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# DOES THE TRADE STRUCTURE AMONG THE LEAGUE OF ARAB STATES SHOW POTENTIAL FOR A SUCCESSFUL REGIONAL ECONOMIC INTEGRATION?

Zarinah Hamid[1], Ruzita Mohd. Amin[2] and Norma Md. Saad[3]

The League of Arab States (LAS) has placed an equally important attention on economic matters whereby the Economic and Social Council of the League adopted resolution No. 1317 of the 1980 Amman Summit declaring the establishment of a Pan-Arab Free Trade Area. This paper investigates whether or not the LAS possesses the necessary prerequisites for a successful regional trade arrangement. It examines the trade structure among five LAS members, namely Egypt, Jordan, Saudi Arabia, Syria and Oman by analyzing their dynamic exports as well as their "trade concentration", and "trade divergence" profiles between the years 1990 and 2003. In general, the findings indicate that the existing trade structure may not facilitate intra-regional trade among LAS members. Divergence estimates indicate that only Jordan shows prospects for greater regional exports while the prospects for Egypt, Oman, Saudi Arabia and Syria do not appear to be encouraging. Except for Jordan, exports are found to be highly concentrated especially for Saudi Arabia and Syria. Therefore, based on the findings there is a need for these countries to realign their trade policies in order to promote a more favorable environment for the creation of the Pan-Arab Free Trade Area.

## 1. Introduction

Efforts at economic integration have increasingly become the central focus of various groups of countries in the last decade. Apart from the

[1] Assistant Professor, Department of Economics, Faculty of Economics & Management Sciences, International Islamic University Malaysia, P.O. Box 10, 50728 Email Address: inahumkc@iiu.edu.my Kuala Lumpur, Malaysia.International Islamic University Malaysia
[2] Associate Professor, Department of Economics, International Islamic University Malaysia
[3] Associate Professor, Department of Economics, International Islamic University Malaysia

ability to shift product origin from a high cost domestic producer to a lower cost member producer that leads to a more efficient allocation of resources, i.e., what is termed as "trade creation" by Viner (1950),[4] integration has also been said to have the ability to create a more competitive trade environment as a result of the removal of trade barriers and the possibility of realizing economies of scale. Integration is also an important impetus for stimulating investment in the member countries from both internal and foreign sources. It has been argued that integration stimulates investment by reducing risk and uncertainty due to the larger market that producers become open to. Furthermore, foreign investors may wish to invest in productive capacity in a member country to avoid being excluded by trade restrictions and a high common external tariff (Appleyard, 1995).

The League of Arab States (LAS)[5] is no exception in trying to reap the benefits from economic integration. Formed in 1945, the LAS has the objective of unifying the Arab countries through political, educational, cultural and economic cooperation. Due to the existence of a considerable volume of commercial exchange among members of the LAS, numerous efforts have been undertaken over the years to enhance economic cooperation among member countries.

Beginning with the establishment of the Economic and Financial Committee upon inception of the LAS, the Treaty of Joint Defence and Economic Cooperation between the States of the Arab League[6] was later signed on 13 April 1950 (Muhammad Diab, 1966, p. 238). Three years later, in 1953, the Conference of Arab Ministers of Finance and National Economy recognized the need to create a "common market" where there could be free movement of resources and products. The Arab Trade Convention that resulted from the Conference provided for the exemption of farm, mineral and animal products of Arab origin from all

[4] Trade creation is one of the two static effects of economic integration as proposed by Viner (1950). Another static effect is "trade diversion" where economic integration may shift the product origin from a lower cost non-member producer to a higher cost member producer. Trade diversion, however, is not the highlight of this paper.

[5] From 7 member states originally, the LAS has now 22 members, namely Jordan, UAE, Bahrain, Tunisia, Algeria, Djibouti, Saudi Arabia, Sudan, Syria, Somalia, Iraq, Oman, Palestine, Qatar, Comoros, Kuwait, Lebanon, Libya, Egypt, Morocco, Mauritania and Yemen.

[6] The signatories of this Treaty were Egypt, Iraq, Jordan, Lebanon, Saudi Arabia, Syria and Yemen.

import duties and accorded selected industrial products of domestic origin preferential reduction in import duties. The Convention was later modified at various intervals by the Economic Council to extend its scope in terms of product coverage as well as the degree of preferential tariff treatment accorded. However, the efforts came to a standstill mainly due to the unwillingness on the part of the signatories to remove quantitative and qualitative restrictions on each other (Muhammad Diab, 1966, p. 240).

In 1957, the Arab Economic Unity Agreement was ratified and the Arab Economic Convention was adopted by the Arab Economic Council. The Convention envisages the creation of an economic area that would, among others, allow free movement of persons, capital, goods and services. It targeted a maximum period of 10 years after ratification to bring about unification of the signatories. On 13 August 1964, a resolution for the establishment of an Arab Common Market was issued as a first step towards bringing about an economic union among the signatories. The Arab Common Market Convention requires a gradual abolition of all quantitative and qualitative restrictions, as of 1 January 1965, on commodities produced by the signatories (Muhammad Diab, 1965, p. 242). A schedule of tariff reductions was drafted towards this end which covered agricultural, mineral and manufactured products.

Since then, there was no significant development in economic cooperation until the adoption of the Principle of National Planning in directing and developing the Joint Arab Action as a result of the Amman Summit in 1980. The Summit also approved the documents relating to the Strategy of the Joint Arab Economic Venture, the National Economic Action Charter, the Draft of the Common Development Contract and the Unified Investment Agreement ("The Arab League," 2004). On 19 February 1997, the Economic and Social Council of the League adopted its resolution No. 1317 declaring the establishment of a Pan-Arab Free Trade Area over a period of 10 years beginning 1 January 1998.

The aims of establishing the free trade area are to keep pace with the conditions and needs of all Arab States consistent with the provisions of the World Trade Organisation (WTO), preserve Arab States' economic

interests, develop economic and trade relations among Arab States and between them and the outside world, and constitute the first practical step towards the creation of an Arab economic bloc that will have a standing on the world economic arena. As before in the Arab Common Market Convention of 1965, another schedule of gradual trade liberalization procedures was agreed upon involving customs duties and other charges and taxes of a similar effect by equal annual percentages. A full liberalization of all Arab goods, hence the creation of the Pan-Arab Free Trade Area was envisaged by 21 July 2007.[7] In line with this objective, the First Arab Economic Conference was held in November 2001 as a result of an Egyptian initiative under the theme of "Promoting the Arab Economic Performance". The Amman Summit of 2001 was named "The Economic Summit", since it was the First Periodical Summit held in accordance with the Cairo Summit resolution adopted in 2000 to hold such a conference ("The Arab League," 2004).

Although the LAS has stepped up measures to achieve economic integration, the free trade area is still yet to materialize despite the recent expiry of the deadline. Perhaps it is essential to first investigate whether or not the LAS possesses the necessary prerequisites to enable a successful regional trade arrangement. One of the important questions that arises is whether the LAS' export structure is diverse enough to support further economic integration. It has been argued that the ability to increase regional exports is contingent upon the degree to which countries' dynamic exports are incorporated in the regional export mix. In other words, the extent to which the relative share of regional trade can be increased depends on the extent to which countries' dynamic exports are represented in regional trade. In addition, the likely success or failure of any regional economic integration is highly dependent on the range of products that members have the capacity to export or import. Members exporting a wide range of diversified goods are considered a positive factor, while concentration of exports is considered a limiting factor to the prospects of increasing regional trade (Pitigala, 2005).

This paper is an attempt to investigate the trade structure among five LAS members, namely Egypt, Jordan, Saudi Arabia, Syria and Oman by

[7] For further details, see "The Agreement of the Arab Free Trade Area" (2004).

analyzing their dynamic exports as well as their "trade concentration", and "trade divergence" profiles between the years 1990 and 2003. It also employs the Herfindahl-Hirschman concentration index to measure the dispersion of trade among all five LAS trading partners between these two years. The findings will provide an indication as to whether the existing trade structure would facilitate intra-regional trade among LAS members in their effort towards economic integration. Such information will be useful for member countries to formulate strategies that would foster a closer trade relation among themselves.

This paper is organized as follows. The next section provides a survey of literature on the natural trading partner hypothesis in analyzing intra-trade activities, trade concentration and trade divergence. Section 3 describes the methodology and data used in this study. Section 4 presents the analysis and discussion of the findings while the last section concludes.

