Libyan Foreign Trade: A Time Series Analysis

Wessam Abughalia and Ali Abusalem

This paper is based on an economic analysis of the Libyan economy and its structural changes, with special reference to Libyan foreign trade during the last three decades (1980-2010). The study focuses on the trade exchange process between Libya and its larger EU trading partners. In addition, the study attempts to find answers to the main questions: first; whether there have been any significant improvement and growth in Libyan foreign trade with the rest of the world and her major trading partners; and second, using econometric techniques, examining whether the overall evidence shows any improvement in trade, for achieving more diversification in the domestic economy. The findings indicate that as a result of increases in oil prices and the lifting of international economic embargoes and diversification is likely to lead to dramatic changes taking place over the next few years, mainly in industrial and tourism sectors. The findings also reveal that the trade process between Libya and the EU has achieved some success, indicating more economic cooperation through bilateral relations, encouraging the private sector to play its role in the trade process, improving the investment.

Keywords: Libyan Foreign Trade, EU trading partners, Regression Linear Model, Libya.

1. Introduction

Foreign trade is an important component of GDP for most countries of the world (Nasef, 2005). It has a significant role in the process of economic and social development, where exports contribute to economic development as one of the sources of funding. Additionally, the higher the value of exports compared to the value of imports leads to a surplus of foreign currency. From this, capital goods can be imported and production inputs needed to finance economic development plans can be increased (Fouad, 1994).

For nearly two centuries, many economists such as (Samuelson and Stopler, 1941, Smith and Sutherland, 1998, Mill, 1848) and lately Ronald (1956) and Baldwin (2008) have been concerned with the importance of trade between nations and its potential contributions to economic growth and development. In his inquiry into the nature and causes of the wealth of nations, Smith and Sutherland (1998) have reported that the international trade has positive effects on economic growth. In addition, neo-classical trade theory assumes that international trade generates specialization and scale economies and improves the economic efficiency of trading partners.

Yousef (2004) indicated that despite the increasing trade agreements between countries, the world economy has somehow moved towards the phenomenon of globalization (Barnuevo, 2001). He further argues that as an oil exporting country

*Wessam Abughalia, Ph.D Student, Central Queensland University, Australia. Email: w.abughalia@cqu.edu.au
**Dr. Ali Abusalem, Central Queensland University, Australia. Email: a.abusalem@mel.cqu.edu.au
over a long period of time, Libya has particularly established strong trade relations with the larger countries within the European Union. Therefore, the an important role played by imports in foreign trade and development is perhaps what has generated the current widespread interest in explaining the determinants of imports in developed (DCs) and less developed countries (LDCs) alike.

Due to its unique location on the South coast of the Mediterranean basin, Libya plays a central role in enhancing economic cooperation along with a large part of the world (La Verle, 1989). According to Knapp (1997) in particular, the economic cooperation has been strengthened between European Mediterranean countries, and the Maghreb Union countries. However, a recent move by Libya to join the World Trade Organization (WTO) has been aimed at increasing and enhancing its benefits from the trading system. According to this perspective, every nation to activate the external trade sector in order to improve its trade balance, which leads to increase its gross domestic product (Metz, 1989).

In other words, the Libyan economy of economies open to outside world, especially after the discovery oil and beginning of export, where transformation Libyan economy from a weak economy to an economy distinctive(Siply, 2008). Moreover, the most important characteristic of Libyan economy from other economies of developing countries is the abundance of the financial resources and who is considered one of the basic elements of the productive process in any country(Zoubir, 2009). The rest of the research is structured as follows. Section 2 is literature review which explains about previous studies. Section 3 is for description of study methodology and data used. In section 4 discusses of reports the empirical findings. The final section presents a conclusion and some policy implications.

2. Literature Review

Developing countries have been faced many difficulties in financing their foreign trade. Thus, in order to close the gap left by huge deficits in their balances of payments and trade balances, these countries have sought assistance through borrowing from international capital markets (Drabek and Laird, 2001). But, over the past three decades world trade has been witnessed the growing participation of the developing countries. Therefore, between 1970 and 1999 merchandise exports of the developing countries have grown at an average annual rate of 12 per cent, compared to an overall world growth rate of 10 per cent (UNCTAD, 2000).

