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Economic Cooperation Potential between the Mashrek Countries, Turkey and Israel

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Directed By
Alfred Tovias, Hebrew University, Israël

In collaboration with
Yildiz Technical University, Turkey
Isik University, Turkey

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Economic Cooperation Potential between the Mashrek Countries, Turkey and Israel

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A Research Report prepared for FEMISE (project FEM2-02-21-18)

Alfred Tovias
Sema Kalaycioglu
Inon Dafni
Ester Ruben
Lior Herman

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Foreword

According to the research proposal submitted to FEMISE in early 2002, this research report focuses on four fields of potential economic cooperation among Mashrek countries, Turkey and Israel, namely: trade in goods, trade in services, international investment and infrastructure. In each of these fields, the research focuses on estimating the cooperation and integration potential both separately and across-field. Facilitation of some labour movements was treated mainly in the chapter dealing with trade in services. But the effects of implementing the free flow of labour among the countries of the region were not explored since it is not realistic to contemplate at present the introduction of this sort of policies neither in the short nor medium run. (but for the special case of Palestine-Israel)[1]. The integration of labour markets comes chronologically much after the integration of all other markets, as the example of the EU shows. Even nowadays and with all the so-called "deepening" of the process of economic integration in Europe, the EU's labour market remains fragmented along national borders, even more so for qualified labour and public services. To contemplate at the present time the creation of a Common Market of the Middle East seems to us far-fetched, when the most that realistically can be considered is the establishment of Free Trade Areas or in some cases Customs Unions.

The research in the four fields has been directed and coordinated by **Alfred Tovias**. Countries under exploration were Turkey, Israel, Jordan, Egypt, Lebanon, Syria and Palestine (only when sufficient and/or accurate data were available). Although the main focus is on intra-Mashrek cooperation, cooperation potential with other MENA and Gulf countries has been sometimes explored as well, as side references.

The report is divided in self-contained chapters. Each one contains a conclusion and a list of references. Those readers which do not have time to read the report can find a sum-up of the main results at the end under "**General Conclusions**". After an introduction to the relative magnitudes of the different economies of the region

[1] We did not treat the specific case of the impact of allowing for the free movement of Palestinian workers in the Israeli economy because this case has been amply treated by the existing literature and second because the economy of the PA was not separetly treated in the report.

(**Chapter I**) , the report focuses on trade in goods , the most classical and all-important domain of economic cooperation at least in the early stages both of economic development and "normalization" of economic relations (**Chapter II**). Indeed, one of the characteristics of the sub-region is the lack of "normal" trade relations between the different territorial units, either because some borders are simply closed (e.g. between Syria and Israel; between Lebanon and Israel) or obstacles to trade are prohibitive (e.g. between Israel and the PA since 2001). But even when formally borders are open for business, *de facto* security measures on the one hand (mainly applied by Israel at its borders with Jordan and Egypt) and politicization of economic relations by private agents on the other hand (e.g. informal trade boycotts applied on Israel by members of the Jordanian and Egyptian civil societies) reduce, if not totally eliminate , any incentive to trade which formal peace treaties between Israel on the one hand and Egypt or Jordan on the other, coupled with their membership in the WTO, should have procured to potential traders since more than a decade (e.g. national treatment, most-favoured-nation treatment and renunciation of formal trade boycotts).

Much of the same applies to trade in services which are treated in **Chapter III**.. There are thousands of different types of services, but we have chosen to concentrate only on several of them, such as health, financial and transport services, either because other services are of minor economic significance and have less of a synergetic effect or simply because of lack of data.

International investments, mainly focussing on FDI, are dealt with in **Chapter IV**, the shortest one. The main reason for this is obvious, namely that all the economies under focus in the report are , in the economists' jargon, not properly speaking capital-rich, maybe with the exception of Israel. But then Israel is a small economy by world or OECD standards (comparable to Portugal or Ireland, but smaller than Greece, in nominal terms, much less so in PPP terms).

Furthermore, **Chapter V**, dealing with cooperation in the domain of infrastructure, takes care of some potential projects involving the mobilization of local funds but also of funds originating in some of the neighbouring economies. The chapter explores exhaustively all kind of cooperation possibilities dealing with infrastructure taken in

the largest meaning of the word. It is in this chapter that some space is devoted to the type of institutional agreements the parties could contemplate and always tailoring them to the particular setting explored extensively in the text.

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The research team was composed by **Alfred Tovias** of the Hebrew University (Research Director), **Sema Kalaycioglu** (Senior Researcher) of I_ık University, **Inon Dafni** (Junior researcher) of the Hebrew University, **Ester Ruben** (Junior researcher) of Yildiz Technical University and **Lior Herman** (Junior Researcher) of the Hebrew University. It started actual work in the project in May 2003 when the team convened in Jerusalem for a two-days meeting in which both analytical and practical matters such as the distribution of tasks and data requirements were discussed. The team convened a second time in Istanbul in July 2004 mainly to do the editing work.

The authors would like to thank Dr. Blanc , from the FEMISE Network for its helpful advice received all along the research period of more than one-and-a half year.

Alfred Tovias

Jerusalem

September 2004

Chapter I: Macro-economic Features of the Sub-region

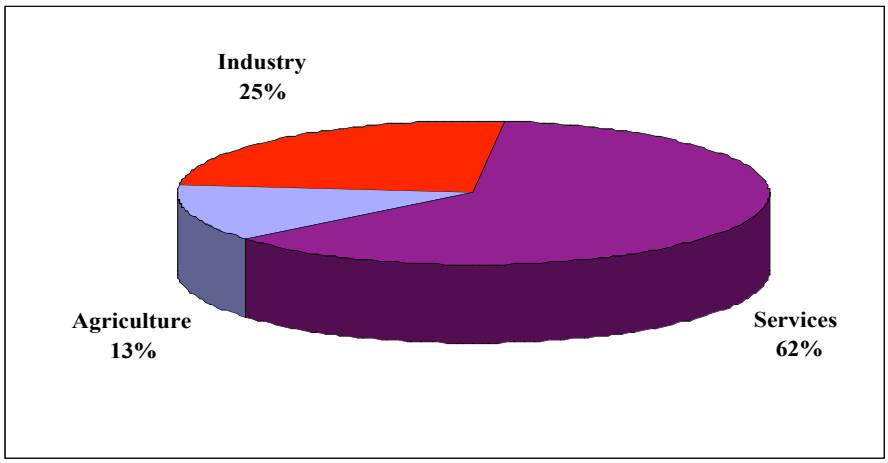
1. 1 Overview

In order to estimate the cooperation potential between the Mashrek countries, Turkey and Israel, one should look first at the main features of the region's economy as a whole, as well as the economies of each one of the countries composing it separately. This analysis will provide us the basis for the estimation of the economic cooperation potential between the countries of the region in the different sectors that will be examined in the following chapters.

The region's economies are characterized by their relatively small size, and low income. In 2000, the aggregate gross domestic product (GDP) of the Mashrek countries, Turkey and Israel was $455 billion while the average GDP was $65 billion. The total population of the region was 164 million and the average population size was 23 million. The weighed average GDP per capita was $2,777, which was similar to a typical medium income economy. Services is the largest sector with 62 percent of the Region's GDP, followed by industry with 25 percent and agriculture with 13 percent.

Figure 1.1: Distribution of production in the Mashrek countries, Turkey and Israel in 2002

(Added value of GDP)



Source: World Bank (2002)

Although substantial efforts have been done in recent years, the region's economies are relatively closed to foreign trade. A good indicator for the level of openness of an economy to world trade is the ratio between its total foreign trade (exports and imports) and its GDP. In 2000 foreign trade in goods (exports and imports) to GDP ratio was 42 percent and the overall foreign trade (goods and services) to GDP was 58 percent. These figures can be considered low since small countries tend to trade more than average. Indeed, the EU member countries' foreign trade in goods to GDP ratio was 56 percent in 2000.

The countries of the region suffer from a significant trade in goods deficit that reached $51 billion in 2000 – equal to 11 percent of the region's GDP that year. Yet, the trade in goods balance deficit is partially offset by a surplus in the commercial service balance and the overall trade deficit in 2000 was $34 billion. [2] Exports of goods amounted to $69.5 billion in 2000. The largest goods export sector is manufactures, which accounted for 79 percent of the region's total exports of goods. The second and third largest sectors are fuels and food, each accounting for 8 percent of total exports of goods in 2000. The share of agricultural raw materials and ores and metals sectors in 2000 was only 2 percent. The largest imports of goods are manufactured goods, accounting for 77 percent of total merchandise imports, followed by food and fuels equal to 9 percent and 8 percent respectively.[3] The exports of commercial services reached $46 billion in 2000, of which travel services accounted for 38 percent. This figure reflects the importance of the tourism sector in the Mashrek countries, Turkey and Israel, especially as a source of foreign currency. Imports of commercial services reach $30 billion in 2000 (World Bank, 2002).[4]

1. 2 Human resources

The level of education in the region is relatively low. This is reflected by the low level of schooling that averaged 5.4 years and a high rate of illiteracy that ranged

[2] No data is available as to Lebanon commercial services trade balance.
[3] Data includes intra Mashrek trade.
[4] Travel services include the goods and services consumed by travelers, such as meals, lodging and transport (World Bank, 2002).

from 3 percent to 33 percent for males and 8 percent to 56 percent for females in 2000. In the late 1990s average secondary gross enrolment in the Mashrek countries, Turkey and Israel was similar to middle income countries' average and tertiary gross enrolment in the region was substantially higher even than the high middle income countries' average. Nevertheless, the average number of scientists and engineers in R&D per million people was only 406. The low human capital endowment is reflected by the relatively low share of high-tech exports of the overall exports of goods that accounted for 9 percent in 2000, equal to the share of lower middle-income countries.