## 2. Literature Review

Studies on regional integration provide relevant empirical evidence on the conceptual criteria for successful regional trading arrangements (Pitigala, 2005; Winters, 1996; and Yeats, 1998). Lipsey (1960) as cited in Pitigala (2005) introduced the "natural trading partners" hypothesis suggesting that the higher the proportion of intra-trade with the region, the more likely a regional agreement would result in an increase in welfare effects. Wonnacott and Lutz (1989) and Deardoff and Stern (1994) modified the natural trading partner hypothesis by adding location and transportation costs. They found that geographical proximity between countries contributes positively to intra-trade.
Some researchers have proposed a definition of natural trading partners based on complementarity. They concluded that if a country imports what its trading partner exports, the natural trading partner hypothesis is likely to hold. Using complementarity index, Michaely (1996) argued that the higher the observed values of the index between partners, the more likely it is that a regional trade agreement will succeed.

Empirical studies also look at the impact of concentration and diversification of exports on regional trade agreements. Massell (1964),

in a cross section analysis of 36 countries, came up with some interesting findings by concluding that there was a clear relationship between instability of export earnings and concentration of exports. However, he stressed that "neither diversification nor the degree of industrialization appears to explain much of the variation in export instability", and elaborated further that "diversification may be beneficial in other ways, for example, in providing the economy with greater flexibility in adapting the structure of its production to changes in market conditions" (Massell, 1964, p.62).

Another cross sectional analysis conducted by Soutar (1977) concluded that trade concentration was one of the significant variables in explaining export instability in 48 less developed countries from 1957 to 1969. Other significant explanatory variables that explained export instability were geographic concentration and petroleum product index.
In a related work, Yeats (1998) reported that studies have shown that countries with highly concentrated exports may experience a relatively high degree of export earning instability that could reduce a country's ability to maintain the financial commitment required by regional arrangements.

The commonly used method for measuring commodity concentration is based on the calculation of Gini coefficient and the modified version called Gini-Hirschman coefficient of concentration. However, Low, Olarreaga and Suarez (1998) used three different concentration indices namely Herfindal-Hirschman concentration index, Theil-entropy coefficient and Mean Logarithm deviation to investigate if globalization has affected the concentration indices. Their findings indicated, among others, that although world trade has increased overtime, globalization does not affect the concentration indices. According to Kali, Mendez and Reyes (2007), empirical measures of trade characteristics or trade structures are limited. In analyzing trade structure and economic growth, they used trade dispersion among trading partners as one of the measures of trade structure. As in Low, Olarreaga and Suarez (1998), Kali, Mendez and Reyes (2007) constructed a Herfindahl-Hirschman concentration index of trade for all countries to measure trade dispersion among all trading partners. A low value of the index indicates low concentration or high dispersion, and vice versa. The study found trade

concentration to be positively correlated with growth for all countries, but the effect is found to be more pronounced for poor countries.

In a separate study, Ishido (2004) used a less rigorous method by applying the coefficient of variation as a proxy to measure manufacturing capability cum trade divergence in selected Asian economies. Ishido found that in these countries export became more divergent when more technology-enhancing economic activities were undertaken within an economy.

This paper attempts to look at the potential success of economic integration among the LAS by adopting measurements of trade concentration and trade divergence as used in Pitigala (2005). In addition, the Herfindahl-Hirschman concentration index as used in Low, Olarreaga and Suarez (1998), Kali, Mendez and Reyes (2007) is also employed to measure trade concentration. In line with Pitigala (2005), Low, Olarreaga and Suarez (1998), and Kali, Mendez and Reyes (2007), this study will focus on the export component of trade. The advantage of using these measurements is that they allow for a more in-depth analysis at the product level as well as country-level examination which could be used to gauge the prospects for the success of economic integration. Since there has been no such effort to investigate the success of regional trade among the LAS member countries at the disaggregated level, the findings of this paper would serve to provide useful information for the formulation of strategies which would enhance regional economic integration among the member countries. The details of the measurements are described in the next section.

## 3. Data Description and Methodology

The statistical analysis uses trade data from five members of the LAS countries namely Egypt, Jordan, Oman, Saudi Arabia and Syria for the years 1990 and 2003. The two years are chosen to examine whether the LAS possesses the characteristics which are conducive for the Pan-Arab Free Trade Area envisaged to be established by 21 July 2007. Values of the countries' intra-regional exports and their exports to the rest of the world (ROW) based on SITC Revision 2 at 4-digit level were extracted from the UNCOMTRADE database. Due to the unavailability of data

for most members of the LAS, this study is only confined to the five member countries. The SITC 4-digit level is selected since it is the highest level of disaggregation for which comparisons can be carried out. This is due to the fact that consistent reporting of data is unattainable at further disaggregated levels, such as the SITC 6- to 8-digit levels (Pitigala, 2005).

In order to compute the share of intra-regional exports and share of total exports, the disaggregated individual product at 4-digit level is divided by intra-regional total exports of the individual countries and total exports of individual countries to the rest of the world, respectively. These values are used to calculate the share in the growth of total exports to the LAS region and to the rest of the world, between 1990 and 2003. The share in the growth of total exports of each commodity *i* for country *j* ( $S_{i,j}$ ) between 1990 and 2003 can be computed as:

$$S_{i,j} = \frac{\left( \frac{X_{i,j}^{2003} - X_{i,j}^{1990}}{\sum_{i=1}^{n} X_{i,j}^{1990}} \right)}{\left( \frac{\sum_{i=1}^{n} X_{i,j}^{2003} - \sum_{i=1}^{n} X_{i,j}^{1990}}{\sum_{i=1}^{n} X_{i,j}^{1990}} \right)} \tag{1}$$

which can be simplified to:

$$S_{i,j} = \frac{\left( X_{i,j}^{2003} - X_{i,j}^{1990} \right)}{\left( \sum_{i=1}^{n} X_{i,j}^{2003} - \sum_{i=1}^{n} X_{i,j}^{1990} \right)} \tag{2}$$

where $X_{i,j}^{1990}$ and $X_{i,j}^{2003}$ are export of commodity *i* of country *j* for 1990 and 2003, respectively; $\sum_{i=1}^{n} X_{i,j}^{1990}$ and $\sum_{i=1}^{n} X_{i,j}^{2003}$ are total exports of country *j* for 1990 and 2003, respectively.

The share in equation (1) is derived based on the commutative property of subtraction where,

$$\frac{\left(\sum_{i=1}^{n} X_{i,j}^{2003} - \sum_{i=1}^{n} X_{i,j}^{1990}\right)}{\sum_{i=1}^{n} X_{i,j}^{1990}} = \frac{\sum_{i=1}^{n}\left(X_{i,j}^{2003} - X_{i,j}^{1990}\right)}{\sum_{i=1}^{n} X_{i,j}^{1990}}$$

$$= \frac{\left(X_{1,j}^{2003} - X_{1,j}^{1990}\right)}{\sum_{i=1}^{n} X_{i,j}^{1990}} + \frac{\left(X_{2,j}^{2003} - X_{2,j}^{1990}\right)}{\sum_{i=1}^{n} X_{i,j}^{1990}} + \cdots + \frac{\left(X_{n,j}^{2003} - X_{n,j}^{1990}\right)}{\sum_{i=1}^{n} X_{i,j}^{1990}}. \quad (3)$$

Dividing equation (3) by the growth of total exports, $\frac{\left(\sum_{i=1}^{n} X_{i,j}^{2003} - \sum_{i=1}^{n} X_{i,j}^{1990}\right)}{\sum_{i=1}^{n} X_{i,j}^{1990}}$, the equation becomes,

$$1 = \frac{\left(\frac{X_{1,j}^{2003} - X_{1,j}^{1990}}{\sum_{i=1}^{n} X_{i,j}^{1990}}\right)}{\left(\frac{\sum_{i=1}^{n} X_{i,j}^{2003} - \sum_{i=1}^{n} X_{i,j}^{1990}}{\sum_{i=1}^{n} X_{i,j}^{1990}}\right)} + \frac{\left(\frac{X_{2,j}^{2003} - X_{2,j}^{1990}}{\sum_{i=1}^{n} X_{i,j}^{1990}}\right)}{\left(\frac{\sum_{i=1}^{n} X_{i,j}^{2003} - \sum_{i=1}^{n} X_{i,j}^{1990}}{\sum_{i=1}^{n} X_{i,j}^{1990}}\right)} + \cdots + \frac{\left(\frac{X_{n,j}^{2003} - X_{n,j}^{1990}}{\sum_{i=1}^{n} X_{i,j}^{1990}}\right)}{\left(\frac{\sum_{i=1}^{n} X_{i,j}^{2003} - \sum_{i=1}^{n} X_{i,j}^{1990}}{\sum_{i=1}^{n} X_{i,j}^{1990}}\right)}$$

thus, $1 = S_{1,j} + S_{2,j} + \cdots + S_{n,j}$, or $1 = \sum_{i=1}^{n} S_{i,j}$.