So far, Libya as a developing country, its economy is mainly dependent on its massive oil exports. However, before the oil era the economy was one of the poorest in the world, with a negative balance of trade. However, since 1961 the discovery of the oil wealth has transformed the Libyan economy to an export capital. Hence, the Libyan economy has no immediate financial constraints on its foreign trade, since both its trade balance and its balance of payments have achieved significant surpluses (Oreibi, 1985). According to secretariat of planning (1996) both local and foreign trade in Libya was always been state controlled. Consequently, quantitative controls through licenses, as well as tariffs and non-tariff barriers have been introduced. Moreover, more controls have been imposed on quotas and foreign exchange when the Libyan economy suffered a deficit during 1980s. In the same period there were incessant fluctuations in the value of both exports and imports; while exports have been more affected as by instability in international oil prices.
Abughalia & Abusalem

Wilkinson (2002) pointed out that the essential importance of trade exchanges for the Libyan economy, particularly with the European Union, the long history of Libya's international trade providing a bridgehead between sub-Saharan Africa and the seafaring nations of Europe, all emphasize the importance of the trade relationship between the two sides. According to Abdalla (1997) Libya's foreign trade with European countries, as the main source of imported goods and services, is highly crucial for meeting local market requirements.

He also contends that the exports to the European markets represent a significant proportion of the hard currency earned from Libya's foreign trade. There have been many previous studies related to the trading activities between countries. However, to date there has been no much academic research or projects which focusing on the issue of trade between Libya and European countries with regards to imports from those countries. Therefore, the importance of this study lies with its contribution to foreign trade studies involving the rest of the world. Moreover, it is hoped that this study will stimulate further investigations in relation to the issue of foreign trade whereas our study attempts to shed light on important structural features of Libyan foreign trade during the last three decades as well as other objectives could be determined as below:

- To assess the development of the Libyan exports and imports during the period of study.
- To examine the development of the Libyan trade balance during the period of study.
- To evaluate some indicators of efficiency of the Libyan foreign trade sector during the period of study.
- To study the Libyan exports and imports structure in order to observe the changes in such structure during the period of study.
- To estimate the geographical distribution of the Libyan exports and imports in order to show the changes occurred either in the exporting or importing markets, determination of the markets receiving the most of the Libyan exports as well as the markets from which the most of the imports are supplied and determination of the extent of the stability of the dealing with them.

### 3. Methodology and Data Sources

The study has been employed the descriptive analysis method and quantitative statistical analysis using some statistical tools such as linear regression analysis in order to know about general time trends of development of both of the exports, imports commodity structure of exports and imports as well as the goods of exporting and importing markets. In addition, the linear regression analysis for the analysis of data was applied. The use of the linear regression analysis to establish the difference between two mediums was considered as one of the famous static parametric measurements, which it can be used extensively in practical applications for testing the difference between two or more variables using a straight line. The study period (1980-2010) has been divided into three stages (1980-1991), (1992-2003) and (2004-2010) which represent the period of three decades. The macro picture of the economy and historical data on various aspects of the Libyan economy, in particular foreign trade sector has been collected from (statistical reports issued by the Central Bank of Libya).
4. The Findings and Discussion

4.1 The Most Important Indicators Related to Libyan Foreign Trade during the Study Period (1908-2010)

4.1.1 Exports

Indicators in Table (4.1) below show that Libyan exports were remarkably developed during the three periods, with exception of the second period (1992-2003). Whereas they amounted to 3907.89 million dollar in the first period, they decreased in the second period to 2882.26 million dollar representing about 73.75% of what they were in the first period. This decrease is attributed to the fact that the Libyan economy was exposed to the unfair economic embargoes and a decline in international oil prices. These had a clear impact on the Libyan foreign trade sector, in general and the exports sector in particular. Libyan imports increased in the third period to 13244.34 million dollars estimated about 338.91% and 459.51% compared to the first and second periods respectively, and this was considered a good indicator of the development of the Libyan exports sector. The average value of the Libyan exports was 6651.397 million dollars during the period.