1.3 Other resources

The Region countries are characterized by the large rural population accounting for 38 percent of the total population in 2000. Nevertheless, since large areas in the region are deserts, arable lands are scarce and per capita arable land was no more than 0.22 hectares in 1997-1999. Fresh water is also rare in large parts of the region and the average cubic meters per capita fresh water was 2,021 in 2000.

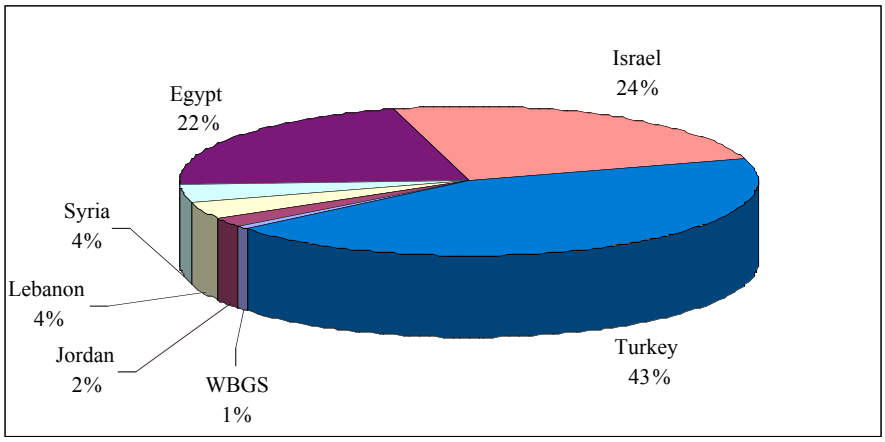
The level of industrialization of the region is relatively low. This is reflected by the small number of motor vehicles per 1000 people that averaged 69, in 2000 as in middle income countries and as compared to 536 in the high income countries. This is also reflected by the low level of commercial energy use, although some of the discussed countries are petroleum exporters. In 1999, the average per capita kg of oil equivalent energy use in the Mashrek countries, Turkey and Israel was 1,023, as in middle income countries and as compared to 5,448 in high income countries. The low level of industrialization is also reflected by the low share of the industrial sector in GDP, which accounted for 25 percent in 2000, lower even than the low-income countries' average. In fact, one can argue that the countries of the region have never experienced a Western-type industrial revolution and have directly evolved from a rural economy to a service economy.

1. 4 Heterogeneity of the region

Yet, the most notable feature of the region is the large heterogeneity among its countries reflected by most of their macroeconomic data.

Although the average size of the region's economies is small, if we look at the disaggregated data of these countries we see that while Turkey's GDP was around $200 billion and Israel's and Egypt's GDPs were around $100 billion, the GDPs of the other countries were less the $20 billion in 2002.

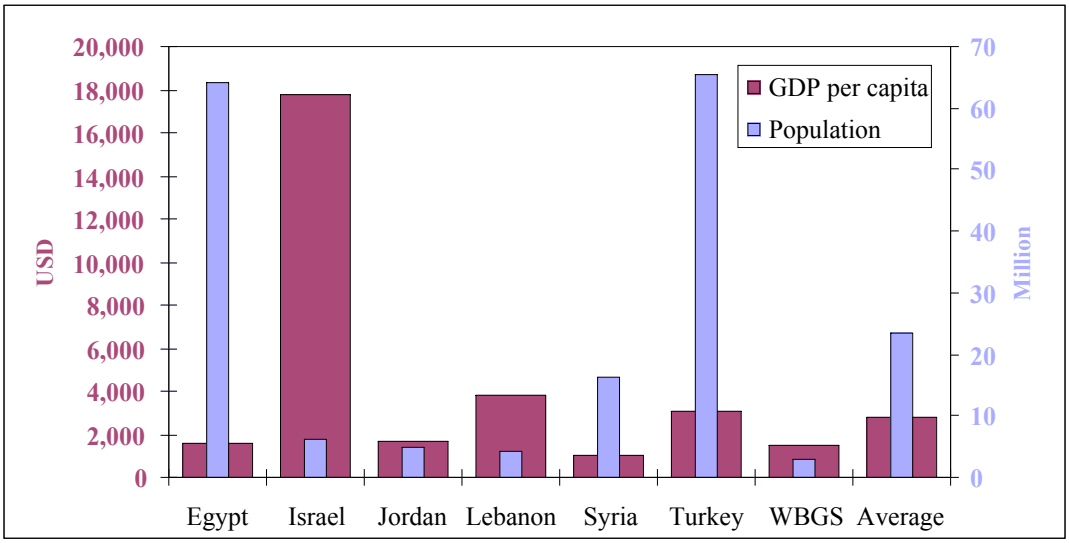
Figure 1.2: Breakdown of region's GDP in 2002



Source: IMF (2003)

This heterogeneity characterizes also the region's population. While the average population in the Mashrek countries, Turkey and Israel was 23 million, Turkey's and Egypt's populations were approximately 65 million each, Syria's population was around 16 million and the other countries' populations were less that 6.5 million each.

Figure 1.3: GDP per capita and population in the Mashrek countries, Turkey and Israel in 2002



Source: IMF (2003)

Large differences can also be found among the countries of the region regarding the structure of production. The share of the agricultural sector in the region's total GDP was 13 percent in 2000. Nevertheless, the share of agriculture in Egypt and Syria was 17 percent and 24 percent respectively. At the same time, the share of agriculture in the West Bank and Gaza was 8 percent and in Israel and Jordan only 2 percent. Services accounted for 62 percent the region's total GDP in 2000. Yet, while the share of services in Israel reached 81 percent it was 49 percent in Syria.

The level of integration in world trade also differs among the countries of the region. Although the region's trade in goods (exports + imports) to GDP ratio is small and accounted in 2000 to 42 percent, Egypt's ratio was no more than 19 percent, and at the same time Jordan's and Israel's trade in goods to GDP ratios were 77 percent and 63 percent respectively. Moreover, Jordan's and Israel's overall foreign trade (goods and services) to GDP ratios was 115 percent and 86 percent (respectively) compared to 58 percent of the total region and 36 percent of Egypt.

Table 1.1: Merchandise Exports and Imports of Mashrek Countries, Turkey and Israel in 2000

	Exports of goods (Million)	Food (Percents of total)	Agricultural raw materials (Percents of total)	Fuels (Percents of total)	Ores and metals (Percents of total)	Manufactured goods (Percents of total)
Egypt	4,689	9	8	37	4	37
Israel	31,338	3	1	1	1	94
Jordan	1,897	16	0	0	15	69
Lebanon	714	--	--	--	--	--
Syria	4,250	9	5	76	1	8
Turkey	26,572	13	1	1	3	81
West Bank and Gaza	--	--	--	--	--	--
Total region	69,460	8	2	8	2	79
	Imports of goods (Million, 2000)	**Food (Percents of total)**	**Agricultural raw materials (Percents of total)**	**Fuels (Percents of total)**	**Ores and metals (Percents of total)**	**Manufactured goods (Percents of total)**
Egypt	14,010	23	4	6	3	59
Israel	38,130	5	1	10	2	81
Jordan	4,539	21	2	5	2	66
Lebanon	6,228	--	--	--	--	--
Syria	3,860	19	3	4	2	65
Turkey	53,499	4	4	14	4	70
West Bank and Gaza	--	--	--	--	--	--
Total region	120,266	9	2	8	3	77

Source: World Bank (2002)

As seen in Table 1.1, manufactured goods is the largest and the major export sector in almost all the countries of the region. This in not the case for Syria, whose major export sector is fuel (76 percent of its exports of goods), and Egypt, for which fuel and manufactured goods sectors both equal to 37 percent of its exports of goods. Manufactured goods are the major import items for all the discussed countries. Yet, while food was around 20 percent of all imports of goods of Egypt, Jordan and Syria in 2000 it was only 5 percent and 4 percent in Israel and Turkey respectively.

The level of education is an additional aspect reflecting heterogeneity among

the region's countries. While the region's average years schooling in 2000 was 5.4, it ranged from 5.3 up to 9.6. At the same time, adults' illiteracy rate for male ranged from 3 percent to 33 percent and adults illiteracy rate for female ranged from 8 percent to 56 percent. This is reflected by the large differences regarding secondary and tertiary gross enrolment, which ranged from 42 percent to 81 percent and from 6 percent to 49 percent respectively in 1998. The large variety as to the level of education caused substantial inequality in the human capital endowment of the region's countries, reflected by the number of scientists and engineers in R&D per million, which ranged from 29 to 1,570 in 2000. The differences in human capital are reflected in the share of high-tech exports in overall exports of goods. This share ranged from 0 percent to 25 percent in 2000.