Collectively, the shares of growth computed are used to identify the dynamic exports of the individual countries, where dynamic exports are defined as products which accounted for a significant amount of total export growth to the region and to the rest of the world between 1990 and 2003. Pitigala (2005) identifies products that account for 75% of total export growth (which exclude marginal products that might not be reported on regular basis) as dynamic exports. For comparison purposes,

apart from using the 75% cut-off point as in Pitigala (2005), this study also employs a cut-off point of 95% to identify dynamic exports.

The divergence and concentration of exports are based on the profile of dynamic exports at both the 75% and 95% cut-off points. Divergence of exports can be interpreted as the extent to which a country's dynamic exports to the rest of the world are represented in its regional dynamic exports. Conversely, the divergence of exports can also be defined as the extent of the departure (i.e., differences) of dynamic exports to the region from dynamic exports to the rest of the world. Hence, smaller differences (larger similarities) in the dynamic export composition provide an indication for the possibility of higher intra-trade among LAS member countries.

Based on Pitigala (2005), the divergence of exports of country *j* ($D_j$) is calculated as:

$$D_j = \frac{\sum_{i=1}^{k} C_{i,LAS}^{j}}{\sum_{i=1}^{k} C_{i,ROW}^{j}},$$

where $i = 1,\ldots,k$; $k$ is the number of common dynamic exports to the LAS and ROW, while $C_{i,LAS}^{j}$ and $C_{i,ROW}^{j}$ are common dynamic exports to the LAS and ROW, respectively. A high value of $D_j$ indicates a more similar (or less different) dynamic export composition of a country to the region and to the rest of the world, hence the better the prospects of increasing regional trade. Meanwhile, the concentration of exports at the 75% (or 95%) cut-off point is measured by the number of products accounting for 75% (or 95%) of export growth to the rest of the world between the years 1990 and 2003.

In order to verify the results of export concentration using the above method, the Herfindahl-Hirschman concentration index ($HHCI$) is also employed. The $HHCI_{j,t}$ for country *j*'s exports to the rest of the world at year *t* is computed as follows:

$$HHCI_{j,t} = \sum_{i=0}^{9} (Z_i)^2 \text{ , and } Z_i = \frac{X_i}{\sum_{i=0}^{9} X_i}$$

where $i = 0,\ldots,9$; $i$ is the SITC Revision 2 at 1-digit level of exports, and $t = 1990,2003$. The *HHCI* increases with the level of concentration, reaching a value o f 1 to indicate a maximum level of concentration and a value close to 0 to indicate a low level of concentration.

## 4. Analysis

In order to evaluate whether the LAS possesses certain fundamental conditions to become a successful grouping, this section first provides a general description of the trade structure of the LAS members. An analysis of product-level trade data in Table 1 suggests that food & live animals, chemicals & materials, and manufactured goods have dominated intra-regional trade in LAS for the past decade. For example, in 2003, the percentage of regional exports that originated in food & live animals was close to 67% for Syria, 29% for Egypt and Oman, and 21% for Jordan. Except for Oman and Saudi Arabia, the percentage has, however, shown a declining trend in the intra-regional trade share of this category for all these countries from 1990. For Jordan, chemicals and materials constituted its major regional exports with a share of 41.46% in 1990 and 36.79% in 2003.

Of all the five countries, only Oman and Egypt showed relatively high export shares in manufactured goods of 58.03% and 23.46% in 1990, respectively. However, this sector showed a substantial decline to only 14.24% share in regional exports in 2003 for Oman, but Egypt managed to increase its share to about 31.8% in the same year. Nevertheless, Oman showed a significant increase in its regional export share in machinery and transport equipment from a mere 1.66% in 1990 to 29.11% in 2003, making it the only country where this sector is dominant in intra-regional trade.

Chemicals and materials are found to be important for Jordan and Saudi Arabia, accounting for 41.46% and 32.69% of intra-regional trade in 1990, and 36.79% and 26.47% in 2003, respectively. For Saudi Arabia, the importance of chemicals and materials is closely associated with the production and exports of minerals and fuels, which are found to have dominated intra-regional trade of the country of 44.3% in 2003.

**Table 1: Product Composition of the League of Arab States' Intra-Regional and Extra-Regional Exports**

| | Food & live animals | | Beverages & tobacco | | Crude materials | | Minerals & fuels | | Animal & Vegetable fat | | Chemicals & materials | | Manufactured goods | | Machinery & Transport equipment | | Miscellaneous manufactures | | Other commodities | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **LAS** | **ROW** | **LAS** | **ROW** | **LAS** | **ROW** | **LAS** | **ROW** | **LAS** | **ROW** | **LAS** | **ROW** | **LAS** | **ROW** | **LAS** | **ROW** | **LAS** | **ROW** | **LAS** | **ROW** |
| Egypt | | | | | | | | | | | | | | | | | | | | |
| 1990 | 45.30 | 7.57 | 0.14 | 0.19 | 2.82 | 10.26 | 1.37 | 30.79 | 0.01 | 0.03 | 9.40 | 4.55 | 23.46 | 36.63 | 2.93 | 0.57 | 13.71 | 9.41 | 0.85 | 0.00 |
| 2003 | 28.33 | 6.58 | 0.48 | 0.07 | 2.16 | 8.99 | 22.26 | 44.36 | 0.68 | 0.32 | 7.48 | 7.41 | 31.80 | 17.39 | 2.61 | 0.84 | 3.75 | 5.51 | 0.46 | 8.54 |
| Jordan | | | | | | | | | | | | | | | | | | | | |
| 1990 | 27.68 | 6.97 | 0.65 | 0.65 | 1.19 | 37.27 | 0.00 | 0.01 | 0.18 | 0.08 | 41.46 | 25.55 | 13.97 | 11.93 | 7.97 | 12.27 | 6.88 | 4.58 | 0.02 | 0.69 |
| 2003 | 21.22 | 8.61 | 0.04 | 2.62 | 1.47 | 13.33 | 0.00 | 0.02 | 0.87 | 2.04 | 36.79 | 17.79 | 22.26 | 5.98 | 11.86 | 10.59 | 5.46 | 31.35 | 0.02 | 7.66 |
| Oman | | | | | | | | | | | | | | | | | | | | |
| 1990 | 23.09 | 1.23 | 2.26 | 0.08 | 0.70 | 0.20 | 0.00 | 92.24 | 0.43 | 0.04 | 8.12 | 0.24 | 58.03 | 1.05 | 1.66 | 3.56 | 4.67 | 0.83 | 1.04 | 0.52 |
| 2003 | 28.54 | 1.90 | 1.74 | 2.03 | 0.11 | 0.46 | 0.00 | 81.57 | 7.44 | 0.13 | 11.49 | 0.82 | 14.24 | 2.75 | 29.11 | 7.72 | 6.16 | 1.68 | 1.15 | 0.94 |
| Saudi | | | | | | | | | | | | | | | | | | | | |
| 1990 | 3.74 | 0.69 | 0.25 | 0.05 | 2.23 | 0.48 | 26.23 | 90.76 | 1.05 | 0.03 | 32.69 | 5.48 | 18.50 | 1.20 | 13.01 | 1.00 | 2.20 | 0.30 | 0.10 | 0.00 |
| 2003 | 5.37 | 1.41 | 0.56 | 0.10 | 0.88 | 0.38 | 44.30 | 79.58 | 0.30 | 0.08 | 26.47 | 11.44 | 16.15 | 3.51 | 4.16 | 2.26 | 1.79 | 0.79 | 0.02 | 0.44 |
| Syria | | | | | | | | | | | | | | | | | | | | |
| 1990 | 67.26 | 8.27 | 0.76 | 0.52 | 3.91 | 5.68 | 8.50 | 48.42 | 0.00 | 0.00 | 0.89 | 13.88 | 7.42 | 14.54 | 0.50 | 0.13 | 10.71 | 8.56 | 0.05 | 0.00 |
| 2003 | 66.67 | 7.43 | 1.42 | 0.22 | 2.13 | 4.48 | 0.00 | 76.93 | 1.34 | 1.10 | 2.50 | 0.87 | 13.06 | 5.34 | 2.06 | 0.55 | 10.81 | 3.06 | 0.01 | 0.02 |

**Note:** Figures represent the export share of each product category out of intra-regional trade (with LAS) and extra-regional trade (with ROW),

Minerals and fuels have also been found to be the dominating sector in LAS exports share to the rest of the world for all the five countries except for Jordan, with Oman and Saudi Arabia showing a significant share. Oman's share of exports of minerals and fuels to the rest of the world accounted for 92.24% and 81.57% in 1990 and 2003, respectively, while Saudi Arabia's share accounted for 90.76% and 79.58% in the same years, respectively. Other sectors that, to a certain extent, are also important exports to the rest of the world include manufactured goods for Egypt, and chemicals and materials, and crude materials for Jordan.