Table 4.1: Averages of the Most Important Indicators Related to Libyan Foreign Trade during Period (1980-2010) (US $)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>3907.89</td>
<td>2882.26</td>
<td>13244.34</td>
<td>6651.397</td>
</tr>
<tr>
<td>Import</td>
<td>1682.06</td>
<td>1491.37</td>
<td>4616.999</td>
<td>2623.4007</td>
</tr>
<tr>
<td>Trade surplus</td>
<td>2225.83</td>
<td>1390.89</td>
<td>8627.34</td>
<td>4027.9966</td>
</tr>
<tr>
<td>Population</td>
<td>3.021</td>
<td>4.1113</td>
<td>5.835</td>
<td>4.4061</td>
</tr>
<tr>
<td>GDP</td>
<td>7812.6</td>
<td>8071.92</td>
<td>30108.67</td>
<td>15554.88</td>
</tr>
<tr>
<td>The ratio of exports to imports</td>
<td>2.3809</td>
<td>1.977</td>
<td>2.4382</td>
<td>2.2093</td>
</tr>
<tr>
<td>The ratio of exports to GDP</td>
<td>0.5</td>
<td>0.3679</td>
<td>0.3661</td>
<td>0.3982</td>
</tr>
<tr>
<td>The ratio of imports to GDP</td>
<td>0.2153</td>
<td>0.19</td>
<td>0.1569</td>
<td>0.1859</td>
</tr>
<tr>
<td>Average per capita imports</td>
<td>565.337</td>
<td>367.957</td>
<td>759.63</td>
<td>562.13</td>
</tr>
<tr>
<td>Total of foreign trade</td>
<td>5589.95</td>
<td>4373.63</td>
<td>17861.34</td>
<td>9274.798</td>
</tr>
<tr>
<td>The ratio of total foreign trade</td>
<td>0.7153</td>
<td>0.5579</td>
<td>0.5230</td>
<td>0.5842</td>
</tr>
</tbody>
</table>

Source: Constructed by researcher on the basis of data gathered from Central Bank of Libya, various years.

The development and boom in the exports sector, mainly attributed to growth of the oil exports and a remarkable rise in oil prices, were reflected on the development and growth of the Libyan gross domestic product (GDP). Whereas the GDP increased
from an average of 7812.6 million dollars in the first study period to 30108.67 million dollars in the third period, a rise of 385.38 %. The GDP during the whole period was 15554.80 million dollars.

Thus, equation no (1) 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 first period it was appeared that each increase of one dollar in the exports shall 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.

\[
y_i = 3825.573 + 1.02 x_i \hspace{1cm} \text{(1)}
\]

\[
(3.325)^* \hspace{1cm} R^2 = 0.58 \hspace{1cm} F = (11.053)^*
\]

Whereas:

Yt is the estimated value of the domestic product in million dollars; X is the value of the Libyan exports in million dollars. The value in the brackets refers to the calculated value of (t), (**) which is significant at 1% significance level.

The second period for equation no (2) shows that each increase of one dollar in the exports shall result in an increase of the gross domestic product by 1.478 dollar. Thus, points out to its relative stability on its annual average and agrees with the previous findings, the reason was the Libyan economy had suffered from economic embargoes for many years.

\[
y_i = 4603.368 + 1.478 x_i \hspace{1cm} \text{(2)}
\]

\[
(1.268)^* \hspace{1cm} R^2 = 0.167 \hspace{1cm} F = (1.607)^*
\]

Yt is the estimated value of the domestic product in million dollars; X is the value of the Libyan exports in million dollars. The value in brackets refers to the calculated value of (t).

While equation no (3) points out that each increase of one dollar in the exports during the third period shall result in increase in the gross domestic product by 1.595 dollar. The significance of the increase was statistically confirmed at 1% significance level. The value of the determination factors was amounted about 0.996, which indicates that about 99.6 % of the changes to be occurred in the domestic product are attributed to changes in the exports and about 0.04% of those changes are attributed to other factors not taken into consideration.
Abughalia & Abusalem

\[ y_i = 8984.554 + 1.595 x_i \]..............................(3)

\[ (39.239)^\text{**} \]

\[ R^2 = 0.995 \quad F = (1539.67)^\text{**} \]

Yt is the estimated value of the domestic product in million dollars; x is the value of the Libyan exports in million dollars. The value in brackets refers to the calculation value of (t) ** which is significant at 1% significance level.

While equation no (4) points out that each increase of one dollar in the Libyan exports shall result in increase in the gross domestic product by 1.779 dollar which indicates that about 96% of the changes to be occurred in the domestic product is attributed to changes in the exports and about 48% of those changes in attributed to other factors not taken into consideration.

\[ y_i = 3720.629 + 1.779 x_i \]..............................(4)

\[ (25.11)^\text{**} \]

\[ R^2 = 0.96 \quad F = (669.51)^\text{**} \]

Yt is the estimated value of the domestic product in million dollars; x is the value of the Libyan exports in million dollars. The value in brackets refers to the calculated value of (t), ** which is significant at 1% significance level.

4.1.2 Imports

Table (4.1) shows that Libyan imports increased during the first and third period. But in the second period they decreased. The average value of total imports during the first period was 1652.02 million dollars, it then decreased in the second period to 1491.37 million dollars (88.62%) compared to the first period. Then the Libyan imports increased remarkably in the third period. Its average during this period was 4616.999 million dollars at 274.4% and 309.58% compared to the first and second periods respectively. This tangible increase in the Libyan imports reflects the positive effect of the Libyan exports sector on the GDP. This resulted in an increase of imports which included imports of oil-related equipment prohibited under the Security Council resolutions 883 of 1993. It was not possible to produce them locally. The imports commodity structure resulted in the upgrading of the various Libyan economic sectors. The average value of Libyan imports during the whole period was 2623.4007 million dollars.