Table 1.2: Level of Education in the Mashrek Countries, Turkey and Israel

	Adult illiteracy rate (female) (% ages 15 and over, 2000)	Adult illiteracy rate (male) (% ages 15 and over, 2000)	Average years of schooling 2000	Secondary gross enrollment ratio (% of relevant age group, 1998)	Tertiary gross enrollment ratio (% of relevant age group, 1998)
Egypt	33	56	5.5	81	39
Israel	3	8	9.6	89	49
Jordan	5	16	6.9	66	--
Lebanon	8	20	--	89	38
Syria	12	40	5.8	42	6
Turkey	7	23	5.3	70	--
WBGS	--	--	--	--	--

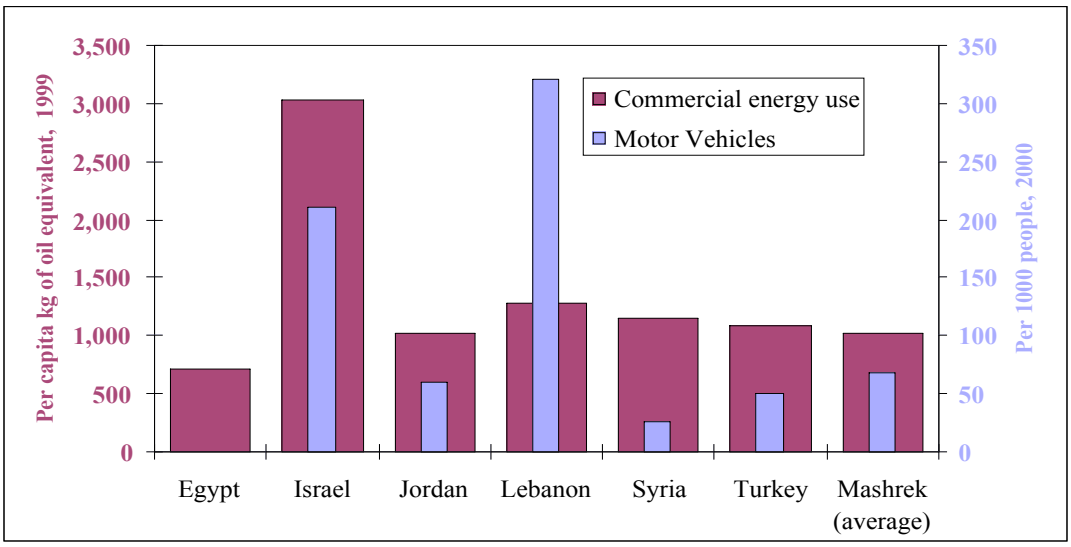
Source: World Bank (2002)

The Mashrek countries, Turkey and Israel also differ in their agricultural sectors. The share of the rural population ranged from 9 percent to 55 percent in 2000, arable land ranged in the late 1990s from 0.04 to 0.31 hectares per capita. Some of the discussed countries enjoy plenty of fresh water while other suffers from a lack of water. Indeed, in 2000 cubic meters per capita fresh water ranged from 143 to 3,118.

The level of industrialization is also diverse between the Mashrek countries, Turkey and Israel. This is reflected by the number of motor vehicles per 1000 people

that ranged from 26 to 321 and the per capita kg of oil equivalent energy use that ranged from 709 to 3,039 in 2000. This is also reflected by the share of the industry in GDP, which ranged from 17 percent to 34 percent in 2000.

Figure 1.4: Level of Industrialization in the Mashrek Countries, Turkey and Israel in 2002



Source: IMF (2003)

1.6 Conclusions

The region's economy has the features of a medium income economy with large agriculture and services sectors and a relatively small industrial sector.

The economy is relatively disintegrated with the world economy in terms of foreign trade and foreign investments. The region's exports of goods accounted for $69.5 billion in 2000. The exports of goods largest sector is manufacturing (79 percent). Imports of goods accounted for $120.3 billion in 2000. The imports of goods largest sector is manufacturing (77 percent). The region's countries suffer from a significant merchandise trade deficit. Yet, trade in goods deficit is partially offset by

a surplus in the commercial service trade balance. The exports of commercial services reached $46 billion in 2000. Imports of commercial services reached $30 billion in 2000. Tourism is the largest commercial services exporter (accounting for 38 percent of commercial services exports).

The region is also characterized by a low level of education and human capital, a large rural population but on the other hand a lack of arable land and fresh water, and a low level of industrialization.

At the same time, the region is characterized by the large heterogeneity of its countries and since the larger the diversity the higher the potential for economic cooperation between two countries, from a macro economic view there is a substantial room for economic cooperation among the Mashrek countries, Turkey and Israel.

1. 7 References

International Monetary Fund (2003), Direction of Trade.
World Bank (2002), World Development Indicators.

Chapter II: Trade in Goods

The most important area of economic cooperation and the first on a chronological scale has been commercial trade in goods. Liberal scholars believe that free trade, institutionalized through free trade area agreements (FTA), among the countries of the region will lead to stability and peace in the region. This view was widely common at the beginning of the 1990s with the outbreak of the peace process between Israel and the Palestinians. Unfortunately, despite the geographical proximity, the trade potential is relatively limited because of the small economies and low purchasing power of the countries in the region. The first part of this section describes the current trade flows among the Mashrek countries, Turkey and Israel. In the second part we estimate the trade potential at an aggregated level using the gravity model; in the third part we examine the pattern of potential specialization by looking into the main economic features of the discussed countries and their current trade flows that reveal their relative advantage; in the last part of this section we examine the potential for inter-industry and intra-industry trade between the Mashrek countries, Turkey and Israel.

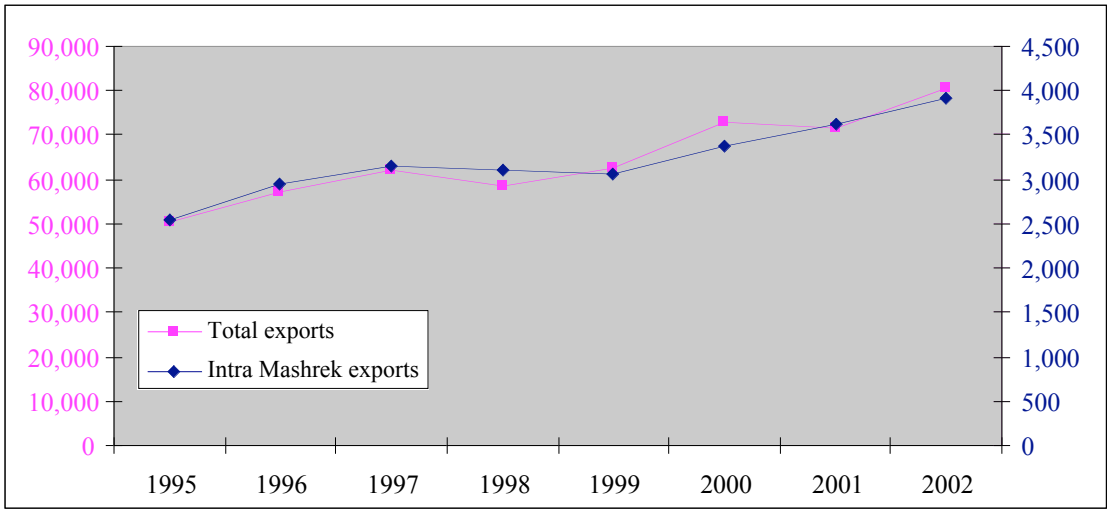
2.1 Current trade flows among the Mashrek countries, Turkey and Israel

According to IMF data (based on the reports of the countries in the region), in 2002 intra- regional exports accounted for $3.9 billion, equal to 4.9 percent of total exports of the Mashrek countries, Turkey and Israel. At the same time, intra- regional imports accounted for $3.5 billion, equal to 2.9 percent of total imports of the Mashrek countries, Turkey and Israel.[5]

[5] IMF data does not include data as to the Palestinian Authority's geographical distribution of trade.

Figure 2.1: Total and intra-regional exports of the Mashrek countries, Turkey and Israel 1995-2002

($ Million)



From the mid-1990s, the total exports of the Mashrek countries, Turkey and Israel have substantially increased. Indeed, from 1995 to 2002 these countries' total exports increased by 60.5% from $50.2 billion to $80.6 billion. This increase did not elude intra-regional trade. In fact, the exports of the Mashrek countries, Turkey and Israel to the other countries of the region increased by 54.3% during that time. Yet, the share of intra-regional exports in the overall exports of the Mashrek countries, Turkey and Israel remained limited.

Table 2.2 gives the intra-regional trade situation of the region in question. The first row shows the exports of the Mashrek region to the region itself, as a percentage

of total exports of the region, while the second row shows the imports of the region from the region itself as a percentage of its total imports. The table shows that a ratio between 7.2% and 8.8% of total trade is realized inside the region.

Table 2.2: Intra-regional trade

(Percent of total trade)

	1995	1996	1997	1998	1999	2000
Exports	8.2	7.6	7.4	8.8	7.3	5.1
Imports	7.8	7.8	7.7	7.2	7.6	7.8

Source: IMF; 2001

Table 2.3 shows the exports of the region to each single country of the region. Almost all export ratios are below 1 %. Turkey is an exception to this fact since its imports from the region are significantly higher than each other country in the region. Israel and Syria are the countries that received the lowest ratios of export products from the region. A very similar situation exists for the imports received by the region from each single country in the region. Very modest percentages of total imports (below 1%) are received from the countries in the region, again with the exception of Turkey. The lowest ratio of imports received are, as expected, from Israel. Turkey's trade with this region is notably higher than the trade within the region itself.

Table 2.3: Exports of the region to the countries of the region

(Percent of total trade)

	1995	1996	1997	1998	1999	2000
Egypt	0.42	0.49	0.63	0.56	0.67	0.41
Israel	0.12	0.25	0.23	0.10	0.14	0.04
Jordan	0.47	0.45	0.18	0.30	0.20	0.36
Lebanon	0.33	0.25	0.33	0.31	0.25	0.24
Syria	0.18	0.15	0.11	0.20	0.15	0.11
Turkey	1.89	1.59	1.64	1.43	1.29	1.24

Source: Calculated from IMF, 2001

Table 2.4: Imports of the region from the countries of the region

(Percent of total trade)

	1995	1996	1997	1998	1999	2000
Egypt	0.47	0.50	0.40	0.50	0.35	0.40
Israel	0.01	0.02	0.04	0.03	0.03	0.07
Jordan	0.47	0.42	0.26	0.26	0.27	0.32
Lebanon	0.24	0.24	0.17	0.20	0.19	0.17
Syria	0.36	0.47	0.44	0.44	0.53	0.42
Turkey	1.70	1.41	1.66	1.62	1.30	1.48

Source: Calculated from IMF,2001.

