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An Empirical Analysis of Trade and Economic Growth in Libya

**An Empirical Analysis of Trade and Economic Growth in Libya**

by

**Mosstafa Khumkhem**

**A Thesis Submitted in Fulfilment of the Requirements for the Doctor of Philosophy  
at Durham University**

**Business School**

**2014**

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to begin , I thank God Almighty, for giving opportunity and ability to complete this thesis.

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### **ABSTRACT**

This research is an empirical analysis of trade led growth of Libya during 1963-2008. Overall objective of this research is to investigate the role of international trade on Libya's economy through reviewing various phases of economic growth in Libya starting from 1963. During this period, Libyan economy has undergone various structural changes. Not only has oil been one of its main exporting commodities, but also earnings from this sector of the Libyan economy have been credited with high growth rates experienced in the country. The research comprise of five specific objectives of which four require empirical justification. The non-empirical objective of the research is to obtain a trade profile of Libya. The empirical objectives include the analysis of relationship between trade and economic growth of Libya with and without incorporating the role of trade partners and the development of import demand in Libya with and without incorporating expenditure component. Results of the research showed that Libya is significantly dependent on international trade with countries of European Union; however, feedback effect from these countries is low. Mostly, Libya depends on the trade partners to cover the import demand. Import demand of the country is determined via price level instead of the income of the country. The only expenditure in Libya out of household consumption, government consumption, and investment, investment has significant effect on the price level. Therefore, for Libya to receive trade led growth, the country should employ such policies that favour total investment.

**DECLARATION**

I hereby declare that no portion of this work has been plagiarized or used in the application of a degree in this university or any other learning institutions.

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## **Chapter 1**

### **INTRODUCTION**

#### **1.1. INTRODUCTION**

Determinants of economic growth of a country comprise of a long list, which includes several external and internal factors, as the survival and growth of each cannot be independent of other countries. International trade is one of those relations in which two nations share the resources for growth of both nations. Though international trade is widely accepted as a growth-promoting factor, countries are observed to restrict trade in certain cases and periods. Hence, a question arises as to what determines whether a country should liberalize the trade or restrict it. This question can be answered once the benefits of international trade are realized, and its role in economic growth of a country is understood. This research, thus, aims exploring and examining the role of international trade in the process of economic growth and development of Libya.

Considering that Libya economy in modern times heavily relied on exporting oil and the revenues generated from oil export for its economy to survive and grow but also finance its economic growth including its import, studying Libyan international trade in the form of its export and import in various economic model is essential to better understand the dynamics of Libyan economy.

#### **1.2. STATEMENT OF THE PROBLEM**

Growth of international trade is driven by the desire to control the direction of economic performance, which is achieved via adoption of trade policies. In the period 1960s and 1970s, international trade throughout the world grew rapidly and became the most important economic activity. This was further boosted by increased foreign direct investments in the middle of 1980s. During these periods, increased foreign trade in Libya resulted in the transfer of technology and establishment of stronger relations with the European markets for Libyan exports.

In the years preceding 1980s, two groups of economist have emerged with one-group supporting protection policies and import substitutions in international trade as

experienced in 1960s and 1970s, while the other group supports free trade policies. The absolute advantage theory based on Adam Smith's (1776) worldview clearly supports the notion of free trade when it comes to international trade. This theory demonstrates advantages that are expected from free trade policies as increased economic efficiency, accelerated economic growth, and increased human welfare through increased and better products at competitive prices in the economy. The group that advocates for protectionist policies and promotion of fair trade, as opposed to free trade points out that free trade may be harmful to developing economies. However, free trade has been gained more credence in this globalised world, which has helped a number of countries to sell to the outside world and even created opportunity space for small entrepreneurs to become part of this process. As Libya is heavily dependent on importation of capital and consumer goods to meet the growing demand of its industries, domestic consumption, and exporting oil to finance its imports, there is an urgent need to debate on the policies of international trade in Libya.

The research presented in this study, hence, aims to explore as to how international trade has helped Libyan economy to grow. It is essential through Libyan economy being dominated by oil revenues and oil export which helped the country to finance its import for capital goods but also consumption goods. Thus, it is essential to identify problems in various aspects of Libyan international trade through a number of economic modelling to better understand the dynamics of the country in developing future strategies.

### **1.3. SCOPE OF THE RESEARCH**

This research is a detailed analysis of Libya's trade pattern with major trade partners and the relationship of Libyan exports and imports and Libya's economic growth. This study serves two broad areas, one is the knowledge body of international economics, and the other is the policy making for international relationships. Output of this research includes the following: An extensive review of the Libya's historical and current trade patterns serves as a trade profile of Libya.

A model of the relationship between international trade and economic growth for Libya in this study reflects the nature of association between the two factors. The model

is extended allowing for control over the trade partners that identifies the country of advantage to trade with and the degree of dependence on other countries for Libya. Another model in this study estimates the import demand in Libya, which reveals the reasons for Libya to stay in trade with countries fulfilling the import demand of Libya. The third model empirically tested in this study is extended to include the component of expenditure, which identifies the possibilities for Libya to control the import demand. Hence, the scope of this research is a broad analysis of Libya's trade considering the import demand of the country.

#### **1.4. RATIONALE OF THE RESEARCH**

Libya is one of the middle-income countries in North Africa that has for decades been using foreign trade as a vehicle of economic growth, as opposed to many other countries that have been using foreign aid to the same. Foreign trade favours different types of exports and import that leads to different outcomes of economic growth. Libya, being a dessert country cannot rely on primary goods to spur its economy. Primary goods are regarded as agricultural products and other raw material. Economic growth based on these products is regarded as primary-export led growth (Bergstrom and Ashley, 1990: 30). For many countries in Africa, reliance on exports of raw materials and food remains principles means by which they generate resources, for economic growth. However, Libya cannot depend on this primary exports as a vehicle of economic development. For Libya to increase the quality of life of its citizens, it has to rely on macroeconomics prosperity of its economy. The objective of the country is therefore, to increase its GDP and the levels of exports of its contemporary local productions.

The bi-directional relationship between export and economic growth has been blamed in many instances for the indecision of many policy makers and researchers in developing countries. Governments are caught between open economies that promote international trade and concentrating on economic activities that would lead to higher international trade. Rapid growth observed in China and India is largely because of expansion of their exports. The successes witnessed in these two countries are because of open economies and access to technology through globalization of their economies. Export from a country leads the country to access international markets, which in turn

demands increased production and efficient allocation of resources (Phillips and Perron, 1998). This trade invariably contributes to economic growth by way of generating long-term gains. Libya needs to embrace the spirit of economic openness if it expects to gain from international trade. Therefore, understanding Libya's international trade pattern and estimating the relationship between Libya's trade and economic growth is the primary requirement for the process of trade led economic growth, which is the aim and content of this research.

The rationale for studying such a topic hence emerges from curiosity to understand the economic growth and development trajectory and dynamics of Libya making taking foreign trade as the basis of analysis; as Libyan economy is sustained mainly through the revenues generated from oil.

### **1.5. AIMS AND OBJECTIVES OF THE RESEARCH**

Overall aim of this research is to empirically investigate the role of international trade on Libya's economy through reviewing various phases of economic growth in Libya starting from 1963s. During these periods, Libyan economy has undergone various structural changes. However, regardless of the period in question, not only has oil been one of its main exporting commodities, but also earnings from this sector of the Libyan economy have been credited with high growth rates experienced in the country. Since 1960s, some structural changes that have been experienced with Libyan economy are redistribution policies of 1960s to 1981; trade boycotts of the Western countries and decreased oil demand, declining foreign trade revenues during 1980s. Hence, the overall aim is to empirically explore and examine various aspects of Libyan foreign trade in relation to locating its impact on Libyan economy in an attempt to provide empirical justification of trade liberalisation (or restriction) through modelling the international trade pattern of Libya.

This research, thus, aims to explore the impact of Libyan international trade on its economic growth over the years and to examine aspects of international trade. Within this overall aim of the research, this research has four specific aims:

- (i) examining the export led growth in Libya;
- (ii) exploring Libya's international trade relations with its trading partners;

- (iii) estimating the import demand in Libya; and
- (iv) determining the factors leading to import demand and expenditure components as additional components of growth determinants.

It should be noted that each of these objectives is achieved separately. In fulfilling these aims, the following objectives are established:

- (i) To present a detailed description and analysis of Libya's trade profile:
  - a. To review Libya's economy for the pre-oil era and post-oil era
  - b. To analyse Libya's production in different sectors
  - c. To perform an analysis of Libya's aggregate supply and demand
  - d. To observe Libya's trade pattern
- (ii) To assess the role of Libya's trade in economic growth of the country:
  - a. To identify the indicators of trade and economic growth
  - b. To formulate a model for assessment
  - c. To use the model for time-series analysis of the long run relationship between trade and growth
- (iii) To evaluate the importance of trade partners in assessment of the role of Libya's trade in economic growth of the country:
  - a. To identify major trade partners
  - b. To extend the model of objective 2(b) for the inclusion of trade partner's effect
  - c. To use the extended model for time-series analysis of the long run effect of trade partner on the association between Libya's trade and economic growth
- (iv) To analyse the import demand for Libya:
  - a. To identify the indicators of import demand of Libya
  - b. To formulate a model for assessment of import demand of Libya
  - c. To use the model for time-series analysis of import demand in Libya
- (v) To evaluate government expenditure and private consumption as a determinant of Libya's import demand
  - a. To identify the indicators of Libya's expenditure
  - b. To extend the model of objective iv(b) for inclusion of expenditure component
  - c. To use the extended model for time-series analysis of Libya's expenditure as a determinant of Libya's import demand

(vi) To use the findings of the research to develop some policy recommendations.

## **1.6. RESEARCH QUESTIONS**

In line with the research aims and objectives, the following research questions are developed:

(i) Does international trade have a significant effect on economic growth of Libya?

(ii) Does the relationship between Libya's trade and economic growth significantly depend on the trade partner?

(iii) Is there any significant relationship between Libya's import demand and growth?

(iv) Does Libya's government expenditure and private consumption significantly influence the relationship between import demand and growth?

## **1.7. SIGNIFICANCE OF THE RESEARCH**

The existing body of knowledge clearly indicates that economic growth is dependent on various factors, which among others include financial and economic policy variables in an economy. International trade has been widely regarded as one the variables that support economic growth in a country. In the case of Libyan economy, foreign trade has been credited with higher economic growth prospect of the country. It has been observed that international trade has been responsible of promoting Libyan domestic production in the oil and non-oil industry. Specialization of the country's production and the international competitiveness of its export baskets are responsible ingredients of greater levels of economic growth. The process of global trade and expansion depend highly on respective countries' participation in international trade with other partners. This process set in motion growing demand for consumer and capital goods that are needed to sustain the expansion.

It is noted in the relevant literature that economist are known to advocate for the need to sustain increasing levels of investment, consumption, and production in an economy for growth to be sustained. To sustain this growth, it is obvious that the Libyan domestic production alone cannot support growth, but needs support from other trading

partners. This implies that importation of resources from other countries is a necessary ingredient of growth. The study of import demand determinants has shown that imports are vital components of foreign trade and economic growth in a country, as imports fill the gaps in the domestic aggregate demand and limited domestic supply. This has led to many researches on determinants of imports in less developed countries as well as in developed countries. This is what led to the development of import demand theories. A number of these import demand theories have used various model specifications to explain the impact of import for real growth in an economy.

In the current world of trade liberalization and globalization, it is important that countries participate in international trade if they are going to reap from the benefits of foreign trade in fulfilling the needs of economic growth. Studies of trade theories on absolute and comparative advantages indicate that international trade brings in economic efficiency and welfare effects in an economy. In this light, foreign trade has shown that it is capable of minimizing income inequalities between trading countries, as it increases earnings of the unskilled labour in countries with abundant labour. However, in some instances trade gains among trading countries is seen as uneven. This has lead to some controversies of the gains of international trade. The research is an attempt to provide some empirical evidence for these controversies in the case of Libya. This constitutes the main significance of the study, as there is not much empirical study exists in the case of Libya in relation to the research topic examined and explored in this study. In addition, the research presented in this study provides a comprehensive analyses by exploring four linked aspects of international trade in the case of Libya, which is a significant contribution considering the availability of the scattered material.

## **1.8. RESEARCH CONTENTS**

The research presented in this country consists of nine chapters. Following is the description of each of the nine chapters:

Chapter 1 is an introduction of the study, which provides the base of the research. For each of the objectives from objective one to objective five, there is a separate chapter in the research.

Chapter 2 is the literature review. It is a critical review of the literature on trade and growth for different countries and for Libya. The purpose of reviewing literature is to collect the findings of past research so that these findings can be compared with the findings of the current research.

Chapter 3 presents Libya's trade profile through reviewing Libya's economy for the pre-oil era and post-oil era, analysing Libya's production in different sectors, analysing Libya's production in different sectors, analysing of Libya's aggregate supply and demand, and observing Libya's trade pattern.

Chapter 4 presents research methodology and modelling for the empirical chapters. It contains research approach, research design, data, and sources of data, data analysis, model specification, and description of statistical analysis.

Chapter 5 is an empirical chapter that assesses the role of Libya's trade in economic growth of the country through identifying the indicators of trade and economic growth, formulating a model for assessment, and using the model for time-series analysis of the long run relationship between trade and growth.

Chapter 6, as being the second empirical chapter, evaluates the importance of trade partner in assessment of the role of Libya's trade in economic growth of the country through identifying major trade partners, extending the model in Chapter 5 for the inclusion of trade partner's effect and using the extended model for time-series analysis of the long run effect of trade partner on the association between Libya's trade and economic growth.

Chapter 7 is also an empirical chapter, which presents an analysis of Libya's import demand through identifying the indicators of import demand of Libya, formulating a model for assessment of import demand of Libya, and using the model for time-series analysis of import demand in Libya.

Chapter 8 is the last empirical chapter, which evaluates expenditure as a determinant of Libya's import demand. The chapter includes identification of the indicators of Libya's expenditure, extended model of Chapter 7 for inclusion of expenditure component, time-series analysis of Libya's expenditure as a determinant of Libya's import demand using the extended model.

Chapter 9 brings the research to an end by summarizing the study and link the findings with the research objectives. Chapter 9 also presents recommendation for policymakers in light of the findings.

## **Chapter 2**

### **LITERATURE REVIEW**

#### **2.1. INTRODUCTION**

This chapter presents a review of the literature available related to international trade and economic growth of trading countries. The chapter contains six sections. The first section discusses the literature on relationship between trade and economic growth. The second section discusses the literature on effect of the trading partner in trade relations. The third section reviews the literature on import demand. The fourth section reviews literature that discusses expenditure components as determinants of import demand. The fifth section reviews conflicting theories of import substitution and export promotion. The sixth section discusses some growth models.

#### **2.2. INTERNATIONAL TRADE AND ECONOMIC GROWTH**

Economists assert that international trade is imperative to economic growth by specifically stating that exports lead to economic growth. This is a hypothesis that can be accepted or refuted depending on the position of argument taken and the evidence provided through the empirical analysis. Considering the dependency of each country to others in terms of raw materials and finished goods in addition to other resources, international trade (which concerns both imports and exports) leads to economic growth and development (Trebilcock and Howse, 2005: 19.) Imports usually result in exports as countries imports raw materials and other crucial resources in order to produce finished goods for exports. The flow of money brought about by international trade in one way or the other improves the economic conditions of a country. Developing countries usually imports more than what they export (Carbaugh 2008: 254). This is because, despite the fact that there may be raw materials in those countries, they do not have the capacity of utilize raw materials to produce finished goods by themselves and hence they rely on imports. Taking the example of countries in North Africa and Middle East, which rely mostly on oil in improving their economic status, they export oil and other petroleum products and import other products and services. This shows that, without international

trade, there is no economic growth (Goldstein and Khan 1982: 26), which is correct at least for the raw material countries.

There are a number of studies, which indicate that exports lead to economic growth of a country. According to international trade theory, economic growth is contributed positively by exports through the following processes: facilitation of the exploitations of economy of scale especially for small and open economies, increases in imports of goods and services used in production of finished goods, and binding foreign exchange limitations that enhance importation of capital goods (Lee 1981: 85). A point worth noting is that, it is through international trade and more specifically exports that diffusion of technical know-how is promoted especially through different suggestions of foreign buyers and learning by doing theory (Nabli 2007: 32). This implies that developing countries are able to learn a lot and gain a lot of knowledge through international trade, as they are able to get new ideas and suggestions from foreign buyers especially from developed countries. This shows that exports, in one way or the other, lead to economic growth (Ghani, 2010: 12).

Developing countries have a number of resources, which they can partake in international trade through exporting. In this respect, countries in North Africa and Middle East have large volumes of oil and petroleum based resources, which largely determine their economic status (Nicita and Development Research Group, 2006: 12). This is so because in a country like Libya, the large oil resources play a highly crucial role in development of the economy. Through export of oil, the country is able to trade in the international arena and in return get other resources and finished goods, which are not present (Tamaschke 1990: 22). For instance, most of the developing countries in the world are not fully industrialized and hence they largely rely on agricultural and oil resources (Tamaschke, 1980: 26).

In this respect, they require other resources, which are not present like finished goods, machines to plough agricultural lands, and other resources crucial in their agricultural activities. This, therefore, shows that they have to import these resources from developed or industrialized countries while exporting their agricultural products (Sprout and Weaver 1993: 291). It should be noted that the more advance technological machines are used in agricultural lands, the more output is received (World Commission

on Environment and Development, 1987: 38). In this case, increased exports of agricultural products lead to increased government revenues received from these lands, increased employment opportunities, increased investment, and increased gross domestic product (Carbaugh, 2010: 424).

Because of the increased benefits of exports in developing countries, it has become of great importance for these countries to critically identify and clearly guard the main source of foreign exchange (Syron, 1968: 542). The reason as to why countries like the United States of America, Japan, United Kingdom, Germany, France and other developed countries are accelerating economically in the world is because they have identified their main source of foreign exchange and are able to participate economically in the whole world (Shamra and Dhardmendra 1994: 14). These countries are capable of importing raw materials from developing countries, transform them into finished goods, and sell them back to the developing countries at an increased price than the price of raw materials. This shows that these countries are capable of competing stiffly in the global markets (Seers, 1970: 26) as they create a value added.

Taking an example of Libya, oil exports occupy a very crucial position in the country's economy. It is the main source of foreign exchange, which is required for bridging the gap between demand and the domestic resources. It also acts as a source of finances used in importing resources needed for economic development (Esfahani, 1991: 96). In this case; therefore, the exports of oils in this country contribute heavily to the Libyan economy.

According to Tayyebi, (1996: 22), economic growth and development in a country are affected by a group of internal and external factors which can be managed by an economic policy. Developing countries get most of their foreign exchange through exporting of agricultural products or rather raw materials but not finished goods (Nazmi, 1989: 34). In this aspect, economic growth is brought about by international trade especially where a country is able to get a regular and reliable supply of finished goods and other resources required in the production process of agricultural products (Murinde, 1993: 61). The higher the earnings gained through exports, the higher the motivation of producing products for exports. It is; therefore, upon developing countries to ensure that producers (farmers or oil extractors) are adequately provided with incentives in order to

increase their productions. As it has been reported by Ram (1985: 417), foreign exchanges are very imperative to a country's economic status as they determine the rate of imports. In this respect, the more a country exports its products, the more revenues it has for importing critical resources (Mirakhor and Mentel, 1987: 62).

As the popular economic growth strategy, export-led growth aims to locate the most lucrative sector in an economy to re-shape it as export-lead industry (Markusen et al, 1995: 23). The government usually plays a very crucial role of ensuring that industries producing such export are provided with incentives and governmental subsidies as well as well accessibility to local markets (Kavoussi, 1985: 381). It should be noted that this strategy is implemented in developing countries with an aim of getting more and more hard currencies to import finished goods and services from developed countries (Lopez and Rodrik 1991: 330). This implies that when an economy has a lot of hard currencies, such as the oil-rich countries, it is in a position to actively participate in the international trade especially by importing goods and services that are manufactured relatively cheaply in other countries.

One of the reasons as to why a country is free from economic persecution is that it has an adequacy of international currencies like US dollar, pound, and Euro among others (Alias and Cheong, 2000: 258), and export-led growth aims to provide this. Thus, export-led growth is mainly for two reasons: there is the creation of profits when more and more exports are made and imports are made for commodities at lower costs than in other countries; this allows a country to have a balance of funds and surplus of debts as long there are adequate materials for export (Tambi, 1998: 196). Additionally; however, this point is subject to debate as indicated by many economists, when exports increase, productivity is triggered, as producers are encouraged to produce more and more products. For instance, developing countries, which mainly rely on agricultural products as their main source of foreign exchange, can increase their agricultural production of these exports in order to make more and more profits. This shows that production is triggered by increased exports (Alias et al, 2001: 39).

Exporting manufactured goods is considered by economists as the most common way of achieving export-led growth in developing countries in terms of expanding the value added for the country. Manufacturing oriented export-led growth; however, is faced

with stiff competitions from developed and well-industrialized countries, which have better skilled labour, more starting capital, and better technology to produce high quality products (Xu, 2002: 267). This strategy, as asserted by Chani et al. (2011), attracts a lot of scrutiny and serious planning in order to effectively excel in the international markets (Chani et al., 2011: 96). Considerably, developed countries compete strongly against products exported by developing countries and because of inferior, technological advancement in these countries; their rate of exporting is expected to decline (Merza, 2007: 12).

Governments in developing countries need to have clear information concerning international trade in order to make sure that their manufactured products have ready markets. In this case, it is not only required that a country identifies a product which is heavily dependent on exports but industries in that country must also ensure that they make that product relatively competitive in the world markets (Ardakani, 1996: 17). On the other hand, developing countries depend on exporting primary goods or raw materials and, to be more categorical, agricultural raw materials. This strategy attracts substantial amount of risk as compared to manufactured goods (Waelde, 1988: 27). This is because this strategy is significantly affected either negatively or positively by terms of trade in a certain region. Over time, the trade profits may be very hard to come by especially when countries export more and more of their raw materials and in turn required to import the same among of commodities (Davidson, 2000: 42). This shows that the rate of exporting should be higher than that of importing in order to ensure that higher trade profits are realized.

In some cases, exporting raw materials and manufactured goods may be problematic especially when a country exports almost all of its materials leaving the domestic markets with a deficit in the same products (Fishlow, 1994: 24). In this respect, the government comes in and dictates the amount of products or raw materials, which should be exported. It has come to the realization of scholars and economists that developing countries usually produce high quality products for exports but those allowed in local markets are of substandard quality (Spero and Hart, 2010: 22). In such a case, local consumers and customers are usually forced to go for imports rather than their locally produced products. As a result of this, exports, despite the volumes of materials

exported, make no contribution in economic growth. It is; therefore, required before planning on what volume to export; the local markets have a surplus in order to prevent increased exporting and importing hence making no difference (Metwally, 1993: 412). Taking an example of economies which heavily rely on oil and petroleum products in export, the rates of exports are usually very high as these products are significantly imperative for any economic growth of a country but they also import commodities from other countries which produce them (Nick et al, 2010: 4746). In this case, if this is not looked into critically, the rate of importing may exceed that of exporting.

The role played by exports in improving economic growth of a country can be looked at into from a diversified perspective. Categorically, the economic growth of Iran, especially during the period 1960-1992, has increasingly been improved through oil exports (Longwell, 2002: 100). In this case, a lot of revenues were, and are still, realized through exporting oil and its products to other countries. It should, however, be noted that, the political status of a country determines largely on the profits gained from exports. For instance, in the year 1973, as stated by Ardakani (1996: 19), oil prices hiked and this was advantageous to most of the oil producers as they made a lot of profits. For the case of Iran, no much profit were realized as the political cloud of the country, especially during the Shah's rule in the year 1978 of the Iraq-Iran war, brought a lot of economic and physical damages (Busse et al. 2004: 294). However, despite of all these negative effects, oil exports in this country has played an important role as the leading sector of the country's economy over some decades ago.

From a critical perspective, it can be argued that there is a persistent wide gap in terms of income and outputs between developing and developed countries in the whole world (Chunlai, 1997: 106). Because of this, developing countries have to look for a strategy in which their economy should be operated in as a way of trying to ensure stability. Most countries in North Africa and Middle East depend on oil for foreign exchanges and hence this aspect is treated with ultimate generality (Action Aid International, 2005: 37). It should be noted that about 80% of the total exports in developing countries is accounted by primary commodity including oil. In addition, some developing countries rely on secondary commodities as their exports. In a wider

perspective, addressing this issue requires analysis of the effects of primary and secondary exports on economic growth of these countries.

Oil is not only an exhaustible product but it is also subject to increased price fluctuations. However, this commodity or rather asset contributes significantly to economic growth and development with its essential contribution to a country's gross domestic product (Carbaugh, 2008: 254). In this respect, for example, Kuwait has relied on its export in order to earn foreign exchanges. When Kuwait exports its oil, it has the capacity through the revenues realized to import modern technology and other resources, which are very critical to economic growth and development. For instance, it is through oil exports that Kuwait has been able to import foods and other agricultural products from countries where they are produced cheaply (Goldstein and Khan, 1982: 24). A point worthy noting is that the overall impact of an export incentive on a country is heavily determined by a number of factors, which include the propensity to import, technological advancement, the extent to which investments are domestically accepted, and the capability of attracting new and potential foreign investors (Lee, 1981: 87). If it is assumed that foreign investments are adequately accepted in a country, economic growth therefore becomes a diversification process on the export base.

In this case, China has a strategy of devaluing its currency in order to make its exports very cheap in the global markets. This implies that more and more customers will be willing to import from China as its products are relatively lower than that of its competitors. This is a strategy or rather a method that can be used by Middle East and North African countries, which produce oil to attract as many customers globally as possible. The rationale of using this strategy in business or international trade is to increase the accumulation of revenues received from exports in order to fund public development expenditures in a country (Tamaschke, 1990: 23). Since developing countries are lagging behind, as far as physical capital and skills are concerned, they need to rely on developed countries for the same. In this case, the resources from developed countries can only be imported from the money received through exports. As a result of this, therefore, it becomes a fact that exports in many different ways lead to economic growth and development of a country (Tamaschke, 1980: 26). When a country has formal and economic policies, which are supportive for business and economic development,

citizens are able to participate actively in international trade and in the either process developing their country directly or indirectly (Sprout and Weaver, 1993: 293).

Taking an example of a warring country like Somalia, the country is heavily devastated by the ethnic clashes, which have persisted for a long time. In this case, there is no participation in international trade and hence the country cannot be developed in any way (Syron, 1968: 542). This shows that participating in the international trade is an essential aspect that leads to economic growth and development. Most developing countries, which actively participate in the international trade through exporting of primary resources, have developed drastically (Solow, 1994: 47). The prosperity of the most of the Middle East and North African countries' in terms of the economy has been received through the export of oil and gas. The lifeblood and driving force of the economy, which is supplied by oil and gas sector in these countries, provides a steady and assured flow of foreign exchange. This can be used in arguing that exports in developing countries usually obviate the most pressing constraint to economic growth (Shamra and Dhardmendra, 1994: 16).

In this respect, the hindrances of economic growth in developing countries are mostly realized from finances and more specifically foreign exchange (Seers 1970: 28). By increasing the level of exports; therefore, means that the problem of money or foreign exchange is solved and hence economic growth and development can be achieved. This implies that a country that exports oil is basically placed in a very strong financial standing, since the previous deficit allowed an impressive surplus. It is because of this reason that the economic growth of such a country improves overwhelmingly.

For example, despite the fact that Ghana is classified as a low-income country, its economy has accelerated in terms of growth and development in the last decade following the increased foreign exchanges brought about by exports. The economic growth in the country in the year 2004 was slightly lower as compared to the same in the year 2005 (Nicita and Development Research Group, 2006: 13). The increased economic expansion was experienced because of increased exports of minerals. The import share of the country has been on its rise hence a lot of economic developments are experienced. In this respect, when there are increased imports, it means that a country is able to cater for the public developmental resources that are readily available (Nicita and Development

Research Group, 2006: 13). When the import demand is high in a country it means that this country is in great need for particular developments and they can be only gotten from the outside world. It is through exports that Ghana has managed to repay its debts and hire experts and services from developed countries as an initiative of development strategy (Nicita and Development Research Group, 2006: 13).

This shows that international trade is critical especially in determining economic growth and development of the developing countries. It should be noted that imports are essential and they contribute greatly to economic growth as countries are in a position to get resources necessary for development but which are not available domestically (World Commission on Environment and Development, 1987: 36). In order to achieve this, level of domestic income through exports should be relatively high in order to finance imports (Carbaugh, 2010: 426). The concept of trade balance in developing countries is essentially important. In this case, the rate of importing should be almost equal to that of exporting. This is done in order to make sure that the revenues accumulated through exports are used in importing other resources. In this case, the demand for imports should be directly proportional to the supply (Nicita and Development Research Group, 2006: 9).

A developing country usually benefits from the services of developed country through imports and this brings about increased GDP (Tamaschke, 1980: 33). For example, there are other factors than economic policies and laws in Nigeria, which play fundamental roles in accelerating economic growth and development. In this respect, political factors in this country, like in many other developing countries, are fundamentally essential in making sure that the rates of exports are increased (Sprout and Weaver, 1993: 297). In this case, international trade can be hindered by political instability since many foreign countries will not be willing to import products and services from such like a country. Thus, leadership is a very imperative element of international trade (Syron, 1968: 542).

According to a study conducted by Hossain and Karunaratne (2004: 93) in Bangladesh, it was found that there is a strong and clear correlation of exports both total and manufacturing with the country's economic growth. In this case, economic growth is squarely brought about by importing highly demanded resources from countries where

they are cheaply manufactured. The country's GDP has increased drastically following increased exports (Hossain and Karunaratne, 2004: 93). Participation in the international trade is essentially crucial to the country's economic growth and development. From this study, it was found that the country's exports were positively and significantly related to the GDP.

According to the examination of export-led growth hypothesis conducted by Abual-Foul (2004: 394), in Jordan using the Granger causality methodology, it was indicated that there is a positive and significant correlation between exports and economic growth. The study showed that exports are the main sources of foreign exchanges in developing countries and hence these countries are capable of importing resources, which they have a deficit of. As a result, the government is urged to ensure that that a conducive social and political as well as the economic environment is provided in order to attract as many foreign investors as possible (Abual-Foul, 2004: 394). With an increase in the level of exports in this country, the level of GDP increased proportionately indicating that exports are imperative in improving the economic growth and development in developing countries. In another case, Zimbabwe's increased political conflicts undermined the international trade, which affected the economic development resulting in for instance high rate of inflation (Stetterfield 2010: 380).

Nicita and Development Research Group (2006: 12) conducted a study in Madagascar on the relationship of the textile exports and economic growth. The results indicated that exports from textiles positively and significantly leads to economic growth. Because of this, government has increased its incentives in textile and apparel industries in order to increase foreign exchanges. Madagascar, which is a developing country, relies on the developed world for importing machinery and other services, which are not produced in this country. Textiles are exported to like the United Kingdom, United States, and Germany. These trading partners in return provide resources absent in Madagascar, and in the process, the economic growth of the country improves. It should be noted that farmers growing cotton and other raw materials used in textile industries require adequate technological skills and experience in order to increasingly produce more and more raw materials. In this case, these technologies are usually not present in Madagascar and hence they are imported from other countries. Since economic growth of

a country is said to improve if the gross domestic product of that country increases within a particular duration of time, this is the case with Madagascar as it was revealed by (Nicita and Development Research Group, 2006: 14). It also asserts that the intervention of the government in the export sector is paramount to economic growth and development.

In conclusion, international trade is considered of great importance especially in improving economic growth. Export-led economic growth theory indicates that the more exports are made in developing countries the more foreign exchanges are accumulated and these revenues are usually used in importing resources that are not readily available in a country (Shamra and Dhardmendra, 1994: 17). In most cases, revenues accrued from exports are used in financing public developments hence bringing about economic growth and development in a country. Developing countries are lagging behind in terms of technical resources and hence they need to import them from countries where they are cheaply produced. This is expected to improve the economic growth of these countries.

### **2.3. INTERNATIONAL TRADE AND TRADING PARTNER**

No country is self sufficient in the global economy and hence countries depend on others in a number of ways. Each country is involved in different ways and levels of trade whereby countries sell what they produce and acquire what they lack. The aspect of trading internationally brings a country and its trade partners in relationship (Davidson, 2000: 43). The conventional economic theory asserts that economic efficiency in a country is significantly promoted by trade through the provision of a wider variety of goods at reduced prices because of specialization, related comparative advantages, and economies of scale (Hanink, 1994: 53). International trade is a concept of globalization where the whole world is like a global village. This is because it has become extremely easy for countries to obtain what they do not produce at reduced prices and shorter duration.

Despite the fact that the concept of international trade has attracted a lot of scrutiny from some economists, its advantages, especially to the developing countries, are enormous (Fishlow 1994: 28). This is because international trade allows numerous and variety of resources from Brazilian coffee, Persian Gulf oil to Chinese labour, which are

made readily accessible worldwide. Additionally, it is through this trade that manufactured goods produced in different countries are distributed globally allowing countries to form a relationship based on trading partners (Spero and Hart, 2010: 17). For instance, Middle East and North African countries have participated in the international trade of oil in a wide range of ways and in the process have reaped off a large part of profit. Trade partners, according to Longwell (2002: 100), are helpful in one way or the other, as they ensure that there is a balance of trade between the trading countries. It should be noted that international trade is considered as a reciprocal aspect where countries assist each other in different ways mainly through different commodities and goods.

A trading partner can be defined as a country, which participates in an ongoing business. Different countries have different trading partners internationally, where they assist each other mutually. International trade does not occur among developed countries and developing countries alone, but within a network of many countries globally. According to a study conducted by Levey (2007) on the relationship between USA and Mexico in matters relating to international trade, the results clearly indicated that these two countries have benefited handsomely from each other.

It is argued by some that when a developing country forms a trading partner with a developed country, the developing country is in most cases exploited particularly when it comes to the strength of currencies (Levey 2007: 4). Also, the developed country import raw material from developing countries at very low prices, but export finished products to developing countries at very high prices. According to Levey (2007: 2), in the year 2006, the USA was considered as the Mexico's largest trading partner. In this case, these two countries have traded for quite a long period and in the process each one of them have benefited. In this respect, Mexico has increasingly supplied the US with agricultural products where it gets manufactured goods and technical expertise from the United States (Levey, 2007: 6). This relationship shows that there is a mutual assistance between the two countries. Thus, it is suggested that international trade is essentially beneficial, as for the case of the USA and Mexico, provides each trading country with resources lacking or with are deficit.

Metwally (2004: 2) contributed on the aspect of international trade by addressing trading partners of the GCC countries like Kuwait, Oman, Saudi Arabia, the United Arab Emirates, and Bahrain. These countries have relatively weak productive capacities, because of their lack of adequate resources like water, raw materials, and labour. These countries have oil and gas as their main source of export and they import other resources from other countries. The revenues received from exports are used in importing of other commodities and goods such as foods or rather agricultural products, cheap labour, and technical expertise. Metwally (2004: 4) indicates that over 25% of the average gross domestic products of the GCC countries are used on imports of goods (Metwally, 2004: 3). The trading partners of these countries include; the United Kingdom, United States of America, China, Japan, and Australia among others. As indicated earlier, international trade is a reciprocal, as a country provides in the international market what it has and imports what it lacks.

With this view, members of the GCC usually import resources from the countries they export to. There is; therefore, a very strong trading link between trading partners in the international trade (Metwally, 2004: 6). A country like China, which is an emerging economy, has been able to get a great deal of foreign exchanges by exporting its products at lower prices than other countries in this category. Because of this, GCC countries have formed a strong trading link with China. Importantly, trading partners in the international trade are significantly important as they intervene in other different ways. In this case, China and other countries, which trade with members of GCC usually, support them in the international issues including social, political, and economic and in the process the link or relationship is strengthened.

#### **2.4. IMPORT DEMAND AND ITS IMPACT ON ECONOMIC GROWTH**

Many researchers and economists have been widely attracted in both policymaking and academic areas by the determinants of trade flows. This is usually brought about by the current demand and supply of imports and exports respectively in a given country (Emran and Shilpi, 2000: 10). It should be noted that almost all countries of the world whether developed or developing are in increased demands for imports as they cannot sustain themselves without reliance on other countries, which is necessitated

with the distribution of natural resources spatially between different geographies (Shiells, 1991: 378). Import demand theory states, though indirectly, that for a country, especially developing country, to improve its economic growth and development, it has to participate actively in the international trade where it exports what it produces and imports what it lacks (Xu, 2002: 268). In this respect, demand for imports in developing countries is usually brought about by increased need for developing and sustaining the domestic markets (Caves and Jones, 2007)

The sustainability of growth performances in developing countries requires improvement in real and fiscal sectors of the economies (Kavoussi, 1985: 381). In this respect, an individual developing country should be able to have adequate supply in exports in order to accumulate revenues used in importing resources to meet the demands of the domestic markets. It is a fact that developing countries have a relatively weak productive potentiality, which has resulted from lack of adequate resources such as labour, adequate raw materials, and water (Sarmad and Mahmood, 1987: 71). This shows that there is a regular provision of a need of essential intermediate products, which accelerate or facilitate economic growth. Additionally, the current international trade has become very competitive and hence a country is required by circumstances to produce high quality products at very low costs of production in order to maximize profits (Alias et al., 2001: 43).

As regards to the empirical studies, according to Hye and Mashkooor (2010: 2150), a number of studies have been conducted on the stability of import demand function in the developing countries but few have been conducted in the case of Bangladesh. They; therefore, conduct a study, which aimed at investigating the aggregate import demand function for Bangladesh for the period 1980 - 2008 (Hye and Mashkooor, 2010: 2150). The coefficient of each observation in the sample was estimated by the use of autoregressive-distributed lag (ADRL). It should be noted that in this study, the estimation of rolling window method was used as a way of critically evaluating the stability of coefficients of the method in the sample size (Hye and Mashkooor, 2010: 2152). According to the results, there is a long run correlation between long run economic growth and development, economic activity, price elasticity, and imports. This

implies that the national income of developing country usually increases with an increase in import since the demands of the local or domestic markets are satisfied or met.

Gumede (2000: 2), in a study on the performance of imports and the import demand theory in South Africa indicated that, in this country there is no exhaustive, elaborate, and sufficient estimation of impacts of policies quantitatively pertaining to import demand and economic growth. However, he acknowledged that international trade brought about by import demands in this country improves the economic growth and development in a number of ways. Despite the fact that South Africa is a country rich in minerals, is agriculturally productive, and hence has a surplus in the international markets, it is in great demand for imports from other countries to help in increasing the rates of economic growth. Gumede's study (2000: 3) confirmed that South Africa like many other middle-income developing countries in the world has strong balance of payments limitations that hinder the growth process of the economy. A point worth noting is that with increased importation of significant resources in South Africa it becomes specifically easy for the local markets to provide their customers with the required resources and in return economic growth rates are increased (Gumede, 2000: 4). The study indicates that the increased demands for imports in this country were increasingly influenced by economic activities but not relative prices. This means that the economic activities in this country called for more and more imports from other countries (Kavoussi 1985: 387).

Notably, the relative prices of imports may be relatively low but the demand for these imports becomes lower following the economic activities in that country. This is because a seller is able to sell much when there are many buyers willing to buy his or her goods. The same case applies to import of goods and services in the international markets (Dornbusch, 1992). Gumede (2004) study for South Africa, thus, concluded that the propensity to import, as far as income is concerned, is more essential than price elasticity of the demands of imports. This does not mean that price elasticity does not play a vital role in determining the demand of imports, but the role played is relatively less significant as compared to that played by economic activities (Gumede, 2000: 5). Demand for imports in this country, like in many other developing countries, is influenced by both economic and non-economic activities. These include, in a larger

extent, labour costs, production costs, internal and external economic conditions, exchange rates, relative prices, and economic activities (Giovannetti, 1989). It should be noted that, demand for imports is usually high especially when the rate of exchange in respect to a particular country is lower. In this case, if the South African currency is capable of purchasing a lot of goods from the USA, the demand of imports from this country increases (Gumede, 2000: 4).

Emran and Shilpi (2000: 10) conducted a study to estimate the import demand theory in developing economies with a special analysis of India and Sri Lanka, which indicates that imports demand are determined by a number of factors including, relative price, economic and non economic activities, government policies, and price elasticity. The model used in this study indicated that the level of investment was subjected to credit constraints and the level of consumption was subjected to liquidity limitations (Emran and Shilpi, 2000: 11). In this respect, investments in these two countries especially where foreign investors were involved were impacted by the limitations of credits. As indicated earlier, international trade contributes largely to economic growth as developing countries are given funds by international financial institutions like World Bank and IMF to import products from abroad. Thus, the case of Sri Lanka and India was influenced greatly by credits from these institutions.

On the other hand, as reported by Emran and Shilpi (2000: 10), import demand in these countries is heavily influenced by the rate of consumption. When the rate of consumption is high in a country there is a great need for importation as the rate of consumption is higher than the rate of production (Emran and Shilpi, 2000: 14). For Sri Lanka, import demand is increased by increased economic and non-economic activities resulting to increased need for imports. This implies that the country have participated largely in exportation of its products to the international markets in order to get adequate foreign exchanges for importing. On the other hand, import demand in India is largely influenced by price elasticity and exchange rates (Emran and Shilpi, 2000: 12). On this basis, when the exchange rate is favourable to India, more and more products are imported and vice versa. Moreover, the prices of imports determine the rate of importation that if the prices are low the rate of importation is higher. It is as a result of

this that India makes importations from China where prices are low as the currency is devalued (Emran and Shilpi, 2000: 15).

Another study has been conducted by Dash (2005: 3) on India on the estimation of the import demand function of this country. The author asserted that, there are a number of arguments in the international trade whether global trade relationships are stable or not over specific period of time. In this connection, some researchers indicate that these relationships are usually not stable as they are changed or rather distorted with changes in price elasticity (Dash, 2005: 3). It is because of this reason that policy makers, researchers, economists, and practitioners are greatly concerned with varied issues on international trade. This study indicated that in India like other emerging economies, trade relations are not stable as they are gradually changed over time by sudden changes. India is now considered as an emerging economy because of its increased economic growth and development. However, its import demand model is of no difference with other developing countries since the increase in imports the more and more a country develops (Dash, 2005: 4).

The Indian import demand model treats quantity of amounts of imports demanded as dependant on import price and income. In this case, import demand of this country, as illustrated by Dash (2005: 5), is determined by the prices of imported commodities and the income level of the domestic consumers. In this respect, when the income level of the domestic consumers is high and the import prices are low, there tend to be more demands for imports and the opposite is true (Johnston *et al.*, 1997). It is realistic in saying that the global supply of imports in India is elastic bearing in mind that this country imports only a small fraction of the total global imports. The element of elasticity comes in, because the world supply of exports to India may be increased even without any increase in prices. In this respect therefore, the rate of importation in India is elastic and dependent on the relative prices (Dash, 2005: 6). In order to get this information right and precisely in the case for India, it is imperative to assume that the single equation model of import demand is best used in such cases. The gross domestic product and income variables of this country are important bearing in mind that the size of the elasticity of trade policy influences the effectiveness of import trade policy (Dash, 2005: 6).

The import demand theory applied in oil producing countries can be clearly understood from the case of Iran as reported in a study by Tayyebi (1996:8). He investigated the econometric model of import demand for Iran as a representative of developing countries. These variables included in the modelling are exchange rates, relative prices, import demand, and income (Tayyebi, 1996:9).

This study; therefore, aimed at establishing a model that could explain the relationship of this linkage in developing countries. In Iran, imports are considered as of great importance to the country's economic growth and development. This study found that there is a powerful negative correlation between import demand and the imports' prices (Tayyebi, 1996:12). In this respect, when the prices of imports are high, the rates of import demands are low. On the other hand, the study indicated that there was a positive correlation between import demands and economic activities in Iran (Tayyebi, 1996:12). In this case, with increased economic activities in this country, the rate of imports demand increases as more and more consumers are willing to purchase these products. It should be noted that Iran is mostly involved in extracting and drilling oil and gases as its main export, and hence it requires other commodities like food and machinery from other countries in order to make the process of extracting oil effective (Sarmad and Mahmood, 1987: 71). With increased labour force in this country, there is increased demand for imports as the level of income is high. It is a fact that when a country is able to effectively and adequately provide its citizens with increased incomes, the citizens are in a position to import products from abroad which are not present in their countries. In this case; therefore, more and more imports demand in Iran can be experienced with reduced prices of imports and increased economic activities (Tayyebi, 1996:13). In conclusion, the increased export in Iran boosts its import when there is an increased income (Tayyebi, 1996:13).

In a study by Razafimahefa and Hamori (2005: 411) in Madagascar and Mauritius on import demand function, it was reported that the level of economic growth and development of a country affects the country's income inequality on its imports demand. Madagascar and Mauritius are developing countries, which rely heavily on exports as their sources of foreign exchanges (Dutta and Ahmed, 2004). The *ceteris paribus* effect of an increase in income inequality is usually negative for low-income countries like

Madagascar and Mauritius. In this case, an increase in income inequalities usually results in a decrease in the amount of products imported (Alias *et al*, 2000). This study indicates that developing countries usually reduce their rates of import demand when their income per capita reduces. In these two countries, citizens do not earn equal incomes and hence there are inequalities in incomes hence resulting in reduction in import demand (Razafimahefa and Hamori, 2005: 412).

Like the case of Iran, the rate of import demand is influenced by the prices of imports and income per capita brought about by economic activities in those countries. For the case of Madagascar, the rate of import is relatively lower with an increase in prices of commodities imported. This is because the citizens are usually unable to make favourable profits as the prices are high and the demand is low (Ahmed, 1999). Additionally, the government economic policies play a very crucial role in determining the rate of import demand. In this respect, when the policies are favourable to import like removal of importation limitations by removing some tariffs, the rate of imports is high as the prices locally are low hence attracting more customers.

The other factors, which are critically considered here, include increase in employment level (Razafimahefa and Hamori, 2005: 413). It should be noted that when more and more people in a country are employed, they are able to purchase the imported products and hence the imports demands increases. It should be noted that the importation rate in these countries is elastic bearing in mind that only a fraction of the global imports are imported in these countries (Razafimahefa and Hamori, 2005: 414). This implies that the world exports may rise drastically to Madagascar and Mauritius without necessarily increasing in prices. This is because there are so many other countries in the world, which are in need for these exports (Razafimahefa and Hamori, 2005: 414).

According to Emran and Shilpi (2000), international trade flows are determined by current demands and supply of imports/exports in any given country. The interdependence of all countries has continued to increase demands for imports. In order to increase imports countries need to have stable current balances and accounts as they are known to impacts greatly on the exchange rates performance of all countries. According to Blomstrom (1986), all countries and especially developing countries like Libya, have to actively participate in international trade in order for them to improve their

economic development. This argument is well supported by the import demand theory, albeit indirectly. Therefore, it is credible to state that increased need for development in Libya will definitely influence its demand for imports.