The average share per capita of the imports, as shown in table (4.1), was 565.337 thousand dollars in the first period, it decreased in the second period to 367.95 thousand dollars, and increased in the third period to 759.63 thousand dollars, representing 134.67% and 206.44% compared to the first and second periods. In addition, the average share per capita of the Libyan imports was 562.13 thousand dollars during the whole period.

As shown in table (4.1) the ratio of the imports to the GDP decreased during the three periods, in spite of the remarkable increase in the Libyan imports as mentioned previously, implying that increase in the GDP is greater than the increase in the imports. Whereas the average ratio of the Libyan Imports to the domestic product in the first period was 0.2153, it decreased in the second period to 0.19 (88.25%), and
decreased in the third period to 0.1569, which was 72.87% and 82.58% compared to the first and second periods. During the whole period, the average ratio of the imports to the domestic product was 0.1859, which is a good indicator of the Libyan economy’s strength and its ability to meet the needs of all the Libyan economic sectors, whether 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. The equation no (5) 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.

\[ M_i = 8.764 + 0.214 y_i \] ..........................(5)

\[ R^2 = 0.552 \quad F = (9.864)^{**} \]

\( M_i \) is the estimated value of the Libyan imports in million dollars, \( Y \) value of the domestic product in million dollars. The value in the brackets refers to the calculated value of \( (t) \), ** which is significant at the 1% significance level.

While during the second period, it appeared that any one dollar increase in the domestic product shall result in about 0.062 dollar increase in the Libyan imports. The significance of that increase was statistically confirmed at 1% significance level. The determination factors value was amounted about 0.437, thus points out that about 43.7% of the changes to be occurred in the Libyan imports is attributed to the changes in the domestic product and about 56.3% of those changes is attributed to other factors not taken into consideration.

\[ M_i = 1026.51 + 0.062 y_i \] ..........................(6)

\[ R^2 = 0.437 \quad F = (6.213)^{**} \]

\( M_t \) is the estimated value of the Libyan imports in million dollars; \( Y \) is the value of the domestic product in million dollars. The value in brackets refers to the calculated value of \( (t) \), ** which is significant at 1% significance level.

As regards the third of the study periods, equation no (7) shows that any one US dollar increase in the domestic product shall result in about 0.125 dollar increase in the Libyan imports. The significance of those findings was statistically confirmed at 1% significance level. The determination factors value was amounted about 0.813, thus points out that about 813% of the changes to be occurred in the Libyan imports are attributed to changes in the domestic product and about 18.7% of those changes are attributed to other factors not taken into consideration.
Abughalia & Abusalem

\[ M_t = 853.043 + 0.125 y_i \] ..........................(7)

\[ R^2 = 0.813 \quad F = (34.751)^* \]

Mt is the estimated value of the Libyan imports in million dollars; Y is the value of the domestic product in million dollars. The value in brackets refers to the calculated value of (t), ** which is significant at 1% significance level.

Through the study of the relation between the Libyan imports and the domestic product during the study period it appeared that any increase of one dollar in the domestic product shall result in about 0.13 dollar increase in the Libyan imports. The significance of such increase was statistically confirmed at 1% significance level. The determination factors value was amounted about 0.888 thus indicates that about 88.8% of the changes to be occurred in the Libyan imports is attributed to changes in the domestic product and about 11.2% of those changes is attributed to other factors not taken into consideration (Equation no 8).

\[ M_t = 594.332 + 0.13 y_i \] ..............................(8)

\[ R^2 = 0.888 \quad F = (222.97)^* \]

Mt is the estimated value of the Libyan imports in million dollars; Y is the value of the domestic product in million dollars. The value in brackets refers to the calculated value of (t), ** which is significant at 1% significance level.

4.1.3 Trade Balance

As shown in table (4.1) the Libyan foreign trade sector achieved a surplus during the three periods (1980-2010). This surplus confirms the importance of this vital sector. It contributed 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 the diversification of this surplus during the various periods, there was always a surplus in the trade balance. In the first period, the average of this surplus was 2225.83 million dollars, it decreased in the second period about 1390.89 million dollars (62.49%) compared to the first period. This decrease did not indicate a decline in the Libyan foreign trade sector, but conversely, it showed the strength of this sector. However, despite international economic sanctions during 1992 and the economic embargoes imposed by the US in the early 1980s on the Libyan economy, in general, and the foreign trade sector in particular, the Libyan economy saw a reasonable improvement and the trade balance recorded a surplus within the last three decades. This fact was confirmed by the surplus value in the trade balance that was achieved after the lifting of international sanctions and opening of the Libyan market to the foreign world in 2003. The foreign trade sector realized a surplus of 8627.34 million dollars at 387.60% and 620.27% compared to the first and second periods respectively. The average surplus was 4027.997 million dollars during the whole period.
4.1.4 Total Value of the Foreign Trade

Indicators of the table (4.1) show that the average total value of the Libyan foreign trade was amounted about 5589.95 thousand dollars in the first period, then decreased in the second period about 4373.63 million dollars estimated about 78.24% than it was in the first period. While it was increased in the third period about 1786.34 million dollars estimated about 319.52% and 408.39% than it was in the first and second 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 table indicators show that, the ratio of the foreign trade to the domestic product was amounted about 71.53% in the first period, 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 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.

4.2 Libyan Imports Commodity Structure during (1980-2010)

Indicators of the table (4.2) and figure (4.1) Show the relative importance of the Libyan imports articles is called the Libyan imports commodity structure during the various study periods. 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 (1980-1991), (1992-2003) and (2003-2010) respectively. The imports of the transportation machinery and equipment occupied the first 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 first period was amounted to 624.53 million dollars, equaling 38.34% of the total Libyan imports during that period, and then decreased about 553.84 million dollars.
In the second 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 first period about 280.18 million dollars at 17.83% of the total value of the Libyan imports during that period. While during the third 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 third 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.

**Table (4.2) Commodity composition of the Libyan imports during the study period (1980-2010) (US$)**

<table>
<thead>
<tr>
<th>State</th>
<th>First period</th>
<th></th>
<th></th>
<th></th>
<th>Third period</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
<td>%</td>
<td>Average</td>
<td>%</td>
<td>Average</td>
<td>%</td>
<td>Average</td>
<td>%</td>
</tr>
<tr>
<td>Foodstuffs &amp; live Animals</td>
<td>262.87</td>
<td>16.13</td>
<td>280.18</td>
<td>17.83</td>
<td>692.95</td>
<td>15.08</td>
<td>411.10</td>
<td>15.85</td>
</tr>
<tr>
<td>Beverages &amp; Tobacco</td>
<td>7.91</td>
<td>0.49</td>
<td>5.66</td>
<td>0.36</td>
<td>22.89</td>
<td>0.5</td>
<td>12.15</td>
<td>0.47</td>
</tr>
<tr>
<td>Raw materials</td>
<td>30.54</td>
<td>1.87</td>
<td>28.05</td>
<td>1.79</td>
<td>88.77</td>
<td>1.93</td>
<td>49.12</td>
<td>1.89</td>
</tr>
<tr>
<td>Mineral fuel resources</td>
<td>15.77</td>
<td>0.97</td>
<td>7.59</td>
<td>0.48</td>
<td>29.39</td>
<td>0.64</td>
<td>17.58</td>
<td>0.68</td>
</tr>
<tr>
<td>Oils, fats Animal &amp; vegetable</td>
<td>25.04</td>
<td>1.54</td>
<td>34.23</td>
<td>2.18</td>
<td>82.26</td>
<td>1.79</td>
<td>47.17</td>
<td>1.81</td>
</tr>
<tr>
<td>Chemicals</td>
<td>80.52</td>
<td>4.94</td>
<td>126.78</td>
<td>8.07</td>
<td>289.50</td>
<td>6.3</td>
<td>165.60</td>
<td>6.37</td>
</tr>
<tr>
<td>Articles classified</td>
<td>367.36</td>
<td>22.55</td>
<td>346.82</td>
<td>22.08</td>
<td>903.99</td>
<td>19.67</td>
<td>539.39</td>
<td>20.76</td>
</tr>
<tr>
<td>Machinery &amp; transport equipment</td>
<td>624.54</td>
<td>38.34</td>
<td>553.84</td>
<td>35.26</td>
<td>2086.10</td>
<td>45.39</td>
<td>1088.16</td>
<td>41.88</td>
</tr>
<tr>
<td>Manufactures different</td>
<td>211.91</td>
<td>13.01</td>
<td>179.05</td>
<td>11.4</td>
<td>397.84</td>
<td>8.66</td>
<td>262.93</td>
<td>10.12</td>
</tr>
<tr>
<td>Commodities not classified</td>
<td>2.62</td>
<td>0.16</td>
<td>8.59</td>
<td>0.55</td>
<td>1.85</td>
<td>0.04</td>
<td>4.35</td>
<td>0.17</td>
</tr>
<tr>
<td>Total</td>
<td>1629.08</td>
<td>100</td>
<td>1570.79</td>
<td>100</td>
<td>4595.54</td>
<td>100</td>
<td>2597.55</td>
<td>100</td>
</tr>
</tbody>
</table>

**Source:** Constructed by researcher on the basis of data gathered from Central Bank of Libya, various years.
4.3 Geographical Distribution of the Libyan Imports during (1980-2010)

The geographical distribution of Libyan imports in this part display the changes in the import markets. As shown in Table (4.3) and Figure (4.2) below, the European Union countries were the most important source of imports during the three periods, but with a difference in the relative importance from period to period. The value of Libyan imports from European Union countries during the first period was 1171.35 million dollars equalling about 69.63% of the average value of the total Libyan imports during that period which was amounted about 1682.15 million dollars. During the second period there is decline in the share of the European Union countries, and the value of the Libyan imports from European Union countries during that period was 949.10 million dollars, the equivalent of 60.41% of the total value of Libyan imports during that period. As mentioned previously, the decrease of the Libyan imports value was due to the economic embargoes which have affected all the economic variables, especially those related to Libyan foreign trade.

But during the third period the value of the imports from European Union countries increased to 2345.65 million dollars which was equivalent to 53.94% of the total value of Libyan imports which reached to 4348.98 million dollars during that period. In this period, in spite of the increase in the total value of the Libyan imports from European Union countries, its percentage decreased more than in the previous periods. This decrease may be attributed to the opening of the Libyan economy in the last period to all countries, whereas the imports sources were diversified and the Libyan economy became more open on the world than in the previous period.
Table 4.3: Geographical Distribution of the Libyan Imports during (1980-2010) (US$)

<table>
<thead>
<tr>
<th>State</th>
<th>First period</th>
<th></th>
<th>Second period</th>
<th></th>
<th>Third period</th>
<th></th>
<th>The study period</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
<td>%</td>
<td>Average</td>
<td>%</td>
<td>Average</td>
<td>%</td>
<td>Average</td>
<td>%</td>
</tr>
<tr>
<td>Arab countries</td>
<td>27.35</td>
<td>1.63</td>
<td>107.66</td>
<td>6.85</td>
<td>458.52</td>
<td>10.54</td>
<td>197.6899</td>
<td>7.80</td>
</tr>
<tr>
<td>African countries</td>
<td>3.20</td>
<td>0.19</td>
<td>3.07</td>
<td>0.19</td>
<td>13.39</td>
<td>0.31</td>
<td>6.553067</td>
<td>0.26</td>
</tr>
<tr>
<td>European Union</td>
<td>1171.35</td>
<td>69.63</td>
<td>949.11</td>
<td>60.41</td>
<td>2345.65</td>
<td>53.94</td>
<td>1488.703</td>
<td>58.75</td>
</tr>
<tr>
<td>countries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern European</td>
<td>113.25</td>
<td>6.73</td>
<td>127.11</td>
<td>8.09</td>
<td>349.26</td>
<td>8.03</td>
<td>196.5434</td>
<td>7.76</td>
</tr>
<tr>
<td>States</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latin American</td>
<td>106.19</td>
<td>6.31</td>
<td>71.10</td>
<td>4.58</td>
<td>296.43</td>
<td>6.82</td>
<td>158.2041</td>
<td>6.24</td>
</tr>
<tr>
<td>countries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian countries</td>
<td>227.41</td>
<td>13.52</td>
<td>304.96</td>
<td>19.41</td>
<td>855.86</td>
<td>19.68</td>
<td>462.744</td>
<td>18.26</td>
</tr>
<tr>
<td>Australia</td>
<td>33.40</td>
<td>1.98</td>
<td>7.23</td>
<td>0.46</td>
<td>29.82</td>
<td>0.68</td>
<td>23.4811</td>
<td>0.93</td>
</tr>
<tr>
<td>Total</td>
<td>1682.15</td>
<td>100</td>
<td>1570.25</td>
<td>100</td>
<td>4348.98</td>
<td>100</td>
<td>2533.918</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Constructed by researcher on the basis of data gathered from Central Bank of Libya, various years.

Figure 4.2: Geographical Distribution of the Libyan Imports during the Period (1980-2010)

Table (4.3) and figure (4.2) above shows that Libyan imports from Asian countries occupied second place during the three periods, where the value of Libyan imports in the first period was 227.41 million dollars representing 13.52% of the average total value of Libyan imports during that period. They increased in the second period, by 34.96 million dollars with an annual growth rate of 19.41%, and reached 855.86 million dollars, which was 19.68% in the third period. During the IEEs period most Libyan imports came from Asian and Arab countries to the detriment of the European countries. The same table and chart show that Libyan imports from Arab countries increased remarkably during the three periods, where most of Libyan imports have been directed toward into the Arab countries.

Whereas, the Libyan imports value was raised from about 27.35 million dollars in the first 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 second period
at 6.8% of the average total value of the imports during this period. Then increased in the third 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.

4.4 Libyan Exports Commodity Structure during the Period (1980-2010)

Indicators of the table (4.4) & figure (4.3) below show the Libyan imports commodity structure during the three study period. They show that, during the first study period (1980-1991), 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 second period compared to the first 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 27312.37 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 third study period, the table and chart data show a continuation of the exports commodity structure as it was in the second 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.
Table 4.4: Commodity Composition of the Libyan Exports during the Period (1980-2010) (Thousand $)

<table>
<thead>
<tr>
<th>State</th>
<th>First period</th>
<th></th>
<th>Second period</th>
<th></th>
<th>Third period</th>
<th></th>
<th>The study period</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
<td>%</td>
<td>Average</td>
<td>%</td>
<td>Average</td>
<td>%</td>
<td>Average</td>
<td>%</td>
</tr>
<tr>
<td>Foodstuffs &amp; live Animals</td>
<td>22.2</td>
<td>0.4</td>
<td>1265.5</td>
<td>0.43</td>
<td>5945.02</td>
<td>0.04</td>
<td>6194.24</td>
<td>0.09</td>
</tr>
<tr>
<td>Beverages &amp; Tobacco</td>
<td>0</td>
<td>0</td>
<td>217.2</td>
<td>0.007</td>
<td>1.666667</td>
<td>1.25</td>
<td>75.41379</td>
<td>0.001</td>
</tr>
<tr>
<td>Raw materials</td>
<td>11.1</td>
<td>0.002</td>
<td>7612.8</td>
<td>0.26</td>
<td>2679.84</td>
<td>0.02</td>
<td>3434.58</td>
<td>0.05</td>
</tr>
<tr>
<td>Mineral fuel resources</td>
<td>3880.53</td>
<td>99.33</td>
<td>27312.37</td>
<td>94.11</td>
<td>128257.51</td>
<td>96.11</td>
<td>6479.147</td>
<td>96.44</td>
</tr>
<tr>
<td>Oils, fats, Animal &amp; vegetable</td>
<td>0</td>
<td>0</td>
<td>363.6</td>
<td>0.01</td>
<td>123.6</td>
<td>0.001</td>
<td>162.4</td>
<td>0.002</td>
</tr>
<tr>
<td>Chemicals</td>
<td>26101.3</td>
<td>0.668</td>
<td>99603</td>
<td>3.43</td>
<td>422840.1</td>
<td>3.17</td>
<td>182848.1</td>
<td>2.72</td>
</tr>
<tr>
<td>Articles classified</td>
<td>0</td>
<td>0</td>
<td>42885.7</td>
<td>1.48</td>
<td>84941.39</td>
<td>0.64</td>
<td>42609.03</td>
<td>0.63</td>
</tr>
<tr>
<td>Machinery &amp; transport equipment</td>
<td>0</td>
<td>0</td>
<td>2600.7</td>
<td>0.09</td>
<td>1642.9</td>
<td>0.01</td>
<td>1414.533</td>
<td>0.02</td>
</tr>
<tr>
<td>Manufactures different</td>
<td>0</td>
<td>0</td>
<td>4877.4</td>
<td>0.17</td>
<td>403.95</td>
<td>0.003</td>
<td>1760.45</td>
<td>0.03</td>
</tr>
<tr>
<td>Total</td>
<td>3906587</td>
<td>100</td>
<td>2902018</td>
<td>100</td>
<td>13344330</td>
<td>100</td>
<td>6717647</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Constructed by researcher on the basis of data gathered from Central Bank of Libya, various years.

Figure 4.3: Commodity Composition of the Libyan Exports during the Period (1980-2010)

4.5 Geographical Distribution of the Libyan Exports during (1980-2010)

Hereinafter the Libyan exports geographical distribution are analyzed in order to show the changes which occurred in the exporting markets and to determine the markets receiving the most exports and the stability of the dealing with those markets. Table (4.5) and Figure (4.4) below show that the European Union countries occupied the first place as they received about 2390.80 million dollars, representing 60.88% of the total value of the Libyan exports, which were worth 3926.69 million dollars during that period.

They were followed by the Latin American countries where the value of the Libyan exports was 1015.30 thousand dollars, representing about 25.86 %. While Libyan
exports to the Arab countries decreased during that period, their value was 37.43 million dollars, representing only 0.95% of the total value of the Libyan exports during this period.

**Table 4.5: Geographical Distribution of the Libyan Exports during the Period (1980-2010)**

<table>
<thead>
<tr>
<th>State</th>
<th>First period</th>
<th>Second period</th>
<th>Third period</th>
<th>The study period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average %</td>
<td>Average %</td>
<td>Average %</td>
<td>Average %</td>
</tr>
<tr>
<td>Arab countries</td>
<td>37.43 0.95</td>
<td>125.99 4.34</td>
<td>571.65 4.31</td>
<td>245.02 3.66</td>
</tr>
<tr>
<td>African countries</td>
<td>4.40 0.11</td>
<td>3.39 0.12</td>
<td>22.35 0.17</td>
<td>10.04 0.15</td>
</tr>
<tr>
<td>European Union countries</td>
<td>2390.80 60.88</td>
<td>2451.78 84.49</td>
<td>10507.61 79.25</td>
<td>5116.73 76.41</td>
</tr>
<tr>
<td>Eastern European States</td>
<td>227.46 5.79</td>
<td>168.12 5.79</td>
<td>154.59 1.16</td>
<td>183.39 2.74</td>
</tr>
<tr>
<td>Latin American countries</td>
<td>1015.30 25.85</td>
<td>142.19 4.9</td>
<td>1343.36 10.13</td>
<td>571.11 8.53</td>
</tr>
<tr>
<td>Asian countries</td>
<td>227.79 5.8</td>
<td>0.00 0.00</td>
<td>7.84 0.11</td>
<td>6695.88 100</td>
</tr>
<tr>
<td>Australia</td>
<td>23.51 0.6</td>
<td>0.00 0.00</td>
<td>0.00 0.00</td>
<td>0.00 0.00</td>
</tr>
<tr>
<td>Total</td>
<td>3926.69 100</td>
<td>2901.96 100</td>
<td>13259 100</td>
<td>6695.88 100</td>
</tr>
</tbody>
</table>

Source: Constructed by researcher on the basis of data gathered from Central Bank of Libya, various years.

**Figure 4.4: Geographical Distribution of the Libyan Exports during the Period (1980-2010)**

Second period (1992-2003) considers the period of IEEs imposed on the Libyan economy. As shown in table (4.5) and figure (4.4) above, there was a substantial change in the Libyan export markets, where the share of the European Union countries rose to 84.49% of the total Libyan exports during that period, to 2451.79 million dollars. The share of Latin American countries in Libyan exports decreased to 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 125.99 million dollars representing about 4.34%.

According to Table (4.5) and Figure (4.4) above, there was an improvement in some markets receiving Libyan exports during the third period (2004-2010), with a multiplicity of receiving markets showing 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 Libyan exports was 10507.61 million dollars, the equivalent of 79.25% of total Libyan exports during this period. On the other hand, the Libyan exports to the Asian countries increased during this period to 1343.36 million dollars which represents 10.13% of total Libyan exports. This was followed by American markets which received 659.44 million dollars which was 4.97%. Finally, the Libyan exports to Arab countries markets amounted to 571.66 million dollars which comprised 4.31% of total Libyan exports.

There was an improvement in Libyan foreign trade during the three periods. As a result of lifting sanctions and the improvement in world oil prices, the Libyan economy changed towards more diversification, which led to dramatic changes through improving the investment environment in the Libyan market during the period of study.

5. Conclusion

This study has been examined of the empirical analysis on the Libyan economy and its structural changes, with special reference to Libyan foreign trade during the last three decades (1980-2010). We used descriptive analytical method and some statistical tools such as linear regression analysis to examine the relationship between trade exchange process between Libya and the larger EU trading partners. Our results from the regression models can be summarized in the following;

1. The main market channel for Libyan export and import during the study period was European Union countries.
2. The study found that the trade process between Libya and the EU has achieved some success, indicating more economic cooperation through bilateral relations, encouraging the private sector to play its role in the trade process during the period of study.
3. The return from export was higher than the expense for import, where this situation has led to positive balance of payment.
4. Improving the investment environment in the Libyan market, and supporting further economic cooperation through trade exchange, especially after increases in oil prices and the lifting of international sanctions during the period of (2004-2010).
5. The coping strategies by the Libyan government against the international sanctions have been led to preventing harmful effect of embargoes on the Libyan economy.
Abughalia & Abusalem

References


Abughalia & Abusalem