Table 2.5: Intra-regional exports by country

(Percent)

	Jordan	Lebanon	Egypt	Syria	Israel	Turkey
Jordan	X	-	0.59	1.29	0.08	0.33
Lebanon	1.96	X	0.64	7.56	-	0.61
Egypt	1.14	2.36	X	0.63	0.2	1.75
Syria	0.92	7.23	1.18	X	-	0.87
Israel	1.03	-	5.25	-	X	2.20
Turkey	0.93	1.63	3.11	9.05	1.15	X

Source: Calculated from IMF, 2000

Table 2.6: Intra-regional imports by country

	Jordan	Lebanon	Egypt	Syria	Israel	Turkey
Jordan	X	-	0.15	0.54	0.06	0.04
Lebanon	0.80	X	0.11	1.70	-	0.02
Egypt	0.64	0.40	X	1.40	0.06	0.26
Syria	1.32	4.39	0.15	X	-	0.75
Israel	0.61	-	0.13	-	X	0.73
Turkey	2.39	2.63	2.83	6.42	1.88	X

Source: Calculated from IMF, 2000

Tables 2.5 and 2.6 show the export and import ratios of each country to and from each country in question. For example the ratio of 1.96 in Jordan's column of table 2.5 shows that Jordan sells 1.96% of its total exports to Lebanon. The ratio of 0.80 in Jordan's column of table 2.6, shows that Jordan buys 0.80 % of its total imports from Lebanon. A two way trade partnership between Lebanon and Syria, and between Turkey and Syria is to be noted. As what regards Israel, she has very modest trade relations with Egypt and Jordan. A notable feature is that Egypt exported 5.25% of its total exports to Israel and this is the highest ratio of Egyptian exports in the region. It is also found that Jordan exported 1.03% of its total exports to Israel, a ratio which is halfway between, in Jordanian exports to the region. The export and import ratios between Turkey and Israel are also notable. Israel sells 1.15% of its total exports to Turkey, while Turkey sells 2.20% of its total exports to Israel.

Trade relations between other countries in the region are found to be very weak.

Direction of Trade

Table 2.7 summarizes the principal trade partners of the countries in question. In table 2.7 the letters M and X represent imports and exports respectively. The letter M in the cell where EU and Jordan intersects means that EU is one of the principal source of imports for Jordan. Similarly the letter X at the intersection, for example, of Israel and EU means that Israel exports principally to EU.

Table 2.7: Principal Trade Partners of Mashrek Countries*

	EU	USA	S.East Asia	Middle East

Jordan	**M**	**M**	**XM**	**XM**
Syria	**XM**		**M**	**X**
Egypt	**XM**	**XM**		**M**
Lebanon	**M**	**XM**		**X**
Israel	**XM**	**XM**		
Turkey	**XM**	**XM**		**XM**

* The data is organized by the authors based on the data of IMF, Direction of Trade Statistics, 2000.

In the analysis of table 2.7 we realize again the weak trade relations between Mashrek countries. For example, we cannot find a Mashrek country in the first five countries to which Egypt exports. A stronger relationship is valid for imports. We cannot find a Mashrek country in the first five trade partners regarding imports of Syria and Lebanon. Mashrek countries generally import from EU,USA, and South East Asia. They export to EU, South East Asia, and USA. Israel's strongest trade partner is EU followed by USA. Turkey's first trade partner is EU, followed by USA and Middle East countries.

The weak trade relation between the countries in the region is explained partly by political factors and partly by economic factors. The absence of a viable regional security environment in the region has constituted the major impediment for economic cooperation. The political conflicts that existed and still exist among the countries of the region lead these countries to neglect bilateral economic relations. Another barrier to regional economic cooperation in the region is inefficient economic policies.[6] The low degree of openness and strong protectionist trade policies causes inefficiency and lack of diversification. These policies are relaxed to some extent only in recent years. With the exception of Turkey and Israel the attempts to form economic unions did not help a lot to strengthen the intra-regional trade relations. Because of the undiversified character of their productive activities they kept their export ties limited to extra-regional arrangements with EU and the USA rather than diversifying their export markets and improving trade among themselves.[7]

[6] Ali Çarko_lu, Mine Eder and Kemal Kiri_çi, *The Political economy of the RegionalCooperation in the Middle East* (London: Routledge Publications 1998), p. 31-32.

[7] Sema Kalaycıo_lu, "Regional Economic Cooperation in the Middle East", *Perceptions,* (September – November 1996), p 91.

2.2 Aggregated trade potential

A common method for estimating the trade potential between two countries is by using the "gravity model", developed by H. Linnemann (1966). This model has been found to have a high explanatory power and was commonly used in the 1990s , in estimating both trade and foreign direct investment potential flows. The gravity model explains the level of trade between two countries (i and j) by the pull and push of their respective incomes (to reflect demand and supply forces) and by transaction costs, measured by the distance between the countries and other dummy variables representing artificial trade barriers:

$$X_{ij} = e^{\alpha} (GDPi)^{\beta 1} (GDPj)^{\beta 2} (POPi)^{\beta 3} (POPj)^{\beta 4} (DIST)^{\beta 5} \Pi(D_n)^{\gamma m}$$

u

The gravity model provides for us the "normal" trade values (Xij) between the estimated country and any other country, not only with which it has had trade relations but also with countries with which it does not have any trade relations at the present due to security, political or other reasons. The dependent variable (Xij) can either be country i's exports to country j or country i's imports from country j.

The basic variables used in the gravity model are:

EXPORTSij - The first dependent variable is the exports of the examined country (i) to its trade partner (j) in $ million. Data source is the IMF's Direction of Trade.

IMPORTSij - The second dependent variable is the imports of the examined country (i) from its trade partner (j) in $ million. Data source is the IMF's Direction of Trade.

GDPi - Gross domestic product of the examined country in $ million as reported by the IMF's World Economic Outlook. GDP represents the country's wealth and it is

assumed that rich countries tend to trade more than poor countries. Therefore, the sign of the coefficient is expected to be positive.

GDPj - Gross domestic product of the trade partner in $ million as reported by the IMF's World Economic Outlook. For the above-mentioned reason the coefficient is expected to be positive. GDPj is denoted as PART GDP in our results (partner).

POPi - Population of the examined country in millions. The size of the population is an approximation of the country's size. Large countries with a large domestic market are commonly considered to be relatively speaking self-sufficient and therefore the larger the population the smaller the expected level of international trade and the sign of the coefficient is expected to be negative. The data was calculated using GDP and GDP per capita data as reported by the IMF World Economic Outlook.

POPj - Population of the trade partner in millions. For the aforementioned reason the sign of the coefficient is expected to be negative. The data was also calculated using GDP and GDP per capita data as reported by the IMF World Economic Outlook. POPj will be signed as PART POP in our results.

DISTij - Distance in kilometers between the examined country's and its partner's capitals. The distance between two countries directly affects transaction costs and therefore we expect the sign of the coefficient to be negative. Distance is measured between the two countries' capitals.

In our research we add a set of four dummy variables to the basic gravity model, as described below:

ARABICj - A major non-tariff barrier to trade is language. Since Arabic is an official language in all of the discussed countries except Turkey, we use a dummy variable receiving the value of 1 if Arabic is an official language in the partner country and zero otherwise. The sign is expected to be positive. For Turkey, which is not an Arab speaking country the dummy variable Arabic was replaced by the

variable OIC that receive the value 1 whenever the partner country is a Organization of the Islamic Conference member and 0 otherwise.

BORDER - A common border is expected to increase trade between two countries since it makes trade transactions more feasible. We define a dummy variable that receives the value 1 whenever there is a border between the examined counrty and its partner. The sign is expected to be positive.

MED - Mediterranean countries are expected to trade more with each other due to cultural similarity, in addition to the fact that access by sea considerably reduces merchandise transaction costs (one should notice that Jordan does not have direct access to the Mediterranean). The dummy receives the value 1 whenever the country is a Mediterranean country and the sign of the coefficient is expected to be positive.

FTA - Free trade agreement leads to the elimination of tariffs and therefore reduces transaction costs and increases trade. As a result, the sign of the coefficient is expected to be positive. The dummy receives the value of 1 whenever there is a free trade agreement in force between the examined country and its trade partner. Our data was based on the data reported by the World Trade Organization (WTO), which contained only reported agreements. FTA received the value of 1 whenever the FTA was in force more than 3 years during the examined period. Only Turkey and Israel were parties to FTAs in the discussed period.

Since we examine each of the countries in the region separately, their GDP and population are constant and they were eliminated from our equation.
The final equation is as defined below:

$$\ln(X_{ij}) = \alpha + \beta 1 * \ln(GDPj) + \beta 2 * \ln(POPj) + \beta 3 * \ln(DISTij) + \beta 4 * (ARABIC) + \beta 5 * (BORDER) + \beta 6 * (MED) + \beta 6 * (FTA)$$

Two countries are absent from our regression. The first is the Palestinian Authority for which its geographical distribution of exports and imports is not available. The second is Israel for which the econometric results were extremely poor and only one independent variable was found to be significant. Yet, the potential of foreign trade of these two with other countries can be drawn from the latter

estimation, except of course between Israel and the Palestinian Authority. In the case of the Palestinian Authority GDP and population data, which were used for our estimation, were the 1998-2001 averages using the World Bank's data. Since the "Palestinian territories" are in fact two separated areas, the distance that was used for estimating Palestinian trade with the other countries in the region was the distance between the latter and Israel.

Results

Egypt

Table 2.8 presents the results of our regression for Egypt. The first two lines present the coefficients' and the t-statistics' values for the original model and the following two lines present the coefficients' and the t-statistics' values for our equation after the omission of the insignificant variables (the same is true regarding the following tables). In the regression of Egypt's 1995-2001 exports average LN PART POP and BORDER were found to be insignificant at a 10 percent confidence level. At the confidence level of 5 percent MED is also insignificant. In the regression of Egypt's 1995-2001 imports average only LN PART GDP and LN DIST were significant at a 10 percent confidence level.