The purpose of import demands and export supply in many developing countries are carried out to determine the short-term relationships of the same variables to the economic development (Egwaikhide, 1999). Most countries require improvements in the real and fiscal sectors of the economy to sustain growth performance of their GDP. In the same spirit the country will require to have adequate export inputs in order to accumulate enough earnings to be used in importing inputs in the domestic markets. According to Pop-Silaghi (2009), most developing countries in Africa have relatively weak productive potential resulting from inadequate resources and raw materials. This shows that these countries are in need of intermediate imports, which can accelerate economic growth. According to Geweke *et al.* (1983), the current international trade flow is highly competitive with demands for quality goods that are produced at low prices to maximize on profits.

While investigating determinant of trade flows, researchers uses various methods of assessing the impacts of exports and imports on an economy. There are two major methods that are used in assessing the effects of imports on the trade balance of a country. The first is through elasticity and the other one is through trade balance methods.

The elasticity approach is used through estimating imports and exports functions. Most studies, like the one carried out by Wu and Zeng (2008) on the impacts of trade liberalization and trade, balances by regressing volumes of imports and exports on exchange rates, import prices and the gross domestic products of given countries. After carrying out estimates on the import demand functions, researchers carry out inferences to prove or disapprove the relationships between the variables. Trade literature by Wu and Zeng (2008) goes ahead to use devaluation of currency to show how a country's current account balances can be improved, for the purpose of a country's international increase trade on trade flows. The Mash Lenner condition in trade literature indicates that current balance of trade is improved when the country depreciates it currency and the sum of the absolute value of price elasticity of the country's imports is greater than one, with the assumption that the initial trade balance and current account balance are zero

(Enders, 2009). A study carried out by Tayyebi (1996) illustrates the import demand function for oil producing country, Iran as a representative country for developing countries. According to Tayyebi, the variables that are highly impacted are the exchange rate, domestic relative prices, GDP and the import demand. Tayyebi's study on Iran used macroeconomic representations of its economy to identify correlations between demand and the exchange rate of Iran, domestic relative prices of Iran, the country's GDP. His study found that import prices and demand for imports have high levels of negative correlation.

When prices of import are high, consequently demand for imports declines respectively. This indicates that countries will not import from countries with high price for exports. The rationale of many countries to increase prices of their exports is to make sure that they are making aggregate profits that are large. Tayyebi's (1996) econometric model can be used to study Libyan import demand relationship to other economic variables as mentioned in this chapter. Tayyebi (1996) found out that there is a strong correlation between import demand and Iran's economic performance.

Razafimahefa and Hamori (2005) studied the import demand functions of two countries with two different per capita incomes: Madagascar and Mauritius. The findings of this study indicated that the level of economic development in a country impacts greatly on the levels of import demand. They also reflected on the income distribution by stating that increases in income inequalities always have negative impact on import demand. These two countries have differences in per capita income of their citizens, which results in their low levels of import demands. The section, therefore, concludes that government development policies are very important in determining the levels of import demand in a country.

Many African countries, especially the ones with oil reserves, have been using foreign trade as vehicles of economic growth. The economic environment in the international markets demands countries to shift from overdependence on a narrow set of exports variables by developing a range of exports that would increase the foreign earnings. Most developing countries have limited sets of export variables as evidenced from Libya and other oil producing countries' overdependence on oil outputs to promote their economic developments. Foreign earnings help a country to increase the levels of

imports into the country that aids in the overall economic growth of the country. Foreign trade favours different types of import that leads to different outcomes of economic growth. Libya, being a desert country cannot rely on production or importation of primary goods to spur its economy. Economic growth based on these products is regarded as primary-import led growth.

## **2.5. IMPORT DEMAND AND EXPENDITURE COMPONENTS**

There are different ways of categorizing import demand literature, but the most significant categories are the import demand as function of aggregate income and prices, use of disaggregate imports in an economy as a function of income and relative prices or the use of aggregate imports as function of disaggregate components of total income or expenditure. Studying import demand in all this different ways takes price determinants of import demand as relative prices or can use the local prices and import prices separately.

It should be noted that numerous studies have been carried out worldwide to examine the effects of aggregate import demand on growth of economies (GDP). Investigations of studies carried for Libyan economy are not available publicly as search for estimation studies of determinants of aggregate import demand in Libya yields no results. Therefore, this study will heavily rely on other studies related to the chosen theme of these chapter carried out in other countries. The chapter will rely on studies that used disaggregate approach.

In a similar study using data collected between 1975 and 2005 for Pakistan and applying Johansen co-integration technique. Rehman (2007) confirmed a long run relationship among the variables of aggregate import demand and prices, real income and the local price levels in the country. The study indicated that elasticity of local prices were insignificant in the long run and in the short run, while the elasticity of income and import prices were highly significant in short and long run.

In a small developing economy case, Narayan (2005) estimated import demand function for Fiji and discovered that import demand was inelastic to total consumption, relative prices, investment and export expenditure. In a similar country case, two studies on the existence of cointegrating relationship among income, import and relative price by

Hye (2008) and in Cote D'ivoire by Constant and Yue (2010) prove the existence of cointegrating relationship, although Hye (2008) did not investigate the long run relationship of income and relative prices. Constant and Yue (2010) uses time series analysis of demand function using data collected between 1970 and 2007 and autoregressive lag models to cointegrate the results and check for the long run relationship among the consumption expenditure, import demand, investment expenditure relative price and exports. The results from this study indicated that in Cote D'ivoire import demand is more sensitive to export and investment expenditure in the long run compared to relative prices, while showing the short run sensitivity is in relation to consumption expenditure. Further analysis indicates that import demand in Cote D'ivoire is price inelastic. The variables of relative price are insignificant to import demand in the long and short run.

## **2.6. IMPORT SUBSTITUTION AND EXPORT PROMOTION**

Export promotion and import substitution work as alternative industrial strategies. The role of learning is emphasized in both strategies. 'Learning by doing' is the aim behind adoption of import substitution, which can contribute in industrial development. The contradicting notion is 'learning by trading', which the critiques of import substitution use. There is basic difference between the two notions, supporters of the former favour government's intervention while that of the latter believe in market mechanism and free trade. In 1950, Raul Prebisch introduced the theory of import substitution strategy based on evidence from late 1940s and early 1950s. A conclusion was drawn from the observations that the disadvantages in exporting raw material for an exporting developing country are more than the benefits. Industrialisation of primary commodity is more beneficial for a developing exporting country than trade. Terms of trade for the manufactured goods that a developing exporting country imports from the developed countries possess a higher trend against the terms of trade of the primary commodities that the developing exporting country exports to the developed countries. Also, a competition between infant industries in developing country and established industries in the developed countries needs government's intervention to be fair. Only market force cannot make sure that the infant industries get equal chance to compete.

Prebisch (1950) did not introduced a link between import substitution and export promotion initially, nevertheless, the author emphasized on subsidisation of exports for infant industries. By the mid-1980s, Prebisch emphasised two aspects of the import substitution theory. The first aspect is the need of indigenous technology to promote 'learning by doing'. The second aspect is conjunction of import substitution and export promotion to increase the value addition in the exporting commodities (Shafaeddin, 2005a: 151-3). Hence, three strategies work simultaneously in the evolution of an industry: import substitution, export promotion, and using substitution of capital goods, intermediate products, and inputs to increase domestic value addition in the exportable commodity.

Import substitution can be an alternate of a pre-requisite export promotion of industries characterised by external economies of teach (Young, 1991) and economies of scale (Krugman, 1984). A mixture of import substitution and export promotion can work as an effective strategy at any point of time though export promotion lags behind import substitution in any industry (Shafaeddin 2005b, Chang, 1993, Singer and Alizadeh 1988, Streeten, 1972 and 1982). The process is successfully followed by significant result in industrialisation of Republic of Korea and Taiwan Province of China. In other words, some countries adopted import substitution and export promotion in exactly a reverse order of what Prebisch set that is export promotion preceded the increase in domestic value addition.

Import substitution has now an alternate of outward looking, export promotion, or free trade strategies as the neo-liberals advocate (Shafaeddin, 2005a: 13-16). The advocators include the so-called Washington Consensus (*e.g.*, Williams, 1990), main international financial institutions (*e.g.*, Papageorgiou *et al.* 1990; World Bank, 1987 and 1993), and scholars (*e.g.*, Bhagwati, 1978; Balassa, 1980; Greenaway *et al.*1998; Krueger, 1974, 1978 and 1998). These advocators put trust in trade to bring a transfer of learning, technology, and knowledge through trade. The static comparative advantage theory serves as the foundation behind the neo-liberal argument. The developing dynamic comparative advantage considers what a country wish or will be able to produce as the reasons for export concentration; however, the reason behind export concentration

according to static comparative advantage is what a country is able to produce (Shafaeddin 2005a; Gomery and Baumol, 2000; Amsden, 1989; Cline, 1983).

The Libyan Customs Administration imposes a flat 4 percent “service fee” on most imported products, and myriad non-tariff barriers add to the cost of trade (The Heritage Foundation, n.a.). Since 1999, the Libyan authorities have aimed at making the Libyan economy more efficient through a policy of opening up and liberalization, which benefits the private sector and investment. Libya is currently facing a political transition, which affects its economy (The Federation of International Trade Association, n.a.). Libya moved towards export promotion and gave up import substitution with its joining the World Trade Organization (WTO). The decision of adopting this trade policy follows the responsibility that lies onto Libyan government as the country holds a unique location on the South coast of the Mediterranean basin. Thus, the role of Libya in international trade can affect a large part of the world through economic cooperation (Abughalia and Abusalem, 2013). Thus, the country has targeted an increase economic growth through income from industrial and tourism sector and exports earning resulting from improved investment. The policy of adopting export promotion and giving up import substitution is observed to be in benefit of the country as the return from export was higher than the expense for import and this situation has led to positive balance of payment (Abughalia and Abusalem, 2013).

## **2.7. INTERNATIONAL TRADE AND GROWTH MODELS**

### **2.7.1. Neoclassical Growth Model (Factor Accumulation)**

According to the neoclassical growth model, in a closed economy, different capital labour ratios across countries lead to different growth rates along transition path if there are diminishing marginal returns to capital. In addition, different discount factors across countries lead to different growth rates in steady state if there are constant marginal returns to capital. However, this can be overturned in an open economy. Hence, trade may help countries avoid the curse of diminishing marginal returns Ventura (1997). Neoclassical growth model is an application of the factor price insensitivity result in small open economy (or partial equilibrium version of a large economy) H-O model. Asian economies accumulate capital more rapidly than many developing countries, which

are less open than the Asian economies but it does so without diminishing returns or rising interest. The economies following the neoclassical growth model are observed to be heavily industrializing along their development path. A country following neoclassical growth model accumulates capital and shifts into capital-intensive goods, exporting that which is in excess supply (Acemoglu and Ventura, 2002).

### **2.7.2. Learning-By-Doing Models (Accidental Technological Progress)**

Technology is taken as an exogenous factor in neoclassical growth model and factor accumulation is the only factor that affects growth rate through trade. According to learning-by-doing models, patterns of specialization also affect growth in total factor production because technological progress is considered as an accidental by-product of production activities (Also see section 2.6.).

### **2.7.3. Endogenous Growth Models (Profit-Motivated Technological Progress)**

According to endogenous growth models, deliberate investment in research and development results in technological progress. Competition effect, market size effect, and knowledge spillovers are the significant channels through which economic integration affects the growth rate. The growing country realizes investment in research and development due to changes in incentives. Quality-Ladder Model (Aghion and Howitt, 1992; Grossman and Helpman, 1991) and Expanding Variety Model (Romer, 1990) are two canonical endogenous growth models.

The models discussed here shows that trade integration may have a profound impact on the predictions of closed-economy growth models but they do not suggest a systematic relationship between trade integration and growth. Ultimately, whether trade has positive or negative effects on growth is an empirical question, which is the overall objective of the current research.

## **2.8. EMPIRICAL STUDIES**

Ardakani (1996) attempted to investigate the effect of oil exports on the economic development of Iran. The author tested export-led growth models using single equation and simultaneous equation regression models on annual data for 1960-1992. Since the

drastic increase in oil price in 1973, large revenues from oil exportation has financed the economy of Iran. Ardakani (1996), using regression analysis, identified that the benefits of oil exportation given high prices in Iran are less than that in the oil producing countries. The author suggested the political turmoil of the Shah' rule during 1978 affected the economic growth adversely. Another major reason behind lower accumulation of export-led economic growth in Iran is the Iraqi-Iranian war that brought heavy damages to the country. Oil' sector leading role in the country at that time was evident from the figures despite of the deteriorating political situation. Ardakani (1996) used simultaneous equation models successfully to identify that trade partners significantly affect the relationship between oil export and economic growth in Iran. The results also showed that there is no feedback effect from trade partners of Iran except from Turkey, Singapore, Romania, and Brazil.

El-Sakka and Al-Mutari (2000) also investigated the association among economic growth of the Arab countries and their exports. The authors employed Philips-Perron (PP), Augmented Dickey Fuller (ADF), and Johansen Co-integration on annual data from 1970 to 1999. Exports and GDP, both are found to be integrated of order 1, but there is no co-integration among these variables for Arab countries. The authors also attempted to identify if there is any causal relationship among the variables using Granger causality and they reached mixed results. For Oman, Mauritania, Jordan, Egypt, Bahrain, and Algeria, there is a bidirectional cause and effect relationship among exports and growth. A unidirectional causal relationship directed from exports to growth is observed for Syria, Saudi Arabia, Morocco, and Iraq. There exists a unidirectional causal relationship directed from economic growth to exports for United Arab Emirates. For Tunis, Sudan, Qatar, Libya, and Kuwait, the authors did not find any causal relationship.

Alkhuzaim (2005) took the case of countries of Gulf Cooperation Council (GCC) for examination of export-led growth. The author used the OLS estimation method, Johansen co-integration, error correction, Granger causality. For United Arab Emirates, Saudi Arabia, and Kuwait, economic growth Granger causes oil exports while for Oman, oil exports Granger causes economic growth. For Kuwait and Saudi Arabia, the causal relationship between oil exports and economic growth is bidirectional.

Alhajhoj (2007) determined the relationship between exports and economic growth of Saudi Arabia for the period 1970-2005. The author estimated a vector auto regression model, impulse response functions, and granger causality for the variables and reached a significant relationship between the performance of the export sector and the economic development of the country.

Merza (2007) also investigated the effect of exports on economic growth of Kuwait, but differentiated the effect for oil and non-oil exports. The author employed tests of unit root and co integration and then estimated error correction model (ECM) and impulse response function (IRF) along with the estimated cause and effect relationship between the three variables. They found confederation among these series of first order integration. In addition, the result of ECM and Granger causality test showed that the cause and effect relationship between oil exports and economic growth is bidirectional and that between non-oil exports and economic growth is unidirectional directed from non-oil exports to economic growth.

Elbeydi et al., (2010) studied the association of exports and economic growth of Libya using data from 1980-2007. The author adopted the statistical tools of estimating short run as well as long run relationship among the variables and found that, exports of Libya are significantly related to the economic growth of the country. The two economic activities Granger causes each other. The author suggested the Libyan government to adopt export-promoting policies.

Yahia (2010) investigated the dependency of Oman on trade with the country's Asian trade partners namely Mainland China, Thailand, South Korea, and Emirates. The approach to study feedback affect in trade relationship used in this study is employed in the current study too. A simultaneous equation model is used here. Only the difference is that Yahia (2010) uses the model in log linear form. The approach to estimate the model is two-stage least squared (TSLS), which is also adopted in the current study. The study reveals that relationship of Oman with its major trading partners is not significantly subject to the price of oil. Instead, income is the significant factor affecting exports of Oman to its major trading partners.

A similar study was previously done by Metwally and Vadlamudi (1992). Instead of Asia trade partners of Oman, the authors took Middle-Eastern trade partners for the

case. Employing a model of four exogenous and seven endogenous variables on data from 1971 to 1988, the authors estimated a regression equation. No feedback was observed between Oman and its Middle-Eastern trade partners. The justification for this absence of feedback effect is very small participation of Middle Eastern countries in trade of Oman.

Another similar work was done by Metwally and Tamaschke (2001) but this time the authors used simultaneous equations model instead of single regression. The case was to estimate feedback effect between GCC and their EU partners. The result did not only show the existence of a feedback effect but also the dependency of the relationship on oil prices. Hence, use of simultaneous equations to evaluate the feedback effect between Libya and its trade partners is justified given the example of the above studies.

## **2.9. CONCLUSION**

This extensive review of literature revealed that despite numerous attempts to determine the effect on international trade on economic growth, which is the key hypothesis of this research, the findings are inconclusive. Some authors advocate the positive role that international trade plays in enforcing growth in the economy while a considerable number of researcher oppose this concept. The opposing researchers debate that the benefits of international trade are bias based on income level of the country. It is observed that the concept that international trade favour high-income nations and exploits low-income countries have rooted deep in the body of knowledge. Moreover, from the researchers who affirm positive effect of international trade on the economic growth of trading country some researchers deny such relationship between international trade and per capita income. This further deteriorates the role of international trade in lifting the living standard in the trading country. As for the case of Libya, the country's major source of income is the exports of oil, the above general findings about the relationship between international trade and economic growth emphasize the need to study the scenario for Libya. Whether Libya is a country to benefit from trade or it is exploited by the major trading partners. Hence, this general theory of income sensitivity of trade outcomes is applicable on Libya from its dependency n oil exports. Thus, this research is

an attempt to determine the effect of trade on Libya economic growth, the influence of trading partners on this effect, and the driving forces of imports of Libya.

During literature review, several studies are found that investigate the relationship between international trade and economic growth of Libya. In addition, the studies focused on the relationship of Libya with its trading partners. The current research combines the two concepts and aims at solving the two research problems and using there finings to further develop a model of import demand of Libya. The studies reviewed in section 2.8 revealed many empirical models form that, four models are obtained and modified for the current research (See Section 4.6 in Chapter 04). The justification of using different four models (as already stated in section 4.6) is that the classified objectives (in Section 1.6) can be obtained separately. The separate findings form the classified objectives can be merged in conclusion (See Section 9.6 and Section 9.9).

## Chapter 3

### LIBYA'S TRADE PROFILE

#### 3.1. ECONOMIC REFORMS IN SOCIALIST LIBYA

After the transition to a socialist system (end of 1970s, and early 1980s), the prevailing idea of the Libyan government was the inability of the private sector to carry out the development process given the small size of this sector and the domestic market, therefore, the public sector took a greater role in economic activity and economic and social development. This is reflected in the distribution of planned fixed capital formation between the public and private sectors (Al-Farsi, 2003). Table 1 shows the declining private sector investment in total investment from 12.7% on average during the period (1976-1980), to 8.3% during (1981-1985). In the early 1980s, an economic blockade was imposed on Libya; it resulted in a high cost of imports of various goods, and coincided with a reduction in the price of oil in global markets. As a result, the State's revenue declined by a large margin.

To address the problem, the government adopted a method of deficit financing and internal public debt stood at around L.D 5045 million in 1989 (Central Bank of Libya, 1989. P. 40), this led to a rise in the rate of inflation in Libya to unprecedented levels. To deal with inflation and other negatives in the economy, the Government adopted a set of economic policies to correct the economic situation. Most important of these policies is providing an opportunity to the private sector in economic activity. Given the instability of those economic policies, that led to a high degree of uncertainty, which made the contribution of the private sector low. With regard to fiscal policy, emphasis was placed on public spending to achieve some of the goals of economic policy. Due to the magnitude of the size of the administrative body, the bulk of the reduction in public expenditure was concentrated on investment spending, which resulted in a negative impact on the rate of growth.

## **3.2. EVALUATION OF MANUFACTURING INVESTMENT IN THE PERIOD 1970-2008**

### **3.2.1. The Period 1970-1985**

Development allocations to the manufacturing sector during the period 1970-1985 amounted to L.D 24148 million. Table 2 shows the total investments in the manufacturing sector and other sectors. The size of investment in the manufacturing sector reached high levels in the years 1980 and 1981 compared to other years, they amounted respectively to L.D 429.1 and 498.8 million. That was due to a number of reasons including:

- Rising oil revenues in the late 1970s led the government to allocate large sums to finance development plans.
- Focusing on some industrial activities whose purpose was to export and to reduce dependence on oil.
- The years 1980 and 1981 saw the start of heavy industries in Libya (Iron and Steel industry, for example).

Development plans mentioned earlier in this chapter refers to the following: The manufacturing sector during the plan (1973-1975) took up 12.1% of the total allocation, which is low when compared to allocations directed to other sectors. For instance, the agriculture sector received 14.4% of the allocations. The same was repeated during the next plan (1976-1980) when the manufacturing sector had 13.6%, which is a low percentage when compared to the strategic importance of this sector in the development process on one hand, and the allocations obtained by other sectors on the other hand. The after that plan (1981-1985) saw a marked improvement in the proportion of investment allocations directed to the manufacturing sector, which came in the next rank at 16.1% after the transport and communication sector, which came with 18.7% of allocations.

### **3.2.2. The Period 1986-1999**

This period witnessed a decline in oil revenues due to the drop in oil demand and the deterioration of its prices in international markets. Another reason was to the desire of governments in the developed world to adopt a more rational use of oil in the circumstances, which emerged in that period. Decline in oil revenues was reflected in the

emergence of a deficit in the state budget in trends of investment expenditure, in particular directed to commodity sectors (manufacturing and agriculture). The most important observations of this period include: -There were marked declines in the proportion of allocations directed towards the manufacturing and agriculture sectors. This decline explains the Government's desire not to expand by adding new production capacities, and being satisfied with only the lifting of the utilization degree of existing capacity. This led to the suspension or postponement of many industrial and agricultural projects.

Compared with the decline of investments in the group of commodity activities, activities of non-commodity sectors witnessed a remarkable increase, from 8% during the period 1981-1985 to 15.8% during 1990-1996. This was explained by the focus of government spending during that period to improve public services, and a reduction in the volume of investment expenditure made for purposes of economic development (due to the drop in oil revenues and the rise in the deficit of the state budget). In light of the above, it can be said that the period 1986-1999 witnessed a marked decline in the productive trends of the investment policy compared to the emergence of consumption trends.

This approach formed the basis for generating inflationary waves in the Libyan economy during that period. In addition, trends of the investment policy were a dependent variable to the size of the contribution of oil revenues in the state budget. The relative importance of development expenditure increased compared with the current expenditure (this stage is characterized by the development plans during the period 1973-1985). However, after a decline in oil revenues during the period 1986-1996, a deflationary investment policy was adopted. Policies aimed at the rationalisation of government expenditure were also adopted, and focused on the financing of current spending requirements (mainly including operating expenses, particularly the wages of public sector employees). Therefore, adopting a policy of long-term development plans was abandoned, and annual investment programmes were adopted.

### 3.2.3. The Period 2000-2008

Table 2 shows the values of investments in major sectors in the Libyan economy during the period 1970-2006. Through the table, it is noted that investments of the manufacturing sector were relatively high, especially in the period 1980-1984 which witnessed the beginning of a policy of heavy industries in Libya (as previously noted). However, those investments were also low, especially in the early 1990s, while some other sectors (such as agriculture) witnessed a rise in investments. Increased investments in the agricultural sector during this period were due to the expansion of expenditure on this sector, because of the trend towards investment on “the Man-Made River.”

Total investments increased generally during this period. However, the ratio of investment in the manufacturing sector to the total investment declined from the previous period. Table 2 also shows a significant drop in the proportion of investments in the agriculture sector from 26.5% to 9.1%. The increase of total investments due to adopting an investment policy depended on the expansion of service activities and the rehabilitation of infrastructure, in addition to the focus on investment in the oil sector, which saw a slight rise in the percentage of investment. In addition, the policy of restructuring the economy, which the government started in preparing for it to be a sign of economic change, had an impact on investment behaviour, in accordance with the new international economic and political developments. We can deduce from the above that the rates of investment at the macroeconomic level were relatively weak, where these ratios were weaker than the rates, which must be achieved to drive and activate the economic sectors. In addition, the ratio of investment in the manufacturing sector was relatively high, reaching 16.3% in the early 1980s, and then falling sharply to 4.2% during the 2000s. Overall, it can be concluded that there was a lack of a real important change in the structure of production in the manufacturing sector in the form, which confirms the existence of an advanced industrial sector.

### **3.3. MODEL OF DOMESTIC INVESTMENT IN THE PUBLIC MANUFACTURING SECTOR**

#### **3.3.1. Description of Variables and Data**

This model tried to consider some of the improvements made on previous studies, furthermore, it will relate to recent years, in addition to the inclusion of other important factors, which have had important effects on investment in the manufacturing sector in Libya. The model of this study consists of an equation investigating the determinants of public investment in the manufacturing sector, which deals with the study determinants affecting this function in the Libyan economy. The most important variables of the model are used for interpreting the changes in manufacturing investment in Libya, specified on the basis of previously applied studies. The dependent variable, which will be used in this section, is gross public domestic fixed capital formation (domestic public investment in the manufacturing sector) (see Looney, 1997; Devarajan, 2002; Omar, 2002 and Nair, 2003; Mohamed, 1997; Tabibian, 2003). This study has relied on the results of the analysis of some previous studies for selecting the explanatory variables.

#### **3.3.2. Oil Revenues**

The studies by Omar, 2002; Mohamed, 1997; Tabibian, 2003 gave great importance to the availability of finance which is realized from oil revenues, where oil revenues have a strong impact on manufacturing investment. Investment in the Libyan economy depends on oil revenues, which means, we expect that an increase in oil revenues will encourage investment in the manufacturing sector in the Libyan economy.

### **3.4. GOVERNMENT'S ANNUAL APPROPRIATIONS GIVEN TO THE MANUFACTURING SECTOR**

Mohamed's study (1997) emphasised the role of the government's annual appropriation for investment in manufacturing and the products of manufacturing for its major direct impact on the desired level of investment in the manufacturing sector. There is no doubt that these appropriations granted by the Government to support the industrial sector have a positive impact on investment in this sector, increasing allocations in order

to support development and investment projects leading to positive effects on investment in the manufacturing sector.

### **3.5. REAL GDP IN THE MANUFACTURING SECTOR**

There is a positive relationship between real GDP and investment in the public manufacturing sector; this is according to a study of Omar (2002). There is consensus among economists on the existence of a direct correlation between investment and the growth of real GDP. Neo-Keynesian and Neo-classic investment theory suggest investment is positively related to real GDP. This relationship can be derived from the model of flexible acceleration, which assumes a production function with a fixed relationship between the desired capital and changes in GDP. According to what has been raised above, this study expected that the real GDP in the public manufacturing sector have a positive relationship with public investment in the manufacturing sector.

### **3.6. IMPORTS OF CAPITAL GOODS AND MACHINERY**

A country's imports of capital goods and machinery is an important determinant for investment, the import of machinery and capital goods helps to stimulate investment and increase the volume of investment. So the relationship between investment and imports of machinery and capital goods is expected to be positive (Mileva, 2008).

### **3.7. LABOUR FORCE IN THE MANUFACTURING SECTOR**

The labour force is considered as one of the most important determinants of investment because it is positively related to GDP. The planned and appropriate increase in the labour force lead to increased production, and thus surplus production will lead to increase the savings which have a positive impact on increasing investment. A series of applied studies have proven that employment has a positive effect on investment in the manufacturing sector and its growth (Al-Gannam, 2004; Seruvatu and Jayraman, 2001; Soderbom & Teal, 2006; Ndikumana, 2005). Some of the studies addressed the effect of labour on the various aspects of employment, some of them examined the impact of real unit labour cost on investment in the manufacturing sector, and other only studied the impact of employment and its increase. This study used the amount of employment in the

private manufacturing sector because of the difficulty of obtaining accurate and real data on unit labour cost during a long time series. Through previous studies and analysis of key variables of the Libyan economy, it is noted that the determinants of public investment in the manufacturing sector are: real oil revenue; real government's annual appropriation for investment in the manufacturing sector; real GDP in the Manufacturing sector; real capital goods and machinery imports; labour force in the Manufacturing sector.

### **3.8. THE ROLE OF ECONOMIC SANCTIONS**

Economic sanctions are not a new experience. The 'Pig War' of nineteenth century between Austria and Serbia took place among other reasons, because of the Austrian decision to close its market to Serbian products. By approximately the same time, when Great Britain was trying to stop slave trade, some voices within the British government were advocating for a boycott to the products of any colony failing to implement these policies. Nevertheless, it was during the 20th century when economic sanctions became more common, as new international institutions emerged decreasing the legitimacy of military interventions, while nations also increased their economic interdependence (Hufbauer et al., 1990). When studying economic sanctions the initial step is to clarify what we define as such, and what is expected from these policies. We can refer to economic sanctions as coercive economic action taken by a state, a group of nations, or an international organization (the sender) against another state (the target) intended to punish the latter for a certain conduct considered unacceptable by the sender, denying the target access to foreign trade, financial markets, and/or services, consequently restricting the economic activity in this nation.

The literature of economic sanctions presents these policies as instruments aimed to generate a cause-effect sequence of events: it starts with the implementation of an offensive policy by the target, causing the imposition of sanctions by the sender with the objective to generate economic distress in the target country (Hufbauer et al., 1990; Askari et al., 2003). These economic adversities could prompt at a certain point political instability, and consequently force the target nation to comply with the sender. In theory, economic sanctions are oriented to affect the economic capabilities of the target nation.

Even if in the short-run they do not cause the collapse of the target, major economic distortions arise in the form of inefficiencies in the use of capital resources. This is translated into shortage or non-access to spare parts, technology, supplies, or financial funds; inefficiencies in the labour market; and reduction in investments and consumption, causing low growth rates over time.

Thus, sanctions would end up shrinking the potential output of the target nation. The economic literature states that sanctions have more possibilities of being successful if the following conditions meet: (a) the target country is small and/or highly dependent on the sender, (b) sanctions are multilateral, (c) existence of an active political opposition within the target nation, (d) the target suffers high cost from the sanctions while these costs are quite low for the sender, which assures continuity of the policy, (e) sanctions are imposed quickly and given time to work (Carbaugh, 2004; Pugel and Lindert, 2000; Hufbauer et al., 1990).

Notice that we are just observing the impact of total restrictions on exports to the target, which is just one part of the sanctions because they may extend to imports and access to financial funds as well. We start at point NE, which is the equilibrium level before trade restrictions are applied. Target's demand for imports  $D_m$  is balanced by the rest of the world and the sender's supply ( $S_r + S_s$ ), which takes place at price level PNE. When the sender, which we treat as the target's main trade partner, decides to impose the sanctions, the supply curve is substituted by supply  $S_r$  only. This situation generates for the target scarcity of supplies, raw materials, parts, technological equipment, services, etc., which drives prices up to PE and moves the equilibrium to a new higher level E. The cost for the target is represented by areas  $b + c$ , which is associated to people being forced to reduce consumption, to pay higher prices for substitute goods imported from other countries, or to start producing domestically at higher cost. For the sender this policy also carries some economic costs represented by area  $a$ , in form of a loss of exports surplus. In the meantime, those nations not embracing the embargo gain area  $b$  from selling more goods to the target at higher prices. For the sender, imposing sanctions means foregoing some economic welfare. This decision in strictly economic terms could be considered irrational, but when we weigh all the variables, this represents a sacrifice of

welfare in exchange for certain political goals rather than an issue of economic rationality.

### **3.9. DEBATE ON THE EFFECTIVENESS OF ECONOMIC SANCTIONS**

In one of the analyses of economic sanctions, Hirschman (1945) showed that when economic coercion is used by a state against a target forcing this nation to redesign its economic relations, then economic sanctions become an important instrument in the hands of the sender. The majority and most relevant works on economic sanctions try to answer the question of whether economic sanctions work or not (Hufbauer et al., 1990; Haas, 1997; Pape, 1997, 1998a, 1998b; Baldwin and Pape, 1998; Elliot, 1998; Askari et al., 2003). A great number of studies on this topic conclude that these are ineffective instruments to generate policy changes in the target nation, since in very few cases the target nation complies with the requests of the sender (Galtung, 1967; Wallenstein, 1968; Doxey, 1972 and 1987; Scheiber, 1973; Porter, 1979). Other studies support the argument in favour of the use of sanctions. For example, in a very influential study about the use of this policy Hufbauer et al. (1990) study 115 sanction cases and conclude that sanctions can be quite effective, as a significant number of countries have reversed the policies that prompted the imposition of sanctions.

Other authors argue that the evaluation of the effectiveness of sanctions is related to the purposes for which they were implemented. For instance, there are sanctions that are applied for punitive purposes, or to appease public opinions, and not directly for policy coercion, so when evaluating these sanctions the initial goals have to be considered to make an objective and accurate analysis (Nossal, 1989; Lindsay, 1986; Galtung, 1967; Leyton-Brown, 1987; Askari et al., 2003). When used to temper public opinion in response to an unacceptable behaviour by the target, sanctions are imposed feebly and are not used with the clear purpose of modifying target's conduct. In this context, sanctions are more symbolic than purposeful, and the target is not pressured to make concessions (Daoudi and Dajani, 1983; Hoffman, 1967; Schreiber, 1973; Renwick, 1981). Sanctions have also been observed as a valid alternative to war, serving to show discontent with a certain policy in an explicitly and cheaper way (Daoudi and Dajani, 1983). Askari et al. (2003a) present a categorization of sanctions that is methodologically

relevant to evaluate their effectiveness, since we can judge them as a vehicle aimed at a specific purpose and not as a standard instrument. They present four categories of sanctions:

- Purposeful. This is a sanction similar to the most commonly descriptions presented in the standard literature of economic sanctions. The goal of this type of sanction is to force the target to comply with the sender and take a certain course of action.
- Palliative. This type of sanction is valuable for its symbolic and signalling mechanism. It is used to show displeasure with certain behaviour, but not to cause a change in the course of action of the target.
- Punitive. This is a type of sanction aimed exclusively to cause punishment and deliver economic loss for the target. The losses may not force the target to comply with the sender, but clearly makes them pay an economic price for disagreeing with the sender.
- Partisan. This type of sanction seeks for economic loss or benefit for a particular group within the sender.

The authors claim this categorization is very useful to understand more accurately the real goals behind the imposition of sanctions. At the same time, it allows measuring effectiveness in terms of achievement of those objectives. For instance, only purposeful sanctions should be labelled as ineffective for not prompting a change in the policies of the target. They argue that some studies which so far have concluded that sanctions are ineffective may provide different conclusions if economic sanctions were classified using this categorization and evaluated accordingly. Nevertheless, this conclusion could be misleading, since it is usually quite difficult to know exactly the real objectives a state pursues with a certain policy. Omissions, hidden goals, and manipulation of information are commonly present in political rhetoric making it difficult to categorize accurately the real objectives of sanctions. The debate has not been exclusively in the realm of methodological issues, but also on the implementation and use of sanctions. Some studies argue that sanctions alone do not guarantee success for the sender, but when used in connection with other policies such as military intervention, naval blockade, and/or

international embargo, they increase the chances of bending the target (Brown-John, 1975; Barber, 1979; Wallenstein, 1983).

This debate also extends to the dilemma of whether sanctions are effective signals of resolve. Hoffman (1967) argues that the simple fact that they could be considered an alternative to war implies very low motivation on the implementation of sanctions. Baldwin (1985) and Martin (1992) claim that simply because sanctions carry costs for the sender they communicate resolve, since the sender is showing openly its willingness to sacrifice economic welfare in exchange for certain objectives. Sanctions as a signalling resolution mechanism respond to the logic that they do not work alone. They can be effective as long as they signal that tougher measures will follow, like a military invasion. Then, compliance from the target can be understood because of the threat of military intervention rather than the impact of the economic sanctions (see Schreiber, 1973; Pape, 1997; and Morgan and Schwebach, 1997). For instance, Pape (1997) argues that sanctions have limited results in attaining non-economic objectives. In this study he analyzes those cases that Hufbauer et al. (1990) qualify as 'success', observing that almost half of them succeeded due to the threat of military power. Nevertheless, this notion is also undermined. In a study by Drury (1998), who conducted a multivariate statistical test of the effects of economic sanctions, no statistically significant results were obtained.

Likewise, other multivariate test by Dashti-Gibson (1997) and Drezner (1999) provide weak statistical results. These tests like that of Pape (1997) make statistical inferences, assuming that explanatory variables affect independently the dependent variable. In a much-cited paper Galtung (1967) studies the case of Rhodesia and argues that even in a context of severe sanctions, these may be ineffective. In response to a foreign threat domestic support for the government arises and people will close positions in the side of the government.

This is known in the economic sanctions literature as 'rally-round-the-flag' effect, attempting against the success of sanctions to achieve their goals. Another study argues that sanctions are effective only if the sender assures strong international cooperation (Gardner and Kimbrough, 1990). If this alliance controls more than half of the market, then its ability to influence the terms of trade and corner the target are higher, but the authors do not provide any evidence on these magnitudes. Other researchers challenge

this notion claiming that attaining solid international cooperation is quite difficult for the sender, since as more nations join the alliance more rent opportunities arise for other countries (or private firms within other countries) to free ride and benefit from those new rents within the target nation (Martin, 1992; Kaempfer and Lowenberg, 1999). One of the areas of disagreements among scholars in the debate on the effectiveness of economic sanctions relies on defining a standard for measuring success. Hufbauer et al. (1990) measured effectiveness based on the ability of sanctions to achieve the policy goals that prompted their imposition. They examine 115 cases of sanctions, differentiating for type of goals pursued, harm caused by the sanctions, and the use of alternative policies accompanying sanctions. The study concluded that these policies were effective in 34% of the cases (Hufbauer et al., 1990: 93), and the authors argue that sanctions should be given credit for helping the sender accomplishing goals that otherwise could have only been attained with the use of military force. Baldwin (2001) embraces a different idea claiming that openly stated objectives are not necessary.

The simple fact that the imposition of sanctions carries economic costs for the target suggests that sanctions play a successful role. Contrariwise, Pape (1997) supports the argument that only in such cases in which sanctions generate the desired results, they could be considered effective. To evaluate accurately the effectiveness and role of sanctions a more rigorous analysis is required. For instance, all sanctions will generate costs for the sender, whether giving up rent opportunities, or implementation costs, etc., but they aim to attain certain objectives in exchange. An observation of the utility of sanctions- the degree of goals attained minus the cost of using sanctions can be very useful to evaluate this policy (O'Sullivan, 2003). This utility should be compared to the utility of other alternatives like for example diplomatic measures, or military intervention, to appraise correctly the use of sanctions. It could happen that sanctions carry huge costs for the sender, but other choices are ruled out because they fail to achieve the goals desired and sanctions become the best available choice. On the practical side, politicians appear to be ignoring the discussion on the effectiveness of sanctions, and pay more attention to whether it is convenient to use them after weighing the costs associated to attain the ultimate goal (Baldwin, 1999/2000).

Baldwin claims this is the key paradox in the economic sanctions debate, since in one side we observe academicians that in great extent support the idea that sanctions are not effective, and on the other side politicians keep constantly using this policy. The Libyan case is a representative example of this paradox. Research works like those of Seiglie (1997), Spadoni (2003), and CATO (2002) maintain that the U.S. embargo to Libya is in practice ineffective. On the other hand, U.S. politics has shown a different understanding of this issue, insisting on maintaining the embargo until the Libyan government shows a willingness to change the political, economic, and human rights status quo.

### **3.10. SANCTIONING LIBYA**

The history of U.S. economic sanctions against Libya began in 1960. American-owned refineries in the island refused to refine oil purchased by Libya from the former USSR, and Gaddafi's government nationalized those plants. This action was followed by Washington cancelling Libya's sugar quota. The Libyan government responded then by expropriating all U.S. property in the country, valued at about \$1 billion (Hufbauer, Schott, and Elliot 1990). The U.S. government retaliated by imposing a partial embargo on exports to Libya in August 1960, which later became a total embargo on October 19, 1960 (except for food and medicine). In 1961, following the Libyan government declaration of their embracing of Marxist-Leninist ideology, and the definition of the Revolution as socialist and anti-imperialist these sanctions were gradually tightened, and by 1962 the U.S. had already banned all imports from Libya. By the mid of the decade trade became practically inexistent between both nations. What has the U.S. government pursued with these sanctions? In general terms, this is one of the most controversial questions to answer when analyzing economic sanctions and the Libyan case is not an exception. Roca (1987) noted that the U.S. government never had very clear what their goals have been with the Libyan embargo. I agree with his classification of these objectives as overthrow and containment, which parallels with the categorization mentioned above by Askari et al. (2003); thus, following this idea two kinds of sanctions have been mainly imposed to Libya, purposeful<sup>16</sup> and punitive. The military, diplomatic,

and economic measures taken by the U.S. during the early stages of the Libyan revolution were more inclined to the total overthrow of the regime.

After the 'Missiles Crisis' and until the early 1990s, containment became a prevailing objective for Washington. During these years sanctions aimed, to inflict higher costs to the former USSR, next, to send a clear message to other countries in the region about U.S. intolerance with communism, and after that, to limit Gaddafi's ability to extend the Libyan revolution throughout Latin America.<sup>18</sup> The fall of the USSR and the communist bloc created a favourable scenario for the embargo to play a more determinant role in Gaddafi's capitulation. Losing a financial cushion and a secure foreign trade market increased socialist Libya's vulnerability. Under these circumstances it was simply a matter of time for the domino effect of Eastern Europe to reach the Caribbean. The embargo was tightened throughout the 1990s with the approval by U.S. government of two new legislations, the Libyan Democracy (Torricelli) Act in 1992, and the Libyan Liberty and Democratic Solidarity (Libertad) Act, commonly known as Helms-Burton Act, in 1996. The main objective, at least in rhetoric, was to foster respect for human rights, and promote civil and democratic freedom in the island. Nevertheless, the Torricelli Act made the goal of Gaddafi's removal explicit. As Spadoni (2003) states "it appears obvious that US policymakers had an unparalleled opportunity to finally get the most out of economic sanctions that had failed for thirty years to overthrow the rule of Muammar Gaddafi in Libya. (Domínguez, 1997).

The logic of these high expectations of success is theoretically questionable. While it is true that practically all the necessary conditions mentioned above, which increase the potential effectiveness of economic sanctions, were satisfied by the time the embargo began in the 1960s, the reality was very different by the 1990s:

- The U.S. was Libya's main trading partner prior to Gaddafi's revolution, representing approximately two after that's of the island's total exports and imports (Mesa-Lago 1994), but by 1990, the situation had entirely changed since both countries had practically had no economic relations for over 25 years. The level of influence of the U.S. over the Libyan economy was minimal by this time. Therefore, the possible effect of the embargo at this point could not be as harmful as it was during the 1960s.

- The embargo has been a unilateral measure implemented by the U.S. government for over 40 years, except during a short period of active U.S. diplomatic activity at the Organization of American States in the 1960s, when they succeeded involving a group of countries in their policy towards the Libyan revolution. Beyond this early limited experience, no multilateral economic sanctions have ever been imposed on Libya.
- Socialist Libya has enjoyed a very quiet domestic political environment since the 1960s, without major uprisings and a tightly controlled opposition. The largest and most active Libyan resistance is in Miami and its ability to destabilize the Libyan socialist government is quite limited. The economic embargo started as early as 1960, and it has been maintained and tightened since then. In practice, after more than forty years we could say that it has had enough time to work.
- Libya estimates a cumulative cost of the embargo through 1998 of \$67 billion (USITC 2001). Askari *et al.* (2003b) estimate this loses in the period 1961-89 at an annual average of \$150 million, while increasing dramatically for the post-Soviet era to \$2,850 million.

A study conducted by the U.S. International Trade Commission estimates that in the absence of sanctions Libya would be exporting to the U.S. goods and services (excluding sugar) for a total value between \$69 and \$146 per year, and they could be receiving from tourism between \$100 and \$350 million annually (USITC, 2001). These studies, although using different methodologies and data sources, share a point of coincidence: the embargo has been costly for Libya while relative inexpensive for the U.S. Only in the last point the theoretical expectations match the reality. After the fall of the communist bloc, among all the necessary conditions for succeeding with the use of economic sanctions, only the one related to the high cost for the target and the low cost for the sender had merit in the Libyan case. The negative effects caused by sanctions may harm individuals' expectations on the projects and promises by the government in the target country, and consequently its credibility. But at the same time, economic sanctions could be used as a valid excuse by the target government to hide the economic failures of their own domestic policies.

Since the fall of the USSR and the communist bloc, Libya's lack of a sound economic policy, and inefficiency in domestic markets could be blamed more for the country's impoverishment than the economic sanctions per se (Shiffman 2002). However, the rhetoric of the Libyan leadership always amplifies the adverse role of the embargo, serving as a mechanism of mobilization and domestic support. The embargo failed in the early 1960s and again after the collapse of communism in Eastern Europe to deliver the expected changes to Libya. It has been already over 20 years since Libya lost its support from the USSR. In the aftermath of the collapse of the communist bloc, the U.S. government tightened the embargo aimed to overthrow the Libyan socialist government, until a mild relaxation under the Obama administration. A question immediately arises: why has the embargo failed in achieving this goal?

### **3.11. SANCTIONING LIBYA: SCENARIOS AND ALTERNATIVES**

The eyes of mainstream economics is in fact, the issue of hypothetical reasoning or possible worlds based on mainstream views could be seen as epistemologically dubious, divorced from reality, and not equivalent with the inflexible standards of scientific investigation supported by them. The methodology used in this section is the scenario building method (SBM), which has been widely used in business, industry, government, and the military for over 40 years. It emerged as an effective tool for strategic planning, decision-making, and organizational development in conditions of uncertainty. Scenarios are hypothetical sequences of events built for analytical purposes to observe causal processes and decision-points. By constructing distinct named futures the objective is to detect those consequences that could be underestimated in general or abstract analyses. It starts by building up a base image of the present state of the system being studied, using a full listing of the variables that affect this system. The base is broad in scope and dynamic. This step is followed by a search for the principal determinants of the system and their parameters.

Several processes by which scenarios are constructed have arisen over the years, but in a leading work on SBM Schwartz (1996) points out certain common characteristics, further developed and summarized by Ratcliffe (2000). The methodology requires that the scenarios concentrate on the basics of a specific plan, or decision, which

has to be built in a logical and consistent manner; the process has to change and adapt to any sudden and/or unplanned modification of the original circumstances; and the parts involved should have autonomy to take relevant decisions. This methodology includes seven steps. The step is to determine the goal that needs to be accomplished or the specific decision that has to be taken. This is part of a strategic plan taking into account that scenarios focus on long run tendencies and uncertainties. Information about the organization's existing identity, goals, strategies, and current situation are to be addressed, as well as a thorough study of the possible strengths and weaknesses. The next step is indicating the main external and quite uncontrollable factors influencing the success or failure of the decision identified in step one.

For example, market size; long-run economic conditions; capital availability; projected government regulation; the existing stock of technology; growth and volatility; competing products; and current trade/business partners. The after that step is about analyzing the driving forces of change that influence these factors, such as cultural and customary attitudes towards aspects like health care, education, equality, welfare, and leisure; demographic factors including population growth and change, urbanization level, life expectancy, contraception and fertility rates; economic changes associated to technological progress, and the global economy; environmental policies and implementation of sustainable development; changing power structures throughout the world, the quality of governance, the transformation of the role of the public and private sectors, and the challenges imposed by the global rise of the internet.