In summary, the region has established a mutual dependency in basic foods and agricultural products. A narrow group of products, namely manufactured goods and machinery and transport equipment have made inroads in regional trade. In general, there appears to be a significant divergence[8] between products that are exported to the region and to the rest of the world. Primary products seem to dominate intra-regional trade while minerals and fuels dominate exports to the rest of the world.

Tables 2 to 6 present the profile of dynamic exports of all five countries at the SITC 4-digit classification level. Table 2a reveals Egypt's regional exports in 2003 which include rice (13.4%), gas oils (9.4%) and gasoline (7.5%). These three products account for 44.4% of the total cumulative share of growth between the years 1990 and 2003. Egypt has succeeded in exporting a notable share of manufactured goods (SITC 6) of 23.9%, minerals and fuels (SITC 3) of 21.6% and food and live animals (SITC 0) of 18.3% in 2003.

[8] As mentioned in the earlier section, divergence is defined as the departure of intra-regional exports from exports to the rest of the world in major product categories (Pitigala, 2005).

**Table 2a: Profile of Dynamic Exports for Egypt (1990-2003) to LAS**

| Code | Product Description | Intra-Regional Exports 2003 (USD) | Share of Intra-Regional Exports 2003 | Share of Growth from Total Growth 1990-2003 | Cumulative share of growth |
|---|---|---|---|---|---|
| 0422 | Rice, semi-milled or wholly milled | 48195987 | 13.4 | 19.7 | 19.7 |
| 3343 | Gas oils | 33655624 | 9.4 | 13.7 | 33.4 |
| 3341 | Gasoline and other light oils | 26828898 | 7.5 | 11.0 | 44.4 |
| 6732 | Bars, rods (not wire rod), from iron or steel; hollow mining drill | 26600428 | 7.4 | 10.9 | 55.2 |
| 6727 | Iron or steel coils for re-rolling | 26348532 | 7.3 | 10.8 | 66.0 |
| 3413 | Petroleum gases and other gaseous hydrocarbons, nes, liquefied | 17037942 | 4.7 | 7.0 | 73.0 |
| 6612 | Cement | 10376516 | 2.9 | 4.2 | 77.2 |
| 5417 | Medicaments (including veterinary medicaments) | 12140607 | 3.4 | 3.8 | 81.0 |
| 6770 | Iron or steel wire (excluding wire rod), not insulated | 5611272 | 1.6 | 2.2 | 83.3 |
| 6725 | Blooms, billets, slabs and sheet bars, of iron or steel | 4797357 | 1.3 | 2.0 | 85.2 |
| 0741 | Tea | 4796014 | 1.3 | 2.0 | 87.2 |
| 6428 | Articles of paper pulp, paper, paperboard or cellulose wadding, nes | 4208386 | 1.2 | 1.7 | 88.9 |
| 6624 | Non-refractory ceramic bricks, tiles, pipes and similar products | 3825617 | 1.1 | 1.5 | 90.3 |
| 0565 | Vegetables, prepared or preserved, nes | 4004602 | 1.1 | 1.4 | 91.8 |
| 6584 | Linens and furnishing articles of textile, not knitted or crocheted | 3862237 | 1.1 | 1.3 | 93.0 |
| 0240 | Cheese and curd | 5991855 | 1.7 | 1.3 | 94.3 |
| 0460 | Meal and flour of wheat and flour of meslin | 2752473 | 0.8 | 1.1 | 95.4 |

**Table 2b: Profile of Dynamic Exports for Egypt (1990-2003) to ROW**

| Code | Product Description | Exports to the ROW 2003 (USD) | Share in Total Export 2003 | Share of Growth from Total Growth 1990-2003 | Cumu-lative share of growth |
|---|---|---|---|---|---|
| 3344 | Fuel oils, nes | 1367731328 | 30.8 | 39.0 | 39.0 |
| 3341 | Gasoline and other light oils#* | 501663102 | 11.3 | 15.0 | 54.0 |
| 9310 | Special transactions, commodity not classified according to class | 384921472 | 8.7 | 11.5 | 65.6 |
| 6612 | Cement* | 182966108 | 4.1 | 5.5 | 71.0 |
| 2631 | Raw cotton, excluding linters, not carded or combed | 365863931 | 8.3 | 4.7 | 75.8 |
| 6727 | Iron or steel coils for re-rolling* | 136168908 | 3.1 | 4.0 | 79.8 |
| 9710 | Gold, non-monetary (excluding gold ores and concentrates) | 106980182 | 2.4 | 3.2 | 83.0 |
| 0422 | Rice, semi-milled or wholly milled* | 101613869 | 2.3 | 3.0 | 86.1 |
| 5221 | Chemical elements | 95757835 | 2.2 | 2.9 | 88.9 |
| 3413 | Petroleum gases and other gaseous hydrocarbons, nes, liquefied* | 93776658 | 2.1 | 2.8 | 91.7 |
| 6732 | Bars, rods (not wire rod), from iron or steel; hollow mining drill* | 91597004 | 2.1 | 2.6 | 94.4 |
| 3345 | Lubricating petroleum oils, and preparations, nes | 83968337 | 1.9 | 2.5 | 96.9 |

**Note:** #Egypt's regional exports that match exports to the ROW that were among its dynamic exports (as defined by those products which accounted for 75% of total export growth between 1990 and 2003) based on Tables 2a and 2b.

*Egypt's regional exports that match exports to the ROW that were among its dynamic exports (as defined by those products which accounted for 95% of total export growth between 1990 and 2003) based on Tables 2a and 2b.

Egypt's leading regional manufactured goods include iron or steel coils (SITC 6727) and bars and rods (SITC 6732). For intra-regional exports of minerals and fuels, the products include gasoline (SITC 3341) and gas oil (SITC 3343). Egypt's regional export under the category of food and live animals are dominated by rice, semi-milled (SITC 0422) which accounts for 13.4% of the total. The prominent sub-category of Egypt's exports to the rest of the world is minerals and fuels, accounting for 44.3% of its exports with fuel oils contributing about 30.8% of the total (see Table 2b).

Meanwhile, a single item, medicament, which constitutes more than one-fifth of its exports, dominates Jordan's regional exports. A further insight into product-level trade data for Jordan in Table 3a reveals that chemicals and materials (SITC 5) is an important sector constituting almost 30% of intra-regional trade in 2003, followed by manufactured goods of SITC 6 (17.6%) and food and live animals of SITC 0 (15.1%). In contrast, miscellaneous manufactures (SITC 8) dominate Jordan's extra-regional exports with 29.3% of the share of extra-regional exports in 2003 falls into this category (see Table 3b).

**Table 3a: Profile of Dynamic Exports for Jordan (1990-2003) to LAS**

| Code | Product Description | Intra-Regional Exports 2003 (USD) | Share of Intra-Regional Exports 2003 | Share of Growth from Total Growth 1990-2003 | Cumulative share of growth |
|---|---|---|---|---|---|
| 5417 | Medicaments (including veterinary medicaments) | 63904153 | 21.1 | 22.1 | 22.1 |
| 0545 | Other fresh or chilled vegetables | 26262407 | 8.7 | 11.0 | 33.1 |
| 6612 | Cement | 22969695 | 7.6 | 10.3 | 43.5 |
| 6417 | Paper & paperboard, creped, crinkled, etc, in rolls or sheets | 9722189 | 3.2 | 5.1 | 48.5 |
| 0012 | Sheep and goats, live | 9420765 | 3.1 | 4.4 | 52.9 |
| 6924 | Cask, drums, etc, of iron, steel, aluminium, for packing goods | 7134803 | 2.4 | 3.7 | 56.6 |
| 7751 | Household laundry equipment, nes | 6676184 | 2.2 | 3.5 | 60.1 |
| 6421 | Packing containers, box files, etc, of paper, used in offices | 5618199 | 1.9 | 2.9 | 63.0 |
| 8211 | Chairs and other seats; and parts thereof, nes | 4902619 | 1.6 | 2.5 | 65.5 |
| 8219 | Other furniture and parts thereof, nes | 5114868 | 1.7 | 2.2 | 67.7 |
| 5629 | Fertilizers, nes | 3944789 | 1.3 | 1.9 | 69.7 |
| 7643 | Television, radio-broadcasting; transmitters, etc | 3246597 | 1.1 | 1.7 | 71.4 |
| 5913 | Herbicides, for sale by retail or as preparation | 3263925 | 1.1 | 1.7 | 73.0 |
| 5222 | Inorganic acids and oxygen compounds of non-metals | 3199773 | 1.1 | 1.6 | 74.7 |
| 7415 | Air conditioning machines and parts thereof, nes | 2850680 | 0.9 | 1.5 | 76.2 |
| 5621 | Mineral or chemical fertilizers, nitrogenous | 4587468 | 1.5 | 1.5 | 77.6 |
| 2714 | Potassium salts, natural, crude | 2796036 | 0.9 | 1.4 | 79.1 |
| 7752 | Domestic refrigerators and freezers | 2507846 | 0.8 | 1.3 | 80.4 |
| 5623 | Mineral or chemical fertilizer, potassic | 2339008 | 0.8 | 1.2 | 81.6 |
| 0980 | Edible products and preparations, nes | 2448459 | 0.8 | 1.2 | 82.8 |
| 0565 | Vegetables, prepared or preserved, nes | 2346727 | 0.8 | 1.2 | 83.9 |
| 6633 | Manufactures of mineral materials, nes (other than ceramic) | 2180752 | 0.7 | 1.1 | 85.1 |
| 6613 | Building and monumental stone, worked, and articles thereof | 2102501 | 0.7 | 1.0 | 86.1 |
| 5832 | Polypropylene | 1857146 | 0.6 | 1.0 | 87.1 |
| 5232 | Metallic salts and peroxysalts of inorganic acids | 4186971 | 1.4 | 1.0 | 88.0 |
| 0812 | Bran, sharps and other residues derives of cereals | 1823569 | 0.6 | 0.9 | 89.0 |
| 6413 | Kraft paper and paperboard, in rolls or sheets | 1795151 | 0.6 | 0.9 | 89.9 |
| 0224 | Milk and cream, preserved, concentrated or sweetened | 1726053 | 0.6 | 0.9 | 90.8 |
| 7831 | Public service type passenger motor vehicles | 1759676 | 0.6 | 0.9 | 91.7 |
| 0620 | Sugar confectionery and preparations, non-chocolate | 1758258 | 0.6 | 0.9 | 92.6 |
| 6732 | Bars, rods (not wire rod), from iron or steel; hollow mining drill | 1614945 | 0.5 | 0.8 | 93.4 |
| 7758 | Electro-thermic appliances, nes | 1530483 | 0.5 | 0.8 | 94.2 |
| 5530 | Perfumery, cosmetics, toilet preparations, etc | 1794500 | 0.6 | 0.8 | 95.0 |

**Table 3b: Profile of Dynamic Exports for Jordan (1990-2003) to ROW**

| Code | Product Description | Exports to the ROW 2003 (USD) | Share in Total Export 2003 | Share of Growth from Total Growth 1990-2003 | Cumulative share of growth |
|---|---|---|---|---|---|
| 9710 | Gold, non-monetary (excluding gold ores and concentrates) | 210526512 | 7.6 | 11.5 | 11.5 |
| 8441 | Under garments of textile fabrics, not knitted or crocheted- men and boys shirts | 201327412 | 7.3 | 11.1 | 22.6 |
| 5417 | Medicaments (including veterinary medicaments) #* | 141687191 | 5.1 | 5.6 | 28.2 |
| 5222 | Inorganic acids and oxygen compounds of non-metals#* | 84319987 | 3.0 | 4.2 | 32.4 |
| 8973 | Precious jewellery, goldsmiths' or silversmiths' wares | 80788880 | 2.9 | 3.8 | 36.2 |
| 8423 | Men's and boys' outerwear, textile fabrics not knitted or crocheted-- trousers, breeches and the like | 68483280 | 2.5 | 3.8 | 40.0 |
| 2714 | Potassium salts, natural, crude* | 201480316 | 7.3 | 3.8 | 43.8 |
| 8439 | Women, girls, infants outerwear, textile, not knitted or crocheted-- other outer garments of textile fabrics, not knitted, crocheted | 64119787 | 2.3 | 3.4 | 47.2 |
| 8459 | Outerwear knitted or crocheted, not elastic nor rubberized-- other, clothing accessories, non-elastic, knitted or crocheted | 58384204 | 2.1 | 3.2 | 50.4 |
| 4312 | Hydrogenated animal or vegetable oils and fats | 48024964 | 1.7 | 2.6 | 53.0 |
| 8431 | Women, girls, infants outerwear, textile, not knitted or crocheted-- coats and jackets | 46308955 | 1.7 | 2.5 | 55.5 |
| 1222 | Cigarettes | 45402996 | 1.6 | 2.4 | 57.9 |
| 8462 | Under-garments, knitted or crocheted-- of cotton, not elastic nor rubberized | 41795400 | 1.5 | 2.3 | 60.2 |
| 0224 | Milk and cream, preserved, concentrated or sweetened* | 41507455 | 1.5 | 2.3 | 62.5 |
| 5542 | Organic surface-active agents, nes | 40612662 | 1.5 | 2.2 | 64.7 |
| 0545 | Other fresh or chilled vegetables#* | 53630057 | 1.9 | 2.2 | 66.9 |
| 8424 | Men's and boys' outerwear, textile fabrics not knitted or crocheted -- jackets, blazers and the like | 39317924 | 1.4 | 2.2 | 69.1 |
| 8720 | Medical instruments and appliances, nes | 36483387 | 1.3 | 1.9 | 71.0 |
| 7810 | Passenger motor vehicles (excluding buses) | 41595953 | 1.5 | 1.9 | 73.0 |
| 8432 | Women, girls, infants outerwear, textile, not knitted or crocheted-- suits and costumes | 30349267 | 1.1 | 1.7 | 74.6 |
| 0544 | Tomatoes, fresh or chilled | 46210130 | 1.7 | 1.6 | 76.2 |
| 8451 | Outerwear knitted or crocheted, not elastic nor rubberized -- jerseys, pullovers, slip-overs, cardigans, etc | 25717980 | 0.9 | 1.4 | 77.7 |
| 8422 | Men's and boys' outerwear, textile fabrics not knitted or crocheted -- suits | 25361217 | 0.9 | 1.4 | 79.1 |
| 6842 | Aluminium and aluminium alloys, worked | 21151383 | 0.8 | 1.1 | 80.2 |
| 7849 | Other parts and accessories, for vehicles of headings 722, 781-783 | 20751167 | 0.7 | 1.1 | 81.2 |
| 7611 | Television receivers, colour | 18264666 | 0.7 | 1.0 | 82.2 |
| 7643 | Television, radio-broadcasting; transmitters, etc* | 16155151 | 0.6 | 0.9 | 83.1 |
| 0980 | Edible products and preparations, nes* | 16857965 | 0.6 | 0.8 | 83.9 |

| Code | Product Description | Exports to the ROW 2003 (USD) | Share in Total Export 2003 | Share of Growth from Total Growth 1990-2003 | Cumulative share of growth |
|---|---|---|---|---|---|
| 1110 | Non-alcoholic beverages, nes | 18737952 | 0.7 | 0.8 | 84.8 |
| 8442 | Under garments of textile fabrics, not knitted or crocheted-- men, boys under garments; other than shirts | 14516141 | 0.5 | 0.8 | 85.6 |
| 7415 | Air conditioning machines and parts thereof, nes* | 13720434 | 0.5 | 0.7 | 86.2 |
| 8429 | Men's and boys' outerwear, textile fabrics not knitted or crocheted -- other outer garments | 17730298 | 0.6 | 0.7 | 86.9 |
| 8435 | Women, girls, infants outerwear, textile, not knitted or crocheted-- blouses | 10233303 | 0.4 | 0.6 | 87.5 |
| 2882 | Other non-ferrous base metal waste and scrap, nes | 15787889 | 0.6 | 0.6 | 88.0 |
| 7428 | Other pumps for liquids and liquid elevators | 10802052 | 0.4 | 0.6 | 88.6 |
| 8219 | Other furniture and parts thereof, nes* | 11943458 | 0.4 | 0.5 | 89.1 |
| 8433 | Women, girls, infants outerwear, textile, not knitted or crocheted -- dresses | 9150562 | 0.3 | 0.5 | 89.6 |
| 7788 | Other electrical machinery and equipment, nes | 9132506 | 0.3 | 0.5 | 90.1 |
| 5989 | Chemical products and preparations, nes | 10604177 | 0.4 | 0.5 | 90.6 |
| 8434 | Women, girls, infants outerwear, textile, not knitted or crocheted -- skirts | 8778058 | 0.3 | 0.5 | 91.1 |
| 6417 | Paper and paperboard, creped, crinkled, etc, in rolls or sheets* | 8649003 | 0.3 | 0.5 | 91.5 |
| 7831 | Public service type passenger motor vehicles* | 8972544 | 0.3 | 0.5 | 92.0 |
| 7832 | Road tractors for semi-trailers | 8398594 | 0.3 | 0.5 | 92.5 |
| 5629 | Fertilizers, nes* | 7934184 | 0.3 | 0.4 | 92.9 |
| 8939 | Miscellaneous articles of plastic | 13159027 | 0.5 | 0.4 | 93.3 |
| 8931 | Plastic packing containers, lids, stoppers and other closures | 7813582 | 0.3 | 0.4 | 93.8 |
| 5831 | Polyethylene | 7460538 | 0.3 | 0.4 | 94.2 |
| 0819 | Food waste and prepared animal feed, nes | 7460813 | 0.3 | 0.4 | 94.6 |
| 5911 | Insecticides, for sale by retail or as preparations | 7331209 | 0.3 | 0.4 | 95.0 |
| 6924 | Cask, drums, etc, of iron, steel, aluminium, for packing goods* | 8616971 | 0.3 | 0.4 | 95.4 |

**Note:** #Jordan's regional exports that match exports to the ROW that were among its dynamic exports (as defined by those products which accounted for 75% of total export growth between 1990 and 2003) based on Tables 3a and 3b.

*Jordan's regional exports that match exports to the ROW that were among its dynamic exports (as defined by those products which accounted for 95% of total export growth between 1990 and 2003) based on Tables 3a and 3b.

Oman, similarly, records almost one-fifth share of intra-regional exports from milk and cream in 2003. As shown in Table 4a, two sectors, namely, machinery and transport equipment (SITC 7) and food and live animals (SITC 0) have been the dominating sectors in Oman's share of intra-regional exports with both accounting for 26.2% and 24.9%, respectively. In contrast, minerals and fuels (SITC 3) is the dominating sector in Oman's exports to the rest of the world with crude petroleum and oils contributing to more than 70% of the extra-regional exports (see Table 4b).

As expected, Saudi Arabia's regional export in 2003 are dominated by crude petroleum, gas and petroleum products in which its cumulative share of growth (SITC 3330, 3413 and 3343) together accounts for 49.9%. Based on the profile of dynamic exports as defined by those products which accounted for 95% of total export growth between 1990 and 2003 (see Table 5), thirty-three products exported to the region are identified as dynamic exports while only one product exported to the rest of the world falls in this category, namely crude petroleum and oils in the minerals and fuels category (SITC 3). The dynamic exports to the region, on the other hand, comprise mainly of manufactured goods (eleven products in SITC 6), chemicals and materials (nine products in SITC 5), and food & live animals (six products in SITC 0). This is followed by minerals & fuels (three products in SITC 3), machinery and transport equipment (two products in SITC 7), beverages & tobacco, and miscellaneous manufactures (one product each in SITC 1 and 8). One single product category, i.e., crude petroleum and oils obtained from bituminous materials, forms the largest share of growth from total growth in the period at 30.2% and 92.2% growth share of exports to the region and to the rest of the world, respectively.

Based on the narrower definition of dynamic exports that includes products which accounted for 75% of total export growth between 1990 and 2003, only nine products exported to the region are classified as dynamic exports, while only one product of the exports to the rest of the world is found to fall in this category. The dynamic exports to the region include chemicals & minerals (4 products in SITC 5), minerals & fuels (3 products in SITC 3), and manufactured goods (2 products in SITC 6).

**Table 4a: Profile of Dynamic Exports for Oman (1990-2003) to LAS**

| Code | Product Description | Intra-Regional Exports 2003 (USD) | Share of Intra-Regional Exports 2003 | Share of Growth from Total Growth 1990-2003 | Cumulative share of growth |
|---|---|---|---|---|---|
| 0224 | Milk and cream, preserved, concentrated or sweetened | 53806420 | 19.4 | 22.1 | 22.1 |
| 7810 | Passenger motor vehicles (excluding buses) | 50208330 | 18.1 | 20.6 | 42.7 |
| 7821 | Motor vehicles for the transport of goods or materials | 19654193 | 7.1 | 8.1 | 50.8 |
| 5542 | Organic surface-active agents, nes | 17854727 | 6.4 | 6.6 | 57.4 |
| 6732 | Bars, rods (not wire rod), from iron or steel; hollow mining drill | 14106814 | 5.1 | 5.8 | 63.2 |
| 4249 | Fixed vegetable oils, nes | 11140852 | 4.0 | 4.5 | 67.7 |
| 6624 | Non-refractory ceramic bricks, tiles, pipes and similar products | 7010152 | 2.5 | 2.9 | 70.6 |
| 0341 | Fish, fresh or chilled, excluding fillet | 6545351 | 2.4 | 2.7 | 73.3 |
| 0980 | Edible products and preparations, nes | 5754348 | 2.1 | 2.4 | 75.6 |
| 6613 | Building and monumental stone, worked, and articles thereof | 5652040 | 2.0 | 2.3 | 78.0 |
| 5833 | Polystyrene and its copolymers | 4993878 | 1.8 | 2.1 | 80.0 |
| 8212 | Furniture for medical, surgical, dental or veterinary practice | 4941878 | 1.8 | 2.0 | 82.0 |
| 4236 | Sunflower seed oil | 4800927 | 1.7 | 2.0 | 84.0 |
| 4242 | Palm oil | 4542678 | 1.6 | 1.9 | 85.9 |
| 8482 | Articles of apparel, clothing accessories of plastic or rubber | 4509233 | 1.6 | 1.9 | 87.7 |
| 1110 | Non-alcoholic beverages, nes | 4555168 | 1.6 | 1.8 | 89.5 |
| 8219 | Other furniture and parts thereof, nes | 4029562 | 1.5 | 1.6 | 91.2 |
| 6783 | Other tubes and pipes, of iron or steel | 3629837 | 1.3 | 1.5 | 92.7 |
| 0585 | Fruit or vegetable juices | 2904900 | 1.0 | 1.2 | 93.9 |
| 7831 | Public service type passenger motor vehicles | 2768577 | 1.0 | 1.1 | 95.0 |

**Table 4b: Profile of Dynamic Exports for Oman (1990-2003) to ROW**

| Code | Product Description | Intra-Regional Exports 2003 (USD) | Share of Intra-Regional Exports 2003 | Share of Growth from Total Growth 1990-2003 | Cumulative share of growth |
|---|---|---|---|---|---|
| 3330 | Crude petroleum and oils obtained from bituminous materials | 7761999997 | 70.3 | 49.9 | 49.9 |
| 3413 | Petroleum gases and other gaseous hydrocarbons, nes, liquefied | 1250418557 | 11.3 | 21.8 | 71.7 |
| 7810 | Passenger motor vehicles (excluding buses)* | 380757485 | 3.4 | 5.2 | 76.9 |
| 1222 | Cigarettes | 212430916 | 1.9 | 3.7 | 80.6 |
| 7849 | Other parts & accessories for vehs. of headings 722, 781-783 | 121324667 | 1.1 | 1.6 | 82.1 |
| 6534 | Fabrics, woven, less 85% of discontinuous synthetic fibres | 82205464 | 0.7 | 1.4 | 83.6 |
| 9310 | Special transactions, comm. not classified according to class | 95583132 | 0.9 | 1.4 | 85.0 |
| 7821 | Motor vehicles for the transport of goods or materials* | 82597230 | 0.7 | 1.4 | 86.4 |
| 0341 | Fish, fresh or chilled, excluding fillet* | 44919919 | 0.4 | 0.8 | 87.2 |
| 7731 | Insulated electric wire, cable, bars, etc | 41943936 | 0.4 | 0.7 | 87.9 |
| 6612 | Cement | 38768148 | 0.4 | 0.7 | 88.6 |
| 7649 | Parts, nes of and accessories for apparatus falling in heading 76 | 38332728 | 0.3 | 0.7 | 89.3 |
| 8459 | Outerwear knitted or crocheted, not elastic nor rubberized-- other, clothing accessories, non-elastic, knitted or crocheted | 42691557 | 0.4 | 0.5 | 89.8 |
| 8472 | Clothing accessories, knitted or crocheted, nes | 28446316 | 0.3 | 0.5 | 90.3 |
| 6732 | Bars, rods (not wire rod), from iron or steel; hollow mining drill* | 25200643 | 0.2 | 0.4 | 90.7 |
| 0460 | Meal and flour of wheat and flour of meslin | 23985853 | 0.2 | 0.4 | 91.1 |
| 6783 | Other tubes and pipes, of iron or steel* | 24333015 | 0.2 | 0.4 | 91.5 |
| 7831 | Public service type passenger motor vehicles* | 22590646 | 0.2 | 0.4 | 91.9 |

| Code | Product Description | Intra-Regional Exports 2003 (USD) | Share of Intra-Regional Exports 2003 | Share of Growth from Total Growth 1990-2003 | Cumulative share of growth |
|---|---|---|---|---|---|
| 0224 | Milk and cream, preserved, concentrated or sweetened* | 22324522 | 0.2 | 0.4 | 92.3 |
| 8219 | Other furniture and parts thereof, nes* | 20026357 | 0.2 | 0.3 | 92.6 |
| 0484 | Bakery products | 18841579 | 0.2 | 0.3 | 92.9 |
| 7239 | Parts, nes of machinery & equipt of headings 72341 to 72346 | 27971938 | 0.3 | 0.3 | 93.2 |
| 6624 | Non-refractory ceramic bricks, tiles, pipes and similar products* | 15374883 | 0.1 | 0.3 | 93.5 |
| 6353 | Builders` carpentry and joinery (including prefabricated) | 13937594 | 0.1 | 0.2 | 93.7 |
| 5833 | Polystyrene and its copolymers* | 12687819 | 0.1 | 0.2 | 93.9 |
| 7415 | Air conditioning machines and parts thereof, nes | 13168086 | 0.1 | 0.2 | 94.1 |
| 0012 | Sheep and goats, live | 13174171 | 0.1 | 0.2 | 94.3 |
| 8510 | Footwear | 11602932 | 0.1 | 0.2 | 94.5 |
| 2734 | Pebbles, gravel, crushed or broken stone, etc | 10092852 | 0.1 | 0.2 | 94.7 |
| 7781 | Batteries and electric accumulators, and parts thereof, nes | 10327180 | 0.1 | 0.2 | 94.8 |
| 6613 | Building and monumental stone, worked, and articles thereof* | 10254017 | 0.1 | 0.2 | 95.0 |
| 6912 | Structures and parts of, of aluminium; plates, rods, and the like | 11223337 | 0.1 | 0.2 | 95.2 |
| 0741 | Tea | 10050880 | 0.1 | 0.2 | 95.3 |
| 0980 | Edible products and preparations, nes* | 9541129 | 0.1 | 0.2 | 95.5 |

**Note:** *Oman's regional exports that match exports to the ROW that were among its dynamic exports (as defined by those products which accounted for 95% of total export growth between 1990 and 2003) based on Tables 4a and 4b. Also note that there is no matching item for dynamic products as defined by those products which accounted for 75% of total export growth between 1990 and 2003.

**Table 5: Profile of Dynamic Exports for Saudi Arabia (1990-2003) to LAS and ROW**

| Code | Product Description | Intra-Regional Exports 2003 (USD) | Share of Intra-Regional Exports 2003 | Share of Growth from Total Growth 1990-2003 | Cumu-lative share of growth |
|---|---|---|---|---|---|
| 3330 | Crude petroleum and oils obtained from bituminous mat. | 345580169 | 27.9 | 30.2 | 30.2 |
| 3413 | Petroleum gases and other gaseous hydrocarbons, nes, liq. | 105529744 | 8.5 | 10.8 | 40.9 |
| 5831 | Polyethylene | 101196008 | 8.2 | 9.4 | 50.3 |
| 3343 | Gas oils | 96715088 | 7.8 | 9.0 | 59.4 |
| 5832 | Polypropylene | 53593908 | 4.3 | 5.6 | 65.0 |
| 5833 | Polystyrene and its copolymers | 29941205 | 2.4 | 3.0 | 67.9 |
| 6428 | Articles of paper pulp, paper, paperboard or cellulose wadding, nes | 30488657 | 2.5 | 2.5 | 70.4 |
| 6514 | Yarn 85% of synthetic fibres, not for retail; monofil, strip | 21666793 | 1.7 | 2.3 | 72.7 |
| 5331 | Other colouring matter; inorganic products use as luminophores | 20703925 | 1.7 | 2.2 | 74.9 |
| 5542 | Organic surface-active agents, nes | 20117021 | 1.6 | 1.8 | 76.7 |
| 5530 | Perfumery, cosmetics, toilet preparations, etc | 16063397 | 1.3 | 1.7 | 78.3 |
| 6911 | Structures and parts of, of iron, steel; plates, rods & the like | 14660378 | 1.2 | 1.5 | 79.8 |
| 6418 | Paper & paperboard, coated, impregnated in rolls or sheets | 11202611 | 0.9 | 1.2 | 81.0 |
| 0585 | Fruit or vegetable juices | 12682038 | 1.0 | 1.2 | 82.2 |
| 7711 | Transformers, electrical | 9725027 | 0.8 | 1.0 | 83.2 |
| 8931 | Plastic packing containers, lids, stoppers and other closures | 9261437 | 0.7 | 1.0 | 84.1 |
| 6644 | Glass, cast, rolled, etc, surface-ground, but no further worked | 8643984 | 0.7 | 0.9 | 85.0 |
| 0612 | Refined sugar, etc. | 8566978 | 0.7 | 0.9 | 85.9 |
| 6998 | Articles, nes, of copper, nickel, aluminium, lead, zinc and tin | 8007346 | 0.6 | 0.8 | 86.8 |

| Code | Product Description | Intra-Regional Exports 2003 (USD) | Share of Intra-Regional Exports 2003 | Share of Growth from Total Growth 1990-2003 | Cumu-lative share of growth |
|---|---|---|---|---|---|
| 7731 | Insulated electric wire, cable, bars, etc | 12955130 | 1.0 | 0.8 | 87.6 |
| 0484 | Bakery products | 7897536 | 0.6 | 0.8 | 88.4 |
| 5823 | Alkyds and other polyesters | 6429246 | 0.5 | 0.7 | 89.1 |
| 6781 | Tubes and pipes, of cast iron | 6308195 | 0.5 | 0.7 | 89.7 |
| 1110 | Non-alcoholic beverages, nes | 6981449 | 0.6 | 0.7 | 90.4 |
| 5417 | Medicaments (including veterinary medicaments) | 6093191 | 0.5 | 0.6 | 91.0 |
| 0223 | Milk and cream fresh, not concentrated or sweetened | 8819920 | 0.7 | 0.6 | 91.6 |
| 6595 | Carpets, rugs, mats, of man-made textile materials, nes | 5941840 | 0.5 | 0.6 | 92.3 |
| 0224 | Milk and cream, preserved, concentrated or sweetened | 5760307 | 0.5 | 0.6 | 92.9 |
| 5138 | Polycarboxylic acids and their derivatives | 5705618 | 0.5 | 0.6 | 93.5 |
| 6783 | Other tubes and pipes, of iron or steel | 5549265 | 0.4 | 0.6 | 94.0 |
| 6931 | Wire, cables, cordage, ropes, plaited bans, sling and the like | 4923880 | 0.4 | 0.5 | 94.5 |
| 0980 | Edible products and preparations, nes | 4787741 | 0.4 | 0.5 | 95.0 |
| 6421 | Packing containers, box files, etc, of paper, used in offices | 5146226 | 0.4 | 0.5 | 95.5 |
| 3330 | Crude petroleum and oils obtained from bituminous mat.[#]* | 7.0296E+10 | 83.0 | 92.2 | 92.2 |
| 3413 | Petroleum gases and other gaseous hydrocarbons, nes, liq.* | 4.0086E+9 | 4.7 | 5.1 | 97.3 |

**Note:** [#]Saudi Arabia's regional exports that match exports to the ROW that were among its dynamic exports (as defined by those products which accounted for 75% of total export growth between 1990 and 2003).

*Saudi Arabia's regional exports that match exports to the ROW that were among its dynamic exports (as defined by those products which accounted for 95% of total export growth between 1990 and 2003).

As shown in Table 5, two products (crude petroleum and oils, and petroleum gases) in Saudi Arabia's dynamic exports (based on the 95% cut-off point) to the region match its dynamic exports to the rest of the world. The situation is worse based on the narrower definition, where only one product which accounted for 75% of the country's growth in exports to the rest of the world is represented in the growth of its regional exports.

For Syria, only nineteen products accounted for 95% of total export growth between 1990 and 2003, while only one product exported to the rest of the world falls in this category (see Table 6). The dynamic exports to the region were mainly dominated by food & live animals (thirteen products in SITC 0). Of significantly smaller number were products in the categories of animal & vegetable fat (two products in SITC 4), and non-alcoholic beverages, olive oil, phenoplasts, and footwear (one product each in SITC 1, 4, 5 and 8, respectively). The dynamic exports to the rest of the world, on the other hand, were completely dominated by crude petroleum in the minerals & fuels category (SITC 3) which, however, is not exported to the region. The share of growth from the intra-regional total growth in exports during the period mainly came from barley, unmilled, and tomatoes, fresh or chilled, at 17.3% and 14.7%, respectively.

The pattern based on the narrower definition of dynamic exports that includes products which accounted for 75% of total export growth show only ten products exported to the region being classified as dynamic exports, while only one of the exports to the rest of the world is found to fall in this category. The dynamic exports to the region were still dominated by food & live animals (six products in SITC 0), followed by only one product each in the categories of beverages & tobacco (SITC 1), chemicals & materials (SITC 5), manufactured goods (SITC 6), and miscellaneous manufactures (SITC 8). Only a single product (crude petroleum and oils) that accounted for 75% or 95% of the country's growth in exports to the rest of the world is represented in the growth of its regional exports.

**Table 6: Profile of Dynamic Exports for Syria (1990-2003) to LAS and ROW**

| Code | Product Description | Intra-Regional Exports 2003 (USD) | Share of Intra-Regional Exports 2003 | Share of Growth from Total Growth 1990-2003 | Cumulative share of growth |
|---|---|---|---|---|---|
| 0430 | Barley, unmilled | 39944141 | 7.1 | 17.3 | 17.3 |
| 0544 | Tomatoes, fresh or chilled | 36573807 | 6.5 | 14.7 | 32.0 |
| 6513 | Cotton yarn | 17506367 | 3.1 | 7.8 | 39.9 |
| 0579 | Fruit, fresh or dried, nes | 19480666 | 3.4 | 7.1 | 47.0 |
| 0411 | Durum wheat, unmilled | 14781930 | 2.6 | 6.6 | 53.6 |
| 0752 | Spices, except pepper and pimento | 12819964 | 2.3 | 5.2 | 58.9 |
| 8510 | Footwear | 12144792 | 2.1 | 5.2 | 64.1 |
| 0412 | Other wheat and meslin, unmilled | 9863370 | 1.7 | 4.4 | 68.5 |
| 1110 | Non-alcoholic beverages, nes | 7512410 | 1.3 | 3.4 | 71.9 |
| 5821 | Phenoplasts | 7082554 | 1.3 | 3.2 | 75.1 |
| 6560 | Tulle, lace, embroidery, ribbons, trimmings and other small wares | 7420963 | 1.3 | 2.8 | 77.9 |
| 0571 | Oranges, mandarins, etc, fresh or dried | 6687299 | 1.2 | 2.7 | 80.6 |
| 0542 | Beans, peas, other leguminous vegetables, dried, shelled | 26377246 | 4.7 | 2.6 | 83.2 |
| 0583 | Jams, jellies, marmalades, etc, as cooked preparations | 8108885 | 1.4 | 2.3 | 85.5 |
| 0565 | Vegetables, prepared or preserved, nes | 5334153 | 0.9 | 2.2 | 87.7 |
| 0574 | Apples, fresh | 5125911 | 0.9 | 2.1 | 89.9 |
| 0484 | Bakery products | 4507063 | 0.8 | 1.9 | 91.8 |
| 4235 | Olive oil | 3710079 | 0.7 | 1.7 | 93.4 |
| 0620 | Sugar confectionery and preparations, non-chocolate | 3884397 | 0.7 | 1.6 | 95.0 |
| 3330 | Crude petroleum and oils obtained from bituminous materials | 3583553024 | 76.9 | 266.7 | 266.7 |

Note: There is no matching item for dynamic products as defined by those products which accounted for 75% and 95% of total export growth between 1990 and 2003.

The likely success or failure of any proposed regional trade arrangement depends on the range of products that members have the capacity to export or import. Members exporting a wide range of diversified goods present a positive signal to a successful regional trade arrangement. However, concentration of exports will limit the prospects of increasing regional trade (Pitigala, 2005).

Table 7 presents a summary of the divergence and concentration estimates derived from Tables 2 to 6 to examine the two propositions above. Based on the 75% cut-off point, the figures suggest that only Jordan shows the likelihood for greater regional exports with 33.39% of its dynamic exports being represented in regional exports. The disparity is extreme for the other countries, particularly Oman and Syria, where none of their products that accounted for 75% of the countries' growth in exports to the rest of the world is represented in the growth of its regional exports. Since the extent to which the relative share of regional trade can be increased depends on the extent to which countries' dynamic exports to the rest of the world are represented in regional trade, the prospects for Egypt, Oman, Saudi Arabia and Syria do not appear to be encouraging. A highly concentrated exports for these countries, especially Saudi Arabia and Syria, also confirms their narrow export base compared to Jordan which is relatively more diversified. For example, dynamic exports of Saudi Arabia and Syria are found to be concentrated in only 1 item, namely crude petroleum and oils.

Based on the 95% cut-off point for dynamic exports, the number of items of regional exports that match exports to the rest of the world is higher for Egypt, Jordan, Oman and Saudi Arabia (6, 13, 12, and 2, respectively). The divergence of exports measurements is also higher for Egypt, Oman and Saudi Arabia. However, for Jordan the percentage share is lower at 21.79% compared to 33.39% at the 75% cut-off point, although the number of matching exports is higher at 13 items.[9] In the case of Syria, the divergence of exports is 0% which means that there is no match at all between dynamic exports to the region and to the rest of the world. At the 95% cut-off point, Table 7 shows a relatively lower degree of trade concentration for Egypt, Jordan and Oman. For Saudi Arabia and Syria export concentration remains at only 1 item, namely crude petroleum and oils.

[9] The inclusion of ten additional matching products with the use of the 95% cut-off point for Jordan has caused the total value of regional dynamic exports to increase less than the increase in the total value of matching dynamic exports to the rest of the world, hence resulting in a lower computed value.

**Table 7: Divergence and Concentration Summary**

| | Egypt | Jordan | Oman | Saudi Arabia | Syria |
|---|---|---|---|---|---|
| ***95% cut-off point*** | | | | | |
| Divergence of exports (%) | 14.03 (6) | 21.79 (13) | 26.57 (12) | 0.61 (2) | 0 (0) |
| Concentration of exports | 11 | 50 | 34 | 1 | 1 |
| ***75% cut-off point*** | | | | | |
| Divergence of exports (%) | 5.35 (1) | 33.39 (3) | 0 (0) | 0.49 (1) | 0 (0) |
| Concentration of exports | 4 | 20 | 2 | 1 | 1 |

**Notes:** Figures in parentheses represent the number of product categories in regional exports that match exports to the ROW that were among its dynamic exports (account for 75% or 95% of total export growth between 1990 and 2003).
Divergence of exports = Regional exports that match exports to the ROW as a share of the latter.
Concentration of exports = Number of products accounting for either 75% or 95% of export growth to the ROW between 1990 and 2003.

Table 8 provides a summary of the Herfindahl-Hirschman Concentration Index (HHCI). The HHCI supports the results for export concentration in Table 7. Jordan is still found to have the lowest concentration of exports to the rest of the world with an HHCI value of 0.24 in 1990 and 0.18 in 2003. Egypt, to a certain extent, also shows a low concentration of exports of 0.26 HHCI for both years.

**Table 8: Herfindahl-Hirschman Concentration Index for Exports to ROW**

| Year | Egypt | Jordan | Oman | Saudi Arabia | Syria |
|---|---|---|---|---|---|
| | | | | | |
| 1990 | 0.26 | 0.24 | 0.85 | 0.83 | 0.29 |
| 2003 | 0.26 | 0.18 | 0.67 | 0.65 | 0.60 |

Syria, on the other hand, initially shows a low index of 0.29 in 1990 but exports became more concentrated in 2003 with an HHCI of 0.60. Oman and Saudi both record a high HHCI (0.85 and 0.83, respectively) indicating a high level of export concentration in 1990, with the index slightly declining to 0.67 and 0.65, respectively, in 2003.

## 5. Conclusion

This paper attempts to investigate whether or not the LAS possesses the necessary prerequisites to enable a successful regional trade arrangement. As

mentioned earlier, it has been argued that the ability to increase regional exports is contingent upon the degree to which countries' dynamic exports are incorporated in the regional export mix. Furthermore, the likely success or failure of any regional economic integration is highly dependent on the range of products that members have the capacity to export or import. The more countries' dynamic exports to the rest of the world are represented in their regional dynamic exports (i.e., trade divergence), the higher is the possibility for intra-regional trade. In addition, members exporting a wide range of diversified goods are considered a positive factor, while concentration of exports is considered a limiting factor to the prospects of increasing regional trade. Hence, this paper attempts to examine the trade structure among five LAS members, namely Egypt, Jordan, Saudi Arabia, Syria and Oman by analyzing their dynamic exports as well as their "trade concentration", and "trade divergence" profiles, for the years 1990 and 2003.

In general, the findings indicate that the existing trade structure may not facilitate intra-regional trade among LAS members. Divergence estimates indicate that only Jordan shows prospects for greater regional exports at both 75% and 95% cut-off points. On the other hand, the prospects for Egypt, Oman, Saudi Arabia and Syria do not appear to be encouraging since only a small number of these countries' dynamic exports to the rest of the world is represented in regional trade.

Except for Jordan, exports are found to be highly concentrated in these countries, especially Saudi Arabia and Syria, where they are found to be concentrated in only one item, namely crude petroleum and oils. In addition, evidence from the HHCI supports these results. In sum, divergence and concentration data do not augur well for a more substantial increase in intra-regional trade. Therefore, based on the findings there is a need for these countries to realign their trade policies in order to promote a more favorable environment for the creation of the Pan-Arab Free Trade Area.

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