GAFTA and Intra-Arab Trade (1997-2004): An Analysis

Georges Harb

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Abstract

Arab efforts aimed at the establishment of a regional bloc have been revived through the implementation of the Greater Arab Free Trade Area (GAFTA). In this paper, the implication of the liberalization process on intra-Arab trade was analyzed. An assessment of the evolution of the trade intensity as well as the propensity to trade between Arab countries was carried out. Results strongly suggest that the liberalization scheme did not increase the intensity of trade inside the Arab region. However, three sub-regions are highly integrated. In addition, the evolution of the composition of intra-Arab trade throughout the implementation of GAFTA was investigated. Results show that intra-regional trade expansion occurred the most in product categories in which the Arab world is not competitive in world markets. Finally, a sketch of the prospects of an expansion of intra-Arab trade in goods in which the Arab countries are efficient producers was presented.

منظمة التجارة الحرة العربية الكبرى والتبادل التجاري العربي البيني (1997-2004): رصد لأبرز التطورات

جورج حرب

ملخص

شكل دخول منطقة التجارة الحرة العربية الكبرى (غافتا) حيز التنفيذ مطلع العام 2005، تقدما ملحوظا في المساعي العربية لاقامة تكتل إقتصادي إقليمي. تشكل هذه الدراسة رصداً لابرز التغيرات في التبادل التجاري العربي البيني التي طرأت منذ بدء تحرير التجارة بين الدول الأعضاء في الغافتا. في القسم الأول من الدراسة، تظهر النتائج أن تحرير التجارة لم يضاعف كثافة التبادل البيني بين الدول الأعضاء في الغافتا، و ذلك مع بروز ثلاث مناطق دون إقليمية على قدر عال من التكامل التجاري. في القسم الثاني، نستعرض التغيرات التي طرأت على هيكلية التجارة العربية البينية منذ أواخر تسعينيات القرن الماضي. تظهر المؤشرات أن تحرير التجارة بين الدول الأعضاء في الغافتا قد ترافق مع ارتفاع نسبي في تبادل السلع التي لا يتمتع العالم العربي بميزة نسبية في تصنيعها. أخيرا، نلقي الضوء على امكانية نمو التبادل التجاري العربي البيني مستعرضين السلع والدول التي من شأنها تفعيل التجارة العربية البينية.

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Introduction

Arab efforts aimed at establishing a regional bloc date back to the beginning of the 1950s. Indeed, the quest for an Arab common market is a paramount feature of the Arab regional system headed by the League of Arab States. The Greater Arab Free Trade Area (GAFTA) under which the trade liberalization among the signatories began in 1998[1], constitutes the achievement of the efforts for an Arab bloc. The executive program of GAFTA calls for a complete liberalization of trade in goods through a gradual phasing out of tariffs and the elimination of non-tariff barriers. To a large extent, trade between GAFTA members became tariff-free in 2005, thus completing the liberalization process.

This paper aims at assessing the trade implications of the liberalization procedure that took place through GAFTA. It appears that this is the first investigation of the impact of GAFTA on the orientation and composition of intra-Arab trade. Given that the study skims over the time-frame of the liberalization process, the results should be particularly revealing.

Intra-Arab Trade Dynamics: 1997-2004

In February 1997, the Arab Economic and Social Council (AESC)[2] gave birth to GAFTA. Starting in 1998, the liberalization of intra-Arab trade[3] was scheduled to take place over a period of ten years, mainly via a gradual phasing out of tariffs. In addition, GAFTA's executive program called for an elimination of non-tariff barriers. A special committee was formed in order to track all forms of non-tariff barriers in member countries, with the objective that these barriers would be eliminated by the end of the transitional period. In 2002, the Arab countries, through the AESC, accelerated tariffs reductions and the full trade liberalization among GAFTA members was completed in January 2005, by which time, seventeen Arab states were GAFTA members.[4]

A glimpse on intra-Arab exports reveals the low level of integration between Arab states.[5] As shown in Figure 1, intra-Arab exports represented on the average, merely 6.5% of total Arab exports, between 1992 and 2004. This ratio is strikingly low when compared to other blocs such as the South-American Mercado Comun del Sur (MERCOSUR), where intra-members exports were

equal to 21% of MERCOSUR's total exports in 2000, and 13% in 2004.[6] It should be noted that the picture is less gloomy when oil exports are excluded. Since oil holds the greatest share of many Arab countries' exports,[7] and since it is largely exported to non-Arab countries, oil tends to bias the real magnitude of intra-Arab trade.

Figure 1 shows that after excluding oil from Arab exports, the ratio of intra-Arab exports to total exports averaged around 23% between 1992 and 2004.

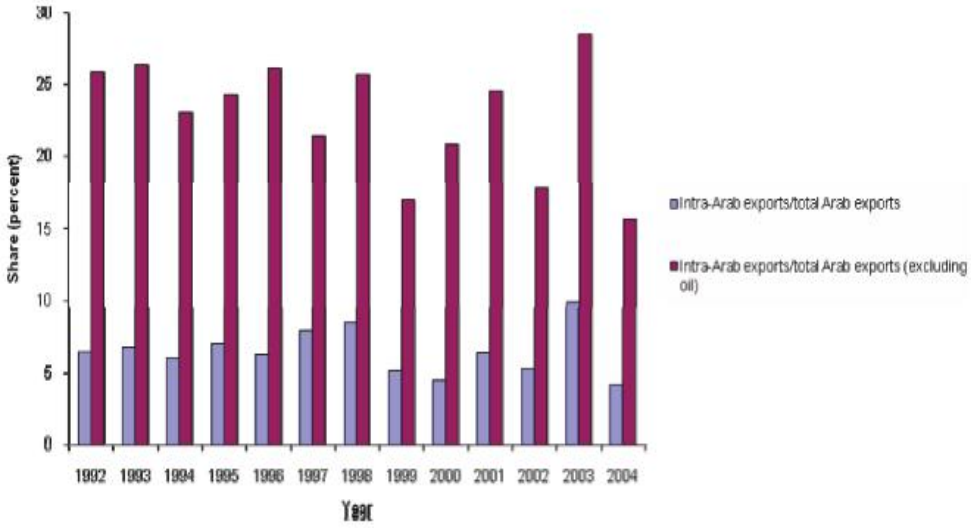

Figure 1. Share of intra-Arab exports in total Arab exports, 1992 – 2004.

N.B. The product category No. 3 (mineral fuels and lubricants) was subtracted from both total and regional Arab exports, when computing the share of intra-Arab exports in total Arab exports excluding oil. This is in accordance with the United Nations' Standard International Trade Classification (SITC, Rev.1)
Source: Author's calculations based on UN Comtrade database.

The composition of intra-Arab trade, depicted in Figures 2 and 3, shows that there are four main product categories in intra-regional trade: (a) food and live animals; (b) machinery and transport equipment; (c) manufactured goods; and (d) mineral fuels. These commodities represented around 73% and 75% of intra-Arab exports in 1997 and 2004, respectively. Regarding the evolution of intra-Arab exports' structure, Figures 2 and 3 highlight the decreasing importance

of food and live animals in intra-regional trade (their share dropped from 24.5% in 1997 to 19.6% in 2004) and the increasing importance of manufactured goods (their share grew from nearly 16% in 1997 to 23% in 2004).

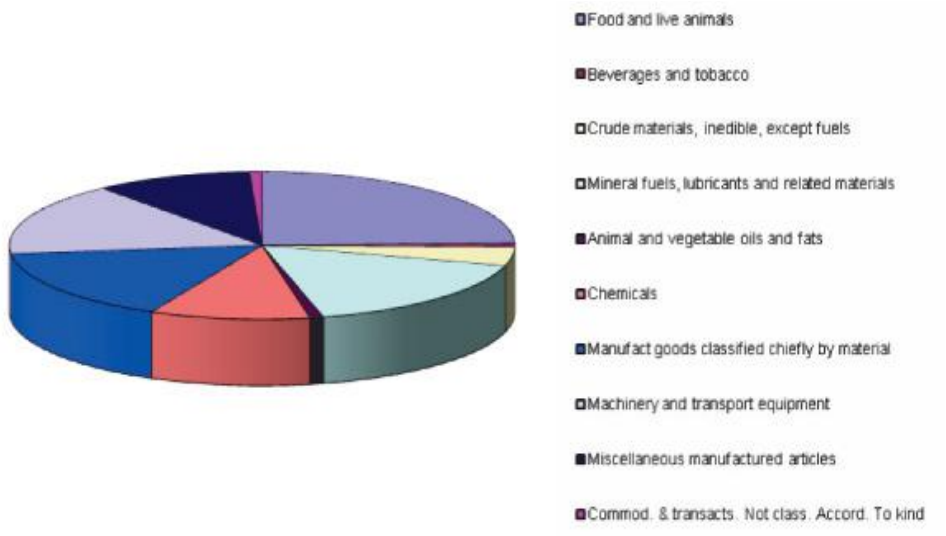

Figure 2. Structure of intra-Arab exports, 1997.

N.B. At the one-digit level of the SITC, Rev 1.
Source: Author's calculations based on UN Comtrade database.

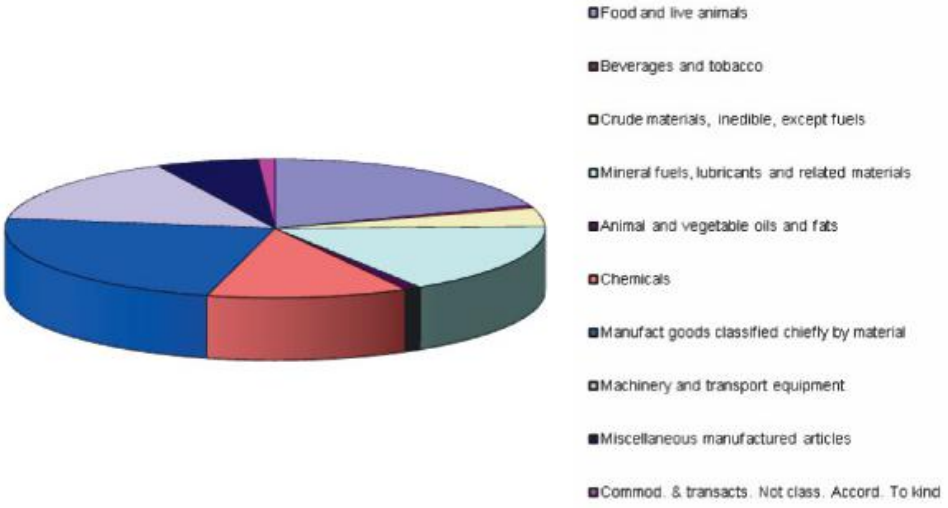

Figure 3. Structure of intra-Arab exports, 2004.

N.B. At the one-digit level of the SITC, Rev 1.
Source: Author's calculations based on UN Comtrade database.

The weight of intra-Arab trade in Arab countries' total trade is illustrated in Table 1. For a number of Arab countries, regional exports represent a significant part of their total exports. This is the case of Bahrain, Egypt, Jordan, Lebanon, Oman, Sudan, Syria and the United Arab Emirates (UAE).[8] The regional market is particularly important (in decreasing order) for Lebanon, Jordan, Syria and Egypt. The Arab market gained a significant importance for Egyptian exports, as they increased from almost 12% of total Egyptian exports in 1997 to 18.4%, seven years later.

Table 1. Arab Countries' Exports to the Arab World, as a Share of Their Total Exports (in percent)

Country	Share of its total exports going to the Arab world 1997	Share of its total exports going to the Arab world 2002	Share of its total exports going to the Arab world 2004
Algeria	1.64	2.38	2.88
Bahrain	8.20	11.07	10.64
Egypt	11.76	14.76	18.44
Jordan	32.70	26.48	22.56
Kuwait	2.86	3.51	2.90
Lebanon	49.92	47.41	42.79
Libya	6.67	4.22	2.83
Mauritania	0.96	2.06	3.68
Morocco	6.34	3.57	3.27
Oman	12.87	12.96	11.24
Qatar[a]	10.80	12.32	6.14
Saudi Arabia	4.26	4.18	4.66
Sudan	39.43	16.73	10.86
Syria	23.53	20.85	20.31
Tunisia	7.53	8.01	6.48
United Arab Emirates (UAE)	6.24	11.09	9.86
Yemen	3.12	6.19	7.17

N.B.
[a] The 1997 share of Qatari exports going to the Arab world is based on 1996 data.
Source: Author's calculations based on UN Comtrade database.

On the other hand, Sudanese exports to the Arab countries dropped considerably between 1997 and 2004 (from 39.4% of total Sudanese exports to nearly 11%). Jordanian exports to the Arab world as a share of total Jordanian

exports, witnessed a severe decrease between 1997 and 2004 (from 32.7% to 22.6%). However, the regional market remains an important outlet for Jordanian exporters.

Did GAFTA Intensify Intra-Arab Trade?

In order to draw conclusions from the evolution of each country's exports to the Arab world since the implementation of GAFTA, a yardstick is needed discerning if a country's exports to the rest of the Arab world are "too much" or "too little". To achieve this, the geographic neutrality concept was used according to which the share of each country's partner in its total trade is equal to the partner's weight in world trade. Thus, if trade between a given country and the Arab world is not geographically biased, then the country's trade with the Arab region would be equal to the latter's weight in world trade. The yardstick computed is the trade intensity index between country i and the Arab world (T_{iAw}), defined as follows:

$$T_{iAw} = \left[\frac{x_{iAw}}{X_i}\right] \div \left[\frac{m_{Aw}}{M_W}\right] \quad (1)$$

with:

x_{iAw} and X_i, respectively country i's exports to the Arab world and its total exports;
m_{Aw} and M_W, respectively Arab world imports (net of country i's imports) and world imports (net of country i's imports).

An index superior to unity highlights higher trade intensity than what would be expected, given the weight of the countries of interest in world trade.(9) Table 2 shows trade intensity indices computed for 1997, 2002 and 2004. Two main conclusions may be drawn from this table. Firstly, with the exception of Mauritania in 1997, all computed indices are superior to unity. Arab countries trade more than expected with their Arab partners, given the latter's weight in international trade. Secondly, it seems that the liberalization process implemented through GAFTA did not increase the intensity of trade between the Arab countries and the region. Indeed, out of the 17 countries, 11 witnessed a decrease in their

trade intensity with the Arab world. Figuring among them were Jordan, Lebanon, Sudan and Syria - countries for which regional exports are significant relatively to their total exports (see Table 1). Only five countries saw an increase in their trade intensity with the rest of the Arab world namely Algeria, Egypt, Mauritania, the UAE and Yemen. Given that neither Algeria nor Mauritania are yet GAFTA members, their more intense trade with the rest of the Arab countries would help accelerate their admission to GAFTA.

Table 2. Arab Countries' Trade Intensity Index with the Arab World, 1997, 1998, 2004

Country	Trade intensity index 1997	Trade intensity index 1998	Trade intensity index 2004
Algeria	1.32	1.45	1.71
Bahrain	5.99	6.32	5.86
Egypt	10.12	9.03	10.60
Jordan	24.48	15.11	12.54
Kuwait	2.28	2.04	1.64
Lebanon	39.14	27.37	23.94
Libya	5.12	2.41	1.56
Mauritania	0.69	1.13	1.97
Morocco	5.03	2.17	1.93
Oman	9.78	7.46	6.27
Qatar[a]	6.17	6.97	3.37
Saudi Arabia	5.78	3.15	3.34
Sudan	28.66	9.34	5.89
Syria	17.66	11.84	11.22
Tunisia	5.99	4.76	3.71
UAE	6.92	9.47	8.44
Yemen	2.28	3.47	3.88

N.B.
[a] The 1997 Qatar/Arab world trade intensity index is based on 1996 data.

Source: Author's calculations based on UN Comtrade database.

While many countries trade less intensively with the region, there could be a rise in the propensity to trade between those countries and the Arab world, because of an expansion of their openness. That is, even when the intensity of trade falls between a given country and the Arab world, there could be a rise in the former's propensity to trade with the latter because of a rise in the value of its exports, relatively to its GDP.

In view of this, an underlying objective of the study was to investigate the trade propensity index between each of the Arab countries of the sample and the rest of the Arab world. Results, unreported in this paper, show that to a very large extent, countries' trade propensity indices follow the same evolution as their trade intensity indices.(10)

All in all, while Arab countries trade intensively with the Arab world, many countries saw their trade intensity with the region has fallen throughout the implementation of GAFTA. Many factors could explain this trend. Firstly, with the gradual elimination of tariffs, many GAFTA members have reinforced their non-tariff barriers, thereby seeking the protection of their domestic producers and hindering by the same token, intra-Arab trade. Secondly, trade policy reforms, undergone throughout the 1990s and early 2000, reduced many countries' tariffs and most likely rendered their exports more competitive, thus favoring the expansion of the latter to world markets. In fact, some Arab countries became members of the World Trade Organization (WTO) during the period of interest, thus benefiting from an access to the WTO members' markets.(11)

In the same vein, starting from the mid-1990s, the implementation of the Euro-Mediterranean agreements may have re-directed some of the Arab-Mediterranean partners' exports to the European Union.(12) The decline of the trade intensity between Jordan and the Arab world could be explained, among other things, by the reinforcement of the former's trade with the United States of America (US). The Qualified Industrial Zones (QIZ) agreement - signed in 1999 between Jordan and the US,(13) as well as the free trade agreement signed the following year - have largely contributed to the increase of Jordanian exports to the US market.(14) Pertaining to the Gulf countries, their low level of tariff protection as well as their increasing trade relations with Asian countries, may help explain their less intense trade with their Arab partners.

To sum up, it is likely that lower intra-regional trade intensity reflects an acceleration of the Arab world's integration with the rest of the world. An increase of the openness of the Arab economies would positively contribute to their growth. While no clear-cut results stem from the extensive theoretical literature dedicated to the relation between openness and growth, three main channels may be highlighted relating trade to economic growth:(15)

• Specialization: From a static point of view, international trade theory shows that free trade assures an efficient reallocation of resources and a specialization according to comparative advantage that increase domestic welfare.

• Knowledge Spillovers: The new trade theory, as well as models of endogenous technological progress, has highlighted the importance of trade as a vector of technology. Indeed, in models where growth is driven by knowledge spillovers, trade can propel growth if it facilitates the diffusion of knowledge. In the same vein, a number of authors have stressed the importance of trade in intermediate products that increase the productivity in R&D, which in turn, translates into higher growth rates.

• Increase of Demand and Relaxation of the Balance of Payments Constraint: The Keynesian approach highlights the crucial role of exports as a growth-propelling force. In this approach, exports affect growth both directly, through the foreign multiplier, and indirectly, through allowing for higher imports and investments.

Nevertheless, one should bear three elements in mind regarding the three abovementioned channels: (a) Many results are based on highly restrictive assumptions; (b) Many authors have shown that in the presence of distortions, opening up to trade would reduce domestic welfare; and (c) The causality of the relationship between trade and growth runs both ways, i.e., an increase in the growth rate of output, could translate into a rise in exports.

Identifying Integrated Sub-Regions

After analyzing the trade intensity of each of the Arab countries with the Arab bloc, the next logical step is to identify highly integrated sub-regions. To do so, the bilateral trade intensity index is defined as follows:

$$T_{ij} = \left[\frac{x_{ij}}{X_i}\right] \div \left[\frac{m_j}{M_w}\right] \qquad (2)$$

with:

T_{ij}, the trade intensity index between country i and j;
x_{ij} and X_i, respectively country i's exports to country j, and country i's total exports;
m_j, country j's imports;
M_w, world imports net of country i's imports.

Table 4 shows bilateral trade intensity indices for 1997.(16) The results reveal three highly integrated sub-regions:

• Maghreb Countries - Countries located in North Africa namely Algeria, Libya, Mauritania, Morocco and Tunisia.

• Gulf Cooperation Council (GCC) - Countries located in the Arabic Gulf, mostly GCC members: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE, as well as Yemen.

• Mashrek Countries - Middle Eastern countries namely Egypt, Jordan, Lebanon, Sudan and Syria.

Indeed, the Maghreb countries display high trade intensity indices with each other. Algeria trades most intensely with Mauritania, Morocco and Tunisia. Morocco exports intensively to Libya, Mauritania and Tunisia. Finally, Tunisia's trade is intense with Libya, Algeria and to a lesser extent, Morocco.

Given the failure of the revival of the Arab Maghreb Union (AMU),(17) the trade intensity indices between the Maghreb countries mostly reflect the low intra-Maghreb transactions cost, relatively to that pertaining to their trade with the rest of the Arab world. In addition to high intra-Maghreb trade intensity, Maghreb countries have intense trade relations with other Arab countries. This is the case of Libya with both Syria and Egypt; Morocco with Saudi Arabia and Syria; and Tunisia with Bahrain.

Regarding the Gulf countries, they exhibit high intra-regional trade intensity indices. Bahrain's trade intensity indices with other Gulf countries are very high (in decreasing order Qatar, Saudi Arabia, Oman and Kuwait). Oman's highest trade intensity indices are with Yemen, the UAE, Bahrain, Kuwait and Qatar. Qatar trades intensively with the UAE, Bahrain and Yemen. Saudi Arabia

exports intensively to Yemen, Bahrain and Qatar. As for the UAE, it exhibits high trade intensity indices with Oman, Yemen, Qatar and Bahrain.

Such high trade intensity indices reflect the trade liberalization process since the implementation of the GCC in 1989. In fact, the GCC members unified their trade policies and became a customs union in 2003. Interestingly, almost all Gulf countries register high trade intensity indices with Sudan. Kuwait has a high trade intensity index with Syria, and Saudi Arabia shows a high trade intensity index with Morocco.

Regarding the Mashrek countries, results illustrate their significant integration with the rest of the Arab world. Indeed, Egypt has intense trade relations with countries located in different sub-regions: Yemen, Sudan, Libya, Syria and Jordan. Jordanian exports are intensively directed to other Mashrek countries, namely Syria, Sudan, and to a lesser extent, Lebanon. Also, Jordan exports intensively to the Gulf countries: Qatar, Yemen, Bahrain and Kuwait. Lebanon trades intensely with other Mashrek countries like Syria and Jordan, as well as with Gulf countries like Bahrain, Kuwait and Saudi Arabia. As for Sudan, it exports extensively towards other Mashrek countries (Jordan, Egypt and Lebanon) and Gulf countries (Yemen and Saudi Arabia). Finally, Syrian exports are expansively directed to Lebanon, Jordan, Algeria, Saudi Arabia and Kuwait.

In order to see whether the liberalization process has changed the pattern of bilateral trade intensity, bilateral trade intensity indices were computed for 2004, i.e., one year before the full implementation of GAFTA. Table 5 illustrates the results. The liberalization of trade between the Arab countries does not seem to have influenced the picture depicted above. Indeed, the three aforementioned and highly integrated sub-regions are still highly distinguishable. Furthermore, the Mashrek countries continue to be well integrated with the other sub-regions, notably with the Gulf countries. In this respect, the Mashrek economies appear to be the core of GAFTA and the propeller of the integration process.

Results imply that efforts aimed at strengthening sub-regional cooperation would increase the integration dynamics. Such efforts may take the form of enhancing transport and communication infrastructures, thus reducing transport

and transactional costs. This is the essence of the recent project of establishing road networks between Mashrek countries (UN ESCWA, 2001a). Efforts should also focus on streamlining customs formalities between countries sharing common borders. This could be achieved through the computerization of customs and the use of the Internet to coordinate the procedures between neighboring countries (UN ESCWA, 2001b and Zarrouk, 2004).

As was done when considering trade intensity between each Arab country and the Arab bloc, also taken into account was the impact of the eventual expansion of a given country's exports (relatively to its GDP) on its bilateral trade. Indeed, even when the intensity of trade falls between country i and j, there could be a rise in the propensity to trade between those countries because of a rise in the value of i's exports, relatively to its GDP. With this end, bilateral trade propensity indices were computed. Results, unreported here, show that in general bilateral trade propensity indices display the same evolution – between 1997 and 2004 – as the trade intensity indices. Taking into consideration the exporting countries' degree of openness does not alter the previous results.[18]

Table 4. Bilateral Arab Trade Intensity Indices, 1997

Country	Algeria	Bahrain	Egypt	Jordan	Kuwait	Lebanon	Libya	Mauritania	Morocco	Oman	Qatar	SA	Sudan	Syria	Tunisia	UAE	Yemen
Algeria	.	..	0.14	0.34	..	0.23	0.20	36.16	4.56	..	..	..	0.98	0.02	2.86	0.02	0.04
Bahrain[a]	1.56	.	1.74	11.64	16.06	1.52	0.36	-	0.29	20.56	48.79	30.68	40.03	3.34	1.82	10.81	7.90
Egypt	1.08	1.52	.	9.34	3.16	6.22	16.91	0.02	1.95	0.74	1.99	5.25	21.07	11.90	3.20	1.71	21.79
Jordan	1.07	24.71	6.13	.	19.88	20.03	5.38	0.09	1.12	3.56	28.83	15.80	32.00	40.67	1.74	10.65	27.38
Kuwait[b]	0.01	3.52	1.34	0.72	.	0.56	..	0.01	0.41	1.27	1.82	1.40	0.03	2.18	0.38	-	14.85
Lebanon	5.35	64.75	10.46	55.23	29.75	.	21.07	4.22	2.88	2.45	15.80	22.87	14.33	80.54	1.27	17.98	15.10
Libya[c]	0.12	..	3.79	0.34	-	2.71	.	-	2.92	..	0.02	0.02	0.67	5.67	17.94	-	..
Mauritania[d]	0.11	-	1.08	-	-	1.75	-	.	0.46	-	-	..	-	-	1.00	-	0.01
Morocco	0.44	0.13	1.04	1.66	0.42	1.10	26.51	20.69	.	0.39	0.12	2.15	0.27	2.06	5.70	0.32	0.19
Oman	0.05	3.75	0.89	1.39	2.42	0.19	1.08	0.47	0.04	.	2.04	1.42	1.45	1.50	0.30	19.22	20.65
Qatar[e]	0.02	6.86	0.60	4.76	4.01	0.16	..	-	..	3.15	.	4.52	7.72	0.19	0.12	12.47	5.57
SA[f]	0.32	6.38	2.93	3.27	-	1.52	0.17	0.13	5.99	3.28	5.38	.	10.53	2.54	0.47	-	8.17
Sudan[g]	1.59	1.40	28.04	61.77	0.06	17.22	10.37	-	0.03	0.11	0.74	30.64	.	10.96	3.75	2.37	58.43
Syria	14.94	5.13	3.22	24.01	7.11	64.33	5.73	0.27	2.90	0.65	5.00	8.25	8.20	.	1.32	2.35	3.49
Tunisia	4.13	3.72	1.75	2.32	0.21	1.56	43.97	1.57	3.99	0.25	0.19	0.57	0.35	0.66	.	0.28	0.37
UAE[h]	0.37	7.82	0.63	1.25	-	0.99	0.64	0.11	0.21	41.96	9.26	3.13	9.48	1.23	0.35	.	16.48
Yemen[i]	0.03	0.24	0.62	0.53	0.01	0.02	..	-	0.02	0.29	19.85	1.78	0.33	0.06	0.01	0.90	.

N.B. For each country appearing in a row, figures correspond to its trade intensity index with the corresponding country figuring in a column.

- Unavailable data.

.. Infinitesimal value.

[a] The Bahrain/Qatar and Bahrain/UAE trade intensity indices are based on 1996 trade data.

[b] The Kuwait/Mauritania trade intensity index is based on 1996 trade data.

[c] The Libya/Bahrain and Libya/Yemen trade intensity indices are based on 1995 trade data . The Libya/Saudi Arabia trade intensity index is based on 1996 trade data.

[d] The Mauritania/Morocco trade intensity index is based on 1996 trade data. The Mauritania/Saudi Arabia as well as Mauritania/Yemen trade intensity indices are based on 1995 trade data.

[e] All the trade indices computed between Qatar and each of the rest of the countries are based on 1996 trade data.

[f] SA stands for Saudi Arabia. The Saudi Arabia/Bahrain and Saudi Arabia/Qatar trade intensity indices are based on 1996 trade data.

[g] The Sudan/Libya trade intensity index is based on 1996 trade data.

[h] The UAE/Bahrain, UAE/Mauritania, UAE/Qatar and UAE/Saudi Arabia trade intensity indices are based on 1996 trade data.

[i] The Yemen/Algeria trade intensity index is based on 1996 trade data.

Source: Author's calculations based on UN Comtrade database.

Table 5. Bilateral Arab Trade Intensity Indices, 2004

Country	Algeria	Bahrain	Egypt	Jordan	Kuwait	Lebanon	Libya	Mauritania	Morocco	Oman	Qatar	SA	Sudan	Syria	Tunisia	UAE	Yemen
Algeria	.	..	9.23	0.13	1.10	..	0.69	0.89	3.44	..	..	0.01	..	0.90	3.54	..	0.02
Bahrain	0.94	.	0.72	1.70	8.00	0.29	1.73	-	0.73	2.05	13.54	12.67	0.12	0.52	0.37	1.90	0.36
Egypt	5.87	0.54	.	22.21	2.80	37.34	12.70	5.63	2.75	0.75	1.66	5.89	29.23	31.65	1.72	2.19	12.12
Jordan	8.83	7.30	5.39	.	12.16	15.78	10.15	0.29	0.31	4.28	9.06	10.90	20.57	49.79	1.97	4.34	16.78
Kuwait	0.11	1.96	1.01	1.31	.	0.77	..	0.02	0.46	0.34	1.72	1.69	0.96	2.01	0.54	-	24.04
Lebanon	5.35	12.47	16.74	44.10	37.18	.	11.72	6.24	1.74	4.27	28.51	14.41	12.15	16.22	1.51	11.84	8.93
Libya[a]	0.09	..	1.44	0.10	-	0.81	.	-	1.12	0.01	0.37	..	..	2.43	14.26	-	0.10
Mauritania	11.35	-	5.08	-	-	1.71	-	.	1.28	-	-	0.03	-	-	0.82	-	0.03
Morocco	1.97	0.10	1.59	1.60	0.31	1.49	4.60	14.81	.	0.10	0.19	1.18	0.03	3.71	4.21	0.19	1.36
Oman	0.07	1.96	0.56	5.53	2.53	0.37	2.78	0.35	0.03	.	4.63	3.17	2.97	2.93	0.48	9.44	12.09
Qatar	0.21	2.65	0.63	1.62	3.59	1.00	1.67	-	0.60	1.50	.	2.41	1.07	1.21	0.30	4.52	1.59
SA[b]	0.24	4.06	2.67	14.06	-	3.19	0.18	0.14	3.78	0.99	6.67	.	7.78	3.28	0.62	-	6.10
Sudan	0.12	0.01	14.43	2.75	0.13	6.58	0.56	-	..	0.01	0.58	10.27	.	5.67	1.52	2.37	2.25
Syria[c]	3.88	0.94	13.67	31.11	9.06	36.10	9.55	4.87	0.81	0.48	6.66	13.25	7.92	.	0.97	1.24	9.85
Tunisia	5.43	1.18	2.13	0.53	0.49	0.39	50.19	4.83	3.81	0.15	0.10	0.49	0.67	0.66	.	0.08	0.18
UAE	0.68	4.13	0.84	2.60	-	1.79	0.54	0.91	0.44	46.39	9.00	3.56	10.50	3.33	0.17	.	23.87
Yemen	0.04	0.12	1.89	0.36	12.73	0.04	1.15	-	0.01	1.19	0.25	4.35	1.66	1.27	0.18	2.85	.

N.B. For each country appearing in a row, figures correspond to its trade intensity index with the corresponding country figuring in a column.

- Unavailable data.

.. Infinitesimal value.

[a] The Libya/Oman trade intensity index is based on 2003 trade data.

[b] SA stands for Saudi Arabia.

[c] The Syria/Mauritania trade intensity index is based on 2003 trade data.

Source: Author's calculations based on UN Comtrade database.

After examining the dynamics of intra-Arab trade directions, the investigation of the evolution of the composition of intra-Arab trade is in order. The main questions are: (a) Which product categories witnessed a relative increase in their regional trade throughout the trade liberalization process? (b) Is the Arab world a competitive producer of such products? and finally (c) What are the prospects of intra-regional trade?

GAFTA and the Pattern of Intra-Regional Trade

Intra-Regional Trade: An Analysis

The objective is to examine whether the liberalization process fostered trade in goods in which the Arab world is competitive in world markets. Firstly, product categories that witnessed an increase in intra-Arab exports are identified relative to Arab exports to the rest of the world. Then, the competitiveness of the Arab world in these products is checked. Regarding the first step, the regional orientation index is computed for Arab exports of product j (RO_j), defined as:[19]

$$RO_j = \left[\frac{x_{irj}}{X_{ir}}\right] \div \left[\frac{x_{erj}}{X_{er}}\right] \quad (3)$$

with:

x_{irj} and x_{erj}, respectively intra-regional exports of product j and the region's exports of product j to the rest of the world;
X_{ir} and X_{er}, respectively intra-regional exports and the region's exports to the rest of the world.

For a given region, the index is the ratio of the share of a product in intra-regional exports, to its share in the region's exports to the rest of the world. The index ranges from 0 to infinity, with a threshold value of 1: a ratio equal to unity reflects the same tendency to export a given product to regional partners and non-partners. On the other hand, higher values indicate a greater tendency to export to regional markets.

The regional orientation index was computed using the United Nations' SITC, Rev 1 at the two-digit level, after excluding two product categories - "mineral fuels and lubricants" and "commodities and transactions not classified". Table 6 shows regional orientation indices for 1997 and 2004, as well as the variation of the regional orientation index between these years. On a given point in time, the orientation of trade is affected by a combination of several factors, and to name a few, comparative advantage, transport and communication costs, and trade barriers. In short-to-medium term, changes in some factors, such as comparative advantage or transport costs, are not substantial. Thus, the computed variation of the regional orientation index reflects mostly changes in other factors, notably the dismantling of tariffs.

Table 6. Regional Orientation Index, 1997, 2004.

Commodity	ROI 1997	ROI 2004	Variation (1997-2004)
00 – Live animals	525.85	78.25	-447.59
01 – Meat and meat preparations	34.81	2.15	-32.66
02 – Dairy products and eggs	7.44	2.93	-4.51
03 – Fish and fish preparations	0.29	0.60	0.31
04 – Cereals and cereal preparations	8.28	5.90	-2.39
05 – Fruit and vegetables	2.45	2.05	-0.40
06 – Sugar, sugar preparations and honey	2.03	1.61	-0.42
07 – Coffee, tea, cocoa and spices, and manufactures thereof	2.16	4.31	2.15
08 – Feed, Stuff for animals excluding unmilled cereals	1.97	3.30	1.32
09 – Miscellaneous food preparations	2.98	3.50	0.52
11 – Beverages	1.72	1.34	-0.38
12 – Tobacco and tobacco manufactures	0.37	0.32	-0.05
21 – Hides, skins and fur skins	0.66	0.62	-0.04
22 – Oil seeds, oil nuts and oil kernels	2.74	5.96	3.22
23 – Crude rubber including synthetic and reclaimed	4.17	2.54	-1.63
24 – Wood, lumber and cork	0.61	1.06	0.45
25 – Pulp and paper	0.48	0.70	0.22
26 – Textile fibers, not manufactured, and waste	0.48	0.34	-0.13
27 – Crude fertilizers and crude minerals	0.17	0.52	0.34
28 – Metalliferous ores and metal scrap	0.29	1.05	0.76
29 – Crude animal and vegetable materials	0.70	0.40	-0.30
41 – Animal oils and fats	0.25	0.07	-0.18
42 – Fixed vegetable oils and fats	0.42	0.67	0.25
43 – Animal and vegetable oils and fats, processed	0.11	0.27	0.16
51 – Chemical elements and compound	0.61	0.27	-0.34

Commodity	ROI 1997	ROI 2004	Variation (1997-2004)
52 – Crude chemicals from coal, petroleum and gas	..	0.10	0.10
53 – Dyeing, tanning and coloring materials	6.40	1.16	-5.24
54 – Medicinal and pharmaceutical products	5.21	7.83	2.62
55 – Perfume materials, toilet and cleansing preparations	1.42	2.04	0.62
56 – Fertilizers, manufactured	0.34	0.20	-0.15
57 – Explosives and pyrotechnic products	25.15	4.78	-20.37
58 – Plastic materials	11.79	0.42	-11.37
59 – Chemical materials and products	2.01	1.99	-0.02
61 – Leather, leather, manufactured, dressed fur skin	0.39	0.11	-0.28
62 – Rubber manufactures	2.69	2.13	-0.57
63 –Wood and cork manufactures excluding furniture	1.18	0.51	-0.67
64 – Paper, paperboard and manufactures thereof	7.19	2.26	-4.93
65 – Textile yarn, fabrics, made up articles	0.69	0.78	0.09
66 – Non metallic mineral manufactures	2.51	2.47	-0.04
67 – Iron and steel	3.41	3.48	0.07
68 – Non ferrous metals	0.82	2.18	1.36
69 – Manufactures of metal	4.50	1.85	-2.65
71 – Machinery, other than electric	4.41	2.12	-2.29
72 – Electrical machinery, apparatus and appliances	0.76	0.47	-0.28
73 – Transport equipment	3.49	2.26	-1.23
81 – Sanitary, plumbing, heating and lighting fixture	1.97	1.47	-0.51
82 – Furniture	4.66	2.49	-2.17
83 – Travel goods, handbags and similar articles	0.90	0.42	-0.48
84 – Clothing	0.22	0.10	-0.11
85 – Footwear	1.41	0.48	-0.93
86 –Scientific and control instruments, photographic goods, clocks	2.20	0.66	-1.54
89 – Miscellaneous manufactured articles	2.18	1.35	-0.83

N.B.
.. Infinitesimal value
Source: Author's calculations based on UN Comtrade database.

The product categories that witnessed a rise in their regional orientation index are food and live animals (categories Nos. 03, 07, 08 and 09 in the SITC, Rev 1)[20]; crude materials (categories Nos. 22, 24, 25, 27 and 28)[21]; animal and vegetable oils and fats (categories Nos. 42 and 43)[22]; chemicals (categories Nos. 52, 54 and 55)[23]; and manufactured goods (categories Nos. 65, 67 and 68).[24] These products witnessed a redirection of their exports pattern. Through the implementation of GAFTA, they became relatively much more intra-regionally traded.

One question to ask is whether the re-orientation of intra-Arab exports took place in product categories in which the Arab world is a competitive producer in world markets. To answer this question, the concept of comparative advantage was utilized. The traditional trade theory shows that, under free trade, the specialization of a given country reflects the sectors in which it enjoys a comparative advantage. Ideally, one needs to compute the difference between autarkic and free trade relative prices in order to identify the sectors in which a given country has a comparative advantage. However, since autarkic prices are unobservable, the common practice in empirical literature is to analyze specialization patterns of countries using revealed comparative advantage measures. Thus, to address this question, it requires proceeding to the next step and computing the Balassa revealed comparative advantage index (RCA) of the Arab world for 2004. The index is defined as follows:(25)

with:

$$RCA_j = \left[\frac{x_{erj}}{X_{er}}\right] \div \left[\frac{x_{wj}}{X_w}\right] \equiv \left[\frac{x_{erj}}{x_{wj}}\right] \div \left[\frac{X_{er}}{X_w}\right] \quad (4)$$

RCA_j, the revealed comparative advantage in product j (defined at the two-digit level of the SITC, Rev 1);
x_{wj}, world exports of product j;
X_w, world exports, net of intra-Arab exports;
x_{erj} and X_{er} have the same definition as in Equation 3.

The index computes the ratio of the share of a product in Arab exports to the rest of the world, to the share of the same product in total world exports. For a given product, a ratio equal to unity indicates that the exports structure of the Arab world does not differ from that of the world exports. Therefore, the Arab world does not have a revealed comparative advantage in terms of the given product. However, a ratio superior to unity indicates a revealed comparative advantage.(26) Table 7 presents the commodities with a positive change in their regional orientation index, and distinguishes between the commodities in which the Arab world has a revealed comparative advantage and those in which the Arab world is not competitive.

Table 7. Commodities with a Positive Change in terms of the Regional Orientation Index

Product categories with a positive variation in ROI between 1997 and 2004 in decreasing order	**Product categories in which the Arab world has RCA**	**Product categories' share in intra-Arab exports (mean, 1997-2004) in %**	**Product categories' annual growth rate in intra-Arab exports (mean, 1997-2004) in %**
22 – Oil seeds, oil nuts and oil kernels	28 – Metalliferous ores and metal scrap	0.97	47.33
54 – Medicinal and pharmaceutical products	27 – Crude fertilizers and crude minerals	1.08	23.48
07 – Coffee, tea, cocoa and spices, and manufactures thereof	03 – Fish and fish preparations	1.15	12.80
68 – Non ferrous metals	42 – Fixed vegetable oils and fats	1.06	19.20
08 – Feed, Stuff for animals excluding unmilled cereals	43 – Animal and vegetable oils and fats, processed	0.10	28.89
28 – Metalliferous ores and metal scrap	52 – Crude chemicals from coal, petroleum and gas	0.43	8755.03
55 – Perfume materials, toilet and cleansing preparations	**Product categories in which the Arab world has not a RCA**	**Product categories' share in intra-Arab exports (mean, 1997-2004) in %**	**Product categories' annual growth rate (mean, 1997-2004) in %**
09 – Miscellaneous food preparations	22 – Oil seeds, oil nuts and oil kernels	0.87	14.19
24 – Wood, lumber and cork	54 – Medicinal and pharmaceutical products	2.30	22.13
27 – Crude fertilizers and crude minerals	07 – Coffee, tea, cocoa and spices, and manufactures thereof	1.03	12.35
03 – Fish and fish preparations	68 – Non ferrous metals	3.82	51.67
42 – Fixed vegetable oils and fats	08 – Feed, Stuff for animals excluding unmilled cereals	0.41	48.82
25 – Pulp and paper	55 – Perfume materials, toilet and cleansing preparations	2.26	59.27
43 – Animal and vegetable oils and fats, processed	09 – Miscellaneous food preparations	0.53	20.95
52 – Crude chemicals from coal, petroleum and gas	24 – Wood, lumber and cork	0.09	41.77
65 – Textile yarn, fabrics, made up articles	25 – Pulp and paper	0.13	15.83
67 – Iron and steel	65 – Textile yarn, fabrics, made up articles	4.50	25.59
	67 – Iron and steel	5.96	50.03

Source: Author's calculations based on UN Comtrade database.

The product categories that knew an increase in their regional orientation index and in which the Arab world has a comparative advantage are product categories Nos. 03, 27, 28, 42, 43 and 52.(27) The intra-Arab trade expansion in such categories should not be harmful in terms of Arab economies' welfare. These products represented on the average, merely around 5% of intra-Arab exports between 1997 and 2004. The commodities that were traded to a higher extent on a regional basis and in which the Arab world is not competitive in world markets are product categories Nos. 07, 08, 09, 22, 24, 25, 54, 55, 65, 67 and 68.(28) Given that the Arab world is not competitive in such products, the intra-regional trade expansion is likely trade- diverting, i.e., the increase of intra-Arab trade in such categories is probably replacing more efficient non-Arab exporters. Such trade is likely welfare-reducing. Indeed, the general consensus emerging from the literature on regional integration is that a South/South regional bloc that provides preferential access to its members' exports while keeping high barriers with respect to the rest of the world, is likely to be welfare-reducing. The decrease of the bloc's welfare (and small member states' welfare) is due to the diversion of trade form efficient foreign suppliers to large and relatively rich member countries.(29)

It is noteworthy to shed light on some of the limitations of the RCA index. Firstly, the index is sensitive to the level of disaggregation one chooses when defining the different product categories. More precisely, a low level of disaggregation could hide important features of a given country's specialization.(30)

Secondly, from a purely numerical perspective, the index is limited by three main factors. On one hand, the upper bound of the index is inversely related to the share of the relevant country in world exports. This upper bound variability - both among countries for a relevant year, and for the same country in time - might be misleading in the interpretation of cross country (or cross year) comparisons.(31) Also, the index's range is asymmetrical around its threshold value of 1. This asymmetrical distribution around the value of 1 might limit the interpretability of the index variations, depending whether they occur below or above the threshold value.

In addition, as shown in the second part of Equation 4, the RCA index is composed of two components: (a) the country's share of sectoral world exports; and (b) its share of total world exports. Thus, the value of the index depends on both components. This is noteworthy, and ideally, the relative weight of both components should be highlighted when making international dynamic comparisons. Otherwise, the interpretation of the index variations may be misleading.(32)

Thirdly, from an economic perspective, the RCA does not control for government policies and interventions that distort international trade. In this sense, the RCA is mostly an indicator of a country's specialization rather than its "true" comparative advantage.

Intra-Arab Trade: Prospects

To illustrate the prospects of the expansion of intra-Arab exports, product categories were identified that did not witness an increase in intra-regional trade, despite the fact that the Arab world is an efficient producer of such products. Table 8 presents these thirteen product categories.(33) These categories represented, on the average, 26.4% of intra-Arab exports throughout the liberalization process (1997-2004). However, a glimpse on their annual growth rate in intra-regional exports shows that out of the thirteen commodities, nine registered a recent decrease.(34) These commodities are mainly agricultural products (categories Nos. 02, 05, 06 and 29), chemical products (categories Nos. 51 and 58) and manufactured products (categories Nos. 61, 84 and 85).(35)

This could be an indicator of deficiencies in the liberalization process implemented through GAFTA. In fact, many countries have used temporary permissions to protect their agricultural sector and some of their industries. Such permissions can be costly in terms of welfare, since they do not allow the pro-competitive effects of trade liberalization to gain their full momentum and benefit the consumers. Thus, to maximize the pro-competitive effects of GAFTA, efforts should be guided to speed up the trade liberalization of those commodities.

Table 8. Commodities with Negative Change in the Regional Orientation Index, and in which the Arab World Is an Efficient Producer

Product categories with a negative variation in ROI (1997/2004) in which the Arab world has a comparative advantage	Product categories' share in intra-Arab exports (mean, 19 97-2004) in%	Product categories' annual growth rate in intra-Arab exports (mean, 1997-2004) in %
02 – Dairy products and eggs	1.88	95.58
05 – Fruit and vegetables	8.76	2.40
06 – Sugar, sugar preparations and honey	0.50	23.58
12 – Tobacco and tobacco manufactures	1.31	129.13
26 – Textile fibers, not manufactured, and waste	0.73	21.80
29 – Crude animal and vegetable materials	0.34	-5.10
41 – Animal oils and fats	..	44.33
51 – Chemical elements and compound	3.41	28.98
56 – Fertilizers, manufactured	0.96	5.77
58 – Plastic materials	4.90	170.76
61 – Leather, leather, manufactured, dressed fur skin	0.24	7.78
84 – Clothing	2.72	-1.84
85 – Footwear	0.68	-2.80

N.B.
.. Infinitesimal value.
Source: Author's calculations based on UN Comtrade database.

Indeed, the potential increase of intra-GAFTA trade crucially depends on the expansion of trade in these products. The possibilities of increasing intra-Arab trade in terms of these products are outlined, following three steps:(36)

• Firstly, for each country, its principal imports originating from its Arab partners were identified. "Principal imports" refers to product categories that represent at least 1.5% of the importing country's total imports from the Arab world in 2004.

• Secondly, for each product category, competitive Arab exporters were identified. Towards this end, the RCA for each of the countries was computed for 2004.(37)

• Finally, for each importing country, efficient exporters were matched in terms of the commodity of interest.

Thus, partners were identified that could be at the basis of an eventual increase of intra-Arab trade, once the obstacles hampering the full liberalization of trade in the categories outlined above are dealt with. Table 9 summarizes findings for each country: its principal imports originating from the Arab region and competitive exporters in the corresponding commodities.

Two main conclusions may be drawn from Table 9. Firstly, the table shows that the three aforementioned sub-regions should remain significantly integrated. In fact, many Maghreb countries can increase their imports from other Maghreb economies - as is the case of Mauritania, Morocco and Tunisia. Egyptian, Jordanian and Sudanese markets can be supplied by other Mashrek countries. Many Gulf countries can increase their exports to Bahrain, Oman, Saudi Arabia, the UAE and Yemen, thus deepening intra-GCC trade.(38)

Secondly, an integration dynamics may be drawn between the three sub-regions. Many Maghreb economies (Libya, Mauritania, Morocco and Tunisia) are potential markets for Mashrek exports. Besides, some Maghreb countries (Algeria, Morocco and Tunisia) could increase their imports originating from the Gulf countries. As for the Mashrek countries, they could increase their imports from the Maghreb and the Gulf economies. Finally, among the Gulf countries, Oman, Saudi Arabia and Yemen could open their markets to products originating mainly from the Mashrek countries. For the rest of the Gulf countries, as well as Saudi Arabia, there are prospects of increasing their imports from Maghreb countries.

The eventual increase of trade between those countries depends on the elimination of all kind of obstacles still in place. These obstacles are a mixture of tariff-barriers used by some countries to protect mainly the agriculture sector and some of their industries, and non-tariff barriers. The latter frequently takes the form of complex and cumbersome administrative procedures, as well as discriminating production, and sanitary and phytosanitary norms.(39) This calls for reinvigorating GAFTA's special committee responsible for the elimination of non-tariff barriers, and the harmonization of the abovementioned norms between GAFTA members.

Table 9. Prospects of Intra-Arab Trade Increase:
Potential Partners and Commodities, Based On 2004

Country	Principal imports from the Arab world[a]	Competitive exporters in terms of the corresponding commodities[b]	Glossary (denomination of the product categories)
Algeria (Alg)	51, 56, 58	**51** (Bah, Jor, Kuw, Lib, Mor, Qat, SA) **56** (Bah, Egy, Jor, Kuw, Leb, Lib, Mor, Qat, SA, Tun, UAE) **58** (Egy, Kuw, Lib, Qat, SA, UAE)	02 – Dairy products and eggs
Bahrain (Bah)	02, 05, 51, 58	**02** (Alg, Egy, Jor, Oma, SA, Syr, Yem) **05** (Alg, Egy, Jor, Leb, Mor, SA, Sud, Syr, Tun, Yem) **51** (Alg, Jor, Kuw, Lib, Mor, Qat, SA) **58** (Egy, Kuw, Lib, Qat, SA,UAE)	05 – Fruit and vegetables
Egypt (Egy)	05, 26, 51, 58	**05** (Alg, Jor, Leb, Mor, SA, Sud, Syr, Tun, Yem) **26** (SA, Sud, Syr, Yem) **51** (Alg, Bah, Jor, Kuw, Lib, Mor, Qat, SA) **58** (Kuw, Lib, Qat, SA,UAE)	06 – Sugar, sugar preparations and honey
Jordan (Jor)	02, 05, 06, 51, 58, 84	**02** (Alg, Egy, Oma, SA, Syr, Yem) **05** (Alg, Egy, Leb, Mor, SA, Sud, Syr, Tun, Yem) **06** (Egy, Leb, Oma, SA, Sud, Syr, UAE, Yem) **51** (Alg, Bah, Kuw, Lib, Mor, Qat, SA) **58** (Egy, Kuw, Lib, Qat, SA, UAE) **84** (Bah, Egy, Mor, Oma, Syr, Tun)	12 – Tobacco and tobacco manufactures
Kuwait (Kuw)	02, 05, 58, 84	**02** (Alg, Egy, Jor, Oma, SA, Syr, Yem) **05** (Alg, Egy, Jor, Leb, Mor, SA, Sud, Syr, Tun, Yem) **58** (Egy, Lib, Qat, SA, UAE) **84** (Bah, Egy, Mor, Oma, Syr, Tun)	26 – Textile fibers, not manufactured, and waste
Lebanon (Leb)	02, 05, 58, 84	**02** (Alg, Egy, Jor, Oma, SA, Syr, Yem) **05** (Alg, Egy, Jor, Mor, SA, Sud, Syr, Tun, Yem) **58** (Egy, Kuw, Lib, Qat, SA, UAE) **84** (Bah, Egy, Mor, Oma, Syr, Tun,)	29 – Crude animal and vegetable materials
Libya (Lib)	02, 05, 51	**02** (Alg, Egy, Jor, Oma, SA, Syr, Yem) **05** (Alg, Egy, Jor, Leb, Mor, SA, Sud, Syr, Tun, Yem) **51** (Alg, Bah, Jor, Kuw, Mor, Qat, SA)	41 – Animal oils and fats
Mauritania (Mau)	02, 05, 85	**02** (Alg, Egy, Jor, Oma, SA, Syr, Yem) **05** (Alg, Egy, Jor, Leb, Mor, SA, Sud, Syr, Tun, Yem) **85** (Leb, Mor, Syr, Tun)	51 – Chemical elements and compound
Morocco (Mor)	05, 26, 51, 56, 58	**05** (Alg, Egy, Jor, Leb, SA, Sud, Syr, Tun, Yem) **26** (Egy, SA, Sud, Syr, Yem) **51** (Alg, Bah, Jor, Kuw, Lib, Qat, SA) **56** (Alg, Bah, Egy, Jor, Kuw, Leb, Lib, Qat, SA, Tun, UAE) **58** (Egy, Kuw, Lib, Qat, SA, UAE)	56 – Fertilizers, manufactured
Oman (Oma)	02, 05, 12, 51, 58, 84	**02** (Alg, Egy, Jor, SA, Syr, Yem) **05** (Alg, Egy, Jor, Leb, Mor, SA, Sud, Syr, Tun, Yem) **12** (Jor, Leb, UAE, Yem) **51** (Alg, Bah, Jor, Kuw, Lib, Mor, Qat, SA) **58** (Egy, Kuw, Lib, Qat, SA, UAE) **84** (Bah, Egy, Mor, Syr, Tun)	58 – Plastic materials

Country	Principal imports from the Arab world[a]	Competitive exporters in terms of the corresponding commodities[b]	Glossary (denomination of the product categories)
Qatar (Qat)	02, 05, 58	**02** (Alg, Egy, Jor, Oma, SA, Syr, Yem) **05** (Alg, Egy, Jor, Leb, Mor, SA, Sud, Syr, Tun, Yem) **58** (Egy, Kuw, Lib, SA, UAE)	61 – Leather, leather, manufactured, dressed fur skin
Saudi Arabia (SA)	02, 05, 06, 51, 58, 84	**02** (Alg, Egy, Jor, Oma, Syr, Yem) **05** (Alg, Egy, Jor, Leb, Mor, Sud, Syr, Tun, Yem) **06** (Egy, Leb, Oma, Sud, Syr, UAE, Yem) **51** (Alg, Bah, Jor, Kuw, Lib, Mor, Qat) **58** (Egy, Kuw, Lib, Qat, UAE) **84** (Bah, Egy, Mor, Oma, Syr, Tun)	84 – Clothing
Sudan (Sud)	05, 51, 56, 58, 84, 85	**05** (Alg, Egy, Jor, Leb, Mor, SA, Syr, Tun, Yem) **51** (Alg, Bah, Jor, Kuw, Lib, Mor, Qat, SA) **56** (Alg, Bah, Egy, Jor, Kuw, Leb, Lib, Mor, Qat, SA, Tun, UAE) **58** (Egy, Kuw, Lib, Qat, SA, UAE) **84** (Bah, Egy, Mor, Oma, Syr, Tun) **85** (Leb, Mor, Syr, Tun)	85 – Footwear
Syria (Syr)	05, 51, 56, 58	**05** (Alg, Egy, Jor, Leb, Mor, SA, Sud, Tun, Yem) **51** (Alg, Bah, Jor, Kuw, Lib, Mor, Qat, SA) **56** (Alg, Bah, Egy, Jor, Kuw, Leb, Lib, Mor, Qat, SA, Tun, UAE) **58** (Egy, Kuw, Lib, Qat, SA, UAE)	
Tunisia (Tun)	05, 26, 51, 56, 58, 61	**05** (Alg, Egy, Jor, Leb, Mor, SA, Sud, Syr, Yem) **26** (Egy, SA, Sud, Syr, Yem) **51** (Alg, Bah, Jor, Kuw, Lib, Mor, Qat, SA) **56** (Alg, Bah, Egy, Jor, Kuw, Leb, Lib, Mor, Qat, SA, UAE) **58** (Egy, Kuw, Lib, Qat, SA, UAE) **61** (Alg, Egy, Leb, Mor, Syr, Yem)	
UAE	05, 51, 58, 84	**05** (Alg, Egy, Jor, Leb, Mor, SA, Sud, Syr, Tun, Yem) **51** (Alg, Bah, Jor, Kuw, Lib, Mor, Qat, SA) **58** (Egy, Kuw, Lib, Qat, SA) **84** (Bah, Egy, Mor, Oma, Syr, Tun)	
Yemen (Yem)	02, 05, 06, 51, 58	**02** (Alg, Egy, Jor, Oma, SA, Syr) **05** (Alg, Egy, Jor, Leb, Mor, SA, Sud, Syr, Tun,) **06** (Egy, Leb, Oma, SA, Sud, Syr, UAE) **51** (Alg, Bah, Jor, Kuw, Lib, Mor, Qat, SA) **58** (Egy, Kuw, Lib, Qat, SA,UAE)	

N.B.

(a) For each importer, these products correspond to the commodities that knew a decline in their regional orientation index, and represented at least 1.5% of the country's imports from the Arab world in 2004.

(b) Competitive exporter refers to Arab countries with a comparative advantage in terms of the corresponding commodity.

The RCA is computed as follows: $RCA_j = \left[\frac{x_{ij}}{X_i}\right] \div \left[\frac{x_{wj}}{X_w}\right]$ With x_{ij}, country i's exports of product j; X_i, country i's total exports;

:

x_{wj}, world's exports of product j and X_w, world's total exports.

Conclusion

This paper investigated the dynamics of the Arab regional integration embodied by the liberalization of trade between GAFTA members. Results indicate that although Arab countries continue to trade intensely within the region, the intensity of their exports to the Arab markets declined over time. This could be an indicator of an acceleration of Arab countries' insertion into the world economy. Such an insertion should be beneficial since it lessens any welfare-reducing effects of GAFTA. On another hand, calculations strongly suggest that there are three sub-regions highly integrated in the Arab world: (a) the Gulf; (b) the Maghreb; and (c) the Mashrek. The latter has solid trade ties with the other two sub-regions, which render Mashrek countries particularly important for the integration process as a whole.

In the analysis of the evolution of the composition of intra-Arab trade, evidence shows a re-orientation of intra-regional trade in goods in which the Arab world is not competitive in world markets. This could indicate some trade diversion occurring with the liberalization of intra-Arab trade. Such diversion is most likely welfare-reducing. However, giving the low level of intra-Arab trade, the welfare implications should not be of a great magnitude.(39)

Examining the evolution of intra-Arab trade's structure, product categories were highlighted, as well as the Arab partners that could be at the root of an expansion of intra-regional trade. This was done by examining product categories that witnessed a decrease in intra-regional exports and in which the Arab world is an efficient producer. The results imply that the three aforementioned sub-regions will remain highly integrated and that Gulf countries have a considerable potential for increasing their exports to other Arab markets. The expansion of intra-regional trade in these commodities would enhance the trade-creating effects of the liberalization process.

The results obtained imply a number of recommendations:

- Firstly, sub-regional efforts aimed at a deeper integration among neighbor countries could reinforce the Arab integration process as a whole. Such efforts should target investments in transport and communication

infrastructures, and streamlining trans-border control procedures as well as customs services.

• Secondly, parallel to their regional integration process, Arab countries should accelerate their trade policy reforms vis-à-vis the rest of the world, consequently reducing possible trade diversion effects. Indeed, results suggest some trade diversion occurring in product categories representing around 22% of intra-Arab exports between 1997 and 2004.

• Finally, in order to fully benefit from the pro-competitive effects of GAFTA, Arab countries should speed up the liberalization of agricultural products as well as chemical and manufactured goods that they continue to protect. In fact, many Arab countries have a comparative advantage in such commodities, rendering the acceleration of their trade liberalization a necessity to enhance the trade-creating effects of GAFTA.

Footnotes

(1) At that time, GAFTA members were: Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia and the United Arab Emirates (UAE).

(2) The executive body responsible for the implementation of the trade liberalization.

(3) Although GAFTA's executive program called for a comprehensive trade liberalization, it allowed member states to differ the liberalization of certain industrial and agricultural products.

(4) Bahrain, Egypt, Gaza Strip and West Bank, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, the UAE and Yemen. Among the League of Arab States members, only Algeria, Comoros, Djibouti, Mauritania and Somalia were not GAFTA members by the end of 2005 (Arab Monetary Fund, 2006).

(5) In this paper, due to limited data availability, sample of Arab countries included: Algeria, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, the UAE and Yemen. With the exception of Algeria and Mauritania, the sample countries are GAFTA members.

(6) It should be noted that the share of intra-regional trade in a bloc's total trade is biased by the number of its member countries and by their economic size. Given

the bloc's total trade, the larger the number of member countries, the higher is the bloc's intra-regional trade share. In addition, for any given number of member states, intra-regional trade share is positively affected by the bloc's size, as measured by its total trade. For details, see Iapadre (2004).

(7) For instance, in 2004, oil and gas accounted for nearly 97% of Algerian exports, 74% of Bahraini exports, 82% of Omani exports, 86% of Qatari exports, 88% of Saudi Arabian exports, 67% of Syrian exports and 92% of Yemenite exports.

(8) Countries for which their regional exports represented at least 10% of their exports, for at least one year figuring in Table 1.

(9) The index combines the effects of differences in trade complementarities and in relative transaction costs of trading with different partners. Particularly, in the absence of a significant variation in transport costs and trade complementarities, the index reflects eventual bilateral trade agreements concluded between the countries of interest. For a thorough analysis of the trade intensity index, see Anderson and Norheim (1993), and Ng and Yeats (2003). Two main features limit the interpretability of the trade intensity index: firstly, the variability of its range between 0 and the inverse of the Arab world's share in world trade. Such range variability reduces the comparability of indices computed for different countries or periods. Secondly, the index suffers from the asymmetry of its range with respect to the threshold value of 1. When the index is higher than 1, it ranges from 1 to a potentially very high value. On the other hand, in the case of an index inferior to 1, it necessarily ranges from 0 to almost 1. This feature might give rise to biased assessments of the index variations, depending on whether they occur above or below the threshold value. For more details on the limits of the intensity index, see Iapadre (2004).

(10) Trade propensity indices are available upon request.

(11) Jordan and Oman became WTO members in 2000. Lebanon and Libya have observer status since 1999 and 2004, respectively. The latest Arab country to become a WTO member is Saudi Arabia in 2005.

(12) The signatories of the Euro-Mediterranean agreements that witnessed a decrease in their trade intensity with the Arab world are: Jordan, Lebanon, Morocco and Tunisia.

(13) Under the QIZ agreement, Jordanian goods are granted free access to the US market, provided that the products respect specific rules of origin, namely, an Israeli share in the products' value. In a nutshell, through such agreements, the US aims at developing economic ties between Israel and its neighbors.

(14) Between 1999 and 2000, Jordanian exports to the US increased by 147%. The following year, they increased by 209%.

(15) For more details on the theoretical relation between openness and growth, as well as on empirical studies on the subject, see Edwards (1989); Frankel and Romer (1999); Jayme (2001); and Walde and Wood (2004).

(16) That is, one year before the implementation of the liberalization process.

(17) Concluded in 1989, the AMU aims at establishing a free trade area between the signatories namely Algeria, Libya, Mauritania, Morocco and Tunisia. However, geopolitical tensions have significantly hampered the integration process.

(18) Trade propensity indices are available upon request.

(19) For details on the regional orientation index, see Yeats (1998).

(20) Respectively, "fish and fish preparations", "coffee, tea, cocoa and spices", "feed and stuff for animals" and "miscellaneous food preparations".

(21) Respectively, "oil seeds, oil nuts and oil kernels", "wood, lumber and cork", "pulp and paper", "crude fertilizers and crude minerals" and "metalliferous ores and metal scrap".

(22) Respectively, "fixed vegetable oils and fats" and "animal and vegetable oils and fats, processed".

(23) Respectively, "crude chemicals from coal, petroleum and gas", "medicinal and pharmaceutical products" and "perfume materials, toilet and cleansing preparations".

(24) Respectively, "textile yarn, fabrics, made up articles", "iron and steel" and "non ferrous metals".

(25) For more details on the revealed comparative advantage index, see De Benedictis and Tamberi (2001); and Ng and Yeats (2003).

(26) Table A1 of the Appendix illustrates 1997 and 2004 Arab world's RCA indices.

(27) Respectively, "fish and fish preparations", "crude fertilizers and crude minerals", "metalliferous ores and metal scrap", "fixed vegetable oils and fats", "animal and vegetable oils and fats, processed" and "crude chemicals from coal, petroleum and gas".

(28) Respectively, "coffee, tea, cocoa and spices", "feed and stuff for animals", "miscellaneous food preparations", "oil seeds, oil nuts and oil kernels", "wood, lumber and cork", "pulp and paper", "medicinal and pharmaceutical products", "perfume materials, toilet and cleansing preparations", "textile yarn, fabrics, made up articles", "iron and steel" and "non ferrous metals". These commodities averaged around 22% of intra-Arab exports between 1997 and 2004.

(29) In the case of homogenous goods, as large countries' exports to their small partners are generally insufficient to oust foreign exporters, the increase of intra-regional trade translates into a trade diversion without any trade creation effects. In this case, small members suffer from a revenue transfer, whereby exporting countries appropriate the rent created by the removal of tariffs on intra-regional trade. In the case of heterogeneous goods, if intra-regional exports are made under non-competitive conditions, then small member states are likely to lose due to the transfer of revenue depicted above. For details, see Schiff (2002).

(30) Calculations are based on a two-digit disaggregation level of the SITC, Rev.1.

(31) One may think of two countries that have the exact share of world exports for a given product, but are different in size. In this case, the index will make one of them look much more specialized than the other.

(32) One may think of a country that has known an increase of its RCA index (computed for a given product, for example, iron) between two years, while its share of world exports of iron has, in fact, declined. In this case, the increase of the country's specialization in terms of iron does not reflect an increase in competitiveness, but rather the steeper decrease in the country's overall exports.

(33) Defined at the two-digit level of the SITC, Rev 1.

(34) Author's calculations based on UN Comtrade database.

(35) These products averaged around 23% of intra-regional exports between 1997 and 2004.

(36) Product categories in which the Arab world has a comparative advantage, but that witnessed a decline in their regional orientation index.

(37) See Appendix, Table A2.

(38) It should be noted that Yemen is not yet a GCC member.

(39) Empirical studies assessing GAFTA's impact on Arab countries' welfare show that such impact is rather small. For instance, see Hoekman and Konan (2005).

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Appendices

Table A1. Revealed Comparative Advantage of the Arab World, 1997, 2004

Commodity	RCA (1997)	RCA (2004)
00 – Live animals	0.05	0.48
01 – Meat and meat preparations	0.03	0.24
02 – Dairy products and eggs	0.22	1.59
03 – Fish and fish preparations	5.31	2.96
04 – Cereals and cereal preparations	0.53	0.72
05 – Fruit and vegetables	3.56	2.58
06 – Sugar, sugar preparations and honey	0.69	1.44
07 – Coffee, tea, cocoa and spices, and manufactures thereof	0.58	0.43
08 – Feed, Stuff for animals excluding unmilled cereals	0.33	0.46
09 – Miscellaneous food preparations	0.42	0.42
11 – Beverages	0.42	0.74
12 – Tobacco and tobacco manufactures	2.05	1.18
21 – Hides, skins and fur skins	0.78	0.70
22 – Oil seeds, oil nuts and oil kernels	1.37	0.61
23 – Crude rubber including synthetic and reclaimed	0.02	0.04
24 – Wood, lumber and cork	0.11	0.14
25 – Pulp and paper	0.82	0.54
26 – Textile fibers, not manufactured, and waste	5.31	5.43
27 – Crude fertilizers and crude minerals	19.27	10.31
28 – Metalliferous ores and metal scrap	1.70	1.44
29 – Crude animal and vegetable materials	2.55	1.62
41 – Animal oils and fats	0.82	1.42
42 – Fixed vegetable oils and fats	5.03	4.34
43 – Animal and vegetable oils and fats, processed	10.56	5.05
51 – Chemical elements and compound	2.24	3.73
52 – Crude chemicals from coal, petroleum and gas	126.93	13.38
53 – Dyeing, tanning and coloring materials	0.11	0.80
54 – Medicinal and pharmaceutical products	0.18	0.11
55 – Perfume materials, toilet and cleansing preparations	1.22	1.02
56 – Fertilizers, manufactured	18.13	15.41
57 – Explosives and pyrotechnic products	0.14	0.15
58 – Plastic materials	0.06	3.08
59 – Chemical materials and products	0.23	0.34
61 – Leather, leather, manufactured, dressed fur skin	2.73	2.19
62 – Rubber manufactures	0.38	0.26

63 – Wood and cork manufactures excluding furniture	0.38	0.82

Commodity	RCA (1997)	RCA (2004)
64 – Paper, paperboard and manufactures thereof	0.15	0.62
65 – Textile yarn, fabrics, made up articles	1.55	0.97
66 – Non metallic mineral manufactures	0.61	0.94
67 – Iron and steel	0.43	0.76
68 – Non ferrous metals	0.91	1.06
69 – Manufactures of metal	0.23	0.73
71 – Machinery, other than electric	0.06	0.14
72 – Electrical machinery, apparatus and appliances	0.27	0.47
73 – Transport equipment	0.25	0.34
81 – Sanitary, plumbing, heating and lighting fixture	0.91	0.67
82 – Furniture	0.24	0.34
83 – Travel goods, handbags and similar articles	0.63	0.46
84 – Clothing	5.37	5.18
85 – Footwear	1.24	1.49
86 – Scientific and control instruments, photographic goods, clocks	0.12	0.25
89 – Miscellaneous manufactured	0.28	0.44

N.B.
The index is defined as follows: $RCA_j = \left[\frac{x_{erj}}{X_{er}}\right] \div \left[\frac{x_{wj}}{X_w}\right]$. With x_{erj}, the region's exports of product j to the rest of the world; X_{er}, the region's exports to the rest of the world; x_{wj}, world exports of product j and X_w, world exports, net of intra-Arab exports.
Source: Author's calculations based on UN Comtrade database.

Table A2. Arab Countries' Revealed Comparative Advantage, 2004

Commodity code	Alg	Bah	Egy	Jor	Kuw	Leb	Lib	Mau	Mor	Oma	Qat	SA	Sud	Syr	Tun	UAE	Yem
00	..	..	1.80	3.00	..	..	-	-	..	7.66	..	1.20	172.74	116.4	..	4.96	..
01	..	..	..	..	..	..	..	..	..	..	..	..	4.73	..	..	..	..
02	1.22	..	1.18	1.23	..	..	..	..	..	10.23	..	3.92	..	1.86	..	..	3.79
03	1.41	..	..	..	..	..	1.70	59.46	10.40	5.60	..	..	..	..	1.79	..	33.59
04	..	..	5.90	..	..	1.60	..	..		2.27	..	..	..	10.26	..	1.64	3.08
05	1.74	..	6.55	4.05	..	4.98	..	..	6.25	..	..	1.20	5.14	7.32	1.20	..	7.19
06	..	..	6.16	..	..	3.21	..	..	..	..	..	2.08	8.96	2.75	..	2.06	4.18
07	1.33	..	..	..	..	1.93	..	..	..	1.20	..	..	..	4.25	..	1.80	9.58
08	..	..	..	1.18	..	1.30	-	5.38	..	..	..	..	..	2.93	1.35	1.71	3.54
09	..	..	..	1.02	..	1.51	..	..	..	1.67	..	..	-	1.36	..	1.02	..
11	1.19	..	..	1.00	..	2.75	..	..	..	..	..	..		4.73	..	..	..
12	..	..	..	4.06	..	4.41	..	..	..	8.60	..	..		..	..	2.97	11.97
21	2.46	..	..	..	..	2.75	8.07	..	..	..	..	1.26		..	..	..	9.29
22	-	..	1.53	..	..	..	..	..	..	-	..	..	96.96	1.15	..	..	..
23	..	..	..	..	2.97	..	..	..	..	-	..	..	-	-	..	..	-
24	..	..	..	..	..	1.29	..	..	..	..	..	..	..	..	..	..	..
25	..	..	..	..	..	..	..	..	1.27	..	..	..	-	-	..	..	..
26	..	..	36.09	..	..	..	..	..	..	..	..	1.78	50.12	32.35	..	..	7.04
27	9.67	..	15.09	43.88	13.08	1.85	..	..	20.23	5.04	3.22	1.08	..	12.10	2.09	3.74	1.16
28	9.09	9.82	..	..	4.32	8.29	3.40	42.60	1.79	1.61	..	..	3.57	..	..	1.87	1.37
29	..	..	3.39	..	..	..	..	..	3.18	..	..	..	30.52	1.73	..	..	1.24
41	..	..	-	..	2.83	..	-	..	6.44	-	..	..	-	..	..	..	..
42	2.22	..	..	..	..	2.60	..	..	2.05	5.13	..	..	..	6.38	17.68	2.11	1.33
43	4.73	..	4.57	52.62	..	..	-	-	..	1.90	..	..	-	..	..	2.08	11.19
51	5.01	1.29	..	1.14	7.28	..	9.72	..	2.07	..	10.19	7.12	-	..	..	..	..
52	274.28	..	2.17	-	-	..	15.15	-	23.47	-	-	8.37	-	-	..	2.80	62.71
53	..	..	..	..	..	..	..	-	..	..	..	2.07	-	..	..		..
54	..	..	..	1.97	..	..	..	..	..	..	..	..	-	..	..		..
55	..	..	1.68	2.07	..	2.37	..	..	..	2.02	..	1.66	-	2.08	..	1.39	2.81
56	18.10	16.94	1.49	16.06	32.83	11.16	44.54	..	15.16	..	53.44	10.35	-	..	17.05	2.27	-

57	-	-	-	..	..	..	..	-	..	..	..	..	-	-	..	..	-
58	..	..	1.89	..	9.46	..	2.56	..	..	..	6.04	7.89	..	..	..	1.34	..
59	..	..	..	..	..	..	..	..	..	..	..	..	-	..	..	..	..
Commodity code	Alg	Bah	Egy	Jor	Kuw	Leb	Lib	Mau	Mor	Oma	Qat	SA	Sud	Syr	Tun	UAE	Yem
61	3.36	..	1.71	..	..	1.39	..	..	2.26	..	..	..	..	2.68	5.48	..	5.72
62	..	..	..	..	..	..	..	..	..	..	..	..	-	..	..	..	..
63	2.17	..	..	..	..	1.82	..	..	..	..	..	1.12	..	..	..	..	..
64	..	..	..	..	1.20	2.56	..	..	..	..	..	1.33	-	..	..	..	..
65	..	1.4	2.65	..	..	..	..	..	..	..	..	..	-	4.30	1.35	..	..
66	..	..	5.89	..	..	5.16	..	..	..	1.93	..	..	-	..	..	8.52	..
67	3.41	..	3.65	..	1.32	..	9.26	-	..	1.38	3.97	1.16	-	..	..	1.44	..
68	1.47	20.92	47.	..	..	..	..	..	..	..	..	..	-	..	..	2.65	..
69	..	..	1.20	..	..	1.26	..	..	..	..	..	1.50	-	..	..	1.14	..
71	..	..	..	..	..	..	..	..	..	..	..	..	-	..	..	..	..
72	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
73	..	..	..	..	..	..	..	..	..	2.72	..	..	-	..	..	..	..
81	..	..	3.03	..	..	2.00	..	..	1.09	..	..	..	-	..	..	..	..
82	..	..	..	..	..	1.87	..	..	..	1.11	..	..	-	..	..	..	1.19
83	..	..	..	..	..	..	..	..	..	..	..		-	..	1.05	..	..
84	..	2.64	1.73	7.86	..	1.04	..	..	9.13	1.37	..	..	-	1.79	11.09	..	..
85	..	..	..	..	..	1.					..	..	-	2.76	4.46	..	..
86	..	..	..	..	..						..	..	-	..	..	..	..
89	..	..	..	..	..	1.					..	..	..	..	..	..	..

$$RCA_{ij} = \left[\frac{x_{ij}}{X_i}\right] \div \left[\frac{x_{wj}}{X_w}\right]$$

N.B.

The index is computed using the following formula: . With x_{ij}, country i' s exports of product j; X_i, country i' s total exports;

x_{wj}, world's exports of product j and X_w, world's total exports.

.. RCA inferior to unity.

- Unavailable data.

Source: Author's calculations based on UN Comtrade database.