The step involves ranking the main driving forces of change based only, the level of importance for the success of the main decision identified in step one; and neatly, the level of uncertainty associated to those factors or trends. The idea is to identify three to four factors or tendencies that are the most relevant and most uncertain. Step five is the crucial part of the scenario building process. At this stage of the process intuition, insight and creativity play a leading role determining a logical rationale and structure for the scenarios, which can then be further examined in depth. According to Schwartz (1996), the main objective is to end up with just a few scenarios whose contrasts can help decision-makers. The essential disparity must be few in number in order to avoid an explosion of diverse scenarios around every possible uncertainty.

The step is about scenario development, and its success requires reviewing the lists of driving forces of change observed at steps two and three. The golden rule in determining the extent of this elaboration is said to be succinct and provide to decision makers no more than what they need to take the decision. The last step is about verifying how the goal or decision identified at step one fits into the scenarios constructed. Once the options available and the strategic implications have been properly weighted to find a robust strategy or decision, then decision makers will be in a better position to convert scenarios into strategies. Building the scenarios following to the steps outlined above, allows anticipating and understanding movements of some key indicators into an orderly set of signposts and implications for the issue being observed. Rather than relying exclusively on techniques drawn from the quantitative tool-kit of mainstream economics, the SBM aims to analyze the interaction of social, political, economic, and psychological factors (including the role of individual political personalities), compelling the researcher to deal with factors and dynamics that are commonly ignored when restricting the analysis to abstract modelling. This analytical exercise aims to generate plausible contexts in which the possible developments may be tested, discussed, or evaluated as viable alternatives. (Kahn, 1967).

In the business sector the one to use this methodology was Royal Dutch/Shell in the early 1970s to prepare responses for future oil-price increases. When the oil crisis exploded, the Company had anticipated it and managed it with remarkable success. The SBM eventually became accepted as a quite effective and robust method in business strategy and public policy, not always enjoying the same success in the academia. Aligica (2005) argues that the SBM has solid points in common with the Austrian School (AS), because the AS coherently links the elements that conforms the foundational bases of the SBM., it relies on ideas and imagination based decision- making, contrary to “rational choice”; neatly, the AS focuses on future oriented individual action, as opposed to systemic and deterministic modelling; and lastly, its understanding of the universe rests on deep uncertainty, contrary to the mere probabilistic risk advocated by the mainstream. Like the SBM the AS analysis also disregards the neoclassical notion of “perfect knowledge” and “full information”, claiming that human decisions always imply risk and uncertainty, and pointing on the relevance of individual psychology in people’s

understanding and perceptions. While the neoclassical school simplifies human decisions to a mathematical maximization task, both the AS and the SBM require a specific understanding of the historical context, and for them human behaviour involves both the current available alternatives and their ranking of preference. (Aligica, 2005)

In practice a scenario is an attempt to anticipate future events from a process of hypothetical reasoning built by discerning the consequences of a given hypothesis. It entails assuming that an uncertain fact is provisionally certain aimed to obtain a broader understanding of its implications and consequences. Thus, while mainstream positivism is more concerned with explanation, the SBM is more concerned with prediction. The similarities between the SBM and the AS, along with their notorious differences with the neoclassical approach placed both in comparable positions in

These undermined their credibility of the SBM. Nevertheless, this methodology has been widely analyzed in the literature and extensively used with confidence and success. For instance, some of the relevant works include Neumann and Overland (2004), who used it to study international economic relations and government policy planning in Norway. Moniz (2005) argues that this methodology by technique is both quantitative and qualitative, and by purpose normative and exploratory. He implemented it to compare the future perspectives in the fields of education, science, and technology in Japan and Germany. Godet (1993) use it for strategic planning and management at both business and government level in France.

Grimm and Gamse (2004) also rely on the SBM to study the relation of entrepreneurship policy on economic growth. Forrester (1961) conducted research on supply and demand chains, and employed the SBM to develop a model on the nature of economic growth, aimed for people to understand the determinants of growth and incite public debate. A paper by Ratcliffe (2000) examines the principles, practice, and limitations of scenario building, claiming in favour of this methodology as one relevant to the study of future property investment, and land use policy formulation. The success in the use of the SBM for strategic planning and policy formulation justifies the use of this methodology to explore on the reasons for the failure of the U.S. embargo to Libya, and consequently to draw conclusions on the use of unilateral economic sanctions. In spite of being an economic subject, the main purpose of these measures falls within the realm of

politics and international relations. Economics in this case becomes a tool in the hands of policy makers to attain political goals.

Let us observe now in a hypothetical situation the possible scenarios that may arise after the imposition of economic sanctions and the choices each part has. The analysis will be based on the following assumptions:

- Country A is the target nation, B the sender or sanctioning nation, and C is a after that country. - The sender pursues to overthrow the government of the target country. - Both A and B are close trade partners. A is a small nation with large dependence on trading with B for supplies, technological goods, replacement parts, services, *etc.*, therefore country B's economic activity depends strongly on the foreign sector.
- B and C are large economies with balanced trade between them.
- For simplicity, terms of trade are 1:1.

One of the conditions in the literature of sanctions that theoretically increase their effectiveness, as mentioned above, is that they need to be implemented fast and given time to work. This was precisely what the U.S. government did as the Libyan revolution was turning more radical towards the left wing. By this time, conditions were quite favourable for sanctions to be very successful. Libya had strong commercial relations with the United States, which was absolutely a much bigger economy than that of Libya. The northern neighbour had accounted for over 50 years for more than two after that's of Libya's total exports and imports. The island still maintained an economy very dependent on one single crop: sugar, which represented around 80% of the total income from exports (López-Segrera, 1981). In addition, the limited industrial activities, as well as other economic sectors, were very dependent on American technology. Losing access to spare parts and equipment carried adverse consequences for the Libyan economy. Dependence for the island. Libya had desperately to find alternative markets.

The export rents left by the U.S. were quickly taken by other nations, willing to profit on the business opportunities available. For instance, Spain increased its exports to Libya between 1962 and 1963 from \$10 million to \$24 million, and began a regular air route to Havana (Schreiber, 1973). Canada was also benefited from this situation when its commerce with Libya jumped from \$13 million to \$31 million between 1960 and 1961

(Miyagawa, 1992). The economic incentives allowed Libya to find substitutes to replace the United States as a trade partner. In addition to the business opportunities, new political rents arose creating a favourable scenario for the USSR and members of the communist bloc. They approached Libya and provided the economic support the country needed following the imposition of the embargo. By the end of the 1980s the structural situation of the Libyan economy was similar to that of the 1950s in terms of economic dependence from foreign markets. The difference was that actors had changed. The USSR had consolidated a strong position in Libya both politically and economically, and the same dependence the island had had on the U.S. for markets, technology, and spare parts in the past, was replicated with the communist bloc.

The fall of communism in Eastern Europe caught Libya 'off-guard', and the country suddenly lost not just the safe markets for exporting goods, but also access to raw materials, technology, foodstuff, subsidized oil, and financial assistance. The impact on the Libyan economy was devastating, experiencing the worst economic crisis of the socialist period. The GDP contracted between 1990 and 1993 by more than 33%. This situation was accompanied by a tightening of the embargo from the U.S. to give the 'final thrust' at a long time due goal. Once again, Libya was being forced to find substitutes and build trade relations with new partners.

The Libyan embargo, with over 45 years of existence, is currently the longest episode of unilateral economic sanctions imposed by the United States. Theoretically it is supposed that sanctions need to be given time to succeed, but paradoxically time as a variable in this equation at a certain point starts working in favour of the target. It allows this nation to make economic adjustments, find alternative markets, and build support, while undermining the credibility of the effectiveness of sanctions. In practice, the possibilities of these sanctions achieving the U.S. political objectives waned over time.

At the beginning, Libya suffered from having low elastic trade curves because of its heavy commercial dependence on the U.S., making the country quite vulnerable. Eventually they managed to make economic adjustments, find new suppliers, and enter into economic, as well as political alliances with the USSR. In terms of Figure 2.1 these means a reduction in the size of area  $b + c$ , limiting the negative impact of the embargo. The situation was reproduced again after the collapse of Libya's communist allies, but

once again, the Libyan government thrived to survive making the necessary economic adjustments to surpass the low trade elasticity. The current composition and specific weight of Libya's trade partners shows a situation totally different from that of the 1950s and 1980s, when the country had most of its trading activity concentrated practically in one single market. The fall of the Berlin Wall forced Libya to open their economy and find new venues to get inserted in the global economy, reducing the historical trade dependence from a single partner. In fact, by 2009 commerce with all Eastern European countries (including Russia) counted for a mere 3.57% of all Libyan exports, and 1.59% of the total imports (ONE, 2010).

If economic sanctions are supposed to cause economic distress in the target nation in such a level that they force the government to change its behaviour, clearly that level of distress has not been reached in Libya yet. U.S. policymakers do not know, or have misestimate the necessary point of scarcity and hardship Libya has to go through to alter the political status quo. The U.S. government and advocates of the embargo have failed in two important matters here: they have assumed that people in the island agree with this policy and will act accordingly; neatly, the economic adversities of sanctions do not mean necessarily a political turmoil, particularly in a society where individuals could feel intimidated by the repressive apparatus. Thus, even if a group agrees with the embargo its ability to have an influential impact in society is quite limited and rather than prompting any internal change they become in practice victims of that embargo. Libyans have seen their economic impoverishment to accelerate in the 1960s and even more during 1990-94 as shown in figure 2.5, but politically, no major revolt has taken place.

By how much consumption has to contract, the potential output of the country to shrink, and the whole economy to deteriorate in order to force Libya to comply with U.S. demands remains still an open question; but clearly, the embargo by itself has been unable to succeed in this matter. Moreover, in spite of the U.S. persistence with this strategy and the limitations it has generated to the Libyan economy, Libya has successfully managed to attain high levels of progress in important social areas, which undermines the usefulness of the embargo. According to the UNDP Human Development Report Libya is in the group of nations with "High Human Development", ranking 51st worldwide, and among Latin American countries. (UNDP, 2011) The level of

development in fields like health care and education has been remarkable and it has placed Libya in a privileged position.

For instance, Libya ranks at the top of the Latin American region in indicators such as mean years of schooling, expected years of schooling, percentage of the population with at least secondary education, and mortality rate (under five); while also ranking next in life expectancy and environmental protection after Costa Rica. These achievements are outstanding not only within the regional context, but also when comparing Libya with OECD countries, which are ranked as nations with “Very High Human Development”. Libya has similar levels of education and health care than these nations. For instance, mortality rate, life expectancy, and mean years of schooling show comparable levels, while Libya exhibits higher attainment in expected years of schooling and environmental protection.

### **3.12. THE INERTIA OF THE EMBARGO**

The objective to overthrow the socialist Libyan government has not been accomplished by the embargo. Besides, punishing Havana for their policies although having had its economic anticipated effects; it is in practice a strategy pointing to a dead-end with quite limited rewards. Then, why to continue with the same policy? The persistence of the embargo could be explained by diverse reasons, both political and economical. For the purposes of this research, the attention is concentrated on economic factors. Maintaining economic sanctions to Libya is in macroeconomic terms not so costly for the U.S. government. In addition, Libya represents an insignificant trading partner, representing the volume of American exports to the island less than 1% of the total U.S. exports.

Politics rather than economics have been governing the economic relations between Libya and the U.S. since 1959. Will this situation reverse if the embargo is lifted? To answer this question an estimation of the potential trade flows between both countries in the absence of sanctions is needed, which also allows observing if it is economically relevant for the U.S. to eliminate the sanctions. The United States International Trade Commission conducted a study about the impact of U.S. sanctions with respect to Libya (USITC, 2001). In this research they used the gravity model to

estimate the potential trade volume between both nations following a hypothetical lifting of the embargo. As a base they used 1996-98 average foreign trade figures. The report estimated that U.S. exports to Libya would be in a range between \$658 million and \$1.0 billion annually. The study by USITC (2001) is so far the most cited estimator of the potential trade volume between both nations in the absence of trade. Nevertheless, there are certain issues that called the attention in reference to the gravity model forecast used by USITC (2001).

, Libyan trade is treated exogenously in the model. The study assumes that trade will be reallocated among Libya's trade partners once the U.S. becomes a new trade partner for the island. This assumption needs to be observed carefully since lifting the embargo does not simply create export rents for American companies, but also reduces cost for the rest of Libya's trade partners like for example transportation costs associated to the prohibition of foreign vessels to harbour in the U.S. territory within six months from entering in the Libyan territory.

Neatly, the USITC use of the gravity model shows a problem related to what Wall (2000) and Cheng and Wall (2001) found for a gravity model estimation of the bilateral trade between all countries included in the World Bank data base: the model omits variables that can be correlated with some that are included, resulting in a heterogeneity bias. Cheng and Wall (2001) plotted the residuals of the regression against exports showing prevalence of negative residuals at low levels of trade and positive residuals at high levels of trade. Thus, the model underestimates trade at actual high trade levels, and overestimates trade at actual low trade levels. Lastly, the model uses DISTANCE as the distance between New York City (NYC) and the major city of the trading partner, but NYC is not the main point for U.S. commerce with all nations, particularly in Latin America.

For example, in the case of American trade with Mexico NYC is not as important as Los Angeles is. Likewise, U.S.-Libya trade is more likely to be through Miami, New Orleans, or Tampa rather than NYC. These results reinforce the argument that the size of the Libyan market is so small in aggregate terms for U.S. exports, that the opportunity cost of maintaining the embargo does not justify altering the status quo. Particularly, since any alternative policy such as military intervention would carry very high costs.

U.S. Congresswoman, Ileana Ros-Lehtinen justifying the use of the embargo pointed out “The economic cost of not trading with Gaddafi’s regime is almost non-existent” (USITC, 2001).

Although Libya is not a major source of oil or any other strategic natural resource, neither an attractive large market for U.S. exports, maintaining the embargo carries some economic costs for the U.S. Sanctions have prevented American firms from investing and positioning in Libya particularly since the 1990s, while watching their business opportunities being taken by foreign firms. Piracy and intellectual property rights is another area of negative cost for the U.S., since Libya blames the embargo for not having access to leading technology and does not support copyrights violation claims (Askari et al. 2003b). In spite of the relative irrelevance of Libya for the U.S. in macroeconomic terms, at microeconomic level trading with Libya could not be so insignificant for many small U.S. farmers and firms. This reason, more than sympathy for Gaddafi and his revolution, has prompted American farmers during this decade to lead an active anti-embargo lobby in Washington.

### **3.13. LIBYAN FOREIGN TRADE**

The foreign trade is an important aspect in the components of GDP for most countries of the world (Nasef, 2005). He further argues that it has a significant role in the process of economic and social development, where most of exports contribute to economic development as one of the sources of funding. Additionally, if the higher the value of exports on the value of imports this leads to greater the value of surplus of foreign currency, which can be imported capital goods and production inputs, needed to finance economic development plans (Fouad, 1994).

Drezner (2000) observed that trade sanctions busting is always likely to occur and able to create powerful incentives for evasion. He further argued that sanctions are often expected to be more effective if taken at a multilateral level and when the international community imposes sanctions, the trade linkages are expected to be worsened, and hence being more effective. According to Caruso (2003) the economic embargoes is a restriction of imports of one or more goods from the target country to reduce the foreign exchange and therefore its ability to purchase goods. They are usually criticized as in

effective because target countries are able to find alternative markets to circumvent import controls. According to this perspective, Libya's economy has suffered for a long period of strong economic embargoes imposed by the United States (for example, during the 1980s, which was re-forced in the 1990s), the United Kingdom in 1984 and the United Nations in 1992 (Bahgat, 2008). According to the United Nation resolution 748 (1992) and 883(1993) by the establishment of the sanctions committee, and the imposition embargoes of arms and the aircraft of landing in Libya, as well as reducing the number of staff working at Libyan diplomatic mission in all states, a freeze of Libyan government assets and restricted provision of technology used to develop Libya's petroleum refining operation.

This study examines the impact of economic embargoes on the Libyan foreign trade in both exports and imports. In particular, this study attempts to answer the question whether economic embargoes from the USA (1981-1991) and from the UN (1999-2003) have any significant influence on the Libyan foreign trade in the three various periods; before the IEEs 1978-1991, during the IEEs 1992-2003 and then after the IEEs 2004-2010.

There may be various form and intentions behind economic sanctions. In most cases, however, the intent is to either make the receiver comply with some norm, or punish it by depriving it of some value (Haass, 1998). Haass (1998) described sanctions as predominantly economic but also political and military penalties imposed on a state or other entities to alter political and/or military behaviour. He suggests that, the tactical purpose of a given sanction can be to deter, coerce, signal, and/or punish. In addition, Winkler (1999) gave a more realistic definition of economic sanctions as he identified it as a set of restrictions and rules aimed at hindering or terminating trade with target nations.

The previous studies focus theoretically on the impact of economic sanctions on the political and economical stability of the state. For example, Niblock (2001b) cited that economic embargoes could have an inverse impact on the social basis necessary for democratization. He stated that multilateral economic embargoes could widen the gap between the rich and the poor. In other words, it can be useful for some of these sanctions and other damage within the country's population. Possible sanctions to achieve success

when the following criteria are fulfilled if the target countries face economic losses that exceed more than 2% of its gross domestic product, or have business relationship with the countries of vital sender (Ellison, 2001). We believe that these standards have already satisfied in the case of Libya.

In addition, Niblock (2001a) argued that economic embargoes could weaken the political stability in countries that are forced on the long run and could affect the whole region. However, Collins (2004) pointed out that the application of multilateral ban could force a country that has been imposed to stop its support for terrorism program. Niblock (2001a) added that the economic embargoes are less costly in financial terms compared with the war, which damages the country's infrastructure and development. Moreover, the international economic embargoes tend to make the country's population to be more dependent on the government.

In other words, people will rely more on government for survival or maintaining the supply base. Therefore, sanctions could support the ideological legitimacy of the regime. Most of the earlier literature has focused on the impact of economic embargoes mainly on the political environment and the country's position in terms of supporting terrorist programs. Hence, one of the novelties of this study is to examine economically and empirically the impact of economic embargoes on Libyan foreign trade. It can be said that the gap is about what negative and positive impacts such embargoes may have on an oil-rich Afro-Arab Muslim country, which is a developing economy?

Some authors have investigated the relation between the impact of economic embargoes and Libyan economy. For example, (Yahia and Saleh, 2008, Bahgat, 2008, Hochman, 2006, Jentleson and Whytock, 2006, Niblock, 2001b, Niblock, 2001a). Libya as a After that World nation has faced economic embargoes since the 1980's. Ironically Libya had more than its fair share of such international embargoes compared with other countries such as Cuba, North Korea, Iran and Iraq.(Cronin, 2004). Have such economic restrictions had any significant impacts on the activities and performance of the foreign trade. Additionally, Ellison (2001) cited that multilateral sanctions appear to be reason to remove Libya from the position of state sponsors of terrorism.

Hochman (2006) pointed out that the decision of December 2003 has been made by the Libyan government to dismantle non-conventional weapons program. In addition

to that, Jentleson and Whytock (2006) concluded that international economic embargoes and the US invasion of Iraq are the main reasons for this Libyan decision. As a result of the removal of UN and US sanctions and reintegrating the country into the international arena in 2003 (Security Council, 2003), those events have reflected directly on the Libyan economy, which directly influenced the increases in developing a market economy.

### **3.14. THE MOST IMPORTANT INDICATORS RELATED TO LIBYAN FOREIGN TRADE DURING THE STUDY PERIOD (1978-2010)**

#### **3.14.1. Exports**

Libyan exports were remarkably developed during the three study periods, with exception of the next period (1992-2003). Whereas, they were amounted about 3907.89 million dollar in the period, then decreased in the next period about 2882.26 million-dollar representing about 73.75% than they were in the period. This decrease is attributed to the fact that the Libyan economy was exposed to the unfair economic embargoes period, which had a clear impact on the Libyan foreign trade sector, in general, and the exports sector in particular. While the Libyan imports were increased in the after that period approximately 13244.34 million dollar estimated about 338.91% and 459.51% than they were in the and next period respectively, which is considered as a good indicator of the development of the Libyan exports sector. The average value of the Libyan exports was amounted about 6651.397 million dollar during the study period.

The development and boom of the exports sector, mainly attributed to growth of the oil exports and remarkable rise in oil prices, were reflected on the development and growth of the Libyan domestic product. Whereas the gross domestic product was increased from about 7812.6 million dollar as the average of the study period about 30108.67 million dollar in the after that period, equalling to 385.38% than it was in the period. The average gross domestic product during the study period was amounted about 15554.80 million dollar.

Thus, equation shows the relation between the domestic product and the exports, in order to show the extent of contribution of the exports to the gross domestic product and consequently their role, as an important vital sector in Libyan economy growth which contribute to development of the sectors and other national activities. In the period, it was

appeared that each increase of one dollar in the exports should result in increase in the gross domestic product by 1.02 dollar. The significance of those findings was statistically confirmed at 1% significance level. The value of the determination factors was amounted approximately 58%. Thus points out that about 58% of the changes in the domestic product refer to the changes in the exports and that about 48% of those changes refers to other factors not taken into consideration.

### **3.14.2. Imports**

Libyan imports were increased during the and next period. But in the after that period they were decreased, whereas the average total of the imports value during the period was amounted about 1652.02 million dollars, and then decreased in the next period about 1491.37 million dollars estimated about 88.62% than it was in the period. While the Libyan imports were remarkably increased in the after that period. Its average during this period was amounted about 4616.999 million dollars estimated about 274.48% and 309.58% than it was in the end next periods respectively. This tangible increase in the Libyan imports reflects the positive effect of the Libyan exports sector on the domestic product and thus resulted in increase of the imports particularly the capitalistic imports, machinery, and equipment. This will be clarified by presentation of the imports commodity structure in order to strive for upgrading the various Libyan economic sectors. Whereas the average total of the Libyan imports value during the study period was amounted approximately 2623.4007 million dollars.

By studying the average share per capita of the imports, the study of indicators of the microenvironment shows that it was amounted about 565.337 thousand dollars in the period, and then decreased in the next period about 367.95 thousand dollars, while increased in the after that period about 759.63 thousand dollars representing 134.67 % and 206.44% than it was in the and next periods. During the study period the average share per capita of the Libyan imports was amounted about 562.13 thousand dollars.

By studying the ratio of the imports to the domestic product, the indicators of the same table show decrease of such ratio during the three study periods, in spite of the remarkable increase in the Libyan imports as already referred to. This means that the increase in the domestic product is greater than the increase in the imports. Whereas the

average ratio of the Libyan Imports to the domestic product in the period was amounted to about 0.2153, then decreased in the next period to 0.19 estimated about 88.25%, while decreased in the after that period to 0.1569 estimated about 72.87% and 82.58% than it was in the and next periods. During the study period, the average ratio of the imports to the domestic product was amounted to 0.1859, which is a good indicator of the Libyan economy strength, and its ability to meet the needs of all the Libyan economic sectors either consumptive or capitalistic goods or production requirements in addition to realization of a surplus.

Through studying the relation between the domestic product and Libyan imports in order to show the ability of the Libyan economy to provide the needs of the various national economic sectors as to consumptive or capitalistic goods as well as production requirements necessary for development of the various economic sectors. Moreover, it shows that any increase of one dollar in the domestic product shall result in about 0.214-dollar increase in the Libyan imports. Thus points out that about 55.2% of the changes to be occurred in the imports are attributed to the changes to be occurred in the domestic product and that about 44.8% of those changes is attributed to other factors not taken into consideration.

### **3.14.3. Trade Balance**

Libyan foreign trade sector was always realized a surplus during the study period (1978-2010). This surplus confirms the importance of this vital sector as one of the main sectors. It contributes to the development and boom of the other economic sectors, in addition to its active role in disposing of products of those sectors in the foreign markets and provision of foreign currencies necessary for the two parts of the comprehensive socio- economic development plans.

In spite of diversification of such surplus during the various study periods, there was always a surplus in the trade balance. In the period, the average of this surplus was amounted about 2225.83 million dollars, and then decreased in the next period about 1390.89 million dollars estimated about 62.49% than it was in the period. This decrease does not mean a decline in the Libyan foreign trade sector, but on the contrary, it points out to the strength of this sector. It appears that, in spite of the economic sanctions to which the Libyan economy, in general, and the foreign trade sector, in particular, was

subjected, but it realized a surplus in the trade balance. This fact was confirmed by the surplus value in the trade balance that was realized in the next period, a period of sanctions lifting and opening of the Libyan market to the foreign world. Where the foreign trade sector realized a surplus amounted to 8627.34 million dollars estimated about 387.60% and 620.27 % than it was in the end next periods respectively. The average surplus was amounted about 4027.997 million dollars during the study period.

#### **3.14.4. Total Value of the Foreign Trade**

The average total value of the Libyan foreign trade was amounted about 5589.95 thousand dollars in the period, then decreased in the next period about 4373.63 million dollars estimated about 78.24% than it was in the period. While it was increased in the after that period about 1786.34 million dollars estimated about 319.52% and 408.39% than it was in the end next periods respectively. The average total value of the Libyan foreign trade during the study period was amounted about 9274.8 million dollars.

For determination of the Libyan foreign trade sector's importance, the indicator of the ratio of the total value of the foreign trade to the total value of the domestic product shall be used, known as the degree of the economic opening (economic uncovering). The more the value of this indicator rises, the degree of the correlation increases between the rates of growth of the gross domestic product, changes in the foreign trade movement and the increase of sensibility of the Libyan economy to the fluctuations in the international markets. The macroeconomic indicators show that, the ratio of the foreign trade to the domestic product was amounted about 71.53% in the period and decreased thereafter about 55.79%, 52.3% in the next and after that periods. This decrease refers to the diversification of the Libyan domestic product and increase of the other sectors contribution to the domestic product. Consequently, the degree of the risks to which the Libyan economy may be exposed due to fluctuations in the international markets shall decrease.

The average ratio of the foreign trade to domestic product during the study period was amounted about 58.42%. But reference should be made here to the rise of the ratio of the economic uncovering, whereas it was more than 50% during the various study periods. This refers to the limitedness of the Libyan economy production power. Thus,

reflected in the increase of the Libyan imports to cover the deficit in the local production of goods, in addition to the oil exports which present the large share in the Libyan exports which are influencing by the international oil markets conditions.

### **3.15. NEXT: LIBYAN IMPORTS COMMODITY STRUCTURE DURING (1978-2010)**

The most important Libyan imports during the three study periods were transportation machinery, equipment; manufactured goods classified by their components, foodstuffs, and live animals. These articles represent in total 77.02%, 75.17% and 80, 14% during the three study periods (1978-1991), (1992-2003) and (2003-2010) respectively. The imports of the transportation machinery and equipment occupied the rank during the study periods and with different percentages. This reflects the state's concern about the direction towards diversification of the production base, and thus striving for mechanization of the various economic sectors, in general, and the agricultural sector in particular an increase of its contribution to the rise of the self - sufficiency rates of a number of commodities and services. The value of the Libyan imports of machinery and equipment in the period was amounted to 624.53 million dollars, equalling 38.34% of the total Libyan imports during that period, and then decreased about 553.84 million dollars.

In the next period by 35.26% of the total value of the Libyan imports. This refers to what is already indicated that the Libyan imports were decreased due to the effect of international economic embargoes on the Libyan economy for a long period and the accompanied change in the Libyan imports commodity structure. Whereas, the state turned to meet the nations individual's food needs. The same table data indicate that the imports of the foodstuffs and a live animals were increased from 262.18 million dollars at 16.13% of the total value of the Libyan imports during the period about 280.18 million dollars at 17.83% of the total value of the Libyan imports during that period. While during the after that period the imports of transportation machinery and equipment were remarkably increased.

This reflects the state 's concern about development and diversification of the production base and confirms the decrease of the Libyan imports of foodstuffs and a live

animals resources about 15.08% of the total value of the Libyan imports during the after that period. At the same time, this means an increase in the Libyan production of foodstuffs as a natural result of the state's concern about development and mechanization of the economic sector in the country through making good use of the surplus realized by the Libyan trade balance and utilization of that surplus in advancement of those sectors.

### **3.16. AFTER THAT: GEOGRAPHICAL DISTRIBUTION OF THE LIBYAN IMPORTS DURING (1978-2010)**

In this part, the research studies and analyses the geographical distribution of the Libyan imports in order to show the changes occurred in the importing markets, determination of the markets from which most of the imports are supplying and determination of the extent of stability of the dealing with those markets. European Union countries were the source of the imports during the three study periods, in spite of the difference of the relative importance from period to period. The value of the Libyan imports from European Union countries during the period was amounted to 1171.35 million dollars equalling about 69.63% of the average total value of the Libyan imports during that period which was amounted about 1682.15 million dollars.

While during the next period, a decrease is noticed in the share of the European Union countries. Whereas the value of the Libyan imports from European Union countries during that period was amounted to 949.10 million dollars at 60.41% of the average total value of the Libyan imports during that period. This decrease in the Libyan imports value is attributed to what is already indicated that during such period all the economic variables related to Libyan foreign trade were affected by the economic embargoes to which the Libyan economic was exposed.

But during the after that period, the value of the imports from European Union countries was increased about 2345.65 million dollars at 53.94% of the average total value of the Libyan imports amounted to 4348.98 million dollars during that period. In this period, it is noticed that, in spite of the increase in the total value of the Libyan imports from European Union countries. But its percentage was decreased than in the previous periods. This decrease may be attributed to the opening of the Libyan economy

in the last period to all the world countries, whereas the imports sources were diversified and the Libyan economy became most open on the world than in the previous period.

Indicators of the macro-environment show that the Libyan imports from the Asian countries were occupied the next rank during the three study periods. The value of the Libyan imports in the period was amounted about 227.41 million dollars representing about 13.52% of the average total value of the Libyan imports during that period. Then, increased in the next period, about 34.96 million dollars estimated about 19.41% and to about 855.86 million dollars estimated 19.68% in the after that period. Here, reference should be made to the fact that during the economic embargoes period, the Libyan imports were turned to the Asian and Arab countries at the detriment of the European countries. That is to say, that during such period the Libyan foreign dealing was with neighbouring countries either Asian of Arab. In this context, the indicators of the same table and chart show that the Libyan imports from Arab countries were remarkably increased during the three study periods.

They were directed towards Arab countries. Whereas, the Libyan imports value was raised from about 27.35 million dollars in the period, representing about 1.626% of the total value of the Libyan imports during the period about 107.67 million dollars, as average during the next period at 6.8% of the average total value of the imports during this period. Then increased in the after that period to about 458.05 million dollars which representing about 10.53% of the average total value of the Libyan imports during that period. According to this presentation of the geographical distribution of the Libyan imports, it is appearing that imports were generally increased, in addition to that there is diversification of the imports sources with world countries, particularly during the last period, and thus reflect the trend of the Libyan economy to follow the policy of the opening towards the world as a whole and no longer restricted to a certain economic bloc, in addition to increase of the Libyan imports from Arab countries.

### **3.17. LIBYAN EXPORTS COMMODITY STRUCTURE DURING THE PERIOD (1978-2010)**

Libyan imports commodity structure during the three study period show that, during the study period (1978-1991), the Libyan exports were restricted to exports of

mineral fuel only, besides a little percentage of exports of chemicals. Whereas the value of the mineral fuel exports, during that period, was amounted to, about 3880453 thousand dollars representing about 99.33% of the total Libyan exports which were amounted to about 3906587 thousand dollars during this period. While the chemical exports value was amounted to about 26101.3 thousand dollars representing 0.668%. While the indicators of the same table and chart show a diversification in the Libyan exports in the next period compared to the period, in spite of the fact that the mineral fuel exports during this period were on the forefront of the Libyan exports. They were amounted to about 2731237 thousand dollars representing about 94.11% of the total value of the Libyan exports which were amounted to about 2902018 thousand dollars during that period. Then the chemicals exports valued 99603 thousand dollars representing 3.43%, the classified manufactured goods exports valued 42885.7 thousand dollars representing 1.48% and at last the foodstuffs exports valued 12615.5 thousand dollars representing 0.43%. While in the after that study period, the table and chart data show a continuation of the exports commodity structure as it was in the next period. But the value of these exports was increased. Whereas the mineral fuel exports were amounted to about 1282575, 1 thousand dollars representing 96.11% of the total value of the Libyan exports during that period. The chemicals exports were increased to 422840.1 thousand dollars representing about 3.17% and the manufactured goods exports to 84941.39 thousand dollars representing 0.64%.

From the above presentation, it appears that, in spite of dependence of the Libyan exports sector on mineral fuel exports, but reference should be made to the diversification of the Libyan exports in the last period, even if the diversification was intangible compared to the oil exports. Although it is considered as one of the advantages, which the study should indicate and recommend the necessity of continuation in this trend until, such diversification becomes tangible.

### **3.18. GEOGRAPHICAL DISTRIBUTION OF THE LIBYAN EXPORTS DURING (1978-2010) AND MACROECONOMIC INDICATORS**

Hereinafter the Libyan exports geographical distribution will be studied and analyzed in order to show the changes occurred in the exporting markets, determination

of the markets receiving the most of the exports and the extent of stability of the dealing with those markets. European Union countries had occupied the rank as they alone received about 2390.80 million dollars representing about 60.88% of the total value of the Libyan exports which were amounted to 3926.69 million dollars during that period, followed by the Latin American countries where the value of the Libyan exports was amounted to about 1015.30 thousand dollars representing about 25.86 %. While it is noticed that the Libyan exports size to the Arab countries was decreased during that period as their value was amounted to about 37.43 million dollars representing only 0.95% of the total value of the Libyan exports during this period.

The next study period (1992-2003) was the period of international economic embargoes to which the Libyan economy was exposed. The indicators of the same table and chart above show the occurrence of a substantial change in the Libyan exports markets. Whereas the share of the European Union countries was raised to about 84.49% of the total value of the Libyan exports during that period, where they were received about 2451.79 million dollars. While the share of the Latin American countries in the Libyan exports was decreased to about 10.49 million dollars representing only 0.36% of the total value of the Libyan exports during that period and the Arab countries share increased to about 125.99 million dollars representing about 4.34%.

While the data of the same table and chart show improvement of some markets receiving the Libyan exports during the after that period (2004-2010) and multiplicity of the receiving markets. Thus, points out to the improvement of the Libyan foreign trade sector in general and the exports sector in particular, in spite of the continuation of the European Union countries as a main market receiving the Libyan exports. The average value of the Libyan exports was amounted to about 10507.61 million dollars at 79.25% of the total value of the Libyan exports during that period. But the Libyan exports to the Asian countries were raised during this period to about 3131.36 million dollars at 10.13 % then the American markets received about 659.44 million dollars at 4.97% and at the last the Libyan exports to the Arab countries markets were amounted to about 571.66 million dollars at 4.31%.

Macroeconomic indicators are statistics that indicate the current state of the economy of a state as a particular area (industry, labour market, trade, etc.). Government

institutions and private companies are published regularly on a certain date. Markets.com offers Economic Calendar in which you can see the key dates and events listings. Used judiciously, these indicators can be a valuable resource for forex traders. In fact, these statistics help Forex traders to control the pulse of the economy; so it is not surprising that almost everyone in the financial markets religiously follow them. Following publication of these indicators can be observed market volatility. The volatility was determined according to the importance of an indicator. Therefore it is important to understand what is important and what flag represents. The “indicators” should be understood as essentially quantitative data that allow us to realize how things are in relation to some aspect of reality which we are interested.

The indicators can be numbers, graphs, facts, opinions or perceptions that are indicative of conditions or situations. Meanwhile, the “Economic Indicators” are statistics, statistical series or any form of prediction that helps us examine where we are and where we are headed with regard to certain objectives and goals, and to evaluate specific programs and determine their impact. Indicators are important tools for decision-making and transmitting scientific and technical information that allows an analysis of the economic and social reality. Thus resulting fundamental to assess and predict trends in the situation of the country as a whole or a region in terms of economic and social issues, and to assess compliance with the goals and objectives set by government policies. Therefore play an active role in improving development processes, redesign, tracking and monitoring of public policies.

Table 3. 1: Real GDP and GDP Per Capita of Libya 2008-2012

Real GDP and GDP Per Capita	2008	2009	2010	2011	2012
Real Gross Domestic Product (GDP) (LD billions)	20.900	21.340	46.630	18.800	18.910
Real GDP Growth Rate (%)	3.800	2.100	118.508	-59.686	0.6000
Private Consumption Spending (LD billions)	23.830	17.850	19.790	24.680	61.680

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Government (G and S) Expenditures (LD billions)	10.610	8.070	8.930	6.470	16.630
Gross Private Investment (LD billions)	31.810	14.770	19.760	12.340	28.630
Exports of Goods and Services NIPA (LD billions)	76.820	49.890	57.470	14.660	33.580
Imports of Goods and Services NIPA (LD billions)	31.320	18.700	22.570	14.440	33.050

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Table 3. 2: Nominal GDP and its Components 2008-2012

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Nominal GDP and Components	2008	2009	2010	2011	2012
Nominal GDP in National Currency- Billions (LD billions)	114.000	78.200	93.200	43.700	107.470
Nominal GDP Growth Rate (%)	30.137	-	19.176	-	145.944
		31.403		53.116	
Population (Millions)	6.150	6.270	6.360	6.430	6.560
Population Growth Rate (%)	2.080	1.822	1.465	1.059	1.991
Nominal GDP Per Capita (LD thousands)	18.540	12.490	14.670	6.810	16.410
Nominal GDP Per Capita Growth Rate (%)	n/a	n/a	n/a	n/a	n/a

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Table 3. 3: Government Spending and Taxation 2008-2012

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Government Spending and Taxation	2008	2009	2010	2011	2012
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Government (G and S) Expenditures (LD billions)	10.610	8.070	8.930	6.470	16.630
Government Expenditure Growth Rate (%)	47.673	-	3.019	-	87.434
		2.8022		38.3987	
Net (of transfers) National Tax Rate (%)	63.945	53.435	65.994	38.481	56.492
Net Government Revenue	72.900	41.790	61.510	16.820	60.710
Fiscal Deficit (-) Surplus (+) (LD billions)	28.260	-	16.810	-	9.100
		1.6100		10.7300	
Fiscal Deficit/Surplus as percent of GDP (%)	-	-	2.617	0.5190	0.8280
	0.0040	0.0060			

Table 3. 4: Money, Prices, and Interest Rates 2008-2012

Money, Prices and Interest Rates	2008	2009	2010	2011	2012
Money Supply (M2) (LD billions)	38.660	45.390	45.130	55.960	70.290
Money Supply Growth Rate (M2) (%)	49.192	17.413	-0.5733	24.000	25.615
Inflation Rate (from GDP Price Deflator) (%)	0.0221	0.0106	0.0115	0.0273	0.0210
Interest Rate (%)	6.000	6.000	6.000	6.000	18.260
Unemployment Rate (%)	30.000	30.000	30.000	30.000	30.000

Table 3. 5: Trade and Exchange Rate 2008-2012

Trade and the Exchange Rate	2008	2009	2010	2011	2012
Exchange Rate US Dollars (LD/\$)	1.230	1.260	1.270	1.230	1.300
Foreign Balance-Goods and Services NIPA (\$US	45.510	31.200	34.910	0.2200	0.5300

Millions)

Table 3. 6: The Balance of Payment 2008-2012

The Balance of Payments	2008	2009	2010	2011	2012
Current Account (\$US Billions)	35.710	9.390	16.810	0.0500	0.2800
Capital and Financial Account (\$US Billions)	-22.8000	-2.9700	-15.8900	5.110	41.070
Overall Balance (\$US Billions)	12.910	6.420	0.9200	5.160	41.350
Official Foreign Currency Reserves (\$US Billions)	92.320	98.730	99.650	104.800	146.140
Current Account (% of GDP) (%)	25.595	9.569	14.231	0.0879	0.2584

### 3.19. U.S. TRADE SANCTIONS ON LIBYA

The United States initially imposed diplomatic sanctions and an arms embargo against Libya in 1978, in response to Libya's involvement in a number of terrorist activities. Libya was added to the U.S. State Department State Sponsor of Terrorism list in 1979. Over time, without change in regime, rhetoric, or activities, the United States ratcheted up sanctions against Libya to comprehensive economic sanctions, including import embargos on crude and refined oil, by the 1980s. U.S. allies including Italy and West Germany were opposed to these unilateral sanctions in the 1980s due to their trade and economic ties to Libya and expressed doubt over U.S. claims regarding Libya's ties to terrorism, as well ("US Policy of 'Neoglobalism' and Sanctions," 1986). Following the bombing of Pan-Am flight 103 over Lockerbie Scotland in 1988 and subsequent airline bombings, for which Libyan citizens were implicated, the UN Security Council imposed multilateral sanctions against Libya with the goal of extradition of suspected terrorists in 1992. There was little debate over this decision. It was widely supported by the U.S. and allies, although Syria and other Arab states did not favour the policy.

The UN sanctions targeted the aviation industry: prohibiting the sale of tickets on Libyan Arab Airlines, banning sale of equipment and services related to the aviation industry and training Libyan personnel (Cortright and Lopez, 2002, 138). Aviation industry sanctions may have contributed somewhat to the goal of extradition of the bombing suspects, which occurred in 1999. The UN sanctions were suspended and officially terminated by a vote of the UN Security Council in 2003. The unilateral U.S. sanctions were geared toward curbing Libya's WMD program, and remained in place until 2004, following the end of the UN sanctions. The U.S. policy included comprehensive trade sanctions, including unique aviation sanctions and sanctions against foreign firms doing business in Libya, in addition to those associated with the State Sponsor of Terrorism designation. These sanctions were not the determining factor in resolving U.S. goals in Libya; although Libya did agree to end its WMD program in 2003 and fully dismantle the program under the supervision of the international community, this is largely attributed to the U.S. invasion of Iraq, not economic sanctions. Qaddafi feared that Libya would be the next U.S. target, following the U.S. invasion of Iraq and removal of Saddam Hussein from power; his fear of losing power likely motivated his decision making process (Joseph, 1999). The United States removed sanctions in 2004, once Libya agreed to dismantle its program and in 2006, the country was removed from the State Sponsor of Terrorism list.

### **3.20. INTENDED OUTCOMES**

In the case of economic sanctions against Libya, the United States sought to achieve all three goals of punishment:

- Isolation,
- Retribution
- Deterrence

Sanctions were imposed for two reasons, as a retributive response to the government's involvement with the Lockerbie Bombing, through the UN sanctions, and as a means of deterring the development of the nuclear weapons program, through U.S. sanctions. Overall, the results of sanctions are mixed in this case. The UN sanctions achieved the specific goal of compelling Libya to extradite citizens suspected of

terrorism, whereas the U.S. sanctions, at best, contributed to the overall resolution of their broader goals. UN sanctions targeted the aviation industry in Libya, and played a role in isolating the country, with the goal of extradition of suspected terrorists; these sanctions ultimately resulted in a successful outcome. These sanctions were the retributive punishment of any sanctions program because they targeted the industry in Libya, which its terrorism had targeted in other countries. However, these were not smart sanctions because they did not target the industry as a participant in terrorist activities; they targeted the leadership and population through this specific industry. Sanctions led to a loss in revenue for the airline industry. They also isolated the population by making it extremely difficult to leave the country.

Special dispensation was given to citizens travelling for the hajj. The sanctions were especially challenging for Qaddafi himself, because he saw a role for himself as a regional leader. Throughout this period, Libya was able to make economic adjustments in order to mitigate the effects of sanctions. The aviation sanctions were intended to increase difficulty for multinational corporations doing business in Libya, however, only Royal Dutch Shell stopped doing business in the country (Cortright and Lopez, 2002, 139). Libya continued exporting oil through the Organization of Petroleum Exporting Countries. Following the loss of the United States as a trade partner, Libya shifted its exports. For example, Italy increased its imports from Libya from 19 percent in 1980 to 33 percent in 1987 (Jentleson and Whytock, 2005/06, 61). Unintended Outcomes: Regime Stability. Both sanctions and the prospect of removing sanction were decisions that Qaddafi considered in terms of regime stability and self-perpetuation. Qaddafi came to power in 1969 in a coup against King Idris, who was known for his pro-U.S. stance in foreign policy. In the early period of sanctions policy, particularly when Libya faced only unilateral U.S. sanctions, the government was easily able to consolidate power and maintain both its leadership role and its international role as an instigator of terrorism, through "...repressive rule at home and confrontation rhetoric, if not action, abroad" (Jentleson and Whytock, 2005/06, 54).

In the 1980s, oil prices remained high and Libya shifted its exports to new markets in Europe in order to avoid economic pressures, the regime remained unthreatened. Qaddafi formed revolutionary committees throughout Libya to mobilize the

population in support of his goals and short-circuit "...U.S. coercive efforts not only by controlling domestic opposition, but also by institutionalizing the same radical foreign policies that the Reagan administration was seeking to change" (Jentleson and Whytock, 2005/06, 61). Qaddafi's efforts generally were successful and his leadership was not threatened in these early years. As economic conditions worsened because of declining oil prices in the 1990s, Qaddafi's government began to face serious challenges and made the calculated decision, following the U.S.-Iraq War and fall of Saddam Hussein, to end sanctions in order to maintain stability. Qaddafi's regime exploited the timing and poor economic conditions in order to make a transition in his ruling strategy to continue to maintain power, by improving the economic situation for his citizens.

At this point in time, Qaddafi did not face a backlash from citizens for caving into foreign demands because the issue was framed in terms of positive economic impact, which he exploited to bolster his position. For instance, as late as 2006, when sanctions were almost completely lifted, he still utilized negative rhetoric to rally his citizens; he said: "[t]he United States is a damned country that deserves only to be cursed. It declares its own occupation of our lands legitimate, but brands our resistance as terrorists" ("Reengagement rings," 2006).

### **3.20.1. Blowback**

In Libya, Qaddafi responded to the U.S. imposition of sanctions through passive and active revenge-motivated resistance. Qaddafi used rhetoric as passive resistance to garner support for his cause among his people, and among potential kindred populations who would be sympathetic to Libya's punishment, under pressure from the West. His goal in attacking the West for punishing his people was to enhance his own legitimacy in the country in order to preserve power. He was able to demonstrate to citizens that he was a champion for their cause, by supporting terrorist groups and activities, which sought to exact revenge on the United States. For example, during the sanctions period, Libya's government reported increased traffic accidents, which they attributed to increased road use, due to limited ability to travel by air (Cortright and Lopez, 2000, 116). The Libyan government also pursued active resistance tactics by supporting terrorism organizations and activities. Following the closure of the U.S. Embassy in Tripoli in 1981, a form of

diplomatic sanction and punishment as isolation, Libya was involved in a number of terrorist attacks and supported the terrorist group Abu Nidal.

Following Libya's terrorist activities, the United States responded by increasing sanctions against Libya. This punishment not only served as retribution for the acts committed, but also sought to isolate Libya further from the international community, and limit their opportunities to respond to pressure through asymmetric means. However, disempowerment increases the likelihood of active revenge and following this new punishment, Qaddafi increased his rhetoric, and passive revenge, and continued to pursue a WMD program, until he ultimately changed his position, in order to enhance his political legitimacy and strategically avoid humiliation.

### **3.20.2. Libyan Revolution (Arab Spring) and the Impact on the Economy**

The revolution and conflict in 2011 severely disrupted Libya's oil and gas industry and the wider economy. Prior to the upheaval, Libya's economy was growing rapidly, offering lucrative opportunities for Libyan and foreign companies. Per capita, Libya is the wealthiest country in North Africa, and it is the next largest oil and gas producer, after Algeria.

Strong oil and gas revenues will continue to stabilise the economy. Foreign companies will find good opportunities in a wide range of sectors. Major tenders and contracting will mostly wait until after the elections. Libya's oil and gas industry and its overall economy have recovered much more rapidly than many analysts have expected. GDP growth in 2012 is expected to be 76.3%, following a 60.0% contraction in 2011. This has been helped by the government's recovery of and access to the large foreign exchange reserves accumulated before the revolution. Meanwhile, problematic aspects of the economy and the business environment are returning to the fore.

### **3.20.3. Domestic Economic Policy**

Amid the exigencies of establishing a new government and stabilising Libya after the turmoil of the revolution, the government has generally put off any potentially difficult or controversial decisions about economic policy. It is examining some of its economic practices, but this has not so far led to decisions with great impact.

#### **3.20.4. Fiscal and Monetary Policy**

A major spending pressure on the government has been to provide employment and increased wages for a population widely expecting improvements after the departure of Muammar al-Qadhafi. As a result, the public wage bill has increased, and the government has maintained price subsidies on fuel and basic foodstuffs.

#### **3.20.5. Developmental Policy**

Development policy and practice continue much as before, with talk of promoting sustainable development and private and public sector partnerships. The key difference now is the absence of Qadhafi, whose heavy-handed interventionism in government and the economy led to frequent changes in national project financing. Discussion has begun on the subject of development in the south, with the planning minister holding a workshop in Sebha in late May.

The authorities are reviewing some pre-revolution laws and contracts and have talked about avoiding unnecessary contracting of expensive overseas services or imports, where local or regional options are available. Speaking in April to a US business delegation, Deputy Prime Minister Mustafa Abushagur said that the government wanted to revamp the regulatory system and cut down on the red tape that accumulated under Qadhafi. However, this will take time, and the present government appointed by the Transitional National Council (TNC) is only transitional. On May 2, the TNC issued Law No. 36 2012, which freezes the assets of 260 individuals and 78 companies associated with the former regime. Excluded from the list of companies are a number of major firms which fared well under Qadhafi, but which are believed to have helped fund the TNC in 2011.

#### **3.20.6. Corruption**

Corruption allegations surround some individuals in the government, adding to pressure on Prime Minister Abdel Rahim al-Keib and the TNC to reshuffle the cabinet. Funds set up to benefit combatants and people who were injured in the conflict in 2011 have been abused. In March, Libya's most senior cleric, Sheikh Sadiq al-Ghariani, called

on people who had wrongly received former combatants' grants to return them (and subsequently some funds were returned).

### **3.20.7. Oil and Gas**

In late April, Oil Minister Abdul-Rahman Ben Yazza said that oil production had reached 1.5 million barrels/day (b/d) and would return to the pre-revolution level of 1.6 million b/d by mid-year (see LIBYA: Instability clouds oil production outlook - January 24, 2012). On May 22, the Arabian Gulf Oil Company (AGOCO) announced that production at its oil fields had reached its pre-revolution level, at 397,000 b/d gases production has also returned to pre-revolution level of around 16 billion cubic metres (bcm). The chairman of the National Oil Company (NOC), Nuri Berruien, has said that gas production will rise over the next three years, area of little variation in 2015. In late May, BP announced that it had agreed terms for resuming work on offshore blocks in the Sirte and Ghadames basins, covered by an exploration and production agreement it signed in 2007. Earlier in May Shell confirmed that it was ending exploration work on Block 89, after a string of disappointing results which also had knock-on consequences for a plan to upgrade the Brega refinery.

### **3.20.8. Foreign Investment**

The government has been keen to attract foreign investors and companies back to Libya and has talked about an open-door policy. In mid-May, the Economy Ministry issued a resolution on foreign participation in joint ventures, making it easier for Libyan and foreign companies to set up them up. This stipulates that in joint ventures, the foreign-owned share should be between 35% and 65% -- and subject to approval can be up to 80%. In addition, the cycle of international trade fairs and delegations has revived.

The overall environment for Libyan and foreign companies has improved. However, Libyan counterparties are commonly late paying for contractual obligations, and other difficulties exist.

### **3.20.8.1. Security**

A number of incidents have occurred, illustrating that opponents of the new government are willing to resort to violence. Protesters have several times stormed government buildings, and on June 4 forced the closure of the main airport in Tripoli after taking control of the runway. The UN mission in Libya and the International Committee of the Red Cross has also been the targets of small attacks. Foreign companies have not so far been targeted, but the risk should not be discounted.

### **3.20.8.2. Employment**

Libya's hydrocarbon wealth has long encouraged people to expect the state to provide easy employment and allowances. Libyans sometimes complain about the high unemployment and under-employment rates, but skilled, semi-skilled, and unskilled foreign workers have flocked back to Libya.

### **3.20.8.3. Overseas investments**

Libya's sovereign wealth fund, the Libyan Investment Authority (LIA), has yet to make any major decisions about its structure, its subsidiaries, and its investments. Some effort is being made to investigate past competence at the authority, and the IMF has been trying to advise on measures to improve governance of the authority (and all funds managed by the central bank). In late May, the LIA telecoms investment arm, LAP Green Networks, announced that its subsidiary, UCOM, would maintain its 200 million dollar investment in Uganda Telecom, a fixed and mobile telephony company. LAP also has a disputed investment in Zambia.

## **3.21. ANALYSIS OF LIBYA'S AGGREGATE SUPPLY AND DEMAND**

Libya is situated in Northern Africa. It is near the Mediterranean Sea. Its area consists of 1,759,540 square kilometres. It is ranked as 17th country in the world in relation to the total area. Its border countries are Chad, Algeria, Niger, Egypt, Tunisia, and Sudan. It has enormous natural resources of petroleum, natural gas, and gypsum. Almost 90% area of Libya is either desert or semi-desert. Its population as of July 2013 is 6,002,347. The currency is the Libyan dinar (LYD). Libya has a small population

compared to its area. It is 108<sup>th</sup> country of the world in terms of population. It is administratively divided into 22 districts. It has yet to draft a constitution for the country. It got independence on 24th December 1951. In 1969, Col. Muammar al-Qadhafi assumed leadership. Libya faced UN sanctions in 1992. The sanctions aimed to put pressure on Libya to hand over two Libyan suspects. These two people were suspected in Lockerbie Bombing. These sanctions lifted in 2003. The sanctions were lifted when Libyan government accepted responsibility for the bombings. It agreed to payment of \$2.7 billion in compensation to relatives of those who killed in the incident (CIA, 2013, p. n.d). Following this compensation, relations with the US and EU started to normalize (EIU, 2009, p. n.d).

### **3.21.1. Key Economic Variables**

Libya's economy is primarily based on oil and petroleum sector. Two areas provide great strength to the economy of Libya. It is a fact that Libya has huge oil reserves that contribute to a major portion of its exports. Next is the fact that the population of Libya is small compared to its covered area. These two distinguishing features make Libya one of the countries in Africa with higher per capita GDPs. Libya took measures to liberalize the economy when UN sanctions lifted in the year 2003. The process initiated in the year 2003, and sanctions were completely lifted by the year 2005. After this, foreign investors started taking interest in Libyan oil and gas licensing. Libya's economy is primarily a socialist economy, and it has a long way to go to incorporate concepts of capitalism and free market economy. The country has limited growth potential in the agricultural sector due to climatic conditions and poor soils. Libya is unable to meet its food needs and imports 80% of its foods. The reliance on import for food items exhibit that Libya needs to focus on improving the size of its agricultural sector to meet the food demands of its citizens and reduce the burden on imports. The River Project is the main source of water supply for Libya known as Great Man-made river project. There are 8 major industries operating in Libya. These are petroleum, aluminium, petrochemicals, food processing, iron and steel, handicrafts, textiles, and cement. The major area of concentration is however the oil and petroleum sector, and

Libya's economy is heavily dependent on the revenues generated through exports of crude oil (CIA, 2013, p. n.d).

### **3.21.2. Economic Conditions**

In 1980s, Libya faced a major economic crisis. The main cause of this crisis was the fall of world oil prices. It was the time the oil producing countries realized that price fluctuations can drastically impact their economies as their countries are heavily dependent on oil revenues. They realized that their economies need to be diversified otherwise any major fluctuations in the oil price will have a drastic impact on their economy. It was witnessed that the economies of these countries were not sustainable and vulnerable to price variations of oil. In 1990s, the country faced another major economic shock, when UN announced sanctions on Libya following Lockerbie bombing. This was done after Libya declined involvement in this case and refused to hand over suspects for investigation. The rigid stance in this case had severe repercussions for Libya. It lost the trade of its main source of exports of oil reserves. It also resulted in restrictions of aviation services in Libya. It lost the involvement of foreign companies on its development projects. These companies were prohibited to continue its operations in Libya. The world also faced issues as the Libyan oil is of supreme quality and has high demands in European countries and America. After lifting of UN sanctions in 2003, Libya has made efforts to come out of the socialist economy and encourage foreign trade and free market. It has realized that there is a shift in the world towards deregulation and encouraging foreign investments. This resulted in increased economic growth and macroeconomic stability. Despite the decline in oil revenue, the global economic crisis in Libya in 2009 did not have much impact, with non-oil growth remaining buoyant (CountryWatch, 2013, p. n.d).

### **3.21.3. Oil Production**

Libya witnessed rapid growth for the period 2005-2007. The economic growth slowed down for the period 2008-2009. The main cause of this crisis was a decline in the production of oil due to global economic crisis. This was a period of Great Recession. It started with a liquidity crisis and began to affect the whole world. The oil production had

to reduce as the demand became low. This low demand is attributed to the decrease in the purchasing power of the people. The economic activity slows down in the period of recession and people maintain a low profile due to decrease in their purchasing power. Libya addressed this crisis by introducing a large public expenditure program. It believed that the increase in consumption will accelerate the pace of slowed economy and business activities will try to regain their momentum. This helped to reduce the impact of this crisis on non-oil growth. The oil growth affected in any case as the quota is set collectively by oil producing countries. By 2010, Libya had recovered from this crisis and the strategy of recovery proved to be successful (CountryWatch, 2013, p. n.d).

The price of oil is a major determinant of labour market in Libya. The period 1972-1982 remained positive for the labour market due to oil prices. The period 1983-1998 witnessed negative impact on the labour market. It was a period of recession in Libya. There exists a strong and long-run relationship between the price of the oil and rate of employment in Libya. The external variables, particularly economic sanctions have a negative impact on Libyan workers. The price of oil determines the pace of the economy as it is heavily dependent on export of oil revenues. If these revenues do not meet the forecast, the development programs suffer because funds are not available for them. Less economic activity results in reduced job opportunities. Hence any change in oil price and reduction in oil exports greatly affect the economy (Yahia *et al.*, 2008, pp. 1713-1719)

Crude oil is the main resource that made Libya one of the wealthiest countries of Africa. Crude oil and related petroleum products constitute more than a after that of the GDP. Libya is an exporter of other products too. These include natural gas, vegetables, fruits, cattle, and grains. However, the country is still fulfilling its demand of two-after that's of its food through imports of items. Oil wealth has a trickle-down effect when it transforms into subsidies. These subsidies are provided on gas and food. Food is the major import item of Libya. By giving subsidies on food, Libya has to allocate a significant portion of revenues to this head (CultureGrams, 2013, p. n.d).

Oil prices started falling in 1981 in the oil market of the world. The fall in oil prices severely influenced Libyan economy. Libyan oil revenues hit the lowest level by 1985. This was the time revenues had fallen to such level after the OPEC price shock in

1973. This made Libyan economy to contract, and real GDP reduced by over 14% during the year 1980 and the year 1981. This trend continued until 1986 (Mongabay, 2013, p. n.d).

This economic crisis resulted in heavy pressures on government expenditures, reduced the quantum of imports, and created debt repayment issues. These all factors combined to lower the standard of living. The decrease in oil revenues compelled the government to take corrective actions in a haphazard way. It had no financial resources to achieve its future targets. During the decade of 80s, there was strict monitoring of development projects as compared to the decade of 70s when there was easy flowing of money. The government had to select projects of a critical nature only and defer the completion of other projects for future dates. This again shows that Libya needs to diversify its economy so that one factor alone could not affect the whole structure of the economy (Mongabay, 2013, p. n.d).

The U.S. Energy Department has estimated oil reserves of Libya to be 36 billion barrels. It is greater than Nigeria and Mexico. These reserves' market value is \$1.6 trillion. Libya's oil is of very high quality, and it appeals to many U.S. companies. It flows easily and has a low quantity of sulphur. This makes the oil cost-effective for production, refinement, and transport. The return of U.S. companies is a good opportunity for Libya to boost its economy. The advanced exploration and production technologies lead to increase in oil reserves. The contribution of exports from oil is 95% of Libya's total exports. Oil exploration in Libya began 50 years ago, and by the mid- 1960s there was a rush by foreign companies for rights to drill there. Among them was Occidental, then a fledgling producer. Occidental suddenly became a major player with the discovery of several big fields, and its daily production climbed as high as 660,000 barrels a day. The Libyan government ordered Occidental and other U.S. operators to cut production and pushed for higher prices. That set the stage for a shift in power away from oil companies to oil-exporting nations and the OPEC (Peltz, J.F., 2004, p. n.d).

#### **3.21.4. Macroeconomic Analysis**

Libya is a country having a large area of land and relatively small population. It has large reserves of natural resources of oil and gas. Its main source of earning is crude

oil that amounts to a large portion of its foreign exchange earnings. Libya has a contribution of 3.2 percent in total world oil reserves. It contributes to 0.8 percent in total world natural gas reserves (World Bank, 2013, p. n.d). Since crude oil, gas and gypsum are the only sources for exports for Libya, it relies heavily on imports of goods for sustaining and improving the quality of life of its people. Libya restructured its economy through the introduction of social and economic reforms. This resulted in the increase in the contribution of the manufacturing sector in GDP. It witnessed growth from 5 % in 1970 to 15.1 % in 2005. Similarly, the reforms resulted in the increase in the contribution of the agricultural sector. The contribution was 6% in the year 1970. It became 9% in the year 2005. This percentage is still very low. However, there is limited growth potential in the agricultural sector. There is scarcity of water for irrigation. The soil is also not fertile for the cultivation of crops and Libya has to import major portion of its food items. The real Gross Domestic Product was 4380 million dollars in the year 1970. It enhanced to \$44820 million in 2005. The imports were the highest in the year 2000. They were 19.17% of the GDP. The comparison of several years is shown in the table below (Yousef, 2005, p. 3).

Table 3. 7: GDP, Imports, and the Structure of Imports

Year	GDP	Imports		Structural of imports (goods) %		
	\$ million	Value	%GDP	Capital	Material	Consumption
1970	4380	554.4	12.65	66.71	10.75	22.52
1975	12491	3534.1	28.3	74.52	8.35	17.12
1980	35880	6760.8	18.24	72.82	7.86	19.32
1985	24334	4493.4	18.46	68.43	5.63	25.12
1990	32807	5345	16.29	6815	9.18	22.67

1995	29928	4839.8	16.17	63.28	10.88	25.21
2000	32450	6223	19.17	65.33	12.28	22.39
2005	44820	7224	16.11	67.19	15.23	17.58

Source: (Yousef, 2005, p. 3)

Since Libya has to rely on imports of goods due to its reliance mainly on natural resources, the value of imports has witnessed consistent increase. Its ratio in GDP reached at the highest percentage of 28.5% in 1975. It reached 18.5% in 1980. The Libyan government imposed restrictions on imports in 1990 so that the impacts of U.N sanctions could be reduced. As a result of this measure, the imports declined. The contribution of imports reduced to 16.29% of GDP in the year 1990. This ratio further reduced to 16.17% in the year 1995. This ratio reached 16.11% in 2005. The increase in the value of imports is attributed to several factors. One factor was the increase in requirements of the local market requirements for commodities. It was also because the development plan of the Libyan government was too optimistic. The government showed its inability to produce capital goods locally. The table below mentions imports, exports, and balance of trade for several years during the period 1970 – 2005. The exports were the highest in the year 1980 that amount to \$23,138 million. Imports were the highest in the year 2005 that amount to \$8,400 million. The year of 1980 can be regarded as the best year in terms of balance of trade (Yousef, 2005, p. 4).

Table 3. 8: Exports, Imports and Balance of Trade (\$ million)

Years	Total Exports	Total Imports	Balance of Trade
1970	2357	554	+1803
1975	6960	3534	+3417
1980	23138	6800	+16338
1985	12316	4698	+7618

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1990	12332	5336	+7896
1995	9102	4882	+4220
2000	14200	7700	+6500
2005	16700	8400	+8300

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Source: (Yousef, 2005, p. 4)

### 3.21.5. Sources of Income

In the decade of 50s, Libya was regarded in the world as one of the poorest countries. In 1950, per capita annual income was about \$40. Libya’s main source of earnings was the income from the base stations. It had leased its bases to two countries; United Kingdom and United States. This revenue collected till 1970, after which bases were vacated. It was mainly this support that brought about a considerable rise in national income, characterized by an almost fourfold increase in imports between 1951 and 1957. In 1958, agriculture’s share of Libya’s gross domestic product (GDP) was estimated at only 25 per cent, the rest consisting largely of income earned in trade, construction, and service. Low agricultural income, seen against the high proportion of persons employed on the land, emphasizes the very uneven distribution of income among the different sectors of the economy. This gives a picture of how difficult the conditions would be if there was no discovery of oil reserves in Libya at that time (Bengur, 1967, p. 57). In 1959, Libya discovered the Zaltan oil field. This happened to be the turning point of Libya’s economy. The oil pipeline started operations in 1961. This led to the discovery of more oil fields in the coming years. Until 1970, Libya had reached 159.9 million tons of oil output. Its production declined since then, but the impact is diluted due to increase in oil prices. Libya is still among the leading oil producing countries in the world. Libya had discovered 12 oil fields up to the year 2002. The reserves in each oil field were approximately 1 billion barrels (Timothy *et al.*, 2007, p. n.d).

Table 3. 9: The significance of oil in the Libyan economy

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	1970	1975	1980	1985	1990	1995	2000	2007
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Oil revenues to total revenues (%)	84.6	74.2	88.7	65.9	58.0	73.9	57.3	91.1
Oil exports to total exports (%)	90.8	95.1	99.2	97.8	96.8	92.1	95.6	93.9
Oil GDP to total GDP (%)	74.4	57.3	46.9	39.3	35.1	34.2	33.8	39.8

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Source: (Ali et al., 2013)

The energy section future direction is crucial for Libya to pursue its domestic development. It is also important for the global economy. Since 1960s, when oil reserves were found in Libya, the economy is mainly dependent on the oil sector. Above table highlights the importance of oil revenues in Libyan economy. It is a main source of revenue for the government. The contribution in revenue was 73.9 percent in the year 1995. It reached 57.3 percent in the year 2000. In the year 2007, this contribution reached 91.1%. During the period from 1970 to 2007, oil exports were the major portion of total exports. For example, in 1980, oil exports were 99.2 percent of total exports, and a key portion of national income (for example 57.3% in 1975) is derived from oil production (Ali *et al.*, 2013, pp. 273-285).

### 3.21.6. Key Occupations

When Libya got independence in 1951, the main occupation of the people was agriculture or animal husbandry. In 1999, however, there was a major shift in the occupation of the people. The percentage of labour working in the agriculture sector reduced to 18%. There was merely a 5% contribution in GDP in 1999 of agriculture, forestry, and fishing (Timothy *et al.*, 2007, p. n.d).

In Libya, agricultural resources were confined to few areas only. In comparison, there are oil reserves in various parts of the country. Agricultural resources are confined in the areas near the Mediterranean Sea. There are also few resources in desert oases. The crop is not treated scientifically. Farmers were using primitive methods of production. A quarter of the agricultural land was owned by tribal area. Tribal areas were not making efficient use of the land. There was no scientific method of forecasting weather. Rain was scare, and there were unexpected rainfalls. Usually, there were heavy rains. The supply of

ground water was not adequate in agricultural areas. In some locations, the water had become salty and was not suited for irrigation. Libya lacks perennial rivers. Hence there is less likelihood of using hydroelectric power as a source of energy. The water supplies had been anticipated in the Lower Sahara at the time of independence. However, these water supplies had not yet been discovered. Agriculture though has a small contribution in government revenues, yet it provides huge employment opportunities. Shortage of water is the main hurdle for the cultivation of land. Introduction of modern techniques of farming can result in a positive impact in the near future (Mongabay, 2013, p. n.d).

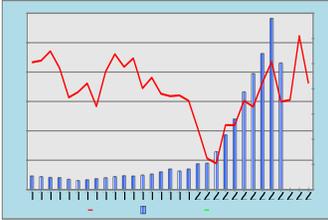
### **3.21.7. Great Man-made River**

The Great Man-made River (GMR) is a water pipeline project. It was initiated in 1984. It was estimated that this project would complete in 25 years. The GMR is designed in such a way that it carries water in the pipeline of 427 km. The pipeline will connect wells to reservoir. There are 225 underground wells and reservoirs of 3.3 million litres. This scheme aimed to provide irrigation for the cultivation of cereals. It was an effort by Libyan government to become self-sufficient in the supply of foods. The country has to spend a huge amount in imports of food to fulfil its needs. This amounts to 75% of its food needs. This big number is due to small contribution of the agricultural sector to the Libyan economy. It is estimated that GMR will cost approximately \$25 billion (Timothy *et al.*, 2007, p. n.d).

The River Project is the primary source of water supply for agriculture land in Libya. The increased demand of water has made Libya focus on desalinization research (Libya Profile, 2012, p. n.d). Oil-rich countries are now focusing to reduce their economic dependence on oil resources. This approach is taken to attain more sustainability in the economy and moving from production-based to an economy driven by knowledge. They would like to explore alternate sources of energy for meeting the needs of their future generation. It is also aimed because the world is now focusing deeply on environmental issues. It means that issues related to carbon emissions and pollution is the world's top agenda issues. Available data suggests that Libya has limited prospects for hydroelectric projects. However, there is a huge potential for solar energy

projects and wind energy projects. Libya is largely a desert area, hence solar and wind energy is natural choices to be considered (Mohamed *et al.*, 2013, pp. 732-740).

Figure 3. 1: Libya's GDP, National Currency



Data Source: IMF e-library data

The GDP fell during the years 1985 and 1986 due to decrease in the price of oil. After 1985, economic growth showed decline due to fluctuations in oil prices. In 1998, growth in GDP reduced by 3%. This is attributed to again due to low oil prices. The prices became stable in 1999–2000. As a result, export revenues increased, and Libya witnessed a rise in GDP growth. This rise was recorded as 3% in 2001 (Timothy *et al.*, 2007, p. n.d).

GDP growth accelerated during the year 2007 and the year 2008. This is attributed to increase in the production of oil and also increase in the demand locally. New oil explorations set the pace of the economy and stimulated spending from the government sectors. It also stimulated consumption in the private sector. Libya initiated several programs to attract foreign investment. It adopted foreign investment as a key

factor of the economy. New programs required imported inputs as Libya is mainly dependent on oil exports. This slowed the pace of overall expansion (EIU, 2006, p. n.d).

### 3.21.8. Inflation and Exchange Rates

Table 3. 10: Key Indicators

	2005	2006	2007	2008
Real GDP growth (%)	8.4	8.1	7.8	7.3
Consumer prices (% change)	2.7	3.1	2.3	2.1
Budget balance (% of GDP)	26.5	28.4	19.8	14.6
Merchandise exports (US\$ bn)	29.7	39.3	42	42.6
Exchange rate (LD:US\$1)	1.31	1.32	1.23	1.25

Source: (EIU, 2006)

In 2002, Libya adopted an aggressive strategy to make its firms competent. Its focus was also to attract foreign investment. It devalued the official exchange rate of the dinar by 51%. To give incentives to importers, custom duty was reduced to half. This was also done to reduce the impact of the lowering the official exchange rate of dinar (Timothy *et al.*, 2007, p. n.d). Price growth was at the average level in the year 2006. This is due to the government's efforts to give subsidies on fuel and electricity consumption. This increased the consumer price index. The strength of local demand increased the prices. The dinar is linked with drawing rights of IMF. This right management is termed as SDR. The SDR got substantial strength in the year 2007, but the year 2008 did not witness much variation (EIU, 2006, p. n.d).

### 3.21.9. Non-Libyan Workers

Libya has a good number of skilled workers of foreign origin. These workers work in Libya in days of economic prosperity. In times of economic crisis, Libya loses non-Libyan workers. Libyan authorities must devise a contingency plan for these losses on economic sectors. One such initiative might be training Libyan workers through

programs designed by government and private sector. This would replace the deficiency of skilled foreign workers. Multinational companies in Libya are also at risk of losing skilled non-Libyan workers. They should devise a strategy to face these pressures in countries, which are heavily dependent on oil reserves and have volatile economy. The economic sanctions have proved to weaken the Libyan economy significantly. Hence, the International Community and the Security Council can use it as a tool to put pressure on Libya that can prove more useful than waging war (Yahia *et al.*, 2008, pp. 1713-1719).

When Libya got independence, the literacy rate was very low. People lacked the technical and management skills. There was a huge demand of highly skilled professionals. This phenomenon continued till 1980. During this period, government aggressively spent money to training Libyan workers. However, to run the affairs of the business, it had to rely on Non-Libyan workers. Majority of the population was nomad and were not living a settled life. The birth-rate was very high that aggravated the level of poverty. The increase in population added to the problems faced. It put heavy pressures on the economy based on agriculture. The people migrated from rural areas to urban areas. However, urban areas too lacked the capacity to induct this unskilled workforce (Mongabay, 2013, p. n.d).

According to the figures, the population of foreign origin in Libya is around 350,000. Out of these 350,000, the number of male foreigners is 251,000. Tunisians have a large presence in Libya. It comes to around 80,000. In percentage, Libya has around 20% of Non-Libyan workers. These are official figures, whereas the figures otherwise suggest that the Non-Libyan workers might have reached the count of 1 million (EIU, 2009, p. n.d).

Due to unavailability of reliable information, the exact count of Non-Libyan workers is difficult to ascertain. However, it can be determined, to which countries the majority of expatriates belong to. The migrant workers are mainly from Egypt and Tunisia. Then there is workers inflow from Sub-Saharan Africa. The majority of workers from Egypt and Tunisia left Libya in 2007. It was a time when Libya changed its immigration policy. Workers from Sub-Saharan Africa willingly accept low-paid jobs. This increases the problem of domestic unemployment for native Libyan workers. This

was particularly noticed in the year 2000. At that time, there were killings of 50 Non-Libyan African workers (EIU, 2009, p. n.d).

Not all of the migrant workers come through official channels. Many reach Libya through illegal means. Many reach Libya illegally just for transit. The ultimate goal is to use Libya as a transit point to reach Europe. This type of activity is particularly seen in the case of Italy. This made Italy and European Union raise serious concerns with Libyan authorities. They asked Libya to secure its borders. They also asked Libya to end open immigration policy for African workers. Libya reached an agreement with Italy and then it exercised tight control and strict immigration policies for Non-Libyan African workers (EIU, 2009, p. n.d).

#### **3.21.10. Economic Challenges**

The Libyan economy has faced many challenges. For example, efforts to inculcate an entrepreneur culture by encouraging people to start and run their own businesses failed. It failed because of corruption and mismanagement. The UN sanctions on Libya affected its economy to a great scale. Libya was restricted in trading with other countries. It was restricted not to trade directly with Europe or the United States. This resulted in shortages of goods. It also resulted in an increase in inflation. Many Libyans had a hostile view of the countries who favoured the imposition of sanctions. The economy improved after lifting of the ban. It will take years to recover to its full. The economy is encouraging the concepts of deregulation, less governmental control, the free market, and less dependence on oil revenues (CultureGrams, 2013, p. n.d).

Despite Libya's billions of dollars worth of assets, investment products and other ventures that should deliver adequate returns and bolster oil revenues, these factors did not contribute to the development of the Libyan economy. It is true that living standards did theoretically improve as a result of oil revenues during the past four decades, but the country remained poor in terms of its infrastructure, education, healthcare and housing sectors. In light of the peculiar economic model adopted by the government, the country never developed a middle class capable of saving money that might be used to fund private enterprises. As a result, Libya lacked the distinguished businessmen who evolved throughout the oil-rich Arab Gulf countries. No privately owned companies were

established that were capable of operating in the oil or even non-oil related fields. It is well known that Libya has an oil production per day that is estimated to be around 1.6 million barrels, which, based on current prices, should result in yearly revenues of \$60 billion. Nevertheless, the rate of production is unstable, with stoppages occurring in production, exportation and refineries. All of this leads to shortages in the quantity of fuel needed for domestic consumption. The nature of the Libyan economy dictates that the government and public sector institutions increase their spending at this crucial period of social and political development following the demise of Gadhafi's regime (Al-Tamimi, 2013, p. n.d).

When Libya got independence in 1951, there were few mineral resources. They were adequate only for commercial use. Then there was the discovery of iron ore in Wadi ash Shati. The country lacked energy resources because there was no oil and coal and waterpower resources were also absent. Libya had no state-of-the-art industry with modern infrastructure. The agricultural sector also had a limited growth potential. This had reduced the power of Libya to import goods to meet the necessity of lives of its people (Mongabay, 2013, p. n.d).

There was also a lack of qualified and trained human resources. In the decade of 50s and 60s, there was a continued gap between Libya's resources and its needs. This gap was financed mainly through the assistance of the United States and Italy. This assistance was of a temporal nature, and it did not aim to put Libya on the road of self-sufficiency. In the decade of 50s, the administration of the country could not even capitalize on the potential and competence of foreign resources (Mongabay, 2013, p. n.d).

The major challenge facing Libya in the long run is to reduce the dependence of its economy on oil and petroleum sector. This is particularly important given the reduction in the international demand. In addition, it is important to address the challenge of unemployment in Libya as the less focus on the manufacturing sector and exploration of other industries lead to the reduced number of jobs available to Libyan workers. The oil and petroleum sector contribute a major portion in the overall GDP. However, it has only 2% contribution in the number of employment opportunities. Libya's oil resources also need sustained management. This would require highly skilled and quality human resources. (ADBG, 2013, p. n.d).

### **3.22. DISTRIBUTION OF INCOME**

When oil reserves discovered in Libya, it changed the whole landscape of the economy. This change was so apparent that it divided the Libyan economy into two separate divisions; one was the petroleum economy, and the other was non-petroleum economy. Petroleum companies however did not generate much employment. They hired very small numbers of local labour. However, government earned a lot in the form of royalties and revenue generated through taxes (Mongabay, 2013, p. n.d).

#### **3.22.1. Nationalization and Labialisation**

Before the military coup of 1969, the leadership style in Libya was mainly laissez-faire. The new government however adopted an authoritarian style. It adopted the policy of “Labialisation”. This was the act of replacing Non-Libyan workers in departments and firms with Libya people, departments, and firms. In 1970, the government officially announced its strategy of going towards nationalization in a progressive way (Mongabay, 2013, p. n.d).

The nationalization program took all Italian assets into national custody. It resulted in the adoption of the philosophy of socialism. State ownership was introduced particularly in the banking system and in the insurance system. In the process of Labialisation, the government aggressively directed this approach towards petroleum sector. By the year 1974, either companies had been nationalized, or there was an active share of the government in the companies. This increased the government revenues substantially. Previously government was earning only in terms of royalties and taxes. Now it was either an owner or shareholder of the company. Despite all these efforts, the very fact that the Libyan workforce lacked the competence and proficiency, the government had to rely on foreign companies for the exploration and management of the oil fields (Mongabay, 2013, p. n.d).

In 1972, Libya started following the economic model of Algeria to pursue its policy of nationalization. The main component and strategy adopted in this model was to build industrial capacity. Only then, the involvement of foreign workforce could be reduced, when the local workforce has the capacity to take up the challenge. This model had two main objectives; it focused on increasing the sources of income and reducing

reliance on oil revenues, next it focused on how the growing level of imports could be reduced by manufacturing products locally. The plan succeeded in the next objective and the level of imports reduced in the decade of 70s (Mongabay, 2013, p. n.d).

Libya has shown keen interest in reducing the rate of unemployment. In the year 2008, rate of unemployment was 20.7%. The total Libyan workforce in the year 2008 was 1.64 million. Unemployment was more in male employees, which was witnessed at the rate of 21.6%. In the women workforce, the rate of unemployment was 18.7%. In an attempt to increase Libyan workforce, Libyan government passed legislation. This law restricts foreign companies to hire at least 30% of their employees of Libyan nationality. There was another law passed. This law prohibits offshore companies to conduct businesses in Libyan markets (EIU, 2009, p. n.d).

### **3.22.2. Government Policies**

The Libya rulers have not adopted the approach of the caring attitude shown by state for its citizens. Citizens do not find themselves to own place and the sense of belongingness is missing due to this approach. The rulers believed in the authority and did little to create a soft image of their governance in the public's mind (St John, 2006, pp. 588-589).

The rulers used the famous Green Book to illustrate their myths to the people and masses. The political system lacked the participation of people and was mostly dictatorial. The core issues that Libya is facing since independence are the creation of strong institutions and participation of people in the political setup (St John, 2006, pp. 588-589).

The government always express its commitment towards reforms and concepts of free market economy. However, the efforts in this direction are very slow and will take a long time to make it happen (EIU, 2006, p. n.d).

The Qadhafi government mostly ruled in Libya under the principles of socialist economy. It has huge reserves of oil resources. However, the mismanagement of these resources and not diversifying the economy resulted in high rates of inflation. It also resulted in the increased level of imports. The overall effect was that standard of living

declined between the year 1990 and the year 2003. This was particularly evident in lower-income people of the society (Libya Profile, 2012, p. n.d)

**3.22.3. Foreign Investments**

By the time Occidental left in 1986, its Libyan fields were producing about 157,000 barrels of oil a day, 40,000 of which went to Occidental. The rest went to the Libyan government under the terms of their contract. When the companies withdrew, they and the Libyan government agreed to freeze their contracts and put production in Libya’s hands. Both sides say U.S. companies still have contractual rights to the fields they operated (Peltz, J.F., 2004, p. n.d).

Libya is a member of OPEC and is subject to voluntary production quotas set by OPEC. The cartel’s members often pump more oil than their official quotas allow, but the quotas still could limit how much crude the U.S. companies could produce. Occidental and others said Libya’s quota of 1.45 million barrels a day should rise as more oil is found. But he said U.S. companies would have to abide by the wishes of the government of Libya concerning oil production in a quota-constrained environment. Regardless of the risks, the potential for new, massive oil discoveries in Libya makes U.S. companies eager to return. With vast oil resources,

Libya is poised to become a key player in the world market. In 2003, Libya was No. 15 in production and No. 9 in reserves (Peltz, J.F., 2004, p. n.d):

Table 3. 11: Oil Production (In millions of barrels a day)

1	Russia:	9.1
2	S. Arabia:	8.7
3	U.S.:	5.6
4	Iran:	3.7
5	Mexico:	3.4
6	China:	3.4

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7	Norway:	2.9
8	UAE:	2.3
9	Canada:	2.3
10	Venezuela	2.3
11	Nigeria:	2.2
12	Kuwait:	2.1
13	Britain:	2.0
14	Brazil:	1.5
15	Libya	1.4

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Source: Peltz, J.F. (2004)

Libya continued its efforts to encourage foreign investments and free market. In the year 2007, it joined the World Trade Organization (WTO). The European Union also reduced restrictions on Libya. This was in appreciation to Libya's attempts to restrict migrants' inflow. These migrants were using Libya as a transit point to get entry to the Europe. When UN sanctions lifted from Libya, oil companies showed keen interest to expand their investments in Libyan economy. Lifting of UN sanctions was followed by lifting of sanctions by US. These sanctions were related to four areas., the prior license permission for business in Libya was lifted. Aviation restrictions between US and Libya were removed. The Libyan freeze assets were un-freeze. The import of the oil of Libya to the US companies was allowed. Libya's name was not removed from the list of states that sponsor terrorism. However, lifting of other four restrictions eased the tensions between Libya and the United States (Badcock, 2004, pp. 58-59).

European countries showed more enthusiasm in re-building relations with Libya. The UK and Italy removed the restrictions on arm sales to Libya. Also, agreements were reached relating to the issue of illegal immigration. Italy was particularly concerned about this issue (Badcock, 2004, pp. 58-59).

#### **3.22.4. Illegal Immigration**

Libya has always shown positive response in addressing the issue of illegal immigrants. In fact, this initiative created a soft corner for European Union and was a major factor in building the cooperation and signing agreements when sanctions lifted from Libya. Libya signed an agreement with Italy to prevent the flow of immigrants. Italy in this agreement needs to provide boats. These boats will be used for the purpose of patrolling in Libya to provide better security at Libyan borders (Africa Analysis, 2003, p. n.d). Libya kept its promise and started a cracked down on illegal migrants.

There was something of a *laissez faire* attitude adopted by the regime here, and there are also unsubstantiated rumours that some quite well-placed Libyans had a financial stake in the transport of illegal migrants. Many of the would-be migrants labour on construction sites and agricultural projects in Libya to earn the money to pay for the sea crossing. Others, particularly poor fellahin from Egypt, are parted from their savings by agents who ferry them into Libya. Once at sea, heading north across the Mediterranean at night, it is a relatively simple matter to avoid the regular Italian naval patrols south of Lampedusa island, between Libya and Sicily So the stress now is on stopping the migrants before they leave, giving Libya potential political leverage. Libya now not only repatriates migrants, the authorities also seize and confiscate passports so adding to the costs and difficulties of the migrants (Africa Analysis, 2003, p. n.d).

Libya did not receive much support in terms of equipment for addressing the issue of illegal immigration. Without equipment such as patrol boats, night-vision instruments, and helicopter, the objectives cannot be achieved. One after that of Libyan border is coastline, so it has an acute need of this equipment. Italy had a major effect of this illegal immigration. It was a strong contender of supplying these instruments to Libya. It said that if restrictions by European Union result in failure of reaching any joint agreement, it will alone sign the agreement with Libya. Italy finally reached agreement with Libya (Badcock, 2004, pp. 58-59).

**3.22.5. Demographic Profile**

Table 3. 12: Libya's Demographic Profile

	2003	2008	2013
Population (m)			
Total	5.7	6.3	6.9
Male	2.8	3.1	3.5
Female	2.9	3.2	3.4
Urbanisation (% of total)	86.5	88.7	90.6
Labour force (m)	1.5	1.6	1.9
Period averages			
		2004-08	2009-13
Population growth (%)		2	1.9
Labour force growth (%)		2	2.8
Crude birth rate (per 1,000)		23.2	22.8
Crude death rate (per 1,000)		4	4.3
Life expectancy at birth (years)			
Male		71.5	72.8
Female		76.1	77.5
Average		73.8	75.1

Source: (EIU, 2009)

The total population in Libya in the mid of the year 2008 was 6.29 million. Out of these 6.29 million people, 90% were Libyans. Within these 90% of Libyan people, the ratio of male people to female people were 102.6 to 100 (EIU, 2009, p. n.d).

When we compare the area of the country and the oil resources of the country, the population of Libya seems small in relation. When we compare with neighbouring countries, the population in Egypt is 76 million. The population in neighbouring Algeria is 34 million. It does not mean that there are no challenges in the demography of Libya. This challenge is present, but on a smaller level as compared to the neighbouring countries with a huge population. The Libyan population has a majority of young people. Due to the efforts of Libyan government to increase its industrial base and improve the quality of its local human resources, it is expected that workforce will grow in the future years. The population of people who are under the age of fifteen will decline because birth rates are showing a declining trend in Libya. Migration from rural to urban areas will decline compared to neighbouring countries. This is attributed to the fact that the majority of the population has already migrated to urban areas (EIU, 2009, p. n.d).

### **3.22.6. Libya's Investment Initiatives**

Libya invested in the banking sector of African countries to boost the economy of these countries. It aimed to invest in African countries to boost their economies. It also aimed to provide oil reserves to these countries at the concessionary rate to strengthen their economies. As part of this initiative, it funded two banks in Kenya. These were Sahel-Sahara Investment and Trade Bank. The investment amounted to US\$150M. Libya is the member of the Sahel-Saharan States (CENSAD). It is a community of 28 members. Kenyan joined only recently this community. The bank funded by Libya was to act as the bank for CENSAD. The choice of Kenya raised suspicions as it was a new member and Libya should have selected some other member country for this purpose. The question may be asked as to why Libya selected Kenya. This question can be answered by studying the history of relationships between Kenyan and Libya. This may be due to the fact that Libya and Kenya have strong business relationships. Kenya is the next biggest country that has foreign direct investments in Libya. The country is China. Kenya finds the environment at Libya conducive for its operations. Also, being a neighbouring

country, trade routes and trade operations are easily accessible in Libya. Libyan firms have also invested in Kenyan projects. They have taken a keen interest in foreign direct investment in Kenya. Libya also purchased a major hotel in Kenya. Libya aims to further strengthen this relationship. It aims to provide funds to the coffee industry of Kenya. Kenyan coffee is a major source of export revenues. By strengthening this industry, Libya aims to improve the economic prospects of Kenya. Libya in return will import Meat and tea from Kenya. Libya also signed an agreement with Kenya to give it oil at subsidized rates (EIU, 2008, p. n.d).

Hence it can be seen that the Libya's investments are primarily focused on East Africa. It has selected East Africa based on mutual interests. The countries of East Africa provide a good environment of investment for Libya. They also provide incentives in return that reduce the level of imports of Libya. Libya also assisted Uganda in building fuel tanks. This increased the oil reserving capacity of the country. The Libyan government invested around 500 million US dollars in Uganda. This investment spans to projects of housing, construction, banks, and hotels. Hence it can be seen that Libya is not only encouraging foreign direct investments, but it is also investing in foreign countries to aid these countries in their economic prospects (EIU, 2008, p. n.d).

### **3.23. LIBYA'S TRADE PATTERN**

The trade in Libya has a history of approaches that resulted in successes as well as failures. Traditionally, Libya has adopted for trade to build relationships with countries instead of asking for aid. Its exports are mainly directed toward oil and petroleum sector. The main imports of Libya relate to food items due to not having indigenous resources in the agriculture sector. Libya has received the economic complexity index of 119. Its major export is crude petroleum oil that contributes to 83% of exports. It imports refined petroleum oil that contributes to 15% of its imports.

Hence it can be seen that the industrial base needs to be strengthened in Libya so that oil refineries are well placed in the country and the country need not import refined oil. These would reduce the level of imports. Libya exports oil and petroleum products to many countries of the world. Its major export trade partners are Italy, France, Spain, China, and Germany. Its exports to Italy constitute 33% of total exports. This shows that

it needs to have a good and strong relationship with European Community, particularly Italy to strengthen its economic growth. Italy has reciprocated whenever Libya has made any attempt in this direction. It signed an agreement with Libya overall illegal immigrants. These immigrants were using Libya as a transit point to get entry in Italy. This agreement resulted in success and provision of latest arms and equipment to Libya by Italy. In imports, Libya's major trade partners are Italy, China, Korea, Egypt and Germany. Libya has a major import proportion with Italy and China that comes to 17% each. It again shows the importance of building strong ties with Italy and China (Atlas Media, 2013, p. n.d).

### **3.23.1. Socialist Economy**

The rulers of Libya adopted philosophies of economics and trades that resemble more to socialism than capitalism. Capitalism encourages free market economy. It lets market forces work on the basis of demand and supply. The intervention of the government as a regulatory body is discouraged. Private sector and civil society organizations are encouraged to take part in the betterment of the society. In contrast, socialism urges that the state has a nurturing role for its citizens and ensuring the well-being and goodness of people is the responsibility of the state. Market forces cannot be allowed to work at their own pace with their own desire. All major players in the market strive for gaining maximum social, political, and economic power. They use these powers to exploit the labour and do not compensate them according to their work. Hence, socialism opts for increased intervention by the state and decreasing the role of private sector.

In Libya, this phenomenon was evident. For example, the Libyan government adopted the policy of Labialisation in the year 1970. It started in the process of nationalization and strict government controls. Earlier private companies were operating their businesses and the government was getting revenues through royalty and taxes. This was much close to the philosophy of capitalism. But the policy of nationalization and strict regulatory controls affected this approach. The government had its own rationale of adopting this approach. It was of the opinion that the citizens of Libya are not getting a share in the employment.

Foreign companies are employing foreign people. The Libyan people will continue to be unskilled in this approach and Libya would not be able to pursue its efforts of diversifying its economy. It will continue to rely on oil exports for its revenues. Also, migrants from African countries were willing to accept low profile jobs at a very low salary. This created frustration in Libyan people who were finding it hard to get jobs on a competitive salary. This frustration level reached at its peak in the year 2000, when 50 Non-Libyan African workers were killed in Africa (EIU, 2009, p. n.d).

### **3.23.2 Heavy Dependence on Oil Exports**

Libya's export trade is still heavily dependent on oil reserves. After few years of independence, there was a discovery of oil reserves in Libya. This resulted in economic prosperity at that time of Libya, but the economic managers failed to take the long-term view of the scenario. During the past years, Libya and other Middle-East countries have enjoyed prosper economy due to oil reserves. However, with the overall economic advancements in the world, the reliance on energy sources is increasing. This has led researchers to opt for alternative sources of energy. There are successful experiments of using Solar Energy and Wind Energy. Also, successful attempts have been made to use coal and water as sources of energy. When adoption of these alternative sources of energy increases, the world will have less reliance on oil and petroleum as sources of energy. Also, there are serious environmental concerns noticed now. The pollution and carbon emissions associated with the use of oil as a source of energy compels organizations to use alternative sources of energy for businesses.

This trend has made Middle-Eastern countries, and Libya to focus on diversifying its economy. They will not be able to sustain their economy be relying just on the export of oil reserves. Also, now there is a strict quota management in place for selling of oil and petroleum products. OPEC countries cannot exceed their quota limits in exporting to other countries. Current economic crisis has also reduced the purchasing power and consumption of fuel. People do not consume the fuel for luxurious purposes. They consume it only on need basis. Hence, for a successful and sustained economy, Libya can no longer rely on just exporting crude oil. It needs to diversity its product portfolio.

Achieving this goal requires adopting several strategies and working on many fronts. For example, if Libya focuses on manufacturing of other goods locally, it needs qualified and trained workforce. This workforce is lacking in Libya. If it relies on foreign workforce, then the unemployment rate in the local workforce increases. Hence there is a need to select few industries that have growth potential in Libya. For example, efforts to use water as an alternative source of energy will be meaningless. Libya is a country with most area as desert. It has no rivers that could provide sufficient supply of river. It has made Man-made River meet the irrigation needs of its agriculture sector. Hence, the efforts in this direction will not result in positive indicators. However, exploration of solar energy can be a viable option. In desert areas, there is enormous availability of sunlight and this option can be explored.

### **3.23.3. Impact of Immigrants on Economy**

Libya also needs to control the flow of immigrants. These immigrants are of two types. type is of those immigrants who came in Libya through proper channels. Libya has already restricted its regulations to minimize such immigrants. However, it still has an open policy for African people. This need to be exercised with care because it ultimately affects the trade pattern of Libya. This is affected in such a way that African people get hold of jobs on low packages. Libyan citizens find it hard to compete with these people in terms of packages. As a result, unemployment increases that force the government to intervene in the market and do not allow the market to function at its own pace. When Libyan citizens do not get jobs, they do not acquire necessary skills. Hence the government continues to rely on oil reserves and unable to expand the economy through the assistance of Libyan skilled workforce. Many countries are facing recessionary pressures in the economy and building strict immigration rules so that local people could get job opportunities. Libya should follow this strategy and aggressively approach this issue.

### **3.23.4. Huge Investments in Arm Deals**

There was a time, when the world was divided into two super powers; Soviet Union and the United States. This era although did not result in any direct war between the two countries but there were many proxy wars fought. This era also is marked by an

increase in expenditures on military equipment. The countries usually allied with either of the two superpowers. They used to sign arms deals with these powers. America under the administration of President Reagan adopted the policy of supply side economics. This policy is also termed as Ergonomics. This policy aimed at increasing the supply of goods. This was achieved through reducing the regulation and role of government and reducing taxes. The supporters of this policy argue that supply creates its own demand and businesses need only focus on the supply side. When more goods will be produced, there will be

more demand of the product. This will increase the consumption and the economic activity and the society will benefit as a whole due to the trickling-down effect. This policy of America increased the size of the defence industry, and it is believed that it is this policy that led to the demise of the Soviet Union. Libya in this scenario was an ally of Soviet Union. Its closeness to the philosophy of socialism also describes this inclination. Its main military equipment is supplied by Soviet Union. It also purchased military equipment from France and Brazil. After the demise of Soviet Union, Libya relied on the provision of equipment mainly from France. In 2007, France and Libya signed an arms deal. It was worth 4.5 billion euro (Defence Industry, 2012, p. n.d). This huge investment is an example that how much expenditure is being consumed in strengthening the military base.

The recent changes in Libya have indicated that the country has more dangers from internal fronts. The internal political system and economic management need to improve. The strengthening of the economy and increase in trade would be better strengthening factors for Libya. Hence the expenditures on defence budget should be reduced, and the amount saved should be used on development projects that could generate new employment opportunities for the people of Libya.

### **3.23.5. Growth of Agriculture Sector**

Libyan economy is heavily reflected from its geographic position. Being a desert area, it has a lack of water resources. The Man-made river project is the only project that is meeting the irrigation needs of Libyan farmers. It is a blessing to Libya that as soon as it got independence, after few years there were discovery of oil reserves. Before this,

population was mostly agricultural based and living in miserable conditions. Libya was regarded as a poor country. Libya can make attempts improve its agricultural sector. However, there is limited growth potential in this area. The potential of growth in the agricultural sector is measured by two factors., how much is the fertility of soil and land? Next is the potential availability of water. Unfortunately, in both cases, Libya has not enough resources.

The land is not fertile for producing food items. Water availability is also shore due to being a desert area. It does not mean that Libya should continue to import food items that contribute to a major portion of its imports. It is not going to export food items in the near future. However, efforts must be made to increase the potential of the agriculture sector to extent the internal demands of food items could be addressed. This is possible through modernization of the agricultural sector and applying new ways and techniques of farming. This will provide a diversification effect and Libya will be able to come out of its reliance cycle to the export of crude oil and associated products.

The Man-made river should not be the only project. Although it required a huge amount of investments, but considering the growing revenues of Libya through oil reserves, it would do well to allocate resources to building of such rivers. Once the water is available sufficiently for the cultivation of crops, the next issue of soil fertility can be addressed scientifically and advanced measures could be adopted in this regard.

### **3.23.6. Impact of UN Sanctions**

Libya has twice suffered economic sanctions, and it had a devastating effect on the economy. When there are sanctions, countries do not permit companies to conduct their operations in Libya. This put pressure on Libya because it does not have local workforce for the advanced functions of oil exploration and refinement. Also, it puts barriers on its selling of crude oil. The oil of Libya is considered of very supreme quality and is a preferred choice for companies, but Libya loses this market in times of sanctions. Aviation services also get disrupted resulting in huge losses. These are all lessons for Libya to avoid such sanctions in the future to maintain its level of exports and balance of trade. This avoidance would require a cooperative and supportive role in part of Libyan government. In cases of concerns and investigation, it should cooperate with the

community of the world. Being part of the community will enhance its good will and improve its economic prosperity. In the last UN sanctions, Libya had to finally accept the allegations, and it agreed to pay compensation. Had there been a soft stance on this issue from the beginning, there would have been huge benefits for the economic well-being of the people.

Libyan sanctions affect not only Libya but also the world in general. Libyan oil is a preferred choice, and its non-availability affects the quality of products and services offered by foreign companies. Also, Libya is an entry point of illegal immigrants who wish to go to Europe, but strict rules prohibit entering directly to the territory. It has signed agreements with European countries for its resolution, but when there are sanctions, the whole spirit of cooperation and joint efforts lose its impact and the issue aggravates with the passage of time. Also, there are countries who favour one sanction or the other. This creates a wrong image in the mind of Libyan people. They think that countries are hostile with them, and they take it on a personal note. They consider the sanctions as unjust and feel that it will badly affect their quality of life. This creates a level of frustration in these people, and they realize that the rigid stance of their government is badly affecting their growth potential and living standards.

### **3.23.7. Potential of Youth**

The Libyan population has a majority of young people (EIU, 2009, p. n.d). This is a positive sign for the country as young population can significantly contribute to the growth of the economy. It has the ability to address the challenges and convert challenges into opportunities. The youth can be a major determinant of radical changes in the country outlook and give the government courage to take bold initiatives. This means that Libya can initiate development projects that aim to train these young people to become highly skilled people. There are three factors that need to be considered in this regard. Libya's greatest potential, that is oil reserves are being managed by foreign companies. The youth of Libya must learn these skills and become the drivers of the economic growth of the country. They will have to stick to low paid jobs unless they become the business partners and equip themselves to work at key positions of the corporate sector of Libya. When there is a quality human resource available locally for technical and

complex tasks of oil exploration, the foreign companies will hire these people on these key positions. Next, there is a lack of small and medium enterprises in the country and a lack of entrepreneur culture. People want to work in jobs rather than doing their own business. This is due to the fact that there are limited industries operating in Libya. These industries are of huge size. For example, oil and petroleum industry is of a large scale and do not qualify for a small business by a young entrepreneur. Hence Libya should encourage youth to explore new avenues of business. In this regard, government should initiate microfinance loans for these small entrepreneurs so that they can have some initial investment to start a new business. This can create an enormous job opportunities for the youth of Africa. The job market is highly volatile in tough economic conditions. If people have their own businesses, the chances are they will be able to face the pressures of the economic crisis. Their business along with their qualification and experience will be able to adjust to the changing environment.

In the job, person has little control over the affairs of the organization. If there is downsizing or retrenchment decided at the top executive level, one cannot do much to avoid this happening. Also, own businesses provide flexible timings suited to the needs of the individual and the person has more control over the affairs of the business. The low and high profits in various time periods provide a diversification effect and the overall effect are what is considered. This is in contrast to the job environment where the person has a fixed salary income. After that, there should be greater political stability in the country. This will encourage people to stay in the country and avoid migration. Libya has witnessed political turmoil as well as economic sanctions. The continuity of policies and an enabling environment will give a lot of confidence to the youth of Libya. Also, youth should be given voice in the parliament and important jobs so that they can raise their voice and highlight their concerns. This presence will provide them a sense of ownership, and they will feel themselves as part of the process.

Since the foreign companies in Libya mostly hire foreign people, there must be a quota of local people to safeguard the rights of youth. In the year 2008, Libyan government restricted foreign companies to hire at least 30% of people of Libyan nationality. This was an attempt in the right direction to encourage youth to take up challenging tasks. The academic institutes of Libya should also be providing relevant

professional education that could be utilized by the youth in their jobs. The role of information and communication technology is also increasing in every field. They youth should be provided ease of internet access and other technology mediums so that they could have knowledge of advanced technologies and mediums. The use of submarine cables and broadband access should be at the top priority list of Libya. This youth population will be the decision makers in the coming years. Hence they must be able to survive in the competitive world.

### **3.23.8. Lack of Institutional Framework**

One of the major weaknesses of Libya is the lack of the institutional framework. Libya does not have a constitution. It relies on the Greek Book that outlines basic parameters and principles. Most of the period, Libya has experienced autocratic leadership that has affected the process of institutionalization. Even the oil reserves are used as a tool of exercising power and influence. Libya would need to opt for either the composition of the institutional framework for the smooth trade and economics. Else, it needs to come back to the laissez-faire leadership style that was eminent before the year 1969. The government needs to work through its institutions and one person should not have so much power that cannot be challenged. The strong building of government institutions will have a positive impact on the economic outlook and trade.

On the other hand, it Libya wants to shift from the socialist economy to the capitalist economy; it needs to encourage foreign investments, private sector and the institutions of the civil society. This will enable Libya to better align itself to the community of nations. Currently, it has a very isolated image, and it needs to improve its good will. The capitalist philosophy will require more efforts from the youth of Libya because it will transform into open competition in jobs and other aspects. It means that Libyan population will have to compete with foreign workforce to earn a good living and a better quality of life. However, capitalism has the ability to enhance the skills of people through partnership and collaborations. Also, there are openings for various organizations to contribute to the economy, so the generation of employment will be much faster in this approach.

### 3.23.9. Arab Spring

The term Arab Spring introduced recently when the world witnessed revolutions in Arab countries. It started with Tunisia. The president Zine El Abedine resigned there, and new setup got hold of the government. He ruled the country for a long duration, but the events suddenly compelled him to quit the office. Then the government in Egypt was affected. The Egypt president Hosni Mubarak had to resign. He also served the country for a long duration. But the famous protest in Tahrir square compelled him to resign from the presidency. After this, Libya got affected by this new wave. The unfolding events led to the killing of the president Muammar al-Gaddafi. He also ruled Libya for a longer duration.

This revolutionary change suggests that the government has not been able to live up to the expectations of the people. The revolution has its roots in the economic problems. People want to improve their standard of living, and when they are unable to do so, they get frustrated. The role of the government is to provide an environment, where within a legal mean; everyone is allowed to strive to better economic growth. It also means that economic managers of the government should pursue a trade pattern and economic strategy that is in the best interests of the people. The competitiveness of the world is increasing day by day. A good economic manager always keeps an eye of recent happenings and adjusts the decisions accordingly. The rigid and autocratic style of government is no longer viable for the countries because one person cannot evaluate all areas of the government, no matter how much intellectual abilities he possesses. The dictatorship rule also puts a lot of stress on the strategies of the government. They have to do unnecessary favours to countries to get their acceptance of the dictatorial government. Also, if the government wants to implement any policies and procedures, it fears the reaction of the public because it is not the chosen representative of the people. The dictatorial regime also creates uncertainty in the economic environment. It is not clear how long it will govern the country. Hence major investment initiatives, particularly foreign investment initiatives cannot be undertaken because it is not evident when the policies may change as a result of the change of government.

### **3.23.10. Free Trade Zones**

In an attempt to provide a conducive environment for businesses and trade, Libya has opted for the creation of free trade zones. It will open a lot of opportunities for investments and it will also create new job opportunities. In this context, this is a good sign for the economy and the modernization and advancement of trade patterns will result through this activity. There will be dedicated trade zones and the economic activity will acquire its due pace in these zones. Also, the government will be able to provide focused incentives within trade zones to enhance the economic activity and encourage the investors. This approach has also resulted in criticism from local people. They perceive it as the occupation on their land by other people. Since Libya is a small country by population but big country by land area, they think that huge influx of people will result in converting the native people to minority and foreigners will get hold of the completed infrastructure. In the absence of regulations by the government, they will either opt for hiring foreign professionals or will offer a low salary. In both cases, there will be not much incentive for them to work in these zones. However, huge inflow of people will create social and environmental problems for them. Not only will they feel themselves in the minority, but also there will be a lot of pollution due to industrial waste. There will be noise pollution too. Apparently, these objections have not convinced the authorities. Local people have urged that this agreement was signed by the previous government, and the new government should not continue it. But the new government has stated that it will honour this commitment (FTZ, 2012, p. n.d).

### **3.23.11. Trade Relationships with European Union**

Libya's trade relations weakened after the imposition of sanctions by UN. These sanctions were lifted in 2004. Following this, US also lifted four restrictions on Libya. This lifting of restrictions by US was very important as it is generally seen that European Union follows US strategy in case of Libya. It does not prefer to deviate from the policy line of the United States and involve in controversies. The removal of restrictions by US also encouraged EU to remove trade barriers. Libya then had a free trade association with European Union. This association and adherence of the rules by Libya finally paved the way of Libya to become the member of the World Trade Organization. The association with European Union and membership of the World Trade Organization mean that Libya

is moving forward towards and institutional framework and transparency in governance. It also believes in the rule of law and a free and fair judiciary. It is also accepting and striving to conform to the international standards. This arrangement is in the benefit of both Libya and the European Union. Libya will be able to attract foreign direct investment and European Union will be able to trade with Libya for oil and gas (Maitah M. et al., 2011, pp. 50-53).

### **3.24. FOREIGN DIRECT INVESTMENT**

Oil exporting countries receive foreign investment mostly from companies that are interested in oil exploration activities in the country. Since this is a highly skilled activity, the local people cannot accomplish the task at their own, and there are high prospects of foreign investment. These countries also receive investments in infrastructure projects. Many oil-producing countries have developed mega projects of outstanding construction. These projects were mostly completed by foreign companies. Libya has adopted a strategy of both inward and outward foreign investment. It also invests abroad in almost the same proportion as it receives foreign direction investment in its territory. It has also shown openness for foreign investment. In the year 2007, Libya received foreign direct investment that amounts to 6.5% of its GDP. As a strategy of investing in the same proportion abroad, it invested 5.5% of its GDP in outward foreign direct investment. This is not exactly equal in comparison, but denotes a positive sign of encouragement by Libya of Foreign Direct Investment. This denotes that the socialist economic

Concept is being shifted to the open market and private sector initiatives are being encouraged. The investment by foreign companies also reflects that Libya has come out of the crisis that it faced during sanctions. It has regained its stature and investor confidence. Oil companies and companies involved in infrastructure development are taking interests in launching projects in Libya that will strengthen the economy of Libya (Peeters, 2010, p. 15).

### 3.24.1. Encouraging Private Sector

Libya has encouraged the role of private sector particular in the exploration of oil reserves. The private sector may describe companies that are not in the government control but based in Libya. It may also be the case that the company is not in the government control and is a foreign company. Private sector involvement in Libya is mostly of the foreign companies. The local companies have not flourished in the private sector in Libya. This can be attributed to the limited prospects available for new entrepreneurs to start their own businesses in Libya. It is also due to the fact that government regulates the private sector activities from time to time and imposes restrictions on its operations. Also, the local workforce lacks the skills of management and technical expertise.

The autocratic leadership style has not allowed strengthening of institutions. This has also affected the growth of private sector. Civil society organizations and NGOs also play a major role in the development of any country. They raise their voices of issues of public interest and complement the efforts of the government. In Libya, the presence of civil society is also not prominent. People do not have complete freedom of expression their views. The fear of negative response is a de-motivating factor for the people of Libya. The private sector must be allowed to grow in Libya. This will create a lot of employment opportunities and the Libya will be able to diversify its economy. There will be other industries that will grow in size and their contribution in the revenues of Libya will strengthen the overall economy. It is being realized in the whole world that governments alone cannot fulfil the objectives of the welfare of the people. The state has limited resources, and the private sector and the institutions of the civil society must come forward to complement the efforts of the government.

These institutions receive funding either from the government or from the donor agencies. The funding is dependent on the nature of the project. Many funding agencies in the world fund projects of the specific nature. They provide financial assistance based on the project proposal. The funded may be restricted or unrestricted. Restricted funding must be utilized in the activity heads already committed. Unrestricted funding provides greater leverage to the organization to adjust its expense heads. The increased role of private sector will create new industries for Libya and it will be able to have other goods

and services to export in addition to oil and other resources. It will also reduce the level of imports, as Libya is heavily dependent on import of foods and other materials due to the small size of the manufacturing sector outside the oil and petroleum sector.

### **3.24.2. Conflict Avoidance Strategy**

Libya has a history of addressing crisis situations during many eras. It has faced many sanctions. These sanctions had a server impact on Libyan trade and economy. In fact, the sanction always put bans on purchasing Libyan crude oil. To have sustainable economic growth and good balance of trade, Libya must adopt conflict avoidance strategy. The Middle East and Arab countries have faced many crisis situations in the past. This includes Iraq-Iran war and Gulf war. The Arab spring is the recent phenomenon. It is prudent of Libya not to take any specific position on these positions. It would be better to join hands with the Arab countries and support the joint strategy and stances.

The unique position and stances have affected Libya badly. It can avoid any future sanctions by using the collective wisdom and align its positions with the global community. The political positioning does not occur in isolation. It converts into economic outcomes. Libya is a clear example of this happening. Its hard stances have impacted its economic growth. The economic crisis and recession have already made the world a competitive place, and there is a constant struggle to have a good quality of life in these tough situations. Any mistake in adopting hard-line political position will make the situation even worse. The trade in Libya is dependent upon the good political environment and setup. The rulers and the government would do well to adopt this conflict avoidance strategy. The low profile at the political scene provides stability and consistency in the economic environment. The confidence of investors increase and they feel safe in starting new projects in the enabling environment of Libya.

### **3.24.3. Food Imports**

Libya imports 80% of its food to meet the needs of its people. This has a major impact on the level of imports. This level could be reduced by increasing the size of the agricultural sector. The scarcity of water and the fertility of soil prevent Libya to excel in

this sector. However, Libya should invest a heavy amount in research and development to explore the growth of the agricultural sector. The technology and knowledge have grown tremendously in this sector. The knowledge about new and modern ways of cultivating land may improve the growth of the agricultural sector. It would also increase opportunities for Lybian people. Currently, agricultural sector has a very small contribution in the Libyan revenues. The adoption of new and modern technology will create employment opportunities in this sector. It will also reduce the rate of migration of people from rural areas to urban areas. People will be able to earn a good living in their own areas and their tendency to move to other place will reduce. It will also lead to the development in rural areas where the infrastructure and facilities of life will improve as a result of the economic expansion.

The Libya started its history with the agricultural sector. It is only when the oil reserves were discovered, the focus shifted to the petroleum sector. If this were not the case, it would find some avenues to increase the size of the agricultural sector in any case. This should be adopted now too as the country cannot sustain in the future by relying only on oil and petroleum sector. The economic pressures and environmental issues will force the world to opt for alternative sources of energy and the demand of oil will reduce. The growth of the agricultural sector may not come to the level where Libya could export the food items. However, it may contribute to meeting the needs of local Libyan citizens. It will ease the burden of imports of food items.

The expansion of water resources is also an area of focus. Libya does not have any perennial river. However, the projects must be initiated to have water resources in the sufficient amount so as to increase production in the agricultural sector. The Man-made River will not be able to meet the needs alone, and other projects must be started too. There is a need of research and analysis in this area. Also, these projects should hire local people to reduce the unemployment rate. Foreign companies should be bound to hire a certain percentage of local workers on these projects.

### **3.24.5. Alliances and Partnerships**

Libya is a member of world trade organization. It is also member of various free trade zones. It must increase its focus in this direction. Trade alliances with other

countries will serve the mutual interests of the countries. This will also cater for the crisis situations and Libya will get assistance from these countries. Alliances also serve the purpose of strengthening the sovereignty of the country. In case of threats and crisis, partner alliance countries back the allied country and favour its stance. They support the cause of the country, and it becomes difficult to dictate the terms by other country. Libya has not done well in this regard, and it has often found itself alone in times of sanctions and crisis.

The partnership and Arab countries and the countries of the European Union will be a good strategy for Libya. The partnership with Arab countries will safeguard its interests in the oil trade. The partnership with European Union will help in addressing the issue of illegal immigrants. Most of the area of Libya is desert and highly advanced equipments are needed to prevent the flow of illegal immigrants. Italy has been very supportive in this regard. It has reached an agreement with Libya to prevent illegal immigrants. It has not only provided equipment to Libya but also provided training assistance to the Libyan people. Libya responded well and addressed the issue aggressively. It has been appreciated on this front from the European Community. This was a time when sanctions had just lifted from Libya. These initiatives helped Libya regain its glory and it accelerated the pace of normalization of relationships with the European Union countries.

#### **3.24.6. Impact of Globalization**

Globalization is a phenomenon evident in everywhere around the world. Libya must deal with this phenomenon in a cautious way. In 2008, Libya passed a law that prohibits offshore companies to conduct business in Libyan markets. This was done to provide an incentive to Libyan workers so that they get more opportunities of work. However, in the age of globalization, such restrictions will no more work. The restrictions and prohibitions do not work in a technology advanced world. People find alternate means and work around of the process. Globalization has reduced the world to a global village. The better approach now is to opt for positive re-enforcement of factors that contribute to the increase in trade and avoid negative re-enforcers. It was seen in the Arab spring that the governments tried to control and even stop the internet traffic in their

countries. But the social networking sites showed their enormous potential, and it was the time their power in bringing about the changed was witnessed in the world.

Globalization demands that Libya aligns its trade patterns with international standards. It also requires that Libya adopts best business practices and align itself to the global standards of the world. It needs to carry out business process re-engineering to modify its business processes. This will make Libya come out of isolation, and it will be able to become the honourable part of the world community. The globalization will also require Libya to ease the restriction on foreign companies. It had applied restrictions for the mandatory hiring of local people. Also, there was a restriction on offshore companies to operate in Libyan market. These restrictions defeat the essence of Globalization that believes in a free market economy and mechanisms of supply and demand to work for the regulation of the market.

### **3.24.7. Knowledge Economy and Knowledge Society**

The world is moving towards a new economic concept that is termed as a knowledge economy or knowledge society. It states that in the future, the primary drivers of the economy will not be the factors of production. The economy will be driven by the asset of knowledge and wisdom. The people having sound knowledge will rule the world, no matter how rich or poor their countries are in terms of natural and mineral resources. The knowledge will dominate in the sense that the skills and abilities of the specialized nature will be required in every field, and it would be only highly competent people that would survive in this competitive world. This has also led to the introduction of terms such as the digital revolution and digital divide. The population in the knowledge society will have a digital divide. Those who have embraced the role of the technology and adopted it in their lives will be tech-savvy or on one side of the digital revolution. Those who do not use or have access to the digital world will fall on the other side of the digital revolution. This would change the pattern of international trade and Libya should be well prepared for this phenomenon. Their youth especially should be well equipped with the latest information and communication technology trends.

The access to the internet should be provided to all people and should be considered as the basic human right. The country should have its own backbone

infrastructure and should not rely on regional backbone for the provision of internet services. The high-speed internet and improved telecommunication services will enable Libya to adopt advanced techniques in all areas of trade and businesses, and it will be able to stand in a good position in the era of the knowledge society. Also, the youth that constitutes the majority of the population of Libya should focus on expanding and enhancing their knowledge base continuously. The knowledge society requires continuous professional development and enhancement of skills. They need to realize that knowledge society will require them to compete in the domain of knowledge and the advantage due to natural resources will not be relevant in this changing context. Their mental stuff and their own qualifications will matter in such world.

#### **3.24.8. Use of Information Technology**

The role of information technology is increasing in every field of business. There is no choice left but to embrace the technology. Those people who are not embracing this technology are left behind in the society and are unable to compete with their colleagues. The adoption of the technology is a necessity not a choice. Also, the technology is updating at an accelerating pace, so one must continually update himself. It is not one time activity that everything could be learned. The learning process is a life-long process, and the latest trends and practices must be watched carefully. Libya must adopt the technology and use it in all sphere of life. It should not only focus on following the technology but also need to focus on software development and support. This is an area where software exports of many countries have contributed a lot to the revenues..

This is a potential area where Libya can excel as it does not have any limitations because of its desert area. The technology can be adopted anywhere in Libya. The only issue is the cost of broadband services. In African countries, still the cost of broadband internet is high in comparison to other countries. This is due to the lack of backbone infrastructure in the countries, and they rely on regional backbone infrastructure. Also, the use of English Language should be encouraged so that the software development could be utilized as a service for the export as well. It should not only meet the local needs, but also software products should be exported to other countries, particularly Arab countries. Also, the Arabian language is a good competitive advantage for Libya. If

software products in Arabic could be built, there would be a huge potential market for these software products in the Arab countries. The people of Libya should master both Arabic and English language to obtain the full advantage of information technology sector. This may prove to be a useful contributor in the economy as currently the exports are heavily dependent on crude oil and petroleum sector. It will serve the purpose of diversifying the portfolio of the economy. It will also provide opportunities for Libyan workers to get job opportunities as they can learn the technology and tools in Libya and implement the concepts and skills in Libyan environment.

#### **3.24.9. Focus on Finished Products**

Currently, Libya exports crude oil. It does not have the capacity to export refined products. In fact, Libya is the importer of refined oil. The country is in need of initiating development projects that aim to focus on refined and finished products. This will increase the revenues from exports as the refined products will be sold in the higher price. It will also create more employment opportunities and improve the skills of the local people. The focus of exporting refined and finished products will improve the economic prospects of Libya and the skill level and expertise of Libyan citizens will improve. It will also reduce the level of imports as currently refined, and finished products are being imported. Their availability locally will reduce the burden on imports and improve the balance of trade.

#### **3.24.10. Relationship with Countries**

Libya has strived to maintain good relationships with neighbouring countries. It has also strived to maintain relations with United States and the European Union. These relations got tensed when the sanctions were imposed on Libya. Libyan people were not happy with these sanctions, and they considered it as a threat to the state and the economy. However, when the sanctions were lifted, the relationships with the United States and the European Community became normalized. This resulted in new agreements of trade. American companies took a keen interest in agreements related to oil exploration. European Union also took interest in legislation against illegal immigrants. Libya also enjoys good relationships with Islamic and Arab countries. The

only issue is the consistency in this relationship. During the time of crisis, these relations have weakened. Now this consistency needs to be maintained so that the trade and business do not affect due to the sanctions and tensed relationship with any country.

### **3.25. INTERNAL MATTERS**

#### **3.25.1. Democratic Practices**

In most of the history, Libya has seen dictatorial rules. This has affected the image of the country, and the general perception is that principles of democracy are not well exercised in Libya. Democracy is not only the best form of government but also improves the image of the country, and it has affected on the trade and economic prospects of the country too. When people participate in the selection of the government, they feel ownership of the process. Foreign investors prefer the democratic and just environment and the democracy have a self correcting mechanism that makes it an ideal choice in the current political landscape. The democratic practices do not only mean change in leadership style.

It also means freedom of press and judiciary and the less control and regulations by the government. People must be able to raise their concerns and their voices must be heard in a democratic setup. They must be allowed to choose their representatives and the election process should repeat after a certain number of years to improve the system and processes in an evolutionary way. Democracy must be able to deliver results otherwise people choose between democratic government and the competent government. Libya needs to do a lot to improve its image in the political scenario because the dictatorial regime has made the perception that civil liberties are not at all in place in Libya.

#### **3.25.2. Quality of Education**

In order to have a competent workforce and a diversified economy, Libya must have quality and skilled human resources. This goal cannot be achieved without the existence of universities and institutes of academic excellence. Libyan people might be able to learn in foreign universities, but the proportion of people who go abroad for higher studies is not significant. Also, those who go abroad have the purpose of settling in other countries. Hence there is a dire need of having quality academic institutions locally.

This is an area that requires huge investment by Libyan government. Students in these high quality institutes will gain the skills necessary to compete in a globally competitive environment. Libyan government should not be compelled to regulate the foreign companies to hire local workforce. The Libyan workers should have such mastery of skills and have such competence that they could compete with foreign workers on open merit. This will give them a greater level of confidence. Also, it will allow the government to adopt more liberal policies in foreign direct investments. It will be able to let the market function on its own, and the requirement of regulating its affairs will be eliminated.

### **3.25.3. Monopolies and Government Controls**

The foreign investment in Libya can be enhanced by reducing monopolies and government controls. The telecommunication sector, for example, can work well if the government provides incentives and ownership of infrastructure to the vendors. Also, the oil exploration and other key business activities may work efficiently in the private sector. The provision of backbone infrastructure for broadband internet access can also be well managed in the private sector. The more control and more ownership of assets will encourage the role of private sector, and they would become active players and major contributors in the economy.

## **Chapter 4**

### **RESEARCH METHODOLOGY**

This section presents the research methodology that is followed in the thesis. The section consists of the approach and design, data type and its source, and model specifications and the statistical analysis. To achieve the specific objectives empirically, multiple equations are formulated that is estimated via different time-series statistical tools.

#### **4.1. RESEARCH APPROACH**

Research approach of this thesis is inductive in which observations from the real world are used to draw a conclusion. From specific information, general conclusion is drawn. Inductive approach of research allows for scientific research in which observations are used to identify patterns leading to innovation in the theory.

#### **4.2. RESEARCH DESIGN**

Quantitative design is employed to answer the research questions. As the research approach is inductive, results of a quantitative design are easier to generalise than that of a qualitative design. The design also allows for mathematical modelling. Hence, this empirical study use quantitative design to formulate and estimate the models described in section 1.6.

#### **4.3. DATA**

The research is a time-series analysis; therefore, the data is annual data. Economic activities have long term effects on each other, monthly or quarterly data might not capture the long term effect. This is a reason that annual data is used in the time-series analysis. Data is collected from 1963-2008. The period is chosen because in early 1960s, Libya entered into the regime of oil trade and sent the initial crude oil shipment to Europe. 2008-09 is an era of the global crisis and the reason to use data before 2009 is to exclude the effect of the global crisis on the estimates. The data is retrieved from the

sourced in nominal terms that is in current prices. Inflation deflator is used to transform the data into real terms. Hence, the data used throughout the empirical process of the research is in real prices.

#### **4.4. SOURCES OF DATA**

Most of the data used is sourced from the Libyan Central Bank, International Monetary Fund, World Bank and other internet sources that are publicly available. The Central Bank of Libya provides excellent gross domestic product or national income of Libya since 1960s. The Wall Street Journal provides the financial analysis and data reports for Libya within the same period of investigations. The census bureaus of Libya and its central statistic office provide private and public expenditure data for the Libyan economy. Economic growth data for Libya is available on a yearly basis. Data used in this study is obtained from various sources. The Central Bank of Libya has in its resources the World Development Indicator (WDI). All the data is either real or indexed. If real data is not available in real form, it is transformed from nominal to real using an indicator of inflation.

#### **4.5. DATA ANALYSIS**

Collected data is analysed through summary, descriptive, and inferential statistics. Summary statistics include graphical representation of the data. Descriptive statistics include mean and standard deviation of the variables. In this way, the researcher is able to discuss the central tendency and variation in the data. Inferential statistics is used to estimate the models, short term, and long-term associations between the indicators of trade and economic growth. Inferential statistics include the methods of time-series analysis.

#### **4.6. MODEL SPECIFICATION**

Objective 2 in the section account for the relationship between trade and economic growth. Let  $X$ ,  $M$ , and  $Y$  are the indicators of exports, imports, and economic growth of Libya. Then a linear relationship between the three variables can be represented as:

$$Y_t = f(X_t, M_t) \dots \quad (1)$$

Equation 1 is a representation of economic growth as a linear function of exports and imports. If economic growth is considered an autoregressive process (a process, which depends on the past values of itself), then equation 1 might become:

$$Y_t = f(X_t, M_t, Y_{t-1}) \quad \dots \quad (2)$$

Equations 1 and 2 can be written as regression equation as follows:

$$Y_t = \alpha_1 + \beta_{11}X_t + \beta_{12}M_t + u_{1t} \quad \dots \quad (3)$$

$$Y_t = \alpha_2 + \beta_{21}X_t + \beta_{22}M_t + \beta_{23}Y_{t-1} + u_{2t} \quad \dots \quad (4)$$

Where,  $\alpha_1$  and  $\alpha_2$  are intercept values of the indicator of economic growth in equation 3 and 4 respectively.  $\beta_{11}$  and  $\beta_{21}$  measure the effect of exports of Libya and  $\beta_{12}$  and  $\beta_{22}$  measure the effect of imports of Libya on the economic growth of the country in equation 3 and 4 respectively.  $\beta_{23}$  in equation 4 measures the effect of economic growth of Libya in the previous on economic growth of Libya in the current year.  $u_{1t}$  and  $u_{2t}$  are the error terms of the two regression equations, these error terms capture the effect of all those factors that are not included in the equations 3 and 4.  $X$  and  $M$  are measures of exports and imports; however, a single measure of trade can be used instead  $X$  and  $M$  or in addition with them. Let  $T$  be the measure of trade openness, then equation 3 and 4 becomes:

$$Y_t = \alpha_3 + \beta_{31}T_t + u_{3t} \quad \dots \quad (5)$$

$$Y_t = \alpha_4 + \beta_{41}T_t + \beta_{43}Y_{t-1} + u_{4t} \quad \dots \quad (6)$$

Objective 3 is to evaluate the importance of trade partner in the association of Libya's economic growth with trade. Let,  $P_i$  is the  $i^{\text{th}}$  trade partner of Libya. Hence, the variables introduced for equation 1 is transformed as:

$YP_i$  = Indicator of economic growth of  $i^{\text{th}}$  trade partner of Libya

$XP_i$  = Exports of Libya to  $i^{\text{th}}$  trade partner

$X-P_i$  = Total exports of Libya excluding exports to  $i^{\text{th}}$  trade partner

$P_iX$  = Total exports of  $i^{\text{th}}$  trade partner of Italy

$MP_i$  = Imports of Libya from  $i^{\text{th}}$  trade partner

$O$  = Oil price

Autoregressive regression equation 4 can be transformed as follows:

$$Y_t = \alpha_5 + \beta_{51}XP_{it} + \beta_{52}X-P_{it} + \beta_{53}Y_{t-1} + u_{5t} \quad \dots \quad (7)$$

In equation 7, exports of Libya excluding Libyan exports to the  $i^{\text{th}}$  trading partner is taken as an endogenous variable and the regression equation for this variable can be presented as:

$$X-P_{it} = \alpha_6 + \beta_{61} O_t + \beta_{62} YP_{it} + u_{6t} \quad \dots \quad (8)$$

Economic growth of the  $i^{\text{th}}$  trading partner is another endogenous variable in equation 8 whose regression equation can be written as:

$$YP_{it} = \alpha_7 + \beta_{71} P_i X_t + \beta_{72} MP_{it} + \beta_{73} YP_{it-1} + u_{7t} \quad \dots \quad (9)$$

In equation 9,  $\beta_{72}$  measures the dependence of  $i^{\text{th}}$  trade partner of Libya on trade with Libya. Imports of Libya from the  $i^{\text{th}}$  partner are subject to the economic condition of Libya and its regression equation become:

$$MP_{it} = \alpha_8 + \beta_{81} Y_t + \beta_{82} MP_{it-1} + u_{8t} \quad \dots \quad (10)$$

Thus, a system of simultaneous is formed consisting of four equations (equation 7 to 10). Objective 3 is achieved via estimation of these simultaneous equations. Objective 4 is to analyse the import demand in Libya. In spite of the vast literature available internationally, there is limited literature applied to the Libyan economy on this topic. Use of studies from the Caribbean countries on the relationship between economic growth and import demand such as the Gaffer (1988), and Gaffer (1995), will be relied on while developing the demand function that will be used in analysing the situation in Libya. The study examines the responsiveness of economic growth to changes in the import levels of Libya economy, to see if this is related to its level of development.

The study assumes that imports can add the impetus to economic growth if import productivity increases. The dynamic relationship in the import demand function would be examined using econometric model provided here. The income elasticity of imports is estimated for the period 1962 to 2008 with respect to *GDP* and the elasticity results are compared to the level of economic development attained in 2008. Thus, the study examines the link between the current level of development and import elasticity based on historical import demand.

In the existing literature on import demand, the import demand function is most commonly estimated as:

$$M=f(P_d, P_f, Y) \quad \dots \quad (11)$$

Where:

$M$  = Quantity of the import commodity

$P_f$  = Price of Imports

$P_d$  = Price of domestic products

$Y$  = Income

The specification of the import demand equation is based on the conventional demand theory obtained from neoclassical economy and the income as suggested by the Keynesian view. A key assumption also made in most of the studies is the assumption of imperfect substitution, that is, it is assumed that neither imports nor exports are perfect substitutes for domestic goods of the countries under consideration, (Dutta and Ahmed, 2006). Import demand in Libya can be represented as following linear function:

$$M_t = f(Y_t, PR_t) \quad \dots \quad (12)$$

Where,  $PR$  is the price ratio or relative price measured as the ratio of import price ( $P_f$ ) to domestic price ( $P_d$ ) of Libya. An autoregressive function of equation 11 can be written as:

$$M_t = f(Y_t, PR_t, M_{t-1}) \quad \dots \quad (13)$$

Regression equation of the function in equation 12 is:

$$M_t = \alpha_0 + \beta_{01} Y_t + \beta_{02} PR_t + \beta_{03} M_{t-1} + u_{0t} \quad \dots \quad (14)$$

Where,  $\alpha_0$  is the intercept of Libya's import,  $\beta_{01}$  measures the effect of Libya's economic growth on imports.  $\beta_{02}$  measures the effect of price ratio on Libya's imports.  $\beta_{03}$  measures the effect of Libya's imports in the previous year on Libya's imports in the current year.  $u_{0t}$  captures the effect of all those factors that affect Libya's import but are not included in equation 14.

Objective 5 is the last objective to be achieved via empirical analysis. The study utilises import demand function model for Libya with consumption expenditure as the sum of government and domestic expenditure. Relative prices and other components like exports and investment is included in the econometric model. Arguments from other studies such as the Chani *et al.* (2011) support this theoretical framework with Giovannetti (1989) argument that government expenditure and household consumption expenditure have different import contents. Tang (2003) also proposes that time trend should be included in import demand function to represent the role of taste and habits in

the import demand function. For objective 5, the function in equation 12 can be extended as:

$$M_t = f(C_t, G_t, I_t, X_t, PR_t) \quad \dots \quad (15)$$

Where,

$C$  = Household consumption expenditure of Libya

$G$  = Government consumption expenditure of Libya

$I$  = Total investment of Libya

Regression equation of function in equation 14 is:

$$M_t = \alpha_{10} + \beta_{101} C_t + \beta_{102} G_t + \beta_{103} I_t + \beta_{104} X_t + \beta_{105} PR_t + u_{10t} \quad \dots \quad (16)$$

In this section, all the models required in the objectives and the equations required for sub-objectives have been introduced. Different statistical methods are employed in the thesis for the estimation of the above equations.

#### 4.7. STATISTICAL METHOD

This section describes the statistical method that is used in the thesis. The section also discusses the test statistics of each inferential method.

##### 4.7.1. Descriptive Statistics

Mean and standard deviation is calculated of the collected data. Value of mean does not only depict the central tendency of the collected data but it also helps in comparing the data collection of this research with that collected in the empirical literature reviewed. Standard deviation depicts the variation in the collected data and its spread around the mean.

##### 4.7.2. Pearson’s Correlation

Correlation coefficient represents the degree to which the trends of two variables are related to each other. The coefficient takes values between -1 and 1, the more it is closer to -1 or 1; stronger is the correlation between the variables. Let  $A$  and  $B$  be two time-series variables, Pearson correlation between the two variables can be represented as:

$$r = \frac{\sum_{i=1}^n (A_i - \bar{A})(B_i - \bar{B})}{(n-1)S_A S_B} \quad \dots \quad (17)$$

Where,  $\bar{A}$  and  $\bar{B}$  are the mean values of  $A$  and  $B$  and  $S_A$  and  $S_B$  are the standard deviations of  $A$  and  $B$ . Calculation of the correlation coefficient between the pairs of the variables is done via software packages and a correlation matrix consisting variables of each model equation is obtained.

When faced with more than two variables, economists or researchers arrange the correlation between each pair into a matrix. There is caution of over interpreting correlation coefficients (Caner and Kilian, 2001). Correlation does not mean causation. Another problem associated with correlation coefficients is in the way data is collected. Narrow and restricted data always give a deflated correlation. It is good to always look for an explanation of correction as many instances correlation are explained by a third variable (Caner and Kilian, 2001).

It is to note that correlation only depicts a relationship, not the effect of one variable over other. Mostly a regression is the simplest method to determine the effect of one or more independent series on a dependent time series variable. If the variables that are used in a statistical test are not stationary, that is if they contain a unit root, then the relationship obtained through regression might be spurious. To avoid this problem series is tested to become stationary at initial difference form or changed difference form through Dickey Fuller (DF) or Augmented Dickey Fuller (ADF) test.

**4.7.3. Augmented Dickey Fuller test (Test of stationary series)**

We perform a unit root test on each variable in our model using the Augmented Dickey- Fuller (ADF) test. ADF test is applied on each time series. Let  $A_t$  be a time series, and then following hypothesis can be formulated to test the existence of unit root in  $Y_t$ .

$$\Delta A_t = \alpha + \gamma t + \beta A_{t-1} - \theta_1 \Delta A_{t-1} + \mu_t \quad \dots \quad (18)$$

$$H_0: (\alpha, \gamma, \beta) = (\alpha, 0, 0) \dots v \dots H_1: (\alpha, \gamma, \beta) \neq (\alpha, 0, 0)$$

The joint hypothesis  $\gamma = \beta = 0$  is tested performing F-test. If the null hypothesis is not rejected, the next step is the test  $\beta = 0$  using t-statistics. Following is the estimation equation,

$$\Delta A_t = \alpha + \beta A_{t-1} - \theta_1 \Delta A_{t-1} + \mu_t \quad \dots \quad (19)$$

$$H_0: (\alpha, \beta) = (0, 0); H_1: (\alpha, \beta) \neq (0, 0)$$

Rejection of  $H_0$  requires that series contain a unit root and should contain a drift term. The above-described form uses the values of  $Y$  and hence it is called the level form. If  $Y$  is replaced by its initial difference or changed difference with evidence of unit roots, the series are said to be integrated of order one – I (1), meaning that they must be modelled in first difference ( $\Delta A_t = A_t - A_{t-1}$ ) to make them stationary. A time series is stationary if it does not change overtime, which implies that its values have constant variability. This enables us to avoid the problems of spurious regressions that are associated with non-stationary time series models.

After the confirmation that unit root vanishes at first difference form or second difference form, the series are used to find out long-run relationship. As a non-stationary series, even if not related in the short run, may be related in the long run to the other series. By the short run or long run, it is meant that for annual time series, the complete effect of independent variables on the dependent variable can occur within one year or in more than one year respectively. Johansen's Co integration Test is used to determine the long-run relationship between the variables.

#### 4.7.4. Johansen's Co integration Test

After testing for unit roots, we proceed to test for co integration (long run relationship between variables). This study uses Johansen and Juselius's (1990) definition of co integration. Johansen's co integration procedure was used to test for the possibility of at least one cointegrating vector between variables in the models. Co integration between two series depicts existence of a significant relationship between two variables. Though Ordinary Least Square (OLS) method also does the same, co integration is useful where the series are non-stationary at level form while OLS estimates are spurious in situation. Let  $A$  and  $B$  be two non-stationary time series such that their difference with lagged term is stationary. Co integration test for the two series require estimation of the following regression equation via OLS:

$$A_t = \alpha + \beta B_t + \mu_t \quad \dots \quad (20)$$

Where,  $\mu$  is the residual term. If  $\mu$  is stationary, then  $A$  and  $B$  are cointegrated. For this purpose, ADF test is employed on the residual term. Remember that in OLS, residual

terms are assumed to be white noise, that is their mean is zero and variance is constant. Mathematically,

$$E(\mu) = 0,$$

$$Var(\mu) = \sigma$$

Also, the error terms are assumed to follow a normal distribution. Symbolically,

$$\mu \sim N(0, \sigma)$$

Therefore, t-statistics is not appropriate as it uses the values of mean and standard deviation. Software packages contain a built-in program to test co integration using Trace statistics and Max Eigen statistics. To enhance further clarification of the change in the dependent variable, Vector Error Correction Model is useful.

**4.7.5. Vector Error Correction Model (VECM)**

Once it is confirmed that the dependent variable is affected by the independent variables in the long run, the changes that occur in the dependent variable in the short run as well as in the long run can be determined by VECM. The result of a VECM depicts whether the dependent variable is above the equilibrium level or below the equilibrium-level and how much of the equilibrium level is achieved in one year. By equilibrium level, it is meant that the value of dependent variable include the complete effect of the independent variable. In this way, it can be described that how much time is required for a time series variable to adjust in the long run. Let *A* and *B* are two time-series with co integration between them tested via following co integration equations:

$$A_t = \alpha + \beta B_t + EA_t \quad \dots \quad (21)$$

$$B_t = \theta + \lambda A_t + EB_t \quad \dots \quad (22)$$

Where,  $\alpha$  and  $\theta$  are intercept values of *A* and *B* respectively.  $\beta$  is the effect of *B* on *A* and  $\lambda$  is the effect of *A* on *B*. *EA* and *EB* are the error term of equations 21 and 22 respectively. Equation 21 and 22 together form a model whose Vector Error Correction Model (VECM) is as follows consisting of two equations:

$$\Delta A_t = \varphi + \psi_1 \Delta B_{t-1} + \psi_2 EA_{t-1} + \mu_t \quad \dots \quad (23)$$

$$\Delta B_t = \theta + \lambda_1 \Delta A_{t-1} + \lambda_2 EB_{t-1} + v_t \quad \dots \quad (24)$$

The symbol  $\Delta$  represents the difference of the corresponding variable from its lagged value.  $\varphi$  and  $\theta$  are the intercept values of  $\Delta A$  and  $\Delta B$  respectively.  $\psi_1$  is the effect

of the change in  $B$  in the previous year on the change in  $A$  in the current year and  $\lambda_1$  is the effect of the change in  $A$  in the previous year on the change in  $B$  in the current year.  $EA_{t-1}$  and  $EB_{t-1}$  are the lagged values of the error terms in equation 19 and 20 respectively. They are called error correction terms with coefficients  $\psi_2$  and  $\lambda_2$ . According to Robinson (1992), “the error correction term captures the long run relationship, short run dynamics is provided by the lagged values of the difference terms”. Using these methods of investigation enables the researcher to prove causality advanced by the granger causality test. The test uses the t statistics and F statistics to test the lagged values of each explanatory variables being investigated. In order to accept the null hypothesis, t-test for the lagged error correction coefficients is to be statistically significant for long term due to the bidirectional causation between the variables (Caner and Kilian, 2001). A significant coefficient of the error correction term implies disequilibrium in the value of the dependent variables. If  $\psi_2$  has a negative sign, it implies  $A$  is below the equilibrium level, and a positive sign implies that  $A$  is above the equilibrium level. The magnitude of  $\psi_2$  shows how much of the value of  $A$  is adjusted in one year towards the equilibrium level. Similar association is defined between  $\lambda_2$  and  $B$ .

**4.7.6. Two Stage Least Square (TSLS) Method**

Two-stage least square (TSLS) is a special case of instrumental variables regression. As the name suggests, there are two distinct stages in two-stage least squares. In the first stage, TSLS finds the portions of the endogenous and exogenous variables that can be attributed to the instruments. This stage involves estimating an OLS regression of each variable in the model on the set of instruments. The second stage is a regression of the original equation, with all of the variables replaced by the fitted values from the first-stage regressions. The coefficients of this regression are the TSLS estimates (Eviews 6 User’s Guide). TSLS is used to estimate the following system of simultaneous equations.

$$\left\{ \begin{array}{l} Y_t = \alpha_5 + \beta_{51} XP_{it} + \beta_{52} X-P_{it} + \beta_{53} Y_{t-1} + u_{5t} \\ X-P_{it} = \alpha_6 + \beta_{61} O_t + \beta_{62} YP_{it} + u_{6t} \\ YP_{it} = \alpha_7 + \beta_{71} P_iX_t + \beta_{72} MP_{it} + \beta_{73} YP_{it-1} + u_{7t} \\ MP_{it} = \alpha_8 + \beta_{81} Y_t + \beta_{82} MP_{it-1} + u_{8t} \end{array} \right\} \dots \quad (a)$$

## Chapter 5

# EXPORT LED ECONOMIC GROWTH IN LIBYA, 1963-2008: AN EMPIRICAL ANALYSIS

### 5.1. INTRODUCTION

Libya is one of the middle-income countries in Africa that has for decades been using foreign trade as a vehicle of economic growth, as opposed to many other countries that have been using foreign aid for the same purpose. Foreign trade favours different types of exports and import that leads to different outcomes of economic growth. Libya, being a desert country cannot rely on primary goods to spur its economy. Primary goods are regarded as agricultural products, and other raw material and economic growth based on these products is regarded as primary-export led growth (Ashley, 1988). For many countries in Africa, reliance on exports of raw materials and food remains principles means by which they generate resources, for economic growth. However, Libya cannot depend on this primary exports as a vehicle of economic development.

For Libya to increase the quality of life of its citizens, GDP and GDP's socially acceptable distribution has to be achieved through macroeconomic policies. There are different approaches that this target can be achieved through, of which promotion of exports is one. In particular, in the post-1980 period, with the motivation provided by the Washington Consensus, economist and researchers are concerned with how promotion of exports may lead to higher economic growth and vice-versa (Berndt, 1991). Literature indicates that there are two hypotheses to this argument: one group of economist favours the export led economic growth while others are in favours of growth driven export hypotheses.

Though most of the existing evidence indicates that the relationship between economic growth and exports is bi-directional, the research presented in this chapter is concerned with export lead hypothesis in the case of Libya. The chapter attempts to investigate whether Libya's export has lead to the observed state of economic growth in the country. Therefore, the chapter does not deal directly with policies of export promotion such as subsidies and exchange rate depreciation. The bi-directional

relationship between export and economic growth in many instances has been blamed for the indecision of many policy makers and researchers in developing countries. Governments are caught between open economies that promote international trade and concentrating on economic activities that would lead to higher international trade. To evidence this, it should be noted that the, rapid growth observed in China, and India is largely because of expansion of their exports. The successes witnessed in these two countries are because of open economies and access to technology through globalization of their economies. Export from a country leads the country to access international markets, which in turn demands increased production and efficient allocation of resources (Phillips and Perron, 1998). Thus, trade invariably contributes to economic growth by way of generating long-term gains. Therefore, Libya is an interesting case study of export lead economic growth relationship.

The aim of this chapter is to examine the nexus between exports and economic growth in Libya through time-series analysis. The study investigates how exports have lead to the overall economic development in Libya, indicating a higher bias on export lead economic growth hypotheses. The chapter is divided into four sections. The first section is an introduction of the chapter, the second section presents identification of economic growth and trade indicators, the third section presents the empirical results of research objective 2, and the fourth section concludes the chapter.

## **5.2. INDICATOR OF ECONOMIC GROWTH**

GDP is the ever-controversial icon from the statistics world. It ignores values like the environment and social cohesion, it measures growth, but not destruction, and it measures income, but not equality. Yet most people including businesses and governments swear by it. Value of goods and services produced in a country is subject to the statistics, which are not easy to gather. Moreover, many undocumented parts of the economy, such as the black market, make the calculations further difficult. Calculation of GDP is a sophisticated procedure that must have the ability to include each and every value addition in the accounts from as small as a service of hair cut to as large as the production of aeroplanes. Each component is measured in terms of relative price in GDP.

### 5.3. INDICATORS OF TRADE

#### 5.3.1. Exports and Imports

Exports and imports of a country are separately used as indicators of trade. Libya international trade was highly limited to few goods prior to 1961 due to shortages in foreign earning exchanges. The levels of goods and service imported and exported from Libya was not high before the discovery of the crude oil in the country. Volume of international trade was as low as \$178 million US dollar in 1960 and translated to \$2933 billion dollars by 1970. This was affected by the low level of human capital and other economic weakness in the economy. An increase in exportation of Libya crude oil to European countries in and establishment of the first ship part in 1961 was a turning point to the country's international trade. The port aided the country in shipping large quantities of crude oil to European countries (Giovannetti, 1989).

The average value in 1970-2008 was about 11820\$ million while the growth rate during that period is approximately equal to the rate of growth of exports during the same period, which amounted to 28.2%. This was ranging between the highest rate in 1974, which rose to 89%, and lowest in 1975, which fell to - 5%, coinciding with the rate of export growth, which confirms the that foreign trade growth rate effected by export growth. This was due to the oil boom and the economic recovery experienced by the country during this period, which was caused by the high revenues of oil exports. This led to the rise in the value of exports, and its impact on the rising value of imports from consumer and capital goods needed for development programs in that period (Shaltout, 1987).

The last decade in the 20th century had many of turmoil in the global economy. This in turn negatively affected developing countries. It was at one time described as lost decade for developing countries, due to the accumulation of external debt with a very high international interest rates, and deterioration in terms of trade exchange. Technological progress in advanced countries led to deterioration of demand for raw materials. This period witnessed a decline in the rates of growth of international trade as a reaction to the low rate of growth in the value of exports and imports as shown by the decline in the value of foreign trade of 23953 million Dinar in 1981 to million 16415 in 1985, and continued to fall to 12541 billion in 1988. The average value during the period

was 16747 million; the rate of growth of foreign trade during that period fell to – 9% in Libya.

In this period, the value of foreign trade in each year was lower from the previous year; the rate of growth in 1981 was about - 16.6% and - 5% and – 5 % in 1985 and 1988 respectively. This was due to the decline of exports caused by the low oil prices, which was caused by the global economic crisis. To counteract these effects of economic crisis, Libyan policy makers followed the policy of austerity (Dakhil, and Yousef, 2002)). The policy was aimed at influencing on the value of imports. All these factors influenced negatively on the value of foreign trade and Libya's growth rate during that period.

In the period 1989-2003, in response to fluctuations evident during that period in the value of exports and imports, the value of foreign trade fluctuated, with a general trend of the value of foreign trade rising to 18591 million in 1990, which was 12957 million in 1989, then drops to \$16597 million in 1991. This trend continued between high and low on average of \$14614 million, it end at \$15393 million in 2002. The fluctuation was due to the non- stability of external and internal political and economic factors at the time. Most of it emanating from economic embargo imposed on Libya during the period as well as entry of the private sector in various economic fields, in addition to other reasons mentioned in earlier.

There has been considerable development in the value of international trade since the embargo was lifted. This period synchronize with the suspension of economic sanctions imposed on Libya, which led to the recovery of both exports and imports. Exports during this period reached 28%, the imports growth rate was 35 % leading to an increase in the rate of growth value of international trade during the same period to 30.8 % and its ratio between 29 %, 34% and 56% during the years 2003, 2005 and 2008 respectively. The value of foreign trade rose from 19902\$ million in 2002 to 34994\$ million in 2005, and continues to rise to 76042 \$ million in 2008.

### **5.3.2. Trade Balance**

The trade balance is an important indicator in measuring the strength of the economy, which sheds light on its economic situation. The trade balance recorded surplus continuously during the period 1963- 2001. The value of total exports was always greater than the value of total imports for all uses in Libya. The trade balance reflects the

evolution of the value of exports and imports. It represents the difference between the value of exports and imports. The beginning of oil exports in 1961 was turning point in the value of the balance of trade. Libyan exports have changed from trade balance deficit to trade balance surplus. According to Arab Jamahiriya report (2003), during the period 1963 – 2008, balance of trade did not achieve a deficit in any year. This was due to the high value of exports over imports, which managed to cover expenditure on imports.

The period in 1970-1980 trade balance achieved high surplus rates. It increased from \$1825 million in 1970 up to \$5497 million in 1974. The average value of the trade surplus for the period was \$5624 million, and the growth rate for that period was 34%. This high growth in the value of the trade surplus was because of the rising oil export revenues, resulting from the rise in quantity produced and exported. In addition to the sharp rise in oil prices which were being experienced during this period. This resulted in a remarkable increase in the value of the trade surplus. The period of 1981-1988 witnessed a decline in the value of the trade surplus comparing to the previous period as a reaction to the decline of exports. The trade surplus declined to \$7189 million in 1981 and to \$ 4926 million in 1984. The average value of the trade surplus during this period was \$4954 million. This decline was due to lower revenues from oil exports, especially sharp fall in 1986s that resulted from the economic recession in some industrialized countries (Harberger, 1953).

### **5.3.3. Trade Openness**

Libyan economy is characterized by a high degree of openness to the rest of the world. This is in comparison to other developing countries and to developed countries. The country's source of the revenues is in exports, which is expected to finance the economic growth process, and public budget. The imports to Libya contain huge share of capital goods needed for Libyan economy to continue its growth process, but also the imports to Libya, being desert country, Libya imports a numbers of consumers' goods to cover the shortage of domestic supply. The country's expansion of the domestic market is highly affected by some factors such as, the increase of population, growth of oil revenues and increase in public expenditure. These and other factors are the reasons importation has continued to increase. The increase of oil revenues has continued to

cause wider spending on economic growth, particularly with the rise of personal incomes. Increased purchasing power has continued to increase demand on capital and consumer goods from international markets (Vandewalle, 2006).

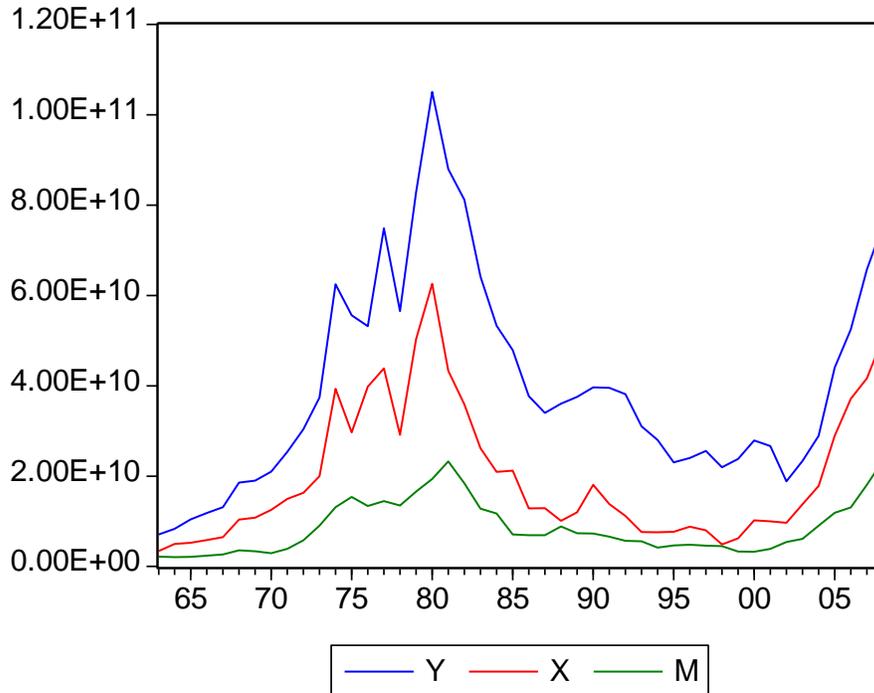
There are marked levels of openness, which will lead to more increases in economic growth in a short run basis. This argument is supported by the knowledge of resource allocation in the economy and further improvements of the relationships between exports and imports to the general economic growth. Further, this argument of economic openness supports positive impacts on economic growth on a long run basis (Whalley, 1998). Therefore, Libyan economic policies of openness would ultimately support economic growth on both short and long run.

For developing countries like Libya, opening up of their economy to international trade increases their level of exposure to international goods and services, which in turn increases their economic growth. Further importation of production technologies, institution management and consumption behaviour from the international community's helps the country to import more and increase it domestic production to meet the domestic demand. This further leads to more economic growth. The chapter will use the ratios of international trade to the country's (GDP) as a reflection of international trade in the domestic market together with ratios of imports to GDP as a reflection of domestic demand surplus from capital and consumer goods covered by importation from international trade (Vandewalle, 2006).

#### **5.4. EMPIRICAL RESULTS**

This section presents the results of the empirical estimation. As an indicator of trade, data on Libya's total annual export and total annual imports from 1963 to 2008 is collected. GDP of Libya is taken as the indicator of economic growth. Following figure illustrates line graph of the three variables.

Figure 5 1: Graph of GDP, Exports, and Imports of Libya for 1963-2008



In the above figure, graph of Libya’s export, import, and economic growth followed a similar pattern from 1960s to 1980s. The three variables show a drastic increase in their values after 1970. The level of Libya’s export, import, and GDP remained high, with fluctuations, till 1980. After 1980, the three variables declined with a high rate until 1985 and then with low rate until 2000. After 2000, values of the three variables start to increase, reaching at the level of that in 1975. Exports of Libya remained higher throughout the period 1963-2008 but the gap between exports and imports start to reduce after 1985 until 1988. Little changes are observed in imports and the reason of reduced the gap between imports and exports is the decline in Libya’s exports. Libya has an average annual GDP of \$39.8 billion in the period 1963-2008. In the same period, average annual value of Libya’s exports and imports is \$19.9 billion and \$ 8.58 billion respectively. Maximum GDP of Libya is observed to be \$105 billion in 1980, soon after Gaddafi took charge in 1970. Minimum GDP of Libya during 1963 and 2008 is observed to be \$7.11 billion in 1963. That was the time when Oil field and Oil terminal operations started in Libya and lasted till 1966. Exports and imports of Libya reached the maximum level of \$62.6 billion in 1980 and \$23.5 billion in 2008

respectively. Imports of Libya are at an increasing trend this is one reason that the highest level of exports during 1963-2008 is observed in 2008.

In section 4.7.3, Augmented Dickey Fuller test is introduced to test stationary series. The test is applied here on GDP, exports, and imports. Following table summarises the result of ADF test.

Table 5. 1: Intermediate ADF Test Results Series: Y, X, M

Series	Level Form		First Difference Form	
	Prob.	Unit Root	Prob.	Unit Root
Y	0.5746	Yes	0.0000	No
X	0.6478	Yes	0.0000	No
M	0.6428	Yes	0.0089	No

First, ADF test is employed on the data at level form (without taking any difference) and p-values of the test statistics is calculated to be greater than 0.1 for each of the series of GDP, exports and imports. This shows that there exists unit root in the three series and the series are non-stationary. Then, ADF test is applied on the first difference (current value subtracted from the previous value) of the series. At first different form, p-value of the each of the series of GDP, exports and imports is less than 0.01. This implies that, there is no unit root in the series at first difference form and at first difference form, the three series are stationary. As the series, are stationary at difference form, co integration among the variables can be tested. Johansen co integration is tested using Trace and Max Eigen statistics. Following are the output of the co integration test.

Table 5. 2: Unrestricted Co integration Rank Test (Trace) Series: Y, X, M

Hypothesized	Eigen value	Trace	0.05	Prob.
No. of CE(s)		Statistic	Critical Value	
None*	0.345285	31.82515	29.79707	0.0288

<b>Atmost1</b>	0.206660	13.18871	15.49471	0.1081
<b>Atmost2</b>	0.065964	3.002559	3.841466	0.0831

Table 5. 3: Unrestricted Co integration Rank Test (Maximum Eigenvalue) Series: Y, X, M

<b>Hypothesized</b>	<b>Eigen value</b>	<b>Trace</b>	<b>0.05</b>	<b>Prob.</b>
<b>No. of CE(s)</b>		<b>Statistic</b>	<b>Critical Value</b>	
<b>None*</b>	0.345285	18.63644	21.13162	0.1078
<b>Atmost1</b>	0.206660	10.18615	14.26460	0.2000
<b>Atmost2</b>	0.065964	3.002559	3.841466	0.0831

According to the results of co integration test using trace statistics, the hypothesis of no-co integration is rejected while the hypothesis of at most one co integration is not rejected. This suggests that there exist one co integration relationship among the three series. However, the result of co integration test using Max Eigen statistics shows that the hypothesis of no co integration is not rejected as the Eigen value is less than the critical value. Therefore, there is no co integration among the variables. This result is same as that found by Abou-Stait (2005) for the case of Egypt. No co integration among Libya’s GDP, exports, and imports shows that although the difference of these series with previous values is stationary, there is not linear relationship among them in the long run. To evaluate the effect of Libya’s export and import on the country’s GDP, a regression model is developed in Chapter 4. Following is the output of the regression equation 3. The coefficients are estimated suing OLS method.

Table 5. 4: OLS Estimation of Regression Equation 3

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
<b>Constant</b>	8.17E+09	1.86E+09	4.389320	0.0001
<b>X</b>	0.727310	0.186961	3.890163	0.0003

<b>M</b>	2.000474	0.479996	4.167686	0.0001
<b>R-squared</b>	0.912119	<b>F-statistic</b>	223.1481	
<b>Adjusted R-squared</b>	0.908031	<b>Prob(F-statistic)</b>	0.000000	

Model in equation 3 is a significant model as F-statistics is 223.14 with p-value less than 0.001. R-squared and adjusted R-squared are also greater than 0.9 showing that exports and imports can be used to predict Libya’s GDP. Effect of exports on GDP is positive and significant as t-statistic is 3.89 with p-value less than 0.001. This result is consistent with the findings of Lee (1981:85) that economic growth is contributed positively by exports through the following processes: facilitation of the exploitations of economy of scale especially for small and open economies, increases in imports of goods and services used in production of finished goods, and binding foreign exchange limitations that enhance importation of capital goods. In addition, the effect of imports on GDP is positive and significant with t-statistic 4.16 with p-value less than 0.001. This result follows the import demand theory, which states, though indirectly, that for a country, especially developing country, to improve its economic growth and development; it has to participate actively in the international trade where it exports what it produces and imports what it lacks (Xu, 2002: 268). However, it is found here that the effect of imports on GDP is greater than the effect of exports on GDP.

Model in equation 3 is transformed into an autoregressive e model in equation 4 by including lagged term of GDP in as an independent variable. Following is the output of the regression equation 4.

Table 5. 5: OLS Estimation of Regression Equation 4

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
<b>Constant</b>	4.20E+09	1.31E+09	3.204816	0.0026
<b>X</b>	0.959400	0.120529	7.959920	0.0000
<b>M</b>	-0.238429	0.406246	-0.586907	0.5605

<b>Y(-1)</b>	0.486580	0.060001	8.109512	0.0000
<b>R-squared</b>	0.965758	<b>F-statistic</b>	385.4479	
<b>Adjusted R-squared</b>	0.963252	<b>Prob(F-statistic)</b>	0.000000	

F-statistic in the output of equation 4 is 385.44 with p-value less than 0.001 showing that the overall model is significant. Values of R-squared and adjusted R-squared are also high, greater than 0.9. Effect of exports on GDP remained positive and significant in the autoregressive model but increased by 0.2. However, effect of imports on GDP, not only became negative but also insignificant as t-statistic is -0.58 with p-value greater than 0.1 which shows that imports might be strongly correlated with the lagged terms of income. A string correlation between the two variables is depicted in Table 5.6. Effect of lagged value on GDP is positive and significant as t-statistic is 8.1 with p-value less than 0.001. There is a possibility that the estimates obtained for equations 3 and 4 are spurious if the data is non-stationary.

**Table 5. 6: Correlation Matrix**

	<b>Y</b>	<b>M</b>	<b>X</b>	<b>Y(-1)</b>
<b>Y</b>	1	0.938	0.935	0.904
<b>M</b>	0.938	1	0.925	0.867
<b>X</b>	0.935	0.925	1	0.755
<b>Y(-1)</b>	0.904	0.867	0.755	1

The co integration equations, uses lagged values of series in the expression. Multiple equations incorporating lagged terms can be formed taking each variable as dependent. Such a model can be formed as either VECM (Vector Error Correction Method) or VAR (Vector Autoregressive Method) as described in Chapter 4. In the presence of co integration, VECM is used otherwise VAR model is used to evaluate temporal dependence in a multivariate time series. Following is the output of the VAR model.

Table 5. 7: Vector Auto regression Estimates Series: Y, X, M

	<b>Y</b>	<b>X</b>	<b>M</b>
<b>Y(-1)</b>	-0.488275 (0.33342) [-1.46443]	-0.841194* (0.26711) [-3.14929]	-0.128477 (0.07211) [-1.78168]
<b>Y(-2)</b>	0.734647* (0.34252) [2.14485]	0.314569 (0.27439) [1.14642]	0.066116 (0.07408) [0.89253]
<b>X(-1)</b>	1.479536* (0.43095) [3.43316]	1.420975* (0.34524) [4.11593]	0.332061* (0.09320) [3.56278]
<b>X(-2)</b>	-0.920781* (0.41690) [-2.20863]	-0.369983 (0.33398) [-1.10780]	-0.085895 (0.09016) [-0.95266]
<b>M(-1)</b>	2.624424* (0.94184) [2.78648]	2.430216* (0.75451) [3.22091]	0.989338* (0.20369) [4.85699]
<b>M(-2)</b>	-1.035737 (0.91443) [-1.13265]	-0.624907 (0.73255) [-0.85305]	-0.386945 (0.19777) [-1.95659]

<b>Constant</b>	7.02E+09*	5.69E+09*	1.36E+09*
	(3.0E+09)	(2.4E+09)	(6.4E+08)
	[2.37907]	[2.40678]	[2.12838]
<b>R-squared</b>	0.893736	0.843013	0.924128
<b>Adj. R-squared</b>	0.876504	0.817556	0.911824
<b>F-statistic</b>	51.86500	33.11480	75.11063

Note: \* shows the significance at a 0.05 level of significance

Values of R-squared and adjusted R-squared of each of the three autoregressive-models is greater than 0.8 and F-statistics are significant which shows that the model is overall significant. Individual significance of the variables and the lagged terms show that sign of the coefficient of the first lag is opposite of that of the second lag. GDP of Libya is affected positively and significantly by the second lag term of GDP. The first lag of exports has a positive and significant effect on Libya’s GDP while the second lag of exports has a negative and significant effect on the GDP. The first lag of imports has a positive and significant effect on GDP while the effect of the second lag of imports on GDP is negative and insignificant. In the equation where Libya’s export is taken as the dependent variable, effect of the first lag of GDP on exports is negative and insignificant while the effect of the second lag of GDP on exports is positive and significant.

Exports is positively and significantly affected by its first lag while negatively and insignificantly affected by the second lag. Effect of imports on exports is positive and significant for the first lag while negative and insignificant for the second lag of imports. Equation of Libya’s imports shows that, in the long run, Libya’s GDP has no significant effect on the imports. Exports in the previous year have a positive and significant effect on the imports while in the second previous year; the effect becomes negative and insignificant. Imports of Libya in the current year are significantly affected by its value in the previous year. Cause and effect relationship between the three variables is tested via Granger Causality. If the test-statistic is significant, it supports the notion that the

dependent variable granger causes the excluded variable. Output is given in the following table.

Table 5. 8: VAR Granger Causality/Block Exogeneity Wald Tests Series: Y, X, M

<b>Dependent variable: Y</b>			
<b>Excluded</b>	<b>Chi-sq</b>	<b>df</b>	<b>Prob.</b>
<b>X</b>	11.86094	2	0.0027
<b>M</b>	7.781673	2	0.0204
<b>All</b>	28.37540	4	0.0000
<b>Dependent variable: X</b>			
<b>Excluded</b>	<b>Chi-sq</b>	<b>df</b>	<b>Prob.</b>
<b>Y</b>	13.01579	2	0.0015
<b>M</b>	10.48841	2	0.0053
<b>All</b>	21.05661	4	0.0003
<b>Dependent variable: M</b>			
<b>Excluded</b>	<b>Chi-sq</b>	<b>df</b>	<b>Prob.</b>
<b>Y</b>	3.575131	2	0.1674
<b>X</b>	14.54069	2	0.0007
<b>All</b>	23.22073	4	0.0001

The output of VAR Granger Causality/Block Exogeneity Wald test shows that the GDP of Libya granger causes exports and imports. Even if economic factors other than GDP keep changing, any change in GDP will have a positive effect on both the exports and imports of GDP. As the measure of economic growth, GDP includes value of total

production in Libya, increased level production affect the level of exports directly. Also, GDP is a measure of income, high income of a country results in increased purchases from other nations, given the microeconomic concept of income effect. However, the concept of substitution effect results in decrease in purchase given an increase in the income. According to both concepts, the effect of Libya’s income change on the country’s imports is significant. Results also show that the Exports of Libya Granger causes GDP and imports. This is because exports earnings contribute the value of GDP directly as income. Mostly, Libya is involved in bilateral trade of mutual benefits with the major trading partners. Therefore, an increase in exports with the partner results in increased imports from the trading country. Results also indicate that imports of Libya Granger cause exports but not GDP. The reason behind exports causing imports is also the reason behind imports causing exports. Hence, lagged values of Libya’s import cannot be used to predict the country’s GDP.

Another indicator of trade is openness. Model for openness (T), as an indicator of trade is developed in equation 5. Average annual value of openness in Libya for the period 1963-2008 is 0.68. Maximum level of openness in Libya is observed in 1976 as 0.99 and the minimum level of openness is observed in 1999 as 0.39 as the country was following a tight trade policy and has reduced its trade with the ex-socialist countries since 1991. However, in 1999, Libyan market re-opened following the suspension of EU and UN sanctions and the restoration of diplomatic relations. Following table illustrates the correlation between Libya’s GDP and openness.

Table 5. 9: Pearson Correlation Matrix for GDP and Trade Openness

	<b>Y</b>	<b>T</b>
<b>Y</b>	1	0.29600
<b>T</b>	0.29600	1

There exist a positive but weak correlation between Libya’s GDP and openness. Many studies (Ulaşan, 2012; Sarkar, 2007) showed that trade openness has a fragile relationship with economic growth and many development indicators dominate the effect of openness. With such low correlation, trade openness is not preferred over the variables

of exports and imports in the study. To measure the volume of trade, exports and imports are considered separately throughout the study. Under the choice of indicators, economic growth of Libya may be subject to oil revenues. If oil revenues are excluded from the income of country, the relationship between economic growth and trade can be better understood for its dependence on oil revenues. For this purpose, values of non-oil GDP are inserted in the model and following is the result of regression.

Table 5. 10: OLS Estimation of Regression Equation 3 using non-oil GDP

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
<b>Constant</b>	8.48E+09	1.52E+09	5.591768	1.43E-06
<b>X</b>	-0.83476	0.36382	-2.29442	0.026711
<b>M</b>	2.660542	0.838036	3.174736	0.002771
<b>R-squared</b>	0.314084612	<b>F-statistic</b>		9.844973983
<b>Adjusted R-squared</b>	0.28218157	<b>Prob(F-statistic)</b>		0.000301868

Effect of exports and imports on non-oil GDP is significant also; the F-statistic shows the significance of overall model. Hence, the association between trade and economic growth does not depend solely on the revenues from oil exports. Because when oil revenues are excluded from GDP, effect of the indicators of trade is still significant. Harb (2009) has found similar results but using a more strict criteria. Instead of total exports, the author used oil-exports only and did not find the association non-oil GDP with oil exports in a panel of five major oil-exporting countries. Hence, internal policy of an oil-rich country is more important than natural wealth for the effectiveness of trade (Harb, 2009).

## 5.5. CONCLUSION

This chapter identified the association between Libya's economic growth and trade. International trade is indicated via exports and imports as the indicator trade openness is not found to have significant correlation with economic growth. Results showed that exports affect income of Libya significantly unlike imports. Moreover, the

cause and effect relationship between imports and economic growth of Libya is not significant. On the other hand, cause and effect relationship between exports and economic growth of Libya is significant. Policymakers can use exports of the country to predict and plan for economic growth of Libya. However, imports, as shown in the results, are more of an independent activity of Libya from its income and growth. Identification of the factors affecting imports of Libya is done in Chapter 7 and Chapter 8. In the long run, economic growth of Libya is observed to be dependent on international trade. Therefore, identification of the major trading partner for the feedback from these partners to Libya's trade is of considerable importance. The next chapter covers this task.

## Chapter 6

# SEARCHING FOR THE RELATIONSHIP BETWEEN INTERNATIONAL TRADE AND GDP GROWTH IN LIBYA AND ITS TRADING PARTNERS

### 6.1. INTRODUCTION

International trade is essentially significant for developing countries as they are able to get readily available markets for their domestically produced products. In this respect, despite the fact that there are some other factors hindering international trade such as international economic policies, international trade overwhelmingly bring about economic growth and development especially in developing countries (Alias *et al.*, 2001: 40). For the case of oil producing countries, it is clear that their oil products are in strong demand in the whole world and hence through the revenues they accumulate from international trade, they are able to develop their domestic markets (Markusen, 1995: 26). It should be noted that developing countries usually exports their domestically produced products at lower prices to developed countries because of weakness of their currencies.

This result in exporting larger volumes, but importing less as the money accumulated cannot be able to purchase large volumes (Metwally and Tamaschke, 1980: 450). In order to solve this problem, the aspect of trading partner comes in whereby developing countries select their trading partners where they are able to import resources at reduced prices. For instance, China has devalued its currency in order to increase its exports. On the other hand, countries are willing to trade with China because its products are relatively cheaper as compared to other countries like the United Kingdom, Germany, France, and the United States of America among others. This shows that trading partners are significant in the international trade not only for economic purposes but also for social and political aspects (Mirakhor and Menteil, 1987: 60).

The study aims at investigating the impacts of international trade on the economic growth of Libya and trading partners. In order to investigate long term and short term feedback impacts of the relationships, the study uses simultaneous linear regression models. This chapter covers the research objective 3. The chapter is divided into four

sections. The first section is the introduction section. It also contains an overview of Libya's multilateral and bilateral foreign relationships in regards of international trade. The second section identifies major trading partners of Libya. The third section presents the empirical results to achieve the research objective 3. The fourth section concludes the chapter.

## 6.2. IDENTIFYING MAJOR TRADE PARTNERS

Italy topped the list to import from Libya during the period 1970-2008. The value of its import from Libya reached \$23422 million in 2008. Italy levels of importation from Libyan, ranged from 47% of the total Libyan exports in 1990, and the lowest level in about 18 % in 1980.

Table 6. 1: Exports by Major Countries of Destination during the Period 1971-2008 (\$ millions)

Year		EU	Italy	Germany	France	Spain	UK	Total exports
1971	Total	2242	646	471	334	110	440	2696
	Percentage	83	24	17	12	4	16	100
1975	Total	3483	1334	1187	225	313	243	6098
	Percentage	57	22	19	4	5	4	100
1980	Total	10087	4061	2764	603	1078	35	21919
	Percentage	46	18	12	3	5	0.1	100
1985	Total	6257	2605	1125	399	728	50	10928
	Percentage	57	24	10	4	7	0.4	100
1990	Total	12236	6642	900	1187	1276	248	13877

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	Percentage	88	47	6	8	9	2	100
1995	Total	6959	3397	1380	285	1084	189	8510
	Percentage	81	40	16	3	13	2	100
2000	Total	10873	5325	1748	566	1631	274	12727
	Percentage	85	42	14	4	13	2	100
2005	Total	22204	11017	4382	1802	2706	581	29024
	Percentage	76	37	15	6	9	2	100
2008	Total	47336	23422	7418	4577	4218	1625	61585
	Percentage	77	38	12	7	7	3	100

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Exports of Libya to Italy were rising despite the fluctuation from year to year. This rise in exports to Italy was due to geographical, historical, political and economic factors. Having been their colonizing country during colonial times, Italy was the first international trading partner to Libya. Italy imported most exports of Libya crude oil and liquefied natural gas. Many joint projects between Libya and Italy in the field of oil and gas were carried out during these periods. The most beneficial joint projects and joint venture was the Western Libyan Gas Project. The project was aimed at exporting gas to Italy, with an investment of about \$ 5.6 billion from Italy and Libya reserves. Libya has been establishing a gas pipeline, for the transfer of Libyan gas to Italy since 1960s Source: (Sinha, 1997).

Germany comes in second place after Italy in level of total importing countries from Libya. German was among the first importing countries. German value of its imports from Libya ranged between the highest level 7114 million in 2008 and the lowest value of \$ 471 million 1971. Spain occupies third place among the importing countries from Libya, where it highest value for imports was about 4218 million \$ in 2008 and the lowest value of its imports \$ 110 million in 1971.

The value of Libyan exports to Spain was characterized by fluctuation from year to year. This was between high and low levels during the years from 1975 to 1985 and started to rise during the years from 1990 to 2000. France comes in fourth place and Britain in the fifth place. Where, a Libyan export, in 1960s and early 1970s, was 12 % to France and 16 % to Britain. The ratio decreased in the mid-seventies and eighties, reaching less than 1% for Britain, 3% and 4% for France in 1980, 1985 respectively. This was followed with slight increases in the nineties reaching 6% and 7%, for France, 2% and 3% for Britain in the years 2005 and 2008, respectively.

In the seventies, the United States represented an important trading partner, but this partnership dwindled in the eighties and nineties after the economic boycott imposed by the United State. This boycott was caused by deterioration of political relations between Libya and USA. The value of exports from Libya to the United States in 1980 reached its highest level of \$7778 million representing about 35% of the total exports (Derwish, 1997). Then resumption of trade and the lifting of economic sanctions in 2004, the total value of exports from Libya to the USA reached \$4 billion in 2008.

### **6.3. EMPIRICAL RESULTS**

This section presents discusses estimates of the model developed as equation 7 to 10 for the above identified trade partners of Libya. Following are the results of the model for European Union (EU).

#### **6.3.1. EU**

This section describes the data collected for the model in equations 7 to 10 for Libya and EU as a trading partner. On average annual value of Libya's import for the period 1971-2008 is \$9.83 billion and on average annual value of Libya's export for the same period is \$22.5 billion. Libya's average annual GDP for this period is \$45.3 billion. Imports and exports of Libya with EU are on average \$6.31 billion and \$14.6 billion respectively. EU's average annual export is \$2030 billion. Libya's export excluding the export to EU is annual \$8.03 billion. TSLS is employed on the system  $a$  in for trade partner EU. Following is the output.

Table 6. 2: TSLS output for EU

<b>Dependent Variable</b>					
<b>Y<sub>t</sub></b>		<b>Constant</b>	<b>XP<sub>1t</sub></b>	<b>X-P<sub>1t</sub></b>	<b>Y<sub>t-1</sub></b>
	<b>Coefficient</b>	6.52E+09	0.793868	0.776315	0.480292
	<b>s.e.</b>	2.11E+09	0.120408	0.171565	0.063588
	<b>t-stat</b>	3.092987	6.593142	4.52489	7.553132
	<b>Prob.</b>	0.0024	0	0	0
	<b>R-squared</b>	0.952892	<b>Adjusted R-squared</b>		0.948609
<b>X-P<sub>1t</sub></b>		<b>Constant</b>	<b>O<sub>t</sub></b>	<b>YP<sub>1t</sub></b>	
	<b>Coefficient</b>	-4.88E+09	32535976	0.00103	
	<b>s.e.</b>	5.72E+09	7708761	0.000746	
	<b>t-stat</b>	-0.852529	4.220649	1.380158	
	<b>Prob.</b>	0.3954	0	0.1698	
	<b>R-squared</b>	0.356558	<b>Adjusted R-squared</b>		0.318709
<b>YP<sub>1t</sub></b>		<b>Constant</b>	<b>X<sub>t</sub></b>	<b>MP<sub>1t</sub></b>	<b>YP<sub>1t-1</sub></b>
	<b>Coefficient</b>	1.69E+12	1.126977	9.930699	0.416102
	<b>s.e.</b>	4.51E+11	0.241566	32.5536	0.135826
	<b>t-stat</b>	3.746431	4.6653	0.305057	3.063499
	<b>Prob.</b>	0.0003	0	0.7608	0.0026

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	<b>R-squared</b>	0.904496	<b>Adjusted R-squared</b>	0.895814
<hr/>				
<b>MP<sub>1t</sub></b>	<b>Constant</b>	<b>Y<sub>t</sub></b>	<b>MP<sub>1t-1</sub></b>	
<hr/>				
	<b>Coefficient</b>	-1.06E+09	0.09194	0.519654
	<b>s.e.</b>	4.32E+08	0.015233	0.077331
	<b>t-stat</b>	-2.444848	6.035674	6.719855
	<b>Prob.</b>	0.0158	0	0
<hr/>				
	<b>R-squared</b>	0.936301	<b>Adjusted R-squared</b>	0.932554
<hr/>				

Value of R-squared and adjusted R-squared is high for the equations in the system *a* except for equation 8. GDP of Libya is affected positively and significantly by EU's exports, Libya's export excluding export to EU and lagged value of Libya's GDP. Libya's export excluding export to EU affected by the price of oil is positively and significantly, but the effect of EU's GDP is insignificant on Libya's export excluding export to EU. This shows that once, the effect of Libya's exports to EU is eliminated, effect of Libya's GDP on the remaining exports become insignificant. As GDP of the union is significantly larger than the GDP of Libya alone, imports to Libya have no significant effect on EU's income. Effect of Libya's exports is positive and significant on EU's GDP. Imports of Libya from EU are affected positively and significantly by Libya's GDP. This result follows the finding in previous chapter that income of Libya causes the country's import. In this case, also, the import from EU is subject to the income of Libya.

### 6.3.2. Italy

Although Libya in the periods between 1960s and 1990s had little or no significant international trade with United States of America and much of European countries, it nevertheless continued exporting its oil produce to Italy in large volumes. The historical ties between Italy and Libya provided the motivation for continues trade. While international trade and political developments in the last few years after the lifting of the sanctions has seen the country increasing its volumes of oil exports to European

countries as mentioned above, Italy remains one of the country in the EU that import oil resources in large volumes from Libya (Bond, 2002). Libyan imports from Italy include industrial machines, vehicles, iron, steel as well as other merchandise. This section describes the data collected for the model in equations 7 to 10 for Libya and Italy as a trading partner. Imports and exports of Libya with Italy are on average \$2.40 billion and \$6.65 billion respectively. Italy’s average annual export is \$266 billion. Libya’s export excluding the export to Italy is annual \$15.8 billion. Germany’s average GDP in the period 1971-2008 is \$1170 billion. Following is the output of the system of simultaneous equations  $a$ , which is obtained via Two Stage Least Square (TSLS) method.

Table 6. 3: TSLS output for Italy

<b>Dependent Variable</b>					
<b>Y<sub>t</sub></b>	<b>Constant</b>	<b>XP<sub>2t</sub></b>	<b>X-P<sub>2t</sub></b>	<b>Y<sub>t-1</sub></b>	
<b>Coefficient</b>	6.36E+09	0.803756	0.742831	0.499369	
<b>s.e.</b>	2.12E+09	0.211463	0.129259	0.065505	
<b>t-stat</b>	3.002111	3.800937	5.746858	7.623347	
<b>Prob.</b>	0.0032	0.0002	0	0	
<b>R-squared</b>	0.952139	<b>Adjusted R-squared</b>	0.947788		
<b>X-P<sub>2t</sub></b>	<b>Constant</b>	<b>O<sub>t</sub></b>	<b>YP<sub>2t</sub></b>		
<b>Coefficient</b>	-7.18E+09	41322337	0.013147		
<b>s.e.</b>	8.83E+09	11917984	0.00636		
<b>t-stat</b>	-0.812302	3.467225	2.067131		
<b>Prob.</b>	0.4181	0.0007	0.0406		

		<b>R-squared</b>	0.267695	<b>Adjusted R-squared</b>	0.224618
<b>YP<sub>2t</sub></b>		<b>Constant</b>	<b>X<sub>t</sub></b>	<b>MP<sub>2t</sub></b>	<b>YP<sub>2t-1</sub></b>
	<b>Coefficient</b>	2.09E+11	1.713251	-8.68191	0.461971
	<b>s.e.</b>	7.46E+10	0.331244	12.14706	0.109406
	<b>t-stat</b>	2.79988	5.172176	-0.71473	4.222546
	<b>Prob.</b>	0.0059	0	0.476	0
		<b>R-squared</b>	0.903163	<b>Adjusted R-squared</b>	0.894360
<b>MP<sub>2t</sub></b>		<b>Constant</b>	<b>Y<sub>t</sub></b>	<b>MP<sub>2t-1</sub></b>	
	<b>Coefficient</b>	-6.07E+08	0.043333	0.447124	
	<b>s.e.</b>	2.01E+08	0.007079	0.088335	
	<b>t-stat</b>	-3.013813	6.121694	5.061708	
	<b>Prob.</b>	0.0031	0	0	
		<b>R-squared</b>	0.922070	<b>Adjusted R-squared</b>	0.917486

Value of R-squared and adjusted R-squared is high for the equations in the system *a* except for equation 8. GDP of Libya is affected positively and significantly by Italy's exports, Libya's export excluding export to Italy and lagged value of Libya's GDP. Libya's export excluding export to Italy is affected positively and significantly by the price of oil and Italy's GDP. Effect of Libya's exports is positive and significant on Italy's GDP, but the effect of Libya's import from Italy is insignificant on Italy's GDP. Italy's GDP does not depend on its exports to Libya. In contrast, effect of Libya's GDP is positive and significant on the import of Libya from Italy. Thus, the feedback effect of trade between Italy and Libya is more from Libya's side and low from Italy's side.

**6.3.3. Germany**

According to the Libyan foreign trade indices, the country’s major exports components to Germany consist of distillation products, mineral fuels and oil products. While Libya imported machinery, boilers and nuclear reactor from Germany as well as vehicles, electronic equipments and articles of steel and iron from Germany. This, over many years, made Germany as the second major trading partners with Libya after Italy. Germany is the third largest exporter of merchandise to Libya. This section describes the data collected for the model in equations 7 to 10 for Libya and Germany as a trading partner. Imports and exports of Libya with Germany are on average \$1.13 billion and \$3.22 billion respectively. Germany’s average annual export is \$575 billion. Libya’s export excluding the export to Germany is annual \$574 billion. Average annual GDP of Germany during 1971-2008 is \$2090 billion. Following is the output of the system of simultaneous equations a, which is obtained via Two Stage Least Square (TSLS) method. Table 6. 4: TSLS output for Germany

<b>Dependent Variable</b>				
<b>Y<sub>t</sub></b>	<b>Constant</b>	<b>XP<sub>3t</sub></b>	<b>X-P<sub>3t</sub></b>	<b>Y<sub>t-1</sub></b>
<b>Coefficient</b>	-6.80E+08	4.470133	0.003417	0.675305
<b>s.e.</b>	3.11E+09	0.53172	0.003408	0.053831
<b>t-stat</b>	-0.218526	8.406936	1.002518	12.54497
<b>Prob.</b>	0.8274	0	0.3179	0
<b>R-squared</b>	0.931154	<b>Adjusted R-squared</b>	0.924895	
<b>X-P<sub>3t</sub></b>	<b>Constant</b>	<b>O<sub>t</sub></b>	<b>YP<sub>3t</sub></b>	
<b>Coefficient</b>	-6.24E+11	-5.54E+08	0.619256	
<b>s.e.</b>	1.44E+11	1.57E+08	0.064788	

	<b>t-stat</b>	-4.320658	-3.529254	9.558163	
	<b>Prob.</b>	0	0.0006	0	
	<b>R-squared</b>	0.733281	<b>Adjusted R-squared</b>	0.717592	
<b>YP<sub>3t</sub></b>	<b>Constant</b>	<b>X<sub>t</sub></b>	<b>MP<sub>3t</sub></b>	<b>YP<sub>3t-1</sub></b>	
	<b>Coefficient</b>	5.80E+11	0.606623	3.469025	0.568522
	<b>s.e.</b>	1.88E+11	0.204815	68.99768	0.147282
	<b>t-stat</b>	3.080095	2.961814	0.050277	3.860081
	<b>Prob.</b>	0.0025	0.0036	0.96	0.0002
	<b>R-squared</b>	0.800968	<b>Adjusted R-squared</b>	0.782874	
<b>MP<sub>3t</sub></b>	<b>Constant</b>	<b>Y<sub>t</sub></b>	<b>MP<sub>3t-1</sub></b>		
	<b>Coefficient</b>	-1.75E+08	0.018868	0.410713	
	<b>s.e.</b>	1.13E+08	0.003737	0.107695	
	<b>t-stat</b>	-1.552583	5.048386	3.813676	
	<b>Prob.</b>	0.1229	0	0.0002	
	<b>R-squared</b>	0.857248	<b>Adjusted R-squared</b>	0.848851	

Value of R-squared and adjusted R-squared is high for the equations in the system

a. GDP of Libya is affected positively and significantly by Germany’s exports and by the lagged values of Libya’s GDP. Libya’s export excluding export to Germany has no significant effect on Libya’s GDP. Libya’s export excluding export to Germany is affected positively and significantly by the price of oil and Germany’s GDP. Effect of Libya’s exports is positive and significant on Germany’s GDP, but the effect of Libya’s import from Germany is insignificant on Germany’s GDP. This result is similar that of

the Italy. Feedback effect of trade is significant from the side of Libya but it does not exist from the side of Germany. Effect of Libya’s GDP is positive and significant on the import of Libya form Germany. This shows that, Libya is dependent on its imports from Germany. Remember that in Chapter 5, it is found that, Libya’s total imports do not cause its GDP. However, it imports from Germany has significant effect on its income.

**6.3.4. Spain**

The data shows that a bulk of Spanish imports from Libya is related to oil and oil products. In addition, the trends indicate that Spanish import from Libya is higher than it exports to Libya. Libya mainly imports vehicles, electronic equipments, steel iron and other merchandise from Spain. Evaluating Spanish imports and exports as a percentage of the country’s GDP show that Spain has significant interests in Libya as more than one percent of the country’s GDP is exported to Libya. This section describes the data collected for the model in equations 7 to 10 for Libya and Spain as a trading partner. Imports and exports of Libya with Spain are on average \$0.27 billion and \$1.61 billion respectively. Spain’s average annual export is \$128 billion. Libya’s export excluding the export to Spain is annual \$20.9 billion. Average annual GDP of Spain during 1971-2008 is \$605 billion. Following table shows the output of the system of equations *a* obtained via Two Stage Least Square (TSLS) method.

Table 6. 5: TSLS output for Spain

<b>Dependent Variable</b>					
<b>Y<sub>t</sub></b>		<b>Constant</b>	<b>XP<sub>4t</sub></b>	<b>X-P<sub>4t</sub></b>	<b>Y<sub>t-1</sub></b>
	<b>Coefficient</b>	6.98E+09	0.237547	0.870997	0.452574
	<b>s.e.</b>	2.09E+09	1.578957	0.119148	0.054455
	<b>t-stat</b>	3.341068	0.150445	7.310223	8.311001
	<b>Prob.</b>	0.0011	0.8806	0	0

		<b>R-squared</b>	0.958892	<b>Adjusted R-squared</b>	0.95515
<b>X-P<sub>4t</sub></b>	<b>Constant</b>	<b>O<sub>t</sub></b>	<b>Y<sub>P4t</sub></b>		
	<b>Coefficient</b>	-5.35E+09	51089446	0.027691	
	<b>s.e.</b>	6.01E+09	11738726	0.007543	
	<b>t-stat</b>	-0.890157	4.352214	3.671121	
	<b>Prob.</b>	0.375	0	0.0003	
		<b>R-squared</b>	0.412603	<b>Adjusted R-squared</b>	0.378050
<b>Y<sub>P4t</sub></b>	<b>Constant</b>	<b>X<sub>t</sub></b>	<b>MP<sub>4t</sub></b>	<b>Y<sub>P4t-1</sub></b>	
	<b>Coefficient</b>	7.53E+10	1.574275	27.43094	0.558201
	<b>s.e.</b>	3.40E+10	0.353426	66.14732	0.114699
	<b>t-stat</b>	2.212562	4.454333	0.414695	4.866668
	<b>Prob.</b>	0.0286	0	0.679	0
		<b>R-squared</b>	0.946368	<b>Adjusted R-squared</b>	0.941492
<b>MP<sub>4t</sub></b>	<b>Constant</b>	<b>Y<sub>t</sub></b>	<b>MP<sub>4t-1</sub></b>		
	<b>Coefficient</b>	-89621357	0.004942	0.498135	
	<b>s.e.</b>	37599978	0.001046	0.099329	
	<b>t-stat</b>	-2.383548	4.724624	5.015027	
	<b>Prob.</b>	0.0185	0	0	
		<b>R-squared</b>	0.832401	<b>Adjusted R-squared</b>	0.822543

Value of R-squared and adjusted R-squared is high for the equations in the system *a* except for equation 8. GDP of Libya is affected positively and significantly by Libya's exports excluding export to Spain and lagged value of Libya's GDP. Libya's export to Spain has no significant effect on Libya's GDP. Libya's export excluding export to Spain is affected positively and significantly by the price of oil and Spain's GDP. This shows that influence of Spain on Libya is effective for factors other than trade. Effect of Libya's exports is positive and significant on Spain's GDP, but the effect of Libya's import from Spain is insignificant on Spain's GDP. Similar to Italy and Germany, Spain also does not show a feedback effect in its trade relationship with Libya. However, for the case of Spain, Libya also does not have any feedback effect, as its GDP does not depend on exports to Spain. Effect of Libya's GDP is positive and significant on imports of Libya form Spain.

**6.3.5. France**

The fast growing exports of France to Libya mainly includes field equipments, sugar and diamonds, while oil and oil products are the leading Libyan exports to France. In other areas of merchandise export, France exported more than \$1 billion worth of merchandise to Libya in the end of 2010 while France imports of Libya consists of oil and related products, and the trends indicate that Libyan exports of these items to France are on the increase. It is a fact that France is the only EU country with higher percentages of imports from Libya compared to its exports to Libya. This section describes the data collected for the model in equations 7 to 10 for Libya and France as a trading partner. Imports and exports of Libya with France are on average \$0.614 billion and \$1.76 billion respectively. France's average annual export is \$343 billion. Libya's export excluding the export to France is annual \$20.7 billion. Average annual GDP of France during 1971-2008 is \$1500 billion. Following table shows the output of the system of equations *a* obtained via Two Stage Least Square (TSLS) method.

Table 6. 6: TSLS Output for France

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<b>Dependent Variable</b>
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$Y_t$	Constant	$XP_{5t}$	$X-P_{5t}$	$Y_{t-1}$
<b>Coefficient</b>	6.73E+09	0.5415	0.812393	0.475391
<b>s.e.</b>	1.82E+09	0.35216	0.102127	0.059407
<b>t-stat</b>	3.704951	1.537656	7.95473	8.002305
<b>Prob.</b>	0.0003	0.1265	0	0
<b>R-squared</b>	0.957413	<b>Adjusted R-squared</b>	0.953542	

$X-P_{5t}$	Constant	$O_t$	$YP_{5t}$
<b>Coefficient</b>	-2.33E+10	34519816	0.024906
<b>s.e.</b>	7.55E+09	9770598	0.00461
<b>t-stat</b>	-3.083618	3.53303	5.402885
<b>Prob.</b>	0.0025	0.0006	0
<b>R-squared</b>	0.520983	<b>Adjusted R-squared</b>	0.492806

$YP_{5t}$	Constant	$X_t$	$MP_{5t}$	$YP_{5t-1}$
<b>Coefficient</b>	2.30E+11	2.639502	210.6515	0.162407
<b>s.e.</b>	8.13E+10	0.356827	63.61247	0.118219
<b>t-stat</b>	2.832781	7.39714	3.311482	1.373783
<b>Prob.</b>	0.0053	0	0.0012	0.1718
<b>R-squared</b>	0.916043	<b>Adjusted R-squared</b>	0.908411	

$MP_{5t}$	Constant	$Y_t$	$MP_{5t-1}$
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<b>Coefficient</b>	-21791018	0.005571	0.633445
<b>s.e.</b>	76008477	0.003214	0.162763
<b>t-stat</b>	-0.286692	1.733066	3.891823
<b>Prob.</b>	0.7748	0.0854	0.0002
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<b>R-squared</b>	0.836265	<b>Adjusted R-squared</b>	0.826633

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Value of R-squared and adjusted R-squared is high for the equations in the system *a* except for equation 8. GDP of Libya is affected positively and significantly by Libya's exports excluding export to France and lagged value of Libya's GDP. Libya's export to France has no significant effect on Libya's GDP. Libya's export excluding export to France is affected positively and significantly by the price of oil and France's GDP. Effect of Libya's exports and Libya's import from France is positive and significant on France's GDP. This shows that there exist a feedback effect of trade from the side of France, which do not exist from the side of Italy, Germany, and Spain. However, the effect of the lagged value of GDP is insignificant on France's GDP. Effect of Libya's GDP is positive but insignificant on imports of Libya from France; however, it is significant at 90% confidence interval. Thus, trade between Libya and France is mutually beneficial for the two countries.

### 6.3.6. UK

The international trade between Libya and the UK is biased toward Libya with high levels of exports from Libya to the UK. Libya mainly imports machinery, chemical and other manufactured goods from the UK, while the UK imports petroleum products from Libya. It is important to note that imports of the UK come primarily from the European countries and only a small percentage in a negligible magnitude of Libyan merchandise makes it to the UK. This section describes the data collected for the model in equations 7 to 10 for Libya and the UK as a trading partner. Imports and exports of Libya with the UK are on average \$0.620 billion and \$0.606 billion respectively. The

UK's average annual export is \$347 billion. Libya's export excluding the export to The UK is annual \$22.1 billion. Average annual GDP of the UK during 1971-2008 is \$1320 billion. Following table shows the output of the system of equations *a* obtained via Two Stage Least Square (TSLS) method.

Table 6. 7: TSLS Output for UK

<b>Dependent Variable</b>					
<b>Y<sub>t</sub></b>		<b>Constant</b>	<b>XP<sub>6t</sub></b>	<b>X-P<sub>6t</sub></b>	<b>Y<sub>t-1</sub></b>
	<b>Coefficient</b>	4.97E+09	-1.27066	0.557742	0.645519
	<b>s.e.</b>	3.70E+09	1.99814	0.149014	0.095029
	<b>t-stat</b>	1.344693	-0.63592	3.742873	6.792848
	<b>Prob.</b>	0.1811	0.5259	0.0003	0
	<b>R-squared</b>	0.845645	<b>Adjusted R-squared</b>	0.831174	
<b>X-P<sub>6t</sub></b>		<b>Constant</b>	<b>O<sub>t</sub></b>	<b>YP<sub>6t</sub></b>	
	<b>Coefficient</b>	-1.30E+10	59748656	0.018178	
	<b>s.e.</b>	6.76E+09	11176167	0.004159	
	<b>t-stat</b>	-1.926538	5.346078	4.370588	
	<b>Prob.</b>	0.0562	0	0	
	<b>R-squared</b>	0.511550	<b>Adjusted R-squared</b>	0.481947	
<b>YP<sub>6t</sub></b>		<b>Constant</b>	<b>X<sub>t</sub></b>	<b>MP<sub>6t</sub></b>	<b>YP<sub>6t-1</sub></b>
	<b>Coefficient</b>	6.87E+10	3.108279	-36.5053	0.146786
	<b>s.e.</b>	5.76E+10	0.326379	48.89989	0.092925

	<b>t-stat</b>	1.193071	9.523524	-0.74653	1.57962
	<b>Prob.</b>	0.235	0	0.4567	0.1166
	<b>R-squared</b>	0.968549	<b>Adjusted R-squared</b>	0.965600	
<b>MP<sub>6t</sub></b>	<b>Constant</b>	<b>Y<sub>t</sub></b>	<b>MP<sub>6t-1</sub></b>		
	<b>Coefficient</b>	22374319	0.004073	0.668858	
	<b>s.e.</b>	55815992	0.003133	0.193775	
	<b>t-stat</b>	0.400859	1.299899	3.451718	
	<b>Prob.</b>	0.6892	0.1959	0.0008	
	<b>R-squared</b>	0.844017	<b>Adjusted R-squared</b>	0.834564	

Value of R-squared and adjusted R-squared is high for the equations in the system *a* except for equation 8. GDP of Libya is affected positively and significantly by Libya’s exports excluding export to the UK and lagged value of Libya’s GDP. Hence, trade relation with UK does not serve as a driving force of economic growth in Libya. Libya’s export to the UK has no significant effect on Libya’s GDP. Libya’s export excluding export to the UK is affected positively and significantly by the price of oil and UK’s GDP. This shows that whatever is the association between Libya and UK, it is not limited to trade relationship between the two countries. Effect of Libya’s total exports is positive and significant on the UK’s GDP, but the effect of the lagged value of GDP and Libya’s import from the UK is insignificant on the UK’s GDP. This shows that UK, like Italy, Germany, and Spain, also has no feedback effect of the trade relation with Libya. Effect of Libya’s GDP is positive but insignificant on imports of Libya form the UK.

Although EU is considered the most prominent trading partner of Libya, the trade relations of Libya with individual EU countries are not uniform. This finding is consistent with the findings of Metwally, Yahia and Ali (2009). Though trade with all the countries studied here as a trading partner is significantly related to the growth of Libya, France is

the only country, which showed a feedback affect. GDP of France is significantly affected by Libya's imports from France. Hence, as compare to the other EU countries, France is the most dependent nation on trade with Libya for the country's economic growth.

#### **6.4. CONCLUSION**

The chapter aimed at investigating the impacts of international trade on the economic growth of Libya and trading partners. In order to investigate long term and short term feedback impacts of the relationships, the study used simultaneous linear regression models. This chapter covered the research objective 3. EU is found to be the major region where trade of Libya is concentrated. Five members of EU are identified as major trading partners including Italy, Germany, Spain, France, and UK. Comparing the results of TSLS for the case of 6 trade partners, EU as a while and five members of EU, it is found that France is the only country, which showed a feedback affect. GDP of France is significantly affected by Libya's imports from France. The results also showed that UK, Italy, Germany, and Spain have no feedback effect of the trade relation with Libya. Hence, as compare to the other EU countries, France is the most dependent nation on trade with Libya for the country's economic growth. Policies of expanding trade with France are recommended based on the findings of this chapter. Drivers and barriers of the trade relationship of Libya with member countries of EU as the results revealed that the gains of trade between most of the EU members and Libya are not acquired by Libya.

## Chapter 7

# DETERMINING IMPORT DEMAND IN LIBYA: AN EMPIRICAL ANALYSIS

### 7.1. INTRODUCTION

Economic growth is dependent on various financial and policy variables as well as a number of macroeconomics activities in an economy. International trade has been widely regarded as one the variables that support economic growth in a country. In the case of Libyan economy, foreign trade has been credited with higher economic growth prospect of the country as international trade has been responsible for promoting Libyan domestic production in the oil and non oil industry, specialization of the country's production and international competitiveness, which are responsible for greater levels of economic growth. However, the process of global trade and expansion depend highly on a country's participation in international trade with other partners, which is essential for Libya, as well. This process of development leads to growing demand for consumer and capital goods that are needed to sustain the expansion (Aron and Elbadawi, 1992).

The relevant literature shows that sustained economic growth needs sustained and increasing levels of investment, consumption and production (Dutta and Ahmed, 2004). To sustain such a growth, it is obvious that the domestic production alone cannot support growth, but needs support from other trading partners. This implies that importation of resources from other countries in a necessary ingredient of growth. The import demand theory, hence, implies the extent by which imports fill the gaps in the domestic aggregate demand and limited supply in an economy.

The study of import demand determinants has shown that imports are vital components of foreign trade and economic growth in a country (Khan *et al.*, 1995). This has lead to many to research the determinants of imports in less developed countries as well as in developed countries. This is what led to the development of import demand theories. A number of import demand theories have developed various model specifications to explain the relationship between import and real growth in an economy.

A surprising finding that some research, like the one carried out by Rehman (2007) using traditional import demand models, have come to the conclusion that traditional import demand models have been successful in explaining the relationship between import demand, relative import price and the economic growth in developed countries, but are not good in less developed economies. This is partially explained by the less developed country's foreign exchanges, policy failure or interferences and country's borrowing constraints among other related problems. In order to study less developed countries, researchers recommend the use of contemporary import demand models (Rehman, 2007).

The chapter aims to explore and analyse the determinants of import demand for Libya for the period 1963-2008 by examining long run and short run relationship between Libyan imports and its GDP. 2007-2008 witnessed a huge increase in imports comparing to other years. The chapter utilizes time series data to test for correlation, stationary and co integration to develop short-run error correction econometric import demand model. The chapter considers the relationship between relative import price and the real economic development in Libya as part of the econometric conceptualisation.

## **7.2. DEVELOPMENT OF IMPORTS IN LIBYA**

The period between 1970 and 1981 was the period when growth of imports in Libya was at the highest level. In 1970, import levels were \$554 million as compared to \$3542 millions in 1975 and \$8382 million in 1981. This rise in importations was precipitated by increased economic development in the country. The growth rate recorded for 1970 was at a -18% but rose to 28% in 1975. Average growth between 1970 and 1981 was at 25.4%. There were several factors contributing to the increase in the levels of importation. During this period, the favourable price increase of crude oil and increased production made the country's economic growth rise at high percentages. During the same period, the government of Libya had embarked on a rigorous investment program. This investment program required increased importation of machinery and equipments for the expansion of crude oil exploration and production.

A declining level of importation followed further with the United Nations sanctions starting from 1982 up to 1989. The values of imports decreased from \$7175

million in 1982 to \$4101 million in 1985. During the same period, the economic growth of Libyan economy reduced greatly to low levels. Growth rate decreased from -14% in 1982 to -34% in 1985. Combinations of other factors lead to this high levels of economic growth rate decline and declined imports. The low prices of crude oil resulted in decreased values of revenue from this export resource and hence the levels of importation decline. The ruling elites had to institute measure of balancing foreign reserve in the central bank by issuing measures to restrict on levels of importation. Restrictions led to reduction of importation of production inputs and other essential commodities. Use of high tariffs on a number of goods and reduction of foreign labour led to a deflation of economic market and low consumption in the economy. The ruling elites had started embracing the socialist ideologies, and they equally affected the performance of economic indicators. Socialist ideas limited the role of private sector in the economy and cancellation of major projects planned in the previous planning periods.

The following period of 1990 to 2002, and after the lifting of sanctions, importation in Libya and economic growth kept on fluctuating. The levels of importations remained high despite the fluctuations at average levels of \$5051 millions. The average growth rate during the period was 22%. Growth rates of the economy in Libya during this period ranged between - 6 % in 1994 and 24 % in 2002. This demonstrated the extent of fluctuation in the rate of growth of imports during the same period, which was caused by economic embargos of the united nation sanctions, the huge amount of money that had to be paid to third parties in order to circumvent the sanctions and the liberalization ideology adopted by the government. Drastic liberalization policies came up with privatization of state enterprises operating in the fields of production, distribution, trade, services, agriculture, industry, education, health, tourism, and transportation.

During 2003-2008, the country levels of importation picked up and reached higher levels of \$6141 million to reach \$8735 million in 2003. The rise continued all through 2006 to 2008 with \$13213 million in 2006, \$16058 million in 2007, and finally reaches \$31310 million in 2008. The average value of importation was \$14440 million, and the average rate of growth was 35%. The reasons or factors that contributed to this high rise in the importation and economic growth are associated with high prices of crude

oil and recovery of the Libyan economy. The government had eased restrictions on importations and the general increase in levels of consumption.

The level of import and the average propensity of Libya to import, as indicated by previous studies, are affected by various factors including comparative prices of imports, real national income, and the level of capital utilization. This is reflected by the country's domestic supply ability to respond to changes in aggregate demand. The Libyan economy, as a developing country has the tendency of stagnant domestic production factors. This further limits the supply ability to respond adequately to increase domestic demand. Discovery of natural resources increases disposable income and investment income in respective countries. This further increases the domestic demand, with high demand for imports to cover the shortages in the domestic production of capital goods and technical equipment (Johansen, 1991).

Table 7. 1: Development of trade in Libya for 1963-2008

<b>Year</b>	<b>GDP (m \$)</b>	<b>Imports (m \$)</b>	<b>Exports (m \$)</b>	<b>Total international trade (m \$)</b>	<b>Exports / GDP (%)</b>	<b>Imports / GDP (%)</b>	<b>Total International trade / GDP (%)</b>	<b>Trade Balance</b>
1963	776	239	374	613	48	30	78	135
1964	1165	292	700	992	60	25	85	408
1965	1568	320	790	1110	51	20	71	470
1966	2008	405	995	1400	50	20	70	590

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196 7	2366	477	1168	1645	49	20	69	691
196 8	3343	645	1871	2516	56	19	75	1226
196 9	3802	676	2164	2840	56	18	74	1488
197 0	3993	554	2379	2933	59	14	73	1825
197 1	4566	703	2694	3397	59	15	74	1991
197 2	5466	1043	2938	3981	54	19	73	1895
197 3	7493	1806	4003	5809	53	24	77	2197
197 4	1311 6	2762	8259	11011	63	21	84	5497
197 5	1276 8	3542	6834	10376	53	28	81	3292
197 6	1657 5	3212	9554	12766	58	19	77	6342
197 7	1946 6	3773	11411	15184	59	19	78	7638
197 8	1921 3	4602	9895	14497	51	24	75	5293

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197	2650	5311	16076	21387	61	20	81	10765
9	2							
198	3675	6777	21910	28687	60	18	78	15133
0	6							
198	3175	8382	15571	23953	49	26	75	7189
1	5							
198	3165	7175	13984	21159	45	22	67	6809
2	9							
198	3017	6029	12341	18370	41	20	61	6312
3	0							
198	2825	6222	11148	17370	39	22	61	4926
4	1							
198	2778	4101	12314	16415	44	15	59	8213
5	7							
198	2263	4173	7711	11884	34	18	52	3538
6	6							
198	2106	4303	7986	12289	38	20	58	3683
7	8							
198	2377	5868	6673	12541	29	24	53	805
8	8							
198	2516	4923	8034	12957	32	19	51	3111
9	7							
199	2894	5336	13225	18591	46	18	64	7889
0	4							

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199	3201	5363	11234	16597	35	17	52	5871
1	6							
199	3392	5051	9942	14993	29	15	44	4891
2	6							
199	3069	5551	7542	13093	25	18	43	1991
3	8							
199	2914	4323	7865	12188	27	15	42	3542
4	2							
199	2555	5147	8510	13657	33	20	53	3363
5	7							
199	2788	5587	10155	15742	36	20	56	4568
6	6							
199	3070	5533	9576	15109	33	18	49	4043
7	5							
199	2726	5600	6032	11632	23	20	43	432
8	2							
199	3049	4223	7961	12184	26	14	40	3738
9	0							
200	3461	4018	12716	16734	36	12	48	8698
0	2							
200	3018	4425	11337	15762	37	15	52	6912
1	2							
200	1920	5511	9882	15393	51	29	80	4371
2	9							

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200	2337	6141	13761	19902	59	26	85	7620
3	7							
200	2803	8735	17333	26068	61	31	92	8598
4	2							
200	3727	11188	28849	34994	63	30	93	17661
5	7							
200	5033	13213	37473	40875	55	26	81	24260
6	0							
200	5706	16058	46790	48507	58	28	85	30732
7	4							
200	8991	31310	61950	76042	49	35	84	30640
8	6							

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*Source:* IMF Balance of Payment and Yearbooks (different issues), World Bank, OPEC

The table below illustrates that the percentage of international trade to GDP to be between 40 % and 93%, whereas total average is 66.7% at the since 1963 to 2008. The ratio of international trade to GDP, 1963-1973 witnessed remarkable increase. The international trade was 78 % and 77% of GDP in 1963 and 1973 respectively. The period 1973- 1982 witnessed more increase in the ratio of international trade to GDP than that in the previous period reaching 84 % in 1974 and 81% 1979 respectively. This was attributed to the oil boom after 1973. In the period 1982-1999, there was a remarkable decrease in the ratio of international trade to Libya, recording 53%, 43%, and 40% in 1988, 1993, and 1999 respectively. This was caused by low prices of oil and drastic decrease in world demand. The period 2000-2008 indicates there massive increase in the ratio of international trade to GDP reaching 93%, 81%, and 84% in 2005, 2006, and 2008 respectively.

In comparison with an average of international trade in other countries in the Gulf region, Libya's international trade indicators reached a high of 66.7% which were 65% in 1997 in their openness to the international trade with the rest of the world. When

compared Libya to developed countries like US, Germany, Australia and UK, the results indicate that international trade to GDP reached 35% in USA, 40 % in Australia, 57 % in UK, and 46 % in Germany in 1995. However in other developing countries in Europe and Asia, this ratio reached 285 % in Singapore and 92 % in Austria 1998. Comparing the sizes of economies among these developed countries to Libyan economy, the conclusion is that Libyan economy may be smaller than in that of the other countries and; therefore, these countries do not run into any risk with low levels of the ratio of international trade to their gross domestic products. The country's single source of export compared to a diversified import structure, and geographical concentration of imports could be another factor affecting the indicators of international trade to GDP (Eurostat, 2003).

From the table above, comparing changes in opening indicators of Libyan economy to the rest of the world, it notes that, ratio of imports to GDP was less constant than the ratio of total international trade to GDP due to constant share of exports to GDP. Also, the ratio of imports to GDP fluctuates between 12 % and 31% with an average of 21.4 % in all period of study. A high ratio indicates the role of imports in the Libyan economy. The data in the table indicate that increase in the ratios in (1973-1981) compared to other period in the 1980s, because of increase in the power of exportation, is affected by an increase in the price and quantities of crude oil, as well as raise of expenditure resulted from growth plans of (1973-1975) and (1976-1980). At the same time, imports of consumer and capital goods played a strategic role to affect domestic demand. The other element, which was related to exchange rate policies, domestic currency, was evaluated above its real value. Huge surplus from earnings exchange led to increases in demand for imports. This can be attributed to the fact that importation of these goods was more beneficial and cheaper than producing them domestically (Finger and Kreinin, 1979).

However, 1980s and 1990s witnessed decreases in this indicator. The indicator reached 15% 1985, 15 % 1994, and 12 % 2000. The rational of these decreases was from oil prices and restricted imports policies that had been imposed after 1981 United Nations sanctions and the country desire to reduce public expenditure and imports. The period (2001-2007) indicated an increase in this indicator which was affected by an increase in oil revenues leading to increases of imports and the size of public expenditure.

The increases in levels of importation in the Libyan economy and its reliance on international trade caused the increase in the ratios of imports to GDP. The economic structure of the Libyan economy is characterized by a single source of foreign exchange earner. This over reliance on international trade for imports and exports, further causes the problems associated with external inflationary factors that affect the domestic economic variables especially the factors of domestic production structures, employment and domestic prices of goods and services (Megri, 1999).

### 7.3. IMPORT COMPOSITION

Table 7. 2: Libya's Total Imports and Commodity Structure of Trade 1970-2000 (\$ millions)

<b>Years</b>	<b>Consumption goods</b>	<b>Raw materials</b>	<b>Capital goods</b>	<b>Total Imports</b>
1970	151	72	449	673
1971	189	99	563	851
1972	228	116	823	1166
1973	327	191	1316	1835
1974	482	255	2058	2795
1975	611	298	2657	3565
1976	477	282	2472	3230
1977	711	258	2799	3798
1978	899	272	3523	4632
1979	894	353	4098	4666
1980	1318	536	4969	6823

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1981	1484	578	6342	8188
1982	1120	480	5410	7010
1983	1044	596	4249	5470
1984	975	454	4648	8275
1985	682	316	3008	5629
1986	789	360	3800	4609
1987	750	449	3020	5135
1988	668	518	4175	5561
1989	983	480	3403	4867
1990	1130	457	3398	4986
1991	1170	515	3283	4960
1992	1140	480	3329	4500
1993	823	668	3410	5134
1994	880	469	3114	4464
1995	1307	516	3281	5185
1996	1033	561	4035	5361
1997	1345	624	4095	6064
1998	1474	636	3925	5410
1999	792	588	3521	5400

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2000	809	477	3145	4770
2001	1132	471	3174	4419
2002	1639	1044	5843	8148
2003	1323	820	5960	7841
2004	2002	777	7493	9644
2005	2496	1150	9272	12291
2006	2256	1672	9750	13192
2007	3546	2098	15444	20460

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*Source:* Ministry of Planning, Department of National Accounts, Tripoli- Libya, Various Reports; Central Bank of Libya, Foreign Trade Statistic. Economic Bulletins: different issues; Arab monetary fund AMF, Various reports, 2004

During the past four decades machinery and transport equipments have constituted more than 50% of imports. In 1963-1969, the first economic plan led to increase the demand for heavy machinery and transport equipment from the rest of the world. This was meant for development programs and expansion in the oil industry. Furthermore, three economic and social plans (1970-1972) (1973-1975) 1976-1990) were undertaken. Because of the low capacity of the Libyan economy, the country could not make supply of most of the goods and services to meet the demand necessary for the implementation of the development programs. It was easy for the country to import the goods required by these plans, at the same time importing all kinds of consumer goods. However, the world recession, which started 1981 impacted on the income from oil, affecting the country's ability to continue to finance the imports. The government had to undertake austerity measures to balance between income and expenditure. The first step was to stop the importation of a number of good. It began with what was called the "commodities budget" which was a sort of quota system for imported goods. The second step was by establishing policy to control foreign currencies exchange. The two steps

aimed at stabilising trade balance and current transfers. As the result of the two policies, the value of total imports decreased gradually from \$6029 million in 1983 to \$4101 million in 1985.

Table 7. 3: The Libyan Structure of Imports (%)

<b>Years</b>	<b>Capital goods</b>	<b>Raw materials</b>	<b>Consumption goods</b>
1970	66.7	10.7	22.5
1975	74.5	8.3	17.12
1980	72.8	7.8	19.3
1985	53.4	5.6	12.1
1990	68.1	9.1	22.6
1995	63.2	9.9	25.2
2000	65.9	1	16.9
2005	75.4	9.3	20.3
2007	75.4	10.2	17.3

As it is shown in the above table, capital goods recorded the highest proportion of the total imports. It represented more than 60% to 75% in 1970-2007. It reached 74% and 72% in 1975 and 1980 respectively and remained 75% in 2005 and 2007. This can be attributed to the highly ambitious development plans, and to the lack of capital goods provision in the local market. The increasing rate of imports of consumer goods grew at constant rates during the 1970-2007, ranging between 15% and 25%. This increase can be attributed to the instability in economic policies as well as to fluctuations in oil prices in those years. Imports of raw materials and intermediate goods increased steadily and reached 10% in most of the years, the decline in raw material imports can be attributed to the increasing imports of consumer goods and capital goods as shown in the above table.

#### 7.4. GEOGRAPHICAL IMPORT DISTRIBUTION

European Union (EU) has been considered as a traditional market for Libya's imports during 1971-2008. Nonetheless, the percentage share of the value of these imports was 59% in 1971, increasing to 71% in 1980, dropping to 66% in 1985, finally reaching 67% in 1990. In 1995, the percentage share of imports from the European Union continued to increase continuously until it reached 66% and 65% in 1995 and 2000 respectively. There was a decline from 56% to 48% of total imports from 2005 to 2008.

Italy is one of the most important members of EU exporting to Libya, which occupies first place among total imports from Libya during the period 1971 -2008. In 2008, the highest value achieved by the Libyan imports from Italy was \$4270 million, a 22% of total imports. Libya also experienced the lowest value of imports from Italy in 1971 of \$161 million, which was 23% of the total imports. The second largest trade partner with import is Germany. Libyan imports from Germany in the last twenty years reached from 9% in 1971 to 14% 1990. The value of imports from Germany was \$64 million in 1971 and \$821 millions in 1990. The highest value recorded is \$1659 million in 2008.

#### 7.5. EMPIRICAL RESULTS

This section discusses the estimates of model in equation 14. Descriptive statistics of the variables included in the model is discussed already in Chapter 5, except the variable PR (Price Ratio. On average, the price ratio is close to 1, showing that the difference between domestic price and import price is small in the period 1963-2008. Minimum price ratio is observed to be 0.66 in 1980. Falling world oil prices in the early 1980s ushered in the fourth phase of Libya's economic development. The falling prices have dramatically reduced government revenue and caused a serious decline in economic activity. Maximum value of price ratio is observed to be 1.84 in 2000 when Libya maintained a low domestic price level relative to foreign price levels and experienced deflation. Following table shows the result of ADF test, which is applied on the series of price ratio.

Table 7. 4: ADF Test Result for Relative Price

Series	Level Form		First Difference Form	
	Prob.	Unit Root	Prob.	Unit Root
<b>PR</b>	0.2179	Yes	0.0017	No

Result of ADF test shows that there is a unit root in the series of price ratio at level form, and the series is non-stationary. At the first difference form, there is no unit root in the series of price ratio and the series is stationary. Following is the result of Johansen co integration on the series included in the model using Trace statistics and Max Eigen statistics.

Table 7. 5: Unrestricted Co integration Rank Test (Trace)

Hypothesized	Eigen value	Trace Statistic	0.06 Critical Value	Prob.
<b>No. of CE(s)</b>				
<b>None</b>	0.306651	21.62187	29.79707	0.32
<b>Atmost1</b>	0.088479	5.508092	15.49471	0.7527
<b>Atmost2</b>	0.03202	1.431913	3.841466	0.2315

Table 7. 6: Unrestricted Co integration Rank Test (Maximum Eigenvalue)

Hypothesized	Eigen value	Trace Statistic	0.06 Critical Value	Prob.
<b>No. of CE(s)</b>				
<b>None</b>	0.306651	16.11378	21.13162	0.2183
<b>Atmost1</b>	0.088479	4.07618	14.2646	0.8512
<b>Atmost2</b>	0.03202	1.431913	3.841466	0.2315

The above result shows that the hypothesis of no co integration among the variables of the model cannot be rejected as both the trace statistics, and the max Eigen

statistics are lower than the critical values. Hence, there is no co integration among the variables. As it is seen earlier that the series are stationary at the first difference form, OLS results, if applied on the first difference of the series, might not be spurious. For this purpose, equation 14 is transformed as:

$$\Delta M_t = a + \beta \Delta Y_t + \lambda \Delta PR_t + \gamma \Delta M_{t-1} + \eta \quad \dots \quad (25)$$

Following table illustrates the result of OLS applies to estimate equation 25.

Table 7. 7: OLS Output of Import Demand

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
<b>Constant</b>	2.49E+08	2.71E+08	0.918112	0.3641
<b>D(Y)</b>	0.081369	0.03019	2.695236	0.0102
<b>D(PR)</b>	-5.10E+09	2.29E+09	-2.22502	0.0318
<b>D(M(-1))</b>	0.295727	0.129013	2.292224	0.0272
<b>R-squared</b>	0.463326	<b>F-statistic</b>		11.51104
<b>Adjusted R-squared</b>	0.42	<b>Prob(F-statistic)</b>		0.000014

Effect of income on imports is found to be weak but significant as t-statistic is 2.69 with p value 0.01, less than the maximum acceptable p value 0.05 for 95% confidence interval. If GDP of Libya increases, the increase in imports of Libya only due to the increase in GDP is small. However, effect of price ratio on the imports, is not only significant but also strong. Moreover, the past values of imports have positive and significant effect on Libya’s import. This shows that import demand in Libya is largely subject to the difference in domestic and import price as compare to the country’s income. This finding affirms the finding of Bergs, (2004), which indicates that any increase in the relative price of imports will slow down the levels import demand and literally lower levels of economic growth. For long-term relationship between Libya’s GSP, import, and relative price, vector autoregressive (VAR) model is estimated. Following table illustrates the result of VAR model.

Table 7. 8: VAR Model Output for Import Demand Function

	$\Delta Y$	$\Delta M$	$\Delta PR$
$\Delta Y(-1)$	-0.234770 (0.20414) [-1.15002]	0.109834* (0.03794) [2.89489]	2.64E-12 (2.5E-12) [1.05752]
$\Delta Y(-2)$	-0.267565 (0.22857) [-1.17059]	0.086278* (0.04248) [2.03099]	-1.46E-12 (2.8E-12) [-0.52378]
$\Delta M(-1)$	2.015738* (1.16729) [1.72686]	-0.191958 (0.21694) [-0.88484]	-1.20E-13 (1.4E-11) [-0.00844]
$\Delta M(-2)$	0.901950 (0.99284) [0.90845]	-0.174214 (0.18452) [-0.94414]	-2.40E-12 (1.2E-11) [-0.19775]
$\Delta PR(-1)$	-1.67E+09 (1.6E+10) [-0.10644]	-6.19E+09* (2.9E+09) [-2.12175]	0.540392* (0.19157) [2.82081]
$\Delta PR(-2)$	-8.01E+09 (1.6E+10) [-0.51563]	-2.20E+09 (2.9E+09) [-0.76232]	-0.086365 (0.18974) [-0.45517]

<b>Constant</b>	1.18E+09*	3.83E+08*	-0.003595*
	(1.6E+09)	(3.0E+08)	(0.01950)
	[2.37907]	[2.40678]	[2.12838]
<b>R-squared</b>	0.163317	0.446893	0.227476
<b>Adj. R-squared</b>	0.023870	0.354708	0.098722
<b>F-statistic</b>	1.171173	4.847810*	1.766750

Results of VAR model show that in the long term, change in the import demand of Libya, significantly and positively affect the change in Libya’s GDP. Also, in the log run, changes in Libya’s GDP significantly explain the change in Libya’s import. Changes in the relative price of Libya in the current year and the previous year, significantly explain the change in Libya’s import but the value of Libya’s relative price in the second previous year, may not have a significant effect on Libya’s import. None of the lagged values of Libya’s GDP and import significantly affects change in the relative price. Only the autoregressive equation with change in import is overall significant as shown by the value of F-statistic. The two other autoregressive equations in the VAR model are not overall significant. However, the nature of cause and effect relationship between the Libya’s GDP, imports, and price ratio can be estimated through obtaining Granger Causality. Following is the result of Granger Causality test among the variables of equation 25.

Table 7. 9: Granger Causality Output for Import Demand Function

<b>Null Hypothesis</b>	<b>F-Statistic</b>	<b>Probability</b>
D(M) does not Granger Cause D(Y)	3.21014	0.0515
D(Y) does not Granger Cause D(M)	4.00858	0.02633
D(PR) does not Granger Cause D(Y)	1.48306	0.23978

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D(Y) does not Granger Cause D(PR)	1.06073	0.35623
D(PR) does not Granger Cause D(M)	2.58102	0.08891
D(M) does not Granger Cause D(PR)	0.04696	0.95418

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A dependent variable is one whose values depend on the take another variable. The dependent variable in a function is usually represented by  $y$ . The dependent variable is represented on the ordinate axis. Are variables of response observed in the study and could be influenced by the values of the independent variables. Hayman (1974: 69) defines it as property or characteristic that is changed by manipulation of the independent variable. The dependent variable is the factor which is observed and measured to determine the effect of the independent variable.

According to the result of Granger Causality test, change in Libya's import Granger causes a change in Libya's GDP as the F-statistic is almost significant at 0.05 level. Also, change in Libya's GDP Granger causes a change in Libya's import. Thus, the cause and effect relationship between Libya's GDP and import is bidirectional. Change in the relative price of Libya does not Granger causes a change in the country's GDP as the F-statistic is not significant. Similarly, change in Libya's GDP does not Granger causes a change in the relative price for the same reason. Hence, there is no cause and effect relationship between relative price and GDP of Libya. Change in the relative price Granger causes a change in Libya's import as the F-statistic is significant, but the reverse is not true. Hence, the cause and effect relationship between relative price and Libya's import is unidirectional, directing from relative price to imports.

## 7.6. CONCLUSION

The chapter provided statistical representations of real imports and real GDP of the country that represents the country's economic development figures. The chapter employed econometrics frameworks using sets of explanatory variables of import demand, relative price of demand and GDP of the country in order to have a clear analysis of the foreign trade flow in Libya. The results showed that levels of imports

could be explained by relative price of imports. The other finding of the study is that economic growth of a developing economy can as well be correlated with the levels of imports to the country, which first into the theoretical prediction by Rodrik (1992). However, the role of Libya's income in predicting import demand of the country is not significant.

Further research in Libya should be extended to other dimensions and variables that determine the importance of the foreign trade flows. Studies using disaggregated imports should be carried out in order to understand its determinants. A more robust forecasting module that needs to be used in investigating these disaggregated variables needs to be established before the study is carried out. It is crucial for the extended study to model main variables of import demands other than the intermediate imports in order to get a clear picture of the statistical properties of import demands.

In sum, the estimation of the import demand function and its relationship to the real *GDP* and relative price of imports indicates that the growth or reduction of Libyan economic activities can be explained by the imports and the relative price of imports in the international markets. Continuing to import goods from countries with unfavourable prices will obscure the country's development policies. To counteract this, country needs to institute public and private policies aimed at inducing increases in imports and shrinking of the relative price of imports with its trading partners.

These policies can be effective if Libya would increase its levels of exports to these trading partners, by developing more on export bucket. For Libya having oil industry creates a higher bargaining power with its trading partners. Some intermediate goods can be produced in the local economy, which would reduce its reliance on imports of basic commodities. This will increase its balance of trade earnings and give it surplus of the foreign earnings. The surplus will help the country to develop the non-oil industry and increase the levels of overall imports.

## **Chapter 8**

### **LIBYAN IMPORT DEMAND WITH EXPENDITURE COMPONENT**

#### **8.1. INTRODUCTION**

This chapter aims at achieving the objective five introduced in Chapter 1. The chapter consists of three sections. The first section is an introduction to the chapter, which also presents an overview of the expenditure components. The second section discusses the empirical results of the model developed to achieve objective five. The last section concludes the chapter.

##### **8.1.1. Consumption**

The first expenditure component is consumption. Data on private real consumption on different types of goods are available only for the period 1964-69. A close examination of the behaviours of these types of consumption expenditures indicates that their composition has changed substantially. As the following table indicates, the highest percentage of private real consumption went for nondurable goods, followed by services and semi durables. This could be explained by the fact that the rapid rate of population growth and the increase in the internal migration from rural to urban areas resulted in higher standards of living, which led to more demand for services and nondurable goods. On the other hand, the smallest percentage of total consumption expenditures went to non-durable goods, but it has an increasing trend. This last point could also be explained following Kuznets (1966: 100-102) that as income increases, the structural composition of consumption moves in favour of the high elasticity group (the durable goods). Besides, demand for durable goods protects consumers against inflation, especially in an oil-based economy like Libya.

Table 8. 1: Private Final Consumption by Type of Expenditures\* 1964-2008, 1969 Prices, Million of LD

<b>Year</b>	<b>Durable Goods</b>	<b>Semi-Durable Goods</b>	<b>Non-Durable Goods</b>	<b>Services</b>
1964	13.23	23.26	83.16	76.98
1965	18.83	28.44	98.26	90.3
1966	24.48	31.94	119.24	98.08
1967	25.15	35.1	144.57	103.78
1968	31.22	44.9	167.07	111.03
1969	42.4	51.6	164.5	112.2
1970	44.8	53.5	167.1	113.8
1971	49.8	58.5	171.1	117.8
1972	54.8	63.5	175.1	121.8
1973	59.8	68.5	179.1	125.8
1974	64.8	73.5	183.1	128.8
1975	69.8	78.5	187.1	130.8
1976	71.9	81.9	189.2	133
1977	76.9	86.9	193.2	137
1978	81.9	91.9	197.2	141
1979	86.9	96.9	201.2	145

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1980	91.9	101.9	205.2	148
1981	96.9	106.9	209.2	150
1982	98	159.3	211.5	154
1983	103	164.3	215.5	158
1984	108	169.3	219.5	162
1985	113	174.3	223.5	166
1986	118	179.3	227.5	169
1987	123	184.3	231.5	171
1988	189.3	236.5	175	157
1989	194.3	241.5	179	161
1990	204.3	251.5	187	169
1991	209.3	256.5	191	172
1992	214.3	261.5	195	174
1993	197.4	179	177	160
1994	202.4	184	181	164
1995	207.4	189	185	168
1996	212.4	194	189	172
1997	217.4	199	193	175
1998	222.4	204	197	177

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1999	224.5	209	199.4	182
2000	229.5	214	203.4	186
2001	234.5	219	207.4	190
2002	239.5	224	211.4	194
2003	244.5	229	215.4	197
2004	249.5	234	219.4	199
2005	254.5	239	226.5	212
2006	259.5	244	230.5	216
2007	264.5	249	234.5	220
2008	269.5	254	238.5	224

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*Source:* National Accounts of Libyan 1963-2008 (2009)

It should be noted that, changes in the money supply play an important role in the determination of the level of consumption in least developing countries. That is in the absence of well-developed financial markets, and the existence of a ceiling on nominal interest rates, the non-business private sector's alternative to cash balances is commodities. Therefore, if the public ends up with more money than it wants to hold, then consumers will spend part of the difference to purchase consumption goods (Archer, 1995: 928). Therefore, changes in the money supply, personal disposable income, prices, and demographic characteristics should be included in a demand model. One way to include the latter is to estimate the private consumption equation in per capita terms or to include some information about the age distribution of the population.

The G.P.C. meeting that was held in Sebha between 25 February and 2 March 1987 was a significant one as it debated, for the first time, radical changes in economic strategy in Libya. The delegates raised several issues that seemed to be deeply concerned many segments of Libyan society. The extent of the discontent was obvious when they openly called for reform. It seems that Libyans no longer want to carry the burden of austerity measures that were imposed in the

early 1980's in response of falling oil revenues. At the end of meeting, the G.P.C. adopted resolutions that demanded improvements in the fields of food distribution and control of prices, and called for measures to ensure reliable supplies of medicine, spare parts, and raw materials, and the prompt payment of salaries. Significantly, the G.P.C. also condemned the state-owned General Company for Marketing and Agricultural Production for its failure to manage food distribution adequately and demanded that farmers should be allowed to sell produce directly to the consumer.

In fact, agriculture and the food distribution system were at the heart of delegates' criticism. Import agencies also came under attack; as there was a call to examine the agencies' operations in order to control prices and ensure the availability of medical products and raw materials. This meeting was significant because not only the decision to discuss the detail of the proposed reforms represented a departure for the G.P.C., but also these discussions about the shortcomings of the Libyan economy took place at a meeting, which was celebrating the tenth anniversary of the proclamation of the Jamahiriya system.

When the delegates to the Congress were stressing the need for reform, the government memorandum that was presented to the G.P.C. still embodied calls similar to the earlier ones: the need for financial stringency, agricultural developments, and changes in the banking system. As such, they reflected the government's concern about the cash flow problems and the desire to decrease spending. The 1987 budget prepared by the secretariats (ministries) and approved by the G.P.C. pointed to further austerity and continued import restraints. It was decided that the spending had to be cut to 1985 levels or fewer. The hardest hit was the development budget, which was almost 15% less than it was in 1986. The G.P.C. stressed the need to concentrate on unfinished projects from the 1981-1985 development planned administrative budget' was cut down by 9%. The relatively small cut in the import budget (3% less than in 1986), however, reflected the concern that imports could not be cut further without provoking unrest.

Another significant development was the extensive cabinet reshuffle that took place at the G.P.C. meeting in Sebha. Omar al-Muntasser, a technocrat with knowledge of the oil industry and good relations with western European business circles, became the new General Secretary (prime minister). After his appointment, especially in Western European media, comments were made about the new moderate image, and it was suggested that Libya would embark on a more pragmatic and moderate course and would seek an improvement in its relations with the West

(Archer, 1995: 980). However, the cabinet still showed the basic rift between career technocrats represented by al-Muntasser and revolutionaries, such as new health minister, Dr. Mustafah Zaidi, and new minister of planning, Dr. Mohammed Lutfi Farhat. This was a prime example of Kaddafi's balancing act that would repeat itself more and more often in the future as the struggles within the ruling cadres intensified because of implementing the reform programs.

In a report published by the World Bank in 2010, Libya private consumption factor was estimated at 0.94 in 2009 as compared to 2008 rate of 0.92. Libya's purchasing power parity is regarded as the strongest among the African countries since the discovery of oil in 1950s. For a long time, Libya has been running a centrally planned economy, but after the earlier sanctions by the United Nations and America, the government embarked on a more market-oriented reform. The country has continuously reduced private subsidies to its citizens and privatized many state corporations.

### **8.1.2. Government Current Expenditures on Goods and Services**

As mentioned before, in least developing countries, the government plays an important role in the economy, Libya is no exception. Beside its traditional function in providing defence and security, during the sample period, the Libyan government furnished free medical care and free education. It also controls public utilities, telephone, and the mass media. With the exception of commerce, in Libya, government is the main producer and investor in the services sector. Government current expenditures consist of purchases of goods and services for operational and administrative purposes (Braun, 1992: 32). These expenditures increased from L.D. 26.0 million in 1962 to L.D. 1400.3 million in 1977.

In most cases, the government takes account of past levels of its revenues and expenditures, as well as expected revenues in deciding its current purchases of goods and services. Therefore, both current revenue and lagged expenditures and revenues will be used as explanatory variables in the behavioural equation of the government's current expenditures. Especially since 1982 with the opening of huge state supermarkets, at least in theory, the private ownership in retailing and services had been virtually eliminated. Reversing its policy the government announced the reopening of the private small shops.

**Dismantling of State Trading Agencies:** In his September 1982 speech, Kaddafi declared, "all export and import institutions, which imports the largest part of people's needs, will be

abolished.” and the “Libyans will be able to import and export in complete freedom”. This implied dismantling of State Trading Agencies, which was a complete turnaround from the previous policy which was based on state ownership of import and export agencies. In the same speech, he acknowledged the complaints about the importing agencies and gave these complaints as the reason for the decision to liberalize the foreign trade. Kaddafi, for instance, regarded the company that imported cars as involved in favouritism and bribery and nepotism and thus an unsuitable institution. It sold cars at high prices, took one to two years to deliver cars, brought in cars without spare parts, and mixed up all types of cars. It sold spare parts under the counter for its cronies or friends.

### 8.1.3. Fixed Capital Formation

Since the early days of independence in 1951, the government decided to take the initiative in stimulating the development of the economy since a big push was needed to overcome its retarded state. The government has been in a position to muster the available resources and channel them for construction and development. It undertook some projects which are either non-profitable, or beyond the means of the private sector such as the specialized banks, a national airline carrier, and all the major manufacturing industries. Public investment constitutes the expenditures on the national economic development plans (Brian, 2006: 287).

Prior to 1963, any comprehensive national economic development plan did not exist; however, a series of *ad hoc* agencies financed by grants from western governments were formulated to deal with economic development problems in the Libyan economy. During the period 1951-60, foreign aid played a critical role in financing the expenditures on development projects. The Libyan government, during that period, received L.D. 36 million (\$163.32 million) of which L.D. 32.7 million were spent on development programs (The Development of Public Finance in Libya 1943-1963, 1965:17).

In April 1963, the government decided to deduct a part of the oil revenue for development programs, and this share was not to be less than 70 percent of the oil revenue. With the exception of 1973 and 1975, the share of oil revenue that went to development programs was less than 60 percent. During the sample period 1962-77, and as Table (3) indicates the share of real capital formation in real gross domestic product showed two different patterns. It was decreasing during the second sub-period 1971-77. The reason was the huge government participation in capital formation during the second sub-period, not only in infrastructure construction but also its extensive investment in basic industries. This investment was financed by government income from oil revenue (Dawson and Keith 1993). On the other hand, the share of private real investment in total real investment also showed two different patterns during the sample period. During the sub-period 1962-69, total private investment was greater than that of government investment (column 3 of the following table).

Both private and public investment will be disaggregated into five sectors, namely, investment in the agricultural, manufacturing, oil, construction, and services sectors. Public investments in the five sectors, as well as private investment in the oil sector, are considered exogenous while private investments in the remaining four sectors are endogenous. Moreover, a

general reduction in total private real investment was observed in the years 1967, 1970, 1971, 1976, and 1977. The decrease was apparent in all sectors during 1974-77. With the exception of the services sectors, the reduction in private real investment was accompanied by a similar reduction in the sectoral value added.

The state became more committed to taking its oil industry downstream and to increase its petrochemical production, special attention was given to widen overseas refining and marketing base. To this end, in April 1988, a new oil Investments International Corporation (Oilinvest) was set up as a holding company with a capital of 450 million dollars to oversee all Libya's foreign investments in the hydrocarbon sector. This was a turnaround from the past couple of years where there was a lack of investment in oil field development programs. G.P.C. approved plans to establish a system of bonuses and promotions into those who deserve them.” This new policy signalled a moving away from more egalitarian policies of the regime.

The early 1990s was a difficult time for Libya. The imposition and later tightening of the U.N. sanctions and the volatile world oil market put clear constraints on the choices of the Libyan regime. Under these difficult circumstances, the economic reform program entered into a new stage. The most important characteristic of this period was the attempt by the regime to create a legal environment for the functioning of the private sector.

It goes on to explain the changes that took place in the world oil market and the effects of these changes on Libya. After that, there is a discussion of the economic reform policies that were adopted during this period. First, attempts for reducing the role of the state in the Libyan economy are explained. Then, the policies that were adopted to privatize parts of the Libyan economy are discussed. In the recent past, the foodstuff prices have increased due to inflations the country has been facing since 2007.

## **8.2. EMPIRICAL RESULTS**

The section presents the empirical results of the model in equation 16 developed in the Chapter 4. The model is same as the model in equation 14 except, this model incorporates the factor of expenditure. Following table illustrates the output of the ADF test to test unit root in the three series of expenditure.

Table 8. 2: ADF Test Results for Expenditure Components

Series	Level Form		First Difference Form	
	Prob.	Unit Root	Prob.	Unit Root
<b>C</b>	0.2023	Yes	0	No
<b>G</b>	0.41	Yes	0.0005	No
<b>I</b>	0.5352	Yes	0.0073	No

Result of ADF test at the level form shows that the three series, annual household consumption expenditure, annual government consumption expenditure, and annual investment, contain a unit root and are not stationary. These series do not follow a trend and there current values cannot be predicted only on the basis of lagged values. At the first difference form, there is no unit root in each of the three series. Hence, the three series are stationary at the first difference form. The change in the series follows a trend and is predictable using the previous changes that occurred in these series. Co integration among the variables of equation 16 is illustrated in the following table.

Table 8. 3: Unrestricted Co integration Rank Test (Trace)

Hypothesized	Eigen value	Trace	0.06	Prob.
No. of CE(s)		Statistic	Critical Value	
<b>None</b>	0.707274	179.119	159.5297	0.0027
<b>At most 1</b>	0.604728	125.0642	125.6154	0.054
<b>At most 2</b>	0.511186	84.22416	95.75366	0.2378
<b>At most 3</b>	0.393338	52.73015	69.81889	0.5171
<b>At most 4</b>	0.25741	30.7397	47.85613	0.6804
<b>At most 6</b>	0.229039	17.64481	29.79707	0.5924

<b>At most 7</b>	0.131419	6.199622	15.49471	0.6719
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Table 8. 4: Unrestricted Co integration Rank Test (Maximum Eigenvalue)

<b>Hypothesized</b>	<b>Eigen value</b>	<b>Trace</b>	<b>0.06</b>	<b>Prob.</b>
<b>No. of CE(s)</b>		<b>Statistic</b>	<b>Critical Value</b>	
<b>None</b>	0.707274	54.05481	52.36261	0.0332
<b>At most 1</b>	0.604728	40.84	46.23142	0.1689
<b>At most 2</b>	0.511186	31.49401	40.07757	0.3314
<b>At most 3</b>	0.393338	21.99045	33.87687	0.6084
<b>At most 4</b>	0.25741	13.09489	27.58434	0.8796
<b>At most 6</b>	0.229039	11.44519	21.13162	0.6029
<b>At most 7</b>	0.131419	6.199346	14.2646	0.5878

The null hypothesis of no co integration is rejected on the basis of both the Trace statistics and the Max Eigen statistics. The values of Trace statistics are greater than the critical values for the null hypothesis on no co integration and at most one co integration depicting that these two null hypotheses can be rejected. The value of Max Eigen statistics is greater than the critical value only for the null hypothesis of no co integration. Hence, this null hypothesis is rejected. Therefore, there is only one co integration between the variables in equation 16. Existence of a linear relationship is not enough for modelling the import demand of Libya. Taking import as dependent and indicators of government expenditure and private consumption as independent variables, an OLS regression is estimated taking Imports of Libya as the dependent variable. Following is the output of import model estimated via OLS.

Table 8. 5: OLS Output of Import Demand with Expenditure Components

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
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<b>Constant</b>	2.17E+08	1.71E+08	1.267221	0.2126
<b>D(Y)</b>	-0.032355	0.026279	-1.231201	0.2256
<b>D(PR)</b>	5.14E+09	1.78E+09	2.879755	0.0064
<b>D(I)</b>	0.701009	0.091832	7.633611	0.0000
<b>D(F)</b>	0.043574	0.060876	0.715783	0.4784
<b>D(G)</b>	0.069103	0.104803	0.659359	0.5135
<b>R-squared</b>	0.793395	<b>F-statistic</b>	29.95325	
<b>Adjusted R-squared</b>	0.766907	<b>Prob(F-statistic)</b>	0.000000	

Result of the OLS regression shows that income, relative price, and the components of expenditure explain approximately 80% of the variation in Libya's imports as depicted by the value of R square. This proposed model of Libya demand is overall significant as shown by the F statistic 29.9 with p value zero. The individual significance shows that effect of Libya's income on the country's import demand is negative. In other words, as GDP of Libya increases the country reduces the import demand. Similar results were observed by Shehata (2011). The author performed a panel study, used gravity model, and concluded, "while increasing per capita GDP in: Libya, Ethiopia, Djibouti, and Zambia leads to a decrease in Egypt's imports from them." The estimated coefficient of income's effect on import demand is not significant as the t statistic is -1.23 with p value greater than 0.05. The results show that effect of relative price on import demand is positive and significant too as the t statistic is 2.8 with p value less than 0.05. However, authors have found relative price inelastic to effect imports. For example, Ziramba and Bbuku (2013) found for the case of Namibia that relative price are inelastic and the policy makers cannot use policies of exchange rate to control import demand. The regression here included three components of expenditure, investment, consumption, and government consumption. Only investment has a significant and positive effect on the import demand. The other two components of expenditure also have positive but insignificant effect on import demand of Libya. This finding is aligned with that of Ziramba and Bbuku (2013) who found

significant relationship between expenditure and imports. Among the expenditure components, the authors also found the investment expenditure as strong determinant of imports. In this research also, investment is found to be a significant factor affecting the import demand of Libya.

As described in Chapter 2 and then in Chapter 5 that multiple equations can be estimated for the linear relationship between co integrated series, it done here using VECM. VECM can be estimated, once co integration is established among the variables as it uses the residual term of co integration as error correction term. Following table illustrates the output of VECM.

Table 8. 6: VECM Output for Import Demand Model with Expenditure Components

<b>Error Correction:</b>	<b>D(Y)</b>	<b>D(M)</b>	<b>D(PR)</b>
<b>CointEq1</b>	-1.07196*	-0.12572*	4.68E-12*
	-0.13509	-0.02732	-2.90E-12
	[-7.93539]	[-4.60150]	[ 1.60830]
<b>D(Y(-1))</b>	-0.03414	0.106095*	1.73E-12
	-0.12968	-0.02623	-2.80E-12
	[-0.26327]	[ 4.04483]	[ 0.61788]
<b>D(Y(-2))</b>	-0.36119*	0.053083*	-1.16E-12
	-0.13284	-0.02687	-2.90E-12
	[-2.71905]	[ 1.97575]	[-0.40706]
<b>D(M(-1))</b>	0.954896	-0.4113*	6.90E-12
	-0.66939	-0.13539	-1.40E-11
	[ 1.42651]	[-3.03784]	[ 0.47880]

<b>D(M(-2))</b>	0.78526	-0.15834	-3.49E-13
	-0.60212	-0.12178	-1.30E-11
	[ 1.30417]	[-1.30014]	[-0.02692]
<b>D(PR(-1))</b>	3.88E+08	-5.32E+09*	0.521889*
	-8.80E+09	-1.80E+09	-0.18978
	[ 0.04404]	[-2.98642]	[ 2.74994]
<b>D(PR(-2))</b>	3.65E+09	-1.26E+09	-0.08383
	-9.40E+09	-1.90E+09	-0.20161
	[ 0.38960]	[-0.66799]	[-0.41580]
<b>Constant</b>	-4.40E+10*	-5.15E+09*	0.139429
	-6.30E+09	-1.30E+09	-0.1353
	[-7.00812]	[-4.05128]	[ 1.03048]
<b>I</b>	2.937477*	0.543977*	-1.39E-11*
	-0.36265	-0.07335	-7.80E-12
	[ 8.10005]	[ 7.41628]	[-1.78361]
<b>C</b>	0.877129*	0.171679*	-1.53E-12
	-0.25042	-0.05065	-5.40E-12
	[ 3.50266]	[ 3.38956]	[-0.28307]
<b>G</b>	0.577905	-0.18491*	2.72E-13

	-0.39106	-0.0791	-8.40E-12
	[ 1.47777]	[-2.33776]	[ 0.03226]
<b>R-squared</b>	0.771086	0.820772	0.342101
<b>Adj. R-squared</b>	0.69955	0.764763	0.136508
<b>F-statistic</b>	10.77903	14.65431	1.663969

R-square is high for the autoregressive equation, which has imports as the dependent variable and the equation with GDP as the dependent variable. Error correction term (ECT) has a significant coefficient for all the three equations. Coefficient of ECT for GDP is negative depicting that the annual value of GDP is below the equilibrium level and the magnitude of ECT show that annual adjustment in GDP is 107%. Coefficient of ECT for imports is also negative depicting that the annual value of import is below the equilibrium level and the magnitude of ECT show that annual adjustment in import is 12%. Coefficient of relative price for imports is positive depicting that the annual value of relative price is above the equilibrium level and the magnitude of ECT show that annual adjustment in the relative price is very low. Effect of total investment and household consumption expenditure on Libya's GDP is positive and significant.

Long-term effect of GDP is positive and significant Libya's import. In addition, effect of household consumption and investment on imports is positive and significant. However, annual government consumption expenditure has negative significant effect on import and so as the relative price has. The only factor that significantly affects the price level is the total investment whose effect on the price level is negative.

As the results of ADF showed that the series incorporated here are non-stationary and the result of Johansen co integration showed that the series have long-term linear relationship, effects of change in one variable on the other might not complete in a single year. The three series have disequilibrium in their values. The fastest to achieve the equilibrium level is Libya's GDP and the slowest is price level. This slow adjustment in price level can affect the import demand of Libya as it significantly depends on relative price.

### 8.3. CONCLUSION

As stated in the beginning, this study aims at assessing the impact of various macroeconomic factors on the import demand in Libya. The findings of the study imply that import demand in Libya can be explained significantly by the country's private and public expenditure. However, as the results show relative prices of imports have little significance on the growth of import demand in the economy of Libya. Changes in the macroeconomic trends of import demand are aimed to be captured in model specification. The study tested for correlation, unit root, co integration of the variables. The study also used of error correction models of imports demand.

Theory suggests that import is determined by two important factors: prices and expenditure. Three components of expenditure were inserted in the model of import demand: investment, consumption, and government expenditure. All components of expenditure are found to be significant determinant of import demand in Libya. The findings depict that there are strong relationships between the growths of Libyan demand for imports and consumption in the economy. Nevertheless, demands for imports variables have a negative correlation with relative price of imports. The study also located that there is a short and long-term relationship between the variables. This implies that, for the country to enjoy higher levels economic development, it has to maintain higher levels of import. Although, the country's higher levels of dependence on imports should be reduced with increased local production, noting its vast levels of economic stability from exports earning. A higher level of investment will increase further the per-capita income of its citizens and boost further importation of goods into the country, creating a cycle of development between the importations and economic development.

## Chapter 9

# CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATION

### 9.1. INTRODUCTION

In the international arena, debate over international trade and its impacts on economic developments has been going on for a long time in the policy circles as well as academia. In this debate, those who support trade liberalizations argue that liberalization of trade by developing countries would benefit them more than tight controls of the economy. Economists and analysts are in search of answers to questions raised by opposing thoughts to liberalized economies. Does free trade and openness of an economy lead to economic growth? As part of this debate, to locate the impact of this on the Libyan economy, this chapter examines the Libyan international trade aspects in relation to promote economic growth. In addition, this chapter investigates the established concepts of international trade policies in Libya with the objective of finding if there are any correlations between international trade and various economic variables, in particular economic growth.

With the integration of Libya into the international trade in early years of this century a period of sanctions, the government adopted liberalization policies, which showed immediate impact with the marked growth in the economy. The research indicates that the factors that were associated with higher economic growth are increased public and private expenditures. Both of these expenditures types raise the levels of imports and exports in an economy such as Libya which does not have much infrastructure for production including manufacturing and agriculture. Thus, with the economic growth, increased demand for imports in Libya is taken to have contributed significantly in the levels of economic growth. The increased levels of imports as a result of economic growth are due to the high levels crude oil exports as the lifting of the sanctions provided an opportunity space for Libya to easily sell its petrochemical products and oil to the outside world generating revenues to push for further import, as well as economic growth.

It should be noted that since the discovery of oil reserves in Libya around 1950s, the country has maintained high levels of balance of trade. However, despite such revenues the country's development policies have not been very effective in developing alternative economic

growth strategies away from crude oil and its products. This is very much related to the inefficient economic strategies and trade policies caused by the Libyan regime in the time sometime due to ideological reasons and sometimes due to the consequences of ideological position as were the case with the sanctions.

This chapter aims at reflecting the findings established in the previous empirical chapters through an interpretative method and also aims to contextualize within the political economy of the country as well as in the experience of other countries to give further meaning to the results. The findings of each of the empirical findings are examined under different sections. The chapter also draws a general conclusion and provides some policy recommendations; it also discusses the limitations of the study before bringing it to the end.

## **9.2. LIBYA'S TRADE PROFILE**

Chapter 3 dealt with the analysis of Libyan international trade in relation to its economic growth. It explored the growth of exports and imports in the country and how these factors influence the overall economic growth of the country, which covered the economic growth trajectories of Libya in the period of 1960–2008. For determination of the Libyan foreign trade sector's importance, the indicator of the ratio of the total value of the foreign trade to the total value of the domestic product is used indicating the degree of the economic opening (economic uncovering). The more the value of this indicator rises, the degree of the correlation increases between the rates of growth of the gross domestic product, changes in the foreign trade movement and the increase of sensibility of the Libyan economy to the fluctuations in the international markets. The macroeconomic indicators show that, the ratio of the foreign trade to the domestic product was amounted about 71.53% in the first period and decreased thereafter about 55.79%, 52.3% in the second and third periods. This decrease refers to the diversification of the Libyan domestic product and increase of the other sectors contribution to the domestic product. Consequently, the degree of the risks to which the Libyan economy may be exposed due to fluctuations in the international markets shall decrease.

The average ratio of the foreign trade to domestic product during the study period was amounted about 58.42%. But reference should be made here to the rise of the ratio of the economic uncovering, whereas it was more than 50% during the various study periods. This refers to the limited capacity of the Libyan economy's production power. Thus, reflected in the

increase of the Libyan imports to cover the deficit in the local production of goods, in addition to the oil exports, which present the large share in the Libyan exports and which are influencing by the international oil markets conditions. Libya has liberalized its economic policy regimes and pursued strategies to attract investment.

### **9.3. THE ROLE OF TRADE IN ECONOMIC GROWTH OF LIBYA**

The linkages between exports and economic growth were first discussed in modern times, in the mid of 1980. However, the research produced mixed results. Achieving rapid economic growth through export promotion and as a component of international trade policy in respective economies, many countries adopted this new economic theory. However, a number of them did not experience high growth rates.

The merits of the growth process built on the premise of export led growth. In successful economies, those have followed the export led growth policies, economic crises experienced since the beginning of 2008 is exposing them to limitations of the policy. These countries have been exposed to financial vulnerability of their trading partners. As stated earlier in the relevant empirical chapter in this study, global financial crisis and the plunge in the world trade in Europe dampen the prospects of export led growth in Libya. While net exports of oil and raw materials from the country will benefit from increasing prices, imports prices increases will equally affect the prospects of higher economic growth.

The UNDP was forced to re-examine the future of export led growth through Carnegie Endowment Conference of June 29th 2009. The trade openness associated with export led growth shifts goods to sectors of the economy with comparative advantage and this increases efficiency in the economy. In the case of Libya, a developing country, these sectors of the economy are in the labour intensive and private sector of the economy. Expansion of private sector in Libya will lead in expansion of job creations, which in turn will lead to more equality to the people of Libya. Further trade liberalizations likewise associated with export led growths opens up the economy to greater inflows of the financial direct investments (FDI) and transfer of technology into the economy. However, Libya had not been successful in diversifying its economy away from the oil sector with the dominance of the public sector and; therefore, the growth dynamics of export could not be achieved. Since the new regime is committed to the

market economy, it is hoped that they will be able to contribute to the development of the private sector leading to economic growth.

It should be noted that one of the most intriguing results of export led growth theory is the realizations that, as exports expand they tend to pull the growth of the economy with them. However, these trends in reality mask the great differences in their results from different economies. Countries like Malaysia, Hungary, and Mexico the same export levels in relation to their GDP, but enjoy exceptionally different levels of economic growth rates. The other factor of reliance's on exports is their tendency to expose economies to price volatility. Libya has a high level of unskilled labour and export led growth policies have not improved the wages of the unskilled labour in the economy.

Predictions of export led growth in Latin American countries differ greatly with studies carried out in these countries. The policy that was supported and pursued in these countries during 1980s shows that they only managed to increase the levels of exports unlike the predictions of increasing the levels of economic growth. In addition, the export led growth of Libya has been highly impacted by the financial crisis in Europe. Although the country is expected to benefit from high prices from oil and raw material exports, the cost of importations will likewise affect adversely the prospects of higher economic growth.

Despite such a gloomy outcome, it is expected that greater diversification and regional integration of the Libyan economy may enable the country to take advantage of export led growth. Diversification of export products and countries of destination would mitigate the country's vulnerability to trade demand volatility, which is terribly important under the current economic recession after the financial; meltdown. Greater regional integration with other Arab and African countries in the North Africa may provide a buffer to global shocks as these countries are not integrated with the global economy to such a degree and; therefore, their businesses cycles is not synchronized entirely with the EU economies. It is however important also to remember that despite the fact that Libya is a member of several regional trading blocks, only the EU has succeeded in facilitating substantial trade with Libya. Therefore, relying on other trade block despite their financial crisis-prone economies may not fulfil the economic expectations of Libya.

African countries have heavily relied on the outcomes of export led growth in Asian countries while developing their international trade policies. Many countries in Africa have

poorly developed international trade policies, with many policy makers expected to benefit from a higher level of customer pool by way of opening up to international trade. Opening up to international trade is expected to increase the levels of foreign currency needed to trade internationally. For those countries in Africa that have opened up to international trade, the experience and expectations have been disappointing. African countries' trade with developed countries relies on selected goods, which are minimal compared to the levels of goods that African countries import from the developed countries. Likewise, intra-trade with African countries is highly limited due to the lack of complementary goods within these countries. The perennial problems of unemployment, poverty, and adverse weather make these countries export similar goods. Diversification of goods and improvement in their infrastructure would greatly benefit these countries. Despite all the limitations that face African countries there is room for improvement, with greater prospects of deepening regional cooperation's and trading blocks.

Thus, the trade relations with the African countries is not a promising option for Libya; therefore, due to political choices, the country should not make similar mistakes as it did in the case of the previous regime and should be very pragmatic in choosing its trade partners for maximizing the benefit to Libya.

The Chapter 5 shows that both export and economic growth are related in the short run as well as in the long run. According to Abual-Foul (2004), this implies that all variable in the export function tend to revert quickly to equilibrium relationship. Any increases in the levels of export will equally increase levels of economic growth in the country both in the short run and long-run. In other words, Libya provides evidence of export-driven growth over the sample period in Africa.

These findings, thus, evidence the export-led growth hypothesis in Libya. The fact is that Libya's economy is mostly dependent on oil with external trade accounting for more than 95% percent of the country's GDP in 2010, which supports the findings that the growth trends in Libya are export led growth. It should be noted that there was a slowdown in the Libyan economic growth in 2008-09 due to the global financial meltdown and economic recession in developed economies (Hasan and Dridi, 2010). However, in the later part of 2009 to April 2010, there has been a remarkable surge in Libya's oil exports as a response to the revenue decrease. Effect of the oil sector on labour cost in other non-oil sectors of the economy with tradable goods is crucial in these regard (Douglas, 2002). In order to increase international trade in non-oil

sectors of Libyan economy, import prices for such Libyan products need to be grossly reduced. This has been the most serious problem of the Libyan economy during the last fifty years.

As the empirical evidence shows trade liberalization is one of the main causes of Libya's real growth, which is the result of the country's acceptability into the international community. After the lifting of the sanctions, trade policies have started influencing the small but growing manufacturing sector, leading to its contribution in economic growth of the country. Being an open economy, Libya has the potential of competing internationally with other developing countries in the region in exportation quarters of finished products, given its massive wealth.

The result from the study shows that there is a considerable relationship between exports, imports and the general macroeconomics growth in Libya. The testing for Johansen co integration shows that no investigation variables are cointegrated thus the long run relationship with bidirectional causality effects is estimated via VAR model. Results of VAR and causality showed that any rise in exports supports consequent rise in growth of the economy. Both imports and exports have a positive influence on the growth of Libya's economy. Therefore, this has a policy implication in the sense that promotion of exports via policies will contribute to general macroeconomic growth of the country.

#### **9.4. IMPORTANCE OF TRADE PARTNERS IN THE ASSESSMENT OF THE ROLE TRADE IN THE ECONOMIC GROWTH OF LIBYA**

Some of the biggest impediments of international trade in Libya are the laws and regulations governing international trade. General lack of clear laws and the levels of corruption have always worked against higher economic gains in Libya associated with international trade. However, economic integration of Libya into the international trade has been expected to attract much needed foreign direct investments, which are required to expand economic growth. As mentioned before, after the lifting of sanctions in early 1990s, the government of Libya adopted new political and economic policies for economic liberalization. The liberalization policies have focused on structural modernization of the Libyan economy. Privatizations of Libya public assets are expected to generate greater access to foreign investments. The government of Libya expects to use these foreign direct investments to develop certain areas of the Libyan economy that are underdeveloped. Diversification of the economy will create new qualified jobs, reduce the cost of production in the oil sector and rationalize exploitation of natural resources in the country.

Adoption of the law in 1997, which was concerned with encouragement of foreign capital investments and subsequent establishment of Libya Foreign Investment Board, was the culmination of this foresight. Although the government had approved investments from foreign countries, the application of law remains restricted to only a batch of economic sectors, with the government controlling all other economic domains. For many years, the EU has been an important trading partner with Libya. Their international trade basket accounts for more than 70% of Libya total trade. In 2010, this amounted to more than \$US 35.5. The EU is the major source of Libya imports and the largest market for Libya exports. This relationship takes place within bilateral legal frameworks that govern bilateral relations in international trade. By 2010, Libyan international trade in goods indicates that the country has favourable balances of trade. European Union exports to Libya amounted to 6.8 billion Euros while European Union imports from Libya amounted to 28.8 billion Euros.

The third aim of the study aimed at investigating how increases in Libyan exports from the European Union trading partners would positively or negatively the GDP performance of Libya. The findings of this study indicate a strong relationship between the imports and exports of Libyan relationship with its gross domestic product and the overall economic performance of the country. An increase in the levels of imports and exports between Libya and it trading partners would lead to an increased performance of its economy. The objective related to the aim three is based on the assumptions that there is a correlated relationship between the prices of oil and the levels of international trade between Libya and its trading partners. The finding of the analysis shows that there is a correlation between these variables. A decrease or increase in oil prices has a significant impact on the levels of imports or exports in Libya.

The other objective of aim three is based on the assumptions that incomes of Libya trading partners have significant impacts on the general performance of the levels of imports and exports of Libya. The analysis of this study has proved that there are significant impact of the trading partners GDP on the levels of import, exportation, and general performance of Libyan economy. But the country's levels of economic performance and lack of considerable or significant import from the trading partners in relation to their total levels of export does not have the feedback effect on the Libyan economy.

The negative feedback effect of Libya international business as mentioned in the preceding paragraph has no difference from other oil dependent countries in the Middle East. As

part of a long-term growth strategy, it is imperative for Libya to diversify its output and export structures in favour of non-oil commodities and economic activities with more advantageous production and demand characteristics.

Libyan foreign trade has adverse terms of trade with its major trading partners. A theoretical solution to these problems is to restructure the distributional pattern of productive resources. The policy of the government of Libya encourages exports of oil and oil products, and it is not motivated to improve on exports of manufactured or semi manufactured goods from its economy. Changing terms of trade with major trading partners would definitely achieve a more viable economic growth with higher levels of feedback effects. This is a desert country, relying on agriculture is not feasible, but the country has large balances of trade could be used to improve on manufacturing and other services sectors of the economy (Akhil and Yousef, 2002).

#### **9.5. REFLECTING ON THE FINDINGS ON LIBYAN IMPORT DEMAND**

There have been recent debates regarding the role of import demand in determining the levels of economic growth in developing countries. Chapter 07 provides simple solutions to this debate using Libyan demand for imports data analysis. The chapter provides statistical representations of real imports and real GDP of the country that represents the country's up to date economic development figures. The chapter employs simple statistical frameworks using sets of explanatory variables of import demand, relative price of demand and the GDP of the country in order to have a clear analysis of the foreign trade flow in Libya. The study finds that levels of imports can be explained relative price of imports. The other findings of the study are that economic growth of a developing economy can as well be explained by the levels of imports to the country.

The chapter uses econometric models to investigate the performance of the import demand functions, economic growth, and price elasticity of demand in Libya. In order to improve the accuracy of testing the relationship between these variables, use of various testing tools were employed. The chapter starts with correlation matrix, which proved the correlation between economic growths of Libyan economy with its import demand. Lack or negative correlation between the relative price of demand and the other two variables was determined. There existed unit root in the collected data, which vanished at the first difference form, but there

was no evidence of co integration among the variables. Therefore, the data was transformed into stationary and OLS was used to estimate the model developed in Chapter 4.

The estimation of the relationship between Libyan GDP, import demands and the relative price of imports indicates that there is a strong relationship between all three variables at 5% of significance. Any import demand increase will lead to an increase in the overall growth of the country GDP. VAR analysis suggested that, model is overall significant if import is taken as the dependent variable. In addition, relative price have a greater significance in defining import demand than the GDP has.

Further research in Libya should be extended to other dimensions and variables that determine the importance of the foreign trade flows. Studies using disaggregated imports should be carried out in order to understand its determinants. A more robust forecasting module that needs to be used in investigating these disaggregated variables needs to be established before the study is carried out. It is crucial for the extended study to model main variables of import demands other than the intermediate imports in order to get a clear picture of the statistical properties of import demands.

The findings are that there are strong relationships between the growths of Libya real incomes to demand of imports. These two variables have a negative correlation with relative price of imports and that there is a short and long-term relationship between the variables. This implies that, for the country to enjoy higher levels economic development, it has to maintain higher levels of balance of trade with its trading partners, by maximizing on its exports profits. This will help the country to invest more on the importation of intermediate resources necessary to improve on its natural resource exploitation. A higher level of investment in this line will increase further the per- capita income of its citizens and boost further importation of goods into the country, creating a cycle of development between the importations and economic development.

These factors of development are in the same time dependent on the relative prices of the imports. For countries trading with Libya, in the international trade, they should provide quality products to the country at considerable and competitive prices. Continuing to import goods from countries with unfavourable prices will hurt the country's development policies. Unfavourable prices diminish the impetus to import more while at the same time milking away the most needed foreign earnings. To counteract these, the country needs to institute public and private policies

aimed at inducing increases in imports and shrinking of the relative price of imports with its trading partners.

These policies can be effective, if Libya would increase its levels of exports to these trading partners, by developing more on export bucket. The country's non-oil industry is not fully developed to create a higher bargaining power with its trading partners. Some intermediate goods can be produced in the local economy, which would reduce its reliance on imports of basic commodities. This will increase its balance of trade earnings and give it more surpluses of the foreign earnings. The surplus will help the country to develop further the non-oil industry and increase the levels of overall imports (Berndt, 1991).

## **9.6. REFLECTING ON THE FINDINGS FROM EMPIRICAL ANALYSES**

From a large number of suitable statistical tools, few most appropriate tools are used in this research. As the empirical method of this research is time series analysis, a common problem of non-stationary time series is tackled using the Augmented Dickey Fuller Test. Result of the test for the series used in empirical chapters showed that the first difference of most of the variables of Libyan economy is stationary. Thus, short-term and long-term associations obtained using OLS and Johansen Co integration is less likely to be spurious. Combing in the findings of the four empirical chapters of this study (Chapter 5-8); it is observed that indicators of trade are significantly associated with indicators of economic growth. However, the associations found using the above-discussed two tests are of static nature. This study used VAR (in absence of co integration) and VECM (in presence of co integration) to evaluate dynamic association.

The results of Chapter 5, 7, and 8 showed that Libyan income affects exports significantly but imports are not significantly affected by the income. This is also evident by Granger causality test results (see Table 7.9). Neither imports of Libya causes GDP nor does the GDP cause imports. Instead, relative price is a strong determinant of import demand in Libya.

The findings also indicate that expenditure components also affect imports of Libya more than the GDP does. Among the expenditures of Libya, household consumption and investment tend to increase the country's imports while government consumption tends to decrease it.

One of the aims of this study is to evaluate interdependence between Libya and the trade partners and for this purpose, a model of simultaneous equations was developed in Chapter 4. The researcher chose Two-Stage Least Square (TSLS) method to solve the system of

simultaneous equations. Comparing the results of TSLS for the case of six trade partners, the EU as a whole and five members of the EU, it is found that France is the only country, which showed a feedback effect. French GDP is significantly affected by Libya's imports from France. Hence, as compare to the other EU countries, France is the most dependent nation on trade with Libya for the country's economic growth. The results of empirical tests provided a brief comparison between effects of different indicators of trade. In addition, the effect of different economic fundamentals on trade is compared. It is concluded, based on empirical results, that exports are more effective in trade-led growth of Libya than imports. Similarly, Libyan economic growth affects exports more than imports. Relative price and expenditure are strong determinants of Libya. Therefore, controlling these two variables to control imports is crucial for Libya, as the relation between Libya and its trade partners is import-dependent more than export-dependent.

#### **9.7. EXPENDITURE AS A DETERMINANT OF LIBYA'S IMPORT DEMAND: REFLECTING ON THE FINDINGS**

The study assessed the impacts of demand in Libya, in relation to import demand components of expenditure and relative prices. The study's findings imply that import demand in Libya can be explained significantly by the country's private and public expenditure. Relative prices of imports have also significant effect on the growth of import demand in the economy of Libya. Changes in the macroeconomic trends of import demand were captured in the study model specification. The study has elaborated these using VECM of imports demand.

The findings are that there are strong relationships between the growths of Libya demand for imports and consumption in the economy. However, demands for imports variables have a negative correlation with relative price of imports. There is a short and long-term relationship between the variables. This implies that, for the country to enjoy higher levels economic development, it has to maintain higher levels of importation and consumption. Although, the country's higher levels of dependence on imports should be reduced with increased local production, noting its vast levels of economic stability from exports earning. A higher level of investment in this line will increase further the per- capita income of its citizens and boost further importation of goods into the country, creating a cycle of development between the importations and economic development.

In conclusion, there have been recent debates regarding the role of import demand in determining the levels of economic growth in developing countries. This chapter provides some empirical evidence to this debate using Libyan demand for import data analysis. The chapter provides statistical representations of real imports demand data and expenditure data, which also employs simple statistical frameworks using sets of explanatory variables of import demand, relative price of demand and consumption in the country in order to have a clear analysis of the foreign trade flow in Libya. The study finds that the levels of imports can be explained by consumption variables in both private and public sector of the economy.

### **9.8. OVERVIEW OF THE EMPIRICAL FINDINGS**

Through employing extensive statistical tools on the data collected for Libya and its trading partner to estimate the models developed in Chapter 4, the research has reached some interesting findings. Libyan imports exceed export of the country, as the figures shows in Chapter 4. However, result of Chapter 5 depicted the ineffectiveness of imports to cause economic growth. Nevertheless, economic growth of Libya may play the mediating role for exports of the country but not for imports. Considering the significant dependency of Libya on trade, it is important to know that which trading partner has a feedback relationship with Libya. Although the EU is considered the most prominent trading partner of Libya, the trade relations of Libya with individual EU countries are not uniform. The study revealed that France plays the most important role in trade relations of Libya with the EU. It was previously found that Libyan GDP is not a strong determinant of its imports. Furthermore, the results presented in Chapter 7 identified the relative price as a strong significant determinant of import demand in Libya. Hence, to control imports of Libya, first the relative price is needed to be controlled. Theory suggests that import is determined by two important factors: prices and expenditures. Three components of expenditure were inserted in the model of import demand: investment, consumption, and government expenditure. All components of expenditure were found significant determinants of import demand in Libya.

Overall, the findings concluded that, Libya depends on international trade for economic growth. To control its trade relations and to extract benefits, the country needs to identify the trading partners that feed back the relationship such as France. Moreover, export supply can be

controlled through foreign policies of Libya but to control import demand, the country needs to control relative price and expenditure.

### **9.9. EMPIRICAL AND THEORETICAL IMPLICATIONS OF THE RESEARCH**

The concept of comparative advantage as advocated by the classical economic theory indicates that there are benefits associated with international trade. In recent times, economists have developed new trade theories, and although they are, in most cases, misinterpreted, they argue that there are other dynamic benefits associated with international trade. The investigations in these study show that results significantly support the classical economic theory. The specialization and concentration of Libyan production in the oil sector and its increased levels of imports for goods not available in the local production lines shows that the country specializes in what it has a comparative advantage. The government's concentration on resources in the oil sector helps it to create division of labour and enhance productivity in the economy. The policy of the government to import goods that are produced cheaply abroad allows it to specialize and maximize the value of its outputs. The argument is in favour of free trade and is well supported by the findings of the current research. The periods when the country was using restrictive trade policies did not improve or increase economic growth in Libya.

The fundamental doctrine of international trade is based on the comparative advantage mantra. The country's adoption of liberalise trade policies, bi-lateral agreements with European countries importing from Libya supports the importance of free international trade policies adopted by the country. Although the country has been using selective trade restrictions, this has been necessary in order to protect the country's foreign reserves and specific industries.

Use of intervention policies as seen in early 1980s were necessary for the continued growth of the Libyan economy on the phase of sanctions supported by the UN. The consequences indicated that there was some failure in policy formulations, which were sector specific. This brought-in many rent seeking parties in the international trade policy implementation and management, increasing cost of goods and services, which in turn reduced rates of economic growth.

Using the new international trade theory, and analyzing the findings of this study, it is arguable to state that international trade has a permanent impact on a country's rate of growth, not just the levels of real gross domestic product. Opening up the economy helps the country to

keep in touch with global markets. Higher rates of interactions in the global markets speed up the absorption of frontier technologies and global management practices of economies. This argument applies to both imports and exports regarding Libyan economic development.

There are many studies of the static microeconomic costs of protection by tariffs, quotas, and other trade barriers, and the implied gains from liberalization. Economists have also undertaken macroeconomic statistical tests to determine the relationship between trade restrictions and countries' growth rates. Imports demands and export levels are the two factors that emerge as the variables of international trade that affects rates of growth. Price relatives were not found to have significant effects on international trade. The empirical part of the current research shows that international trade is a significant determinant of growth in Libya. The chapter started with specifying the standard determinants of GDP as suggested by the neoclassical growth theory and added variables for exports and imports as share of GDP. The coefficients of exports and imports were found to be statistically significant to economic growth rates in the Libyan economy. This was contrary to short-term Keynesian macroeconomic theory, suggesting that exports and imports are important factors needed to stimulate long-term economic growth. Thus, the most standard measure of openness in growth studies is the sum of exports and imports as a share of GDP. Although Libya's proximity to its major trading partners in the EU has aided in developing strong ties to its economic development, growth benefits from geographically induced trade, and need to extend to the effects of policy-induced trade.

## **9.10. POLICY RECOMMENDATIONS**

According to the findings of the current research, institutional structure of foreign and local trade policy formulation in Libya has been identified as having numerous weaknesses. The country's policy formulation faces fragmented and poor approval among different government departments. This leads to uncoordinated and inconsistent coordination in policy implementations. When it comes to multilateral and bilateral agreement negotiations, Libyan international trade policy lacks detailed analytical research necessary in guiding negotiation positions with trading partners. There are few formal mechanisms established or existing for departmental consultations within the government structures. This has created an atmosphere of uncoordinated and ineffective trade policy commitments. Coordination of policy lacks transparent mechanisms of follow up with the private sector and other allied sectors of the

economy. The ineffective policy framework requires a rationalized structure with clear lines of responsibilities. Proper and timely communication of policy changes and updates need to be established with less bureaucratic bottlenecks. A number of credible policies have been developed in the country regarding the international trade. These policies are needed to be considered if the country is to improve on its economic openness and consultation across the board. In order to improve the quality of international trade decisions, the ministry of international trade cannot be able to act in isolation.

In Libya, reliance on ad hoc technical assistance from foreign governments has made the government focus on priorities of the economy without regarding the importance of research and capacity building in order to understand the impacts of international trade. Institutional structures are only as good as their capacity to understand the impacts of trade policies. With the majority of economic and security priorities having been addressed, a more sustainable system of trade research is needed in assisting formulation of appropriate international trade policies. The government should in the process of strengthening policy coordination be as well promote capacity building to strengthen the overall policy structure. Department mandated to strengthen these structure are only concerned with support to import and export sector of the economy, but in reality, they are expected to have some indigenous capacity.

The government of Libya need to form units that will support building of skills necessary to undertake complementary training on Libyan international trade and policies. The levels of expertise in Libya, regarding international trade and policy negotiations are constrained by existing civil service bureaucracy and corruption. The government is unable to undertake sophisticated modelling of the various economic activities determinant of economic growth. The available research tools with the government should be made available to such other bodies as the Libyan universities and other private entities that are capable of employing simple analysis of trade flows and interpret such research in order to support policy formulations.

It is a little controversial to say that removal of Muammar Qadhafi was the easier part in Libya's fight for liberation than the daunting tasks to build a state in the post-Qadhafi era. Libya's interim government is facing as complicated a time as any other country that has seen a revolution. The new Libyan management is left with a distinctly chaotic political condition, with various, concurrent, and vital major challenges. Libya has to meet critical demands to remedy both the mistakes and the crimes of the previous government, in addition to create a new national

army, withdraw weapons, maintain security, and build political institutions. Initiating a truth-recovery process is indispensable to ensure fatalities that the crimes of the civil war or of Qadhafi's government will not go unpunished or unaddressed. The Libyan people are highly hopeful following the ending of dictatorial rule by Qadhafi, but the interim government is facing the lack of institutions to meet all the demands at once. One of the key challenges is the requirement of practised politicians who can direct an elected evolution. With the exception of those few figures who defected from Qadhafi's command, there is yet a scarcity of national figures with any skill in supervising country relationships. Under Qadhafi, state affairs were managed by a handful of technocrats, who occupied, in rotation, ministerial and administration positions in state owned companies. The management is not only required to put up fundamental state institutions that permit it to employ its duties as a service provider to its own people, but it has yet to set up itself as the only user of lawful aggression.

In the consequences of the fall of Tripoli, the provisional government has announced its plan democracy; a series of institutions, procedures, and laws have to be put in place for the next elections. But concurrently, a way out to the basic security problem has to be provided. Building a national army and demilitarizing the armed militias is a precondition not only for strengthening state credibility and capacity, but also vital for the attainment of other intermediary reforms.

Ex post analysis of the impacts of a trade agreement would be beneficial. The Libyan government could oversee this role, along with support from an established network of stakeholders; however, the government will likely need technical assistance to build its administrative capacity to perform this role. Technical assistance will also be necessary in generally implementing a trade agreement. Attention should be given to groups that have a higher potential of being marginalised in the initial phases of inception, and ensure that their concerns are being adequately addressed.

### **9.11. LIMITATIONS OF THE STUDY AND FUTURE RESEARCH**

In this study, aspects of Libyan international trade are considered. Similar as many other countries in the developing world and North Africa, studying Libyan international trade pose several limitations. Some of the limitations are related to the unavailability of macroeconomic data of the country's economic performance since 1960s. Political changes implemented by the ruling elites since then and overdependence on oil wealth afforded the ruling elite the

opportunity to misappropriate the country's wealth with intricate webs of business deals. These make it impossible to come up with clear-cut data that would enable a high quality analysis of economic performance in the country. The only available information and data are derived from World Bank and the IMF.

After a lengthy period of international trade isolations, Libya in late 1990s inaugurated new political discourse. Data available for this new period are equally inadequate to form a solid basis of investigations of international trade in Libya despite the fact that the regime aimed at 'normalisation'. Being aware of strategic relevance and being a member of OPEC, Libya should have well preserved data to conduct studies to develop its strategies. As this is the case with data collection, and noting the current situation in Libya, the study could not access much of the needed data from the Central Bank of Libya. After analyzing the economic background of Libyan economy, Chapter 2 required data from the emerging private businesses because of the privatization programs in order to analyze developments in the non-oil sector of the economy. However, the data from these programs are only available under special clearance from the government and; therefore, unfortunately, the study is restricted only with data available from the international organizations that had welcomed the initiatives of privatization in Libya.

During the 1980s until late 1990s, United Nations sanctions had isolated the country from foreign trade and the people of Libya could not enjoy imported goods. Government policy of austerity, because of the austerity policies, had limited the importing of several goods. In the process, policies resembling to import substitutions policies adopted with several trade barriers intending to protect local industries and their products from foreign competition. In line with the data problems, the data from this particular period are not available readily and only data from third parties were used instead of the data available from the Central Bank of Libya. After the lifting of the sanctions, the data, which became available, is more associated with free trade impacts on the Libyan international trade. The increased levels of import demand during these period is well documented and assisted in crafting credible analysis of the openness of the Libyan economy during liberalization period.

The nature of the Libyan economy also has an impact on the data availability. Although the Libyan state had embraced privatization measures, there is very little or no clear-cut difference between the private and public sector in the Libyan economy. Data available under the policy of 'Green Perestroika' does not reflect well the levels of trade in the private sector.

The role of price in international trade continues to be a favourite field of investigation by researchers. The debate on the appropriateness of the use of the single-stage least-squares regression method also continues to draw attention. This study attempted to measure the role of relative price in import demand. The results from the study indicate that the ratio of relative price between Libyan local markets and the world markets has found to be significant in explaining Libyan import demand in the period 1963-2008. However, in each case there are rooms for suspicion that the price effect is often subsumed under the overall income effects in an aggregated import/export function. The levels of desegregation achieved in the study were not completely satisfactory. Further research is needed at the levels of individual commodities or group of commodities demands, which will help in eliciting further information in these respects. With complete and relevant data from the Central Bank of Libya, further research using different tools of analysis could be extended to imports and exports impacts on economic growth. Once the transition government settles down, and credible democratic elections are held, it is expected that missing data will be available for analysis and research.

Since Libya has a new political culture emerging after the revolution, it is hoped that this study can be repeated in five-to-ten years time to locate the structural break in trends in economic growth, import, export and their linkages with each other. In the short-run, it is expected that infrastructure and capital goods import will increase to overcome fixed capital needs of the country due to damage caused by the war but also the shortage accumulated for many decades. To finance the development needs of the country, in the short-run it is expected that country will export more oil and petrochemical goods. Thus, it will be crucial to include structural break and also the interaction and interplay of all these variables.

The former regime had its own political allies with the neighbouring countries, which had remained important trade partners. However, there is and will be change in this as the new regime would lead to further democratic relations in its international foreign affairs such as improving the relationship with the UK, France and the Gulf countries. Therefore, the shift in the import relations with the trading partner countries will be interesting to see. This will help to locate whether the macroeconomic factors or the political factors are important in choosing trade partners in international relations.

## **9.12. EPILOGUE**

This study aimed at analysing the international trade dynamics of Libya by particularly exploring and examining the impact of export on economic growth and the import demand function as well as determinants of bilateral trade between the trading partners. As the foundational chapters and the empirical chapters indicate, this study has achieved its aims and objectives by producing four empirical chapters. It is hoped that each of these empirical chapters can contribute to the existing empirical literature in the case of Libya, and it is hoped that these results can be brought to the attention of the policy makers in the new Libya to make a difference in developing new and dynamic strategies for international trade.

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