Table 2.8 regression results for Egypt

Exports

Variable	LN PART GDP	LN PART POP	LN DIST	ARABIC	BORDER	MED	C
Coefficient	0.8	0.1	-1.0	1.1	0.1	0.7	6.5
t-Statistic	11.4	0.9	-5.2	3.0	0.2	1.8	4.2
Coefficient	0.8	-	-1.0	1.0	-	0.7	6.4
t-Statistic	14.1		-5.2	3.1		1.8	4.2

Imports

Variable	LN PART GDP	LN PART POP	LN DIST	ARABIC	BORDER	MED	C
Coefficient	1.1	-0.1	-0.9	-0.1	0.3	-0.3	6.2
t-Statistic	13.6	-0.8	-4.4	-0.1	0.3	-0.7	3.7
Coefficient	1.059	-	-0.836	-	-	-	5.736
t-Statistic	17.6		-5.1				4.3

According to our regression results, the total potential Egyptian annual exports to the other countries in the region is $705 million while the actual average exports from 1995-2001 was $521 million. This was a result of the relatively small Egyptian exports to Israel, which was not more than 18 percent of the potential ($77 million as compared to a potential of $429 million).[8] At the same time, the Egyptian exports to the other countries in the region was significantly higher than the estimated potential. The potential of Egyptian imports from the other in the region countries is $570 million while the actual average imports from 1995-2001 was $400 million. This gap was (again) a result mainly of the relatively small Egyptian imports from Israel, which was not more than 12 percent of the calculated potential ($33 million as compared to a potential of $268 million). On the other hand, the imports from Jordan and Turkey were significantly higher than the potential imports according to the gravity model.

Table 2.9: Egypt's trade and trade potential with the other countries of the region

(1995-2002, by country)

	Trade Potential		Current Trade	
	Imports	Exports	Imports	Exports
Jordan	15.2	21.7	18.9	72.4
Israel	268.1	428.9	32.6	76.7
P. A.	7.5	27.3	n.a.	n.a.
Syria	30.1	70.5	25.4	92.4
Lebanon	26.5	64.8	21.7	86.4
Turkey	222.6	91.7	301.3	193.9
Total region	570.0	704.9	399.9	521.8

Jordan

In the regression of Jordan's 1995-2001 exports average LN PART GDP, LN

[8] This figure might be incomplete since Egypt has committed to sell Israel at least 2 million tons of oil each year (at market prices), through an arrangement established as part of the peace treaty between the two nations. If this arrangement is in force than the average annual Egyptian exports to Israel from 1995-2002 should have been larger than $77 million. One explanation could be that some oil producers include part of their export of oil as offshore operations. On the other hand, some countries do not specify the provenance of oil imports since oil purchased on the international spot market may originate from a number of different sources (Kleiman, 1998).

PART POP, LN DIST, and ARABIC were found significant. As table 2.10 shows, LN DIST and the autonomous element (C) appear to be insignificant in our equation, yet, when we have taken the variable Arabic off the model LN DIST and the autonomous element become highly significant. Therefore, we did not take LN DIST out of the regression. In the regression of Jordan's 1995-2001 imports average only LN PART GDP and LN DIST were significant at a 10 percent confidence level.

Table 2.10: regression results for Jordan

Exports

Variable	LN_PART_GDP	LN_PART_POP	LN_DIST	ARABIC	BORDER	MED	C
Coefficient	0.5	0.4	-0.3	2.9	-0.1	-0.4	0.4
t-Statistic	4.6	3.7	-1.4	6.4	-0.1	-0.8	0.2
Coefficient	0.4	0.3	-0.8				5.6
t-Statistic	3.1	2.4	-4.2				3.6
Coefficient	0.4	0.4	-0.2	2.8			-0.4
t-Statistic	4.6	3.7	-1.3	6.5			-0.2

Imports

Variable	LN_PART_GDP	LN_PART_POP	LN_DIST	ARABIC	BORDER	MED	C
Coefficient	0.9	0.0	-0.8	0.7	-1.0	-0.5	4.9
t-Statistic	10.1	0.1	-4.1	1.6	-1.0	-1.0	3.1
Coefficient	0.9		-0.8				4.6
t-Statistic	11.9		-5.6				4.3

According to our regression results, the total potential of Jordanian annual exports to the other countries of the region is $128 million while the actual average exports from 1995-2001 was $141 million. Nevertheless, Jordanian exports to Israel was only 51 percent of its potential. This was compensated by the 35 times higher than expected exports of Jordan to Lebanon[9] and 3.3 and 2.4 times higher than calculated Jordanian exports to Egypt and Turkey, respectively. The potential of Jordanian imports from the other countries of the region is $424 million while the actual average imports from 1995-2001 was $309 million. This gap was again a result of the relatively small Jordanian exports to Israel, which was not more than 11 percent

[9] One should note the inconsistency of the data made by the different reporting countries regarding their trade with other countries. This is especially notable as to the differences in Jordan-Lebanon trade data. One possible explanation is transit trade, which can, if not excluded, inflate trade flows with the transit country at the expense of the destination country.

of the calculated potential ($28 million exports as compared to a potential of $256 million). This was partially offset by larger than expected imports from other countries in the region except Egypt.

Table 2.11: Jordan's trade and trade potential with the other countries of the region

(1995-2002, by country)

	Trade Potential		Current Trade	
	Imports	Exports	Imports	Exports
Egypt	47.9	5.9	47.6	19.7
Israel	255.8	65.8	28.3	33.3
Lebanon	19.7	1.0	40.9	36.4
P. A.	12.9	11.1	n.a.	n.a.
Syria	26.7	36.2	69.7	34.3
Turkey	61.4	7.4	122.1	17.6
Total region	424.3	127.5	308.6	141.3

Lebanon

In the regression of Lebanon's 1995-2001 exports average LN PART POP, BORDER and Med were found to be insignificant at a 10 percent confidence level. In the regression of Lebanon's 1995-2001 imports average ARABIC, BORDER and MED were found to be significant at a 10 percent confidence level.

Table 2.12: regression results for Lebanon

Exports

Variable	LN_PART_GDP	LN_PART_POP	LN_DIST	ARABIC	BORDER	MED	C
Coefficient	0.4	-0.2	-0.6	1.2	-0.5	0.6	4.5
t-Statistic	4.8	-1.3	-2.6	2.8	-0.3	1.2	2.2
Coefficient	0.4	-	-0.8	1.3	-	-	5.3
t-Statistic	5.5		-3.9	3.2			3.3

Imports

Variable	LN_PART_GDP	LN_PART_POP	LN_DIST	ARABIC	BORDER	MED	C
Coefficient	1.1	-0.2	-0.9	0.2	0.5	0.2	6.2
t-Statistic	15.3	-2.1	-5.9	0.6	0.4	0.6	4.7
Coefficient	1.1	-0.2	-1.0	-	-	-	7.1
t-Statistic	15.8	-2.1	-8.5				7.1

According to our regression results, the total potential of Lebanese annual exports to the other countries in the region is $214 million while the actual average exports from 1995-2001 was $81 million. This was a result of lower than "normal" exports to all countries in the region, except Turkey, to which Lebanese exports were 2.2 times greater than expected. The potential of Lebanese imports from the other countries in the region was $895 million while the actual average exports from 1995-2001 were not more than $491 million. The result for this underperformance is the lower than expected Lebanese imports from Egypt and the lack of trade with Jordan[10] and Israel. This is being partially compensated by a 60 percent larger than expected imports from Syria.

Table 2.13: Lebanon's trade and trade potential with the other countries of the region

(1995-2002, by country)

	Trade Potential		Current Trade	
	Imports	Exports	Imports	Exports
Egypt	89.7	30.5	58.1	19.6
Jordan	31.6	27.2	0.0	0.0
Israel	437.1	66.6	0.0	0.0
P. A.	3.5	5.1	n.a.	n.a.
Syria	160.0	74.9	257.4	40.4
Turkey	173.1	9.4	175.7	20.9
Total region	894.9	213.7	491.3	80.9

Syria

In the regression of Syria's 1995-2001 exports average only LN PART GDP and LN DIST were found to be significant at a 10 percent confidence level. In the

regression of Lebanon's 1995-2001 imports average LN PART GDP, LN DIST, ARABIC and MED were found to be significant at a 10 percent confidence level.

Table 2.14: regression results for Syria

Exports

Variable	LN_PART_GDP	LN_PART_POP	LN_DIST	ARABIC	BORDER	MED	C
Coefficient	1.0	0.1	-1.3	0.0	-0.4	-0.1	8.0
t-Statistic	9.7	1.1	-6.1	0.1	-0.5	-0.1	4.9
Coefficient	1.0		-1.2				7.5
t-Statistic	13.1		-8.0				6.7

Imports

Variable	LN_PART_GDP	LN_PART_POP	LN_DIST	ARABIC	BORDER	MED	C
Coefficient	0.9	-0.2	-1.3	1.3	-0.4	1.3	8.3
t-Statistic	6.3	-1.2	-4.5	2.5	-0.4	2.5	3.8
Coefficient	0.8		-1.3	1.3		1.3	8.1
t-Statistic	6.6		-5.4	2.6		2.4	4.5

According to our regression results, the total potential of Syrian annual exports to the other countries in the region is $782 million while the actual average exports from 1995-2001 was $379 million. This underperformance was a result of a lack of trade with Israel (annual exports potential is equal to $363 million) and lower than "normal" exports to Lebanon and Egypt. At the same time, Syrian exports to Turkey and Jordan was 66 and 34 percent respectively higher than expected by the gravity model. The potential of Syrian imports from the other countries in the region was $1,086 million while the actual average exports from 1995-2001 was no more than $698 million. The reason for this low level was the lack of trade with Israel but also lower than "normal" imports from all other countries but Turkey from which exports was 8.7 times higher than anticipated by the gravity model.

Table 2.15: Syria's trade and trade potential with the other countries of the region

[10]One should notice that according to the Jordanian reports actual trade is larger than zero. Again, a possible explanation for this inconsistency is transit trade. If this is the case, trade flows between

(1995-2002, by country)

	Trade Potential		Current Trade	
	Imports	Exports	Imports	Exports
Egypt	107.3	82.4	31.4	59.4
Israel	490.2	363.2	0.0	0.0
Jordan	84.1	32.0	61.9	43.0
Lebanon	355.0	149.3	255.3	37.0
P. A.	9.3	11.1	n.a.	n.a.
Turkey	40.0	144.3	349.4	239.9
Total region	1,086.0	782.3	698	379

Turkey

In the regression of Turkey's 1995-2001 exports average LN PART POP MED and FTA were found to be insignificant at a 10 percent confidence level. On the other hand Arabic was found to be significant at a 10 percent although Arabic is not an official language in Turkey. This can be explained by the fact that all of the Arabic speaking countries have a large Islamic population and many of them were part of the Ottoman Empire. In the regression of Turkey's 1995-2001 imports average LN PART GDP, LN DIST, LNB DIST and BORDER were found to be significant at a 10 percent confidence level.

It is important to emphasize that FTA was insignificant both for Turkey's exports and imports. Moreover, the sign of FTA's coefficient was negative, contrary to our a priori assumption. This result was also true in the case of Israel. These results may suggest that the creation of inter-regional free trade areas will not necessarily promote trade among the countries in the region.

Table 2.16: regression results for Turkey

Exports

Variable	LN_PART_GDP	LN_PART_POP	LN_DIST	OIC	BORDER	MED	FTA	C
Coefficient	0.8	-0.1	-1.3	0.5	0.8	0.1	-0.3	11.1
t-Statistic	14.7	-1.1	-9.6	1.7	1.8	0.3	-0.9	9.7
Coefficient	0.8	-	-1.3	0.5	0.8	-	-	11.1
t-Statistic	19.7		-10.7	1.9	1.7			10.9

Lebanon and Turkey may be considered overvalued at the expense of Lebanese trade with Jordan.

Imports

Variable	LN_PART_GDP	LN_PART_POP	LN_DIST	OIC	BORDER	MED	FTA	C
Coefficient	1.2	-0.1	-0.9	-0.5	1.3	0.3	0.1	7.1
t-Statistic	15.2	-1.2	-5.1	-1.2	2.2	0.7	0.3	4.6
Coefficient	1.1	-	-0.9	-	1.3	-	-	7.4
t-Statistic	20.5		-6.3		2.1			5.8

According to our regression results, the total potential of Turkish annual exports to the other countries in the region is $2,229 million while the actual average exports from 1995-2001 was $1,416 million. This underperformance was a result of the lower than "normal" exports to all countries in the region except Jordan. The potential of Turkish imports from the other countries in the region is $1,020 million while the actual average imports from 1995-2001 was no more than $811 million. The reason for this low level was the lower than "normal" imports from all other countries but Syria.

Table 2.17: Turkey's trade and trade potential with the other countries of the region

(1995-2002, by country)

	Trade Potential		Current Trade	
	Imports	Exports	Imports	Exports
Egypt	266.6	521.2	217.7	371.9
Jordan	23.8	103.5	18.7	124.7
Israel	408.0	781.3	239.9	486.6
P. A.	10.0	55.9	n.a.	n.a.
Syria	248.1	525.1	313.9	265.1
Lebanon	63.2	241.9	20.4	167.6
Total region	1,019.7	2,228.8	810.6	1,415.9

Table 2.18 summarizes our results as to the inter-regional exports and imports potential and compare them to the actual average 1995-2001 trade data. Each cell contains the trade potential of each country with all other countries based on the regression result for the discussed country and the sum of all trade flows which were estimated by the regressions for the other countries. As mentioned above, because we did not have regression results for Israel and the P.A., in the relevant cells only the

partner country's regression results appear. The actual trade figures also contain both the reports of country Y and country X. One should notice the large discrepancies, which could partially be explained by the differences between CIF and FOB but also by the different methodologies used by the different authorities and the insufficient coordination between them.

Total inter-regional trade potential according to our results is $5.0-$6.5 billion. Yet, average trade from 1995-2001 was no more than $2.3-$3.6 billion. The exports potential of all countries in the region to other countries in the region is larger than the actual exports. One exception is Turkey, whose actual exports to other countries in the region is similar to its exports potential. The imports potential of all countries in the region from other countries in the region is larger than the actual imports as well. The only exception once again is Turkey, whose actual imports to other countries in the region is similar to its imports potential.

These results are contradicting Ekholm's et al. findings of mid-1990s. Ekholm et al. in a comparison of the potential to actual inter-MENA trade values using gravity equations discovered that most countries seemed to trade with other MENA countries in volumes that corresponded to their predicted values. One exception was Israel whose export potential to other MENA countries was 4.9 times greater than its actual trade volume (Ekholm, K, Torstensson, J. and Torstensson, R, 1996). According to our estimations, Israel's export potential to other countries in the region is approximately 3 times greater. This can be explained by the fact that Israel's trade with other countries in the region has substantially increased since the mid-1990s.

Table 2.18: Inter- regional trade and trade potential

	Exports		Imports	
	Potential	1995-2001	Potential	1995-2001
Egypt	560.7-924.9	397.8-523.6	704.9-967.7	229.2-566.3
Israel	1,705.8	491.9-714.5	1859.2	296.5-363.9
Jordan	398.2-479.3	219.5-311.2	127.4-231.6	89.9-170.0
Lebanon	828.8-963.8	245.7-527.6	202.2-547.6	80.4-338.8
P. A.	110.5	--	43.2	--
Syria	721.1-1,294.0	371.2-714.9	724.7-896.8	345.3-700.4
Turkey	670.8-1,019.7	619.7-855.9	1,334.3-1,951.9	1,304.5-1,508.3
Total region	4,995.9-6,498.0	2,345.8-3,647.7	4,995-6,498.0	2,345.8-3,647.7

2.3 Patterns of potential specialization

Macro-economic analysis, which takes into account not only the current trade structure, but also the basic features of the MNMCs' economies that determine a country's comparative advantage, might lead us to different conclusions. According to international trade theory (Heckscher-Ohlin model), a country's comparative advantage is determined by its *relative factor endowments*, meaning how abundant/scarce a production factor is *relative* to the other production factors (Markusen, J, et al., 1995). For example, country X has comparative advantage in textiles, if textiles are labor intensive and all means of production in country X are scarce, compared to labor. Therefore, if we find two countries similar in their factor endowment, we may conclude that these economies are competitive rather than complementary and the trade potential between these countries is limited. On the other hand, if two countries are highly different in terms of their relative factor supplies, we may conclude that that there exists a large trade potential between them.

Tables 2.20 to 2.25 compare the factor endowment of each country in the region vis-à-vis the other countries in the region, based on selected macroeconomic indicators shown in table 2.19. Labor force to total population ratio reflects the country's comparative advantage in labor intensive industries; the number of scientists and engineers in R&D reflects the country comparative advantage in high-tech industries; commercial energy use reflects the country level of industrialization and its comparative advantage in capital-intensive goods; arable land and fresh water are two major inputs of agriculture and their relative abundance indicates the country's comparative advantage in agricultural products.

Table 2.19: Selected macroeconomic indicators of the region countries

	Labor force	Scientists and engineers in R&D	Commercial energy use**	Arable land**	Fresh water**

	(Labor force to population ratio, 2000)	(Per million people)	(Per capita kg of oil equivalent, 1999)	(Hectares per capita, 97-99)	(Cu. Meters per capita, 2000)
Egypt	3	493	709	0.05	1,071
Israel	2	1,570	3,029	0.06	449
Jordan	3	--	1,028	0.05	143
Lebanon	3	--	1,280	0.04	1,109
Syria	3	29	1,143	0.31	2,761
Turkey	2	303	1,093	0.4	3,118

In the first stage we have calculated the ratio between each pair of indicators for each country. In the second stage we have compared the corresponding ratios of each pair of countries. If four (or more) out of five or three (or more) out of four ratios related to indicator X have been found higher in one country compared to the other, we have concluded that the factor of production is more abundant in the first country and therefore the latter enjoys a comparative advantage in the relevant industry. The results are presented in tables 2.20 to 2.25. The sign "+" represent comparative advantage of the country at the upper left cell of the table, compared to the country on the left cell of the relevant row. The sign "=" means that there is no significant comparative advantage according to our calculation. The number of scientists and engineers in R&D data is not available for Jordan and Lebanon and no comparison could be made in this aspect. These cases are represented by the sign "?".

As table 2.20 shows, Egypt enjoys a comparative advantage in agricultural products vis-a-vis Israel, Jordan and Lebanon. Therefore we can expect an Egyptian agricultural net export to these countries. Egypt also enjoys comparative abundance vis-à-vis Israel and Turkey of labor force. Therefore, we can also expect Egyptian exports of labor-intensive products to these countries. On the other hand, Egypt suffers from comparative disadvantage vis-à-vis Israel, Jordan and Lebanon in physical-capital-intensive goods because of lesser use of commercial energy. Therefore we could expect net imports of physical-capital-intensive goods by Egypt from these countries. This finding is apparently surprising since Egypt is an exporter of gas and oil. Yet, an energy good abundant country can have a comparative advantage in energy intensive goods only if it has the facilities needed to transform energy goods to energy intensive goods. .

Table 2.20: Egypt's comparative advantage vis-à-vis other countries in the region

Egypt	Labor force	Scientists and engineers in R&D	Commercial energy use	Arable land	Fresh water
Israel	+	=	-	=	+
Jordan	=	?	-	+	+
Lebanon	=	?	-	+	+
Syria	=	+	=	-	-
Turkey	+	+	=	-	-

As table 2.21 shows, Israel enjoys a comparative advantage in capital-intensive goods vis-à-vis Lebanon and Egypt. It also enjoys comparative advantage in high-tech goods vis-a-vis Syria and Turkey (no data is available for Jordan and Lebanon). On the other hand since Israel has a comparative disadvantage in agricultural goods it is expected to be a net importer of these goods. It is also expected to be a net importer of labor-intensive goods from Egypt and Jordan.

Table 2.21: Israel's comparative advantage vis-à-vis other countries in the region

Israel	Labor force	Scientists and engineers in R&D	Commercial energy use	Arable land	Fresh water
Egypt	-	=	+	=	-
Jordan	-	?	=	-	+
Lebanon	=	?	+	+	-
Syria	=	+	=	-	-
Turkey	=	+	=	-	-

Jordan enjoys a comparative advantage vis-à-vis all countries except Egypt in labor-intensive goods and is expected to be a net exporter of these goods to these countries. It also enjoys comparative advantage in capital-intensive goods vis-à-vis

Egypt and therefore it is expected to be a net exporter of this kind of goods to the latter. On the other hand, Jordan suffers from a lack of fresh water and is expected to be a net importer of agricultural goods.

Table 2.22: Jordan's comparative advantage vis-à-vis other countries in the region

Jordan	Labor force	Scientists and engineers in R&D	Commercial energy use	Arable land	Fresh water
Egypt	=	?	+	-	-
Israel	+	?	=	+	-
Lebanon	+	?	=	+	-
Syria	+	?	=	-	-
Turkey	+	?	=	-	-

Lebanon enjoys a comparative advantage vis-à-vis Egypt and Syria in capital-intensive goods and is expected to become a net exporter of these goods to those countries. On the other hand, Lebanon suffers from a lack of arable land and although it has plenty of water we can expect it to be a net importer of agricultural goods.

Table 2.23: Lebanon's comparative advantage vis-à-vis the other countries in the region

Lebanon	Labor force	Scientists and engineers in R&D	Commercial energy use	Arable land	Fresh water
Egypt	=	?	+	-	-
Israel	=	?	-	-	+
Jordan	-	?	=	-	+
Syria	=	?	+	-	-
Turkey	+	?	=	-	-

Syria has a comparative advantage in arable land and fresh water compared to all other countries in the region aside from Turkey and therefore is expected to be a

net exporter of agricultural goods to the region. On the other hand Syria capital endowment is low and Syria is expected to be a net importer of capital-intensive goods. Syria also suffers from a comparative disadvantage in R&D compared to Egypt, Israel and Turkey and can become a net importer of high-tech goods from these countries.

Table 2.24: Syria's comparative advantage vis-à-vis other countries in the region

Syria	Labor force	Scientists and engineers in R&D	Commercial energy use	Arable land	Fresh water
Egypt	=	-	=	+	+
Israel	=	-	=	+	+
Jordan	-	?	=	+	+
Lebanon	=	?	-	+	+
Turkey	+	-	+	=	=

Finally, Turkey has a comparative advantage in arable land and fresh water compared to all other countries in the region besides Syria and therefore is expected to be a net exporter of agricultural goods to all these countries. On the other hand, Turkey has a relatively low labor force endowment compared to all countries except Israel and is expected to be a net importer of labor intensive goods from them. Lastly, Turkey has a relative low R&D factor endowment compared to Egypt and Israel and is expected to become a net importer of high-tech products from these countries.

Table 2.25: Turkey's comparative advantage vis-à-vis other countries in the region

Turkey	Labor force	Scientists and engineers in R&D	Commercial energy use	Arable land	Fresh water
Egypt	-	-	=	+	+
Israel	=	-	=	+	+
Jordan	-	?	=	+	+
Lebanon	-	?	=	+	+

Syria	-	+	-	=	=

Revealed Comparative Advantage as a Measure of Export Performance

The concept of revealed comparative advantage (RCA) developed by Balassa (1965), is practically used to determine the measure of the export performance of a country for a given product category. Table 2.26 indicates the export performance of the countries in consideration by commodity groups. The export performance is determined by using the above cited Balassa's RCA index for 3-digit SITC product categories. The formula used to measure the RCA index will be as follows:

RCAij = (Xij / Xit) : (Xwj / Xwt)

Xij: Export of good j in country i

Xit: Total exports of manufactures in country i

Xwj: World exports of good j

Xwt: World total export of manufactures

According to this approach, a country's relative export performance in the individual product categories is calculated as the ratio of a country's share in world exports of all manufactured goods. In general when the index is higher than unity, the country's export performance is said to be strong in the product category in consideration. For example a ratio of 1.10 means that the country's export share in a particular product category is 10 percent higher than the world export share of that product category.

Table 2.26: RCA indices of selected countries

		Egypt	Jordan	Lebanon	Syria	Israel	Turkey
001	Live animals	0	1.29	0	15.73	0	0
041	Wheat and meslin	0	0	0	0	0	3.23
042	Rice	21.37	0	0	0	0	0
048	Cereal preparations	0	0	2.38	0	0	1.98
054	Frozen and fresh vegetables	6.72	22.15	7.61	9.91	1.69	4.49
056	Prepared or preserved vegetables	3.06	0	6.44	0	0	3.51
057	Fruits and nuts	1.58	3.7	8.87	5.18	1.70	9.48
058	Fruit preparations	0	0	6.51	0	4.03	12.54
061	Sugar	0	0	0	0	0	3.90
075	Spices	0	0	0	21.57	0	0
081	Feeding stuff for animals	0	0.22	0	0	0	0
098	Edible products	0	0	4.73	0	0	0
112	Alcoholic drinks	0	0	2.17	0	0	0
121	Tobacco unmanufactured	0	0	35.45	0	0	17.63
122	Tobacco manufactured	0	4.44	0	0	0	0
263	Cotton	83.48	0	0	50.89	0	0

269	Worn clothing	0	0	21.59	0	0	0
271	Fertilizers	0	449.42	0	32.85	0	0
273	Stone, sand and gravel	11.6	0	0	0	0	0
278	Other crude minerals	0	0	0	0	0	3.84
282	Ferrous waste and scrap	0	0	13.53	0	0	0
288	Non-ferrous base metal waste	0	0	16.14	0	0	0
292	Crude vegetable materials	2.77	0	0	0	4.24	0
323	Briquettes,lignite and peat	72.39	0	0	0	0	0
333	Crude petroleum	0	0	0	14.70	0	0
334	Petroleum oils	16.60	0	0	3.08	0.31	0.38
335	Residual petroleum products	1.73	0	0	0	0	0
423	Fixed vegetable fats and oils	0	0	7.09	0	0	2.10
431	Processed fats and oils	12.61	18.84	0	0	0	0
511	Hydrocarbons	0	0	0	0	2.42	0
512	Alcohols, phenols	0	0	0	0	2.93	0
514	Nitrogen function compounds	0	0	0	0	1.92	0
515	Organic – inorganic compounds	0	0	0	0	1.05	0
522	Inorganic chemicals	6.58	3.68	17.06	0	3.22	0
523	Metallic salts	0	15.34	0	0	5.92	0
533	Pigments and paints	0	3.07	0	0	0	0
541	Medicinal and pharmaceutical products	2.5	17.86	1.12	0	2.82	1.11
554	Soap, cleansing and polishing prep.	1.82	2.78	10.75	0	0	4.16
562	Fertilizers	6.67	13.83	10.60	0	6.22	0
582	Plastic plates and sheets	0	1.11	1.47	0	0	0
583	Monofilaments	32.06	38.89	16.33	0	37.24	23.32
598	Miscellanous chemical products	1.04	0.99	0	0	3.60	0
611	Leather	0	0	2.79	0	0	0
625	Rubber materials	1.41	0	0	0	0	2.57
641	Paper	0	1.70	1.71	0	0	0
642	Paperboard	0	6.63	4.65	0	0	0
651	Textile yarn	8.05	1.73	0	5.12	0	6.80
652	Cotton fabrics	3.15	0	0	0	0	5.51
653	Woven fabrics	0	1.65	0	1.61	0	5.42
655	Knitted fabrics	0	0	0	2.34	0	0
657	Special yarns	0	2.21	0	0	0	1.89
658	Made-up articles	11.71	0	2.02	0	0	15.75
659	Carpets	10.84	4.84	3.67	0	0	8.58
661	Lime, cement	4.01	14.89	13.33	0	0	8.61
662	Clay construction materials	3.55	0	0	0	0	5.06
664	Glass	0	0	0	0	0	2.04
665	Glassware	2.14	0	4.58	0	0	5.49
667	Pearles, precious stones	0	0	0	0	51.72	0
671	Pig iron	3.69	0	0	0	0	0
672	Ingots of iron and steel	0	0	0	0	0	6.45
673	Flat rolled products of iron and steel	1.94	1.25	0	0	0	8.98
674	Clad or coated products of iron and steel	0	0	0	0	0	2.93
678	Wire of iron and steel	0	0	0	0	0	17.07
682	Copper	0	0	0	0	0	1.27
684	Alluminium	4.62	1.06	7.02	0	0	1.03
691	Structures of iron and steel	0	2.53	2.54	0	0	0
692	Metal containers	0	7.97	0	0	0	0
695	Tools for use in machines	0	0	0	0	4.78	0
697	Household equipment of base metal	0	0	3.39	0	0	3.61
699	Manufactures of base metal	0	0	0.99	0	0	0
713	Internal combustion piston	0	0	0.59	0	0	0.89

	engines						
714	Non electrical engines	0	0	0	0	0.40	0
716	Electrical engines	0	0	1.77	0	0	0
723	Civil engineering equipment	0	2.14	0	0	0	0
726	Printing machinery	0	0	0	0	6.02	0
728	Other machinery for particular industries	0	0	0.91	0	0.65	0
741	Heating and cooling equipment	0	2.41	2.24	0	0.83	0
742	Pumps for liquids	0	4.22	0	0	0	0
743	Gas compressors	0	1.08	0	0	0	0
749	Non electic parts of machinery	0	3.76	0	0	3.5	0
752	Automatic data processing machines	0	0.23	0	0	0.40	0
759	Parts of machines	0	0	0	0	0.76	0
761	TV receivers	0	1.51	0	0	0	7.21
762	Radio broadcast receivers	0	0	0	0	2.91	0
764	Telecommunication equipments	0	0.24	0.32	0	4.04	0
772	Electrical apparatus	0	0.56	0	0	1.16	0
773	Electric distributing equipmet	0	0.94	2.74	0	0	2.23
774	Electro-medical apparatus	0	0	0	0	7.26	0
775	Household type equipment	0	1.53	0	0	0	2.81
776	Thermionic valves and tubes	0	0.13	0	0	1.37	0
778	Electrical machinery	0	0	0	0	1.38	0
782	Motor vehicles for transport of goods	0	1.66	0	0	0	0
783	Road motor vehicles n.e.s	0	0.95	0	0	0	3.95
784	Parts of motor vehicles	0	0.41	0	0	0	0.76
792	Aircraft	0	0.29	0	0	1.75	1.44
793	Ships and boats	0	0	0.08	0	0	0.71
812	Sanitary, plumbing and heating fixtures	11.71	0	5.34	0	0	6.14
821	Furniture	0	1.74	1.75	0	0	0.72
842	Women's clothing acessories not knited	2.51	3.78	2.38	0	0	4.50
843	Men's clothing acessories knitted	9.45	36.93	9.12	2.54	0	43.06
844	Women's clothing acessories knited	6.26	0	0	0	0	4.14
845	Clothing acessories n.e.s	0	0.69	1.74	0.47	0.69	7.74
846	Articles of apparel	0	6.31	5.04	1.49	6	36.50
851	Footwear	0	0	2.17	0.62	0	0
874	Measuring and controlling equipments	0	0.62	0	0	1.92	0
892	Printed matter	0	2.59	8.66	0	0	0
893	Plastic articles n.e.s	2.18	3.05	1.50	0	3.19	1.20
896	Works of art and antiques	0	0	0.25	0	0	0
897	Jewellery	0	2.30	23.55	0	3.78	0

Source: Calculated from UN, 2001.

Table 2.26 indicates the export performance indices of the cited countries in different product categories. In the food category Lebanon, Syria and Turkey are the countries having the highest export performance indices. The three countries' high indices are common in fruits and vegetables. Additionally, Lebanon and Turkey have very high RCA index in non- manufactured tobacco. In the field of crude materials,

Jordan has the highest index in fertilizers, Lebanon has high indices in worn clothing, ferrous waste and non-ferrous base metal waste, while Syria has high indices in cotton and fertilizers and Egypt in cotton and in stone, sand and gravel. Egypt and Syria have high RCA indices in petroleum products. In the field of animal and vegetable oils Egypt, Jordan and Lebanon have high RCA indices in different subcategories. The chemical products category shows high RCA indices in almost all countries in consideration except in Syria. Inorganic chemicals have high RCA indices in Egypt, Jordan, Lebanon and Israel; metallic salts in Jordan and Israel, medicinal and pharmaceutical products in Jordan, Lebanon, Israel and Turkey; soap and polishing preparations in Egypt, Jordan, Lebanon and Turkey; fertilizers in Egypt, Jordan, Lebanon and Israel; plastics in Egypt, Jordan, Lebanon, Israel and Turkey. In the field of basic manufactures, Egypt and Turkey are the countries having high RCA indices in most products. Egypt shows high RCA indices for several textile products and aluminium. Turkey's export performance in textile products is the highest in the region both in terms of quantity of products and in terms of the value of the RCA index. Additionally Turkey is also highly performing in the export of iron and steel products. Other considerable points in the field of basic manufactures is the high export performance of Jordan and Lebanon in lime and cement, and that of Israel in pearls and precious stones.

Machinery and transport equipment category is the poorest category of the region. Israel has the most advantageous situation in this category, having high RCA indices in telecommunication equipments, electro-medical apparatus, aircraft an in some other electrical machinery. Turkey has high RCA indices for TV receivers, household type equipments, electric distributing apparatus and road vehicles and aircraft. Jordan and Lebanon have some comparative advantage for some special machinery and electrical equipment while Egypt and Syria have no comparative advantage at all in this category.

2.4 The potential for inter-industrial trade among the Mashrek countries, Turkey and Israel.

This section is devoted to the analysis of intra-industry trade pattern in the region.

The Concept of Intra-industry Trade

Intra-industry trade is defined as the situation in which countries simultaneously export and import products of the same industry. While inter-industry trade based on comparative advantage is larger when the difference in factor endowments between countries is greater, intra-industry trade is larger between economies of similar size and factor proportions. In other words, the trade between countries with similar levels of economic development is expected to be "intra-industry" in character.[11] The generally used measure for intra-industry trade is the Grubel- Lloyd index. The formula for the Grubel-Lloyd index is:

$T = 1 - [(|X-M|)/(X+M)]$;

where T is the Grubel - Lloyd index for intra-industry trade, X and M are respectively the values of exports and imports of a particular industry and the vertical bars indicate the absolute value. T=0 when a country only exports or only imports the good in question, meaning that trade is inter-industry in character. T=1 when exports and imports of a good are equal, meaning that all trade is intra-industry. The value of T is practically between 0 and 1. When it is approaching unity, the level of intra-industry trade is increasing, when it is approaching "0", the level of intra-industry trade is decreasing.

Intra-industry Trade in the Region

Table 8 shows the Grubel-Lloyd index for intra-industry trade for three digit product categories in the countries in question for the year 2000.

Table 2.27: Intra-industry trade with the rest of the world

		Egypt	Jordan	Lebanon	Syria	Israel	Turkey
121	Tobacco unmanufactured	0	-	0	-	-	0.91
122	Tobacco manufactured	-	0.58	-	-	-	-

[11] Paul Krugman and Maurice Obstfeld, *International Economics,* (New York: Harper Collins College Publishers, 1992), Third Edition, p. 132.

334	Petroleum oils	0.43	0	0.29	0.39	0.36	0.29
514	Nitrogen function compounds	-	-	-	0	0.90	0
541	Medical and pharm. products	0.24	0.90	0.03	0	0	0.19
554	Soap clensing prep	0	0	0.65	-	-	0
583	Monofilaments plastics	0.14	0.27	0.07	0	0.80	0.24
598	Misc. Chemical products	0.34	0.37	-	0	0.81	0
641	Paper	0	0.51	0.23	0	0	0
642	Paper bord	-	0.81	0.52	0	-	-
651	Textile yarn	0.71	0.51	-	0.50	0	0.96
652	Cotton fabrics	0	-	-	-	-	0.92
653	Fabrics woven	-	0.30	0	0.72	0	0.87
661	Lime, cement	0.21	0	0.75	-	-	0
667	Pearls, precious stones	-	-	-	-	0.82	-
678	Wire of iron	0	0	-	0	-	0.92
682	Copper	0	-	-	-	0	0.54
684	Alluminium	0	0.36	0	-	0	0.61
691	Parts of iron structures	-	0.59	0	0	-	-
713	Internal combustion piston engines	0	-	0	0	-	0.50
714	Engines and motors	-	-	-	-	0.52	0
723	Civil engineering plant eq.	0	0.76	-	-	-	0
728	Other machinery for particular industries	0	0	0.30	0	0.68	0
741	Heating and cooling equip.	0	0.55	0.22	0	0.81	0
749	Non electrical parts of machinery	0	0.48	0	0	0.91	0
752	Automatic data processing machines	0	0.43	0	-	0.53	0
759	Parts for use with machines	0	0	-	-	0.85	-
761	TV receivers	-	0	0	-	0	0.71
764	Telecom. Equip.	0	0.15	0.10	-	0.50	0
772	Electric apparatus	0	0.53	0	0	0.90	-
773	Electric distributers	0	0.67	0.36	0	-	0
775	Household type eq	-	0.56	0	-	0	0
776	Thermionic valves	-	0	-	-	0.91	-
778	Electrical machinery n.e.s	0	0	0	0	0.94	-
792	Aircraft	-	0.09	-	-	0.66	0.83
793	Ships and boats	-	-	0	-	-	0.95
821	Furniture	-	0.91	0.32	-	0	0
843	Men's clothing	0	0.50	0.27	0	-	0
874	Measuring, controlling instruments	0	0	-	0	0.87	0
892	Printed matter	-	0	0.80	-	-	-
893	Articles n.e.s of plastic	0.65	0.95	0.23	-	0.55	0.75
897	Jewellery	-	0	0.94	-	0	0

Source: Calculated from UN, 2000.

The analysis of table 2.27 shows that a considerable number of products for Israel, Turkey and Jordan have intra-industry trade characteristic. Israel's intra-industry trade with the rest of the world is concentrated in mostly high-tech products such as various kinds of electrical machinery, aircraft, measuring instruments and some chemical products. Turkey's intra-industry trade is mostly concentrated in primary manufacturing such as tobacco, textile products, iron and steel products, although she has high G-L indices for TV receivers, aircraft and ships and boats. Jordan's intra-industry trade has some mixed characteristics. It shows G-L indices

higher than unity for low and medium – tech products such as manufactured tobacco, medicinal and pharmaceutical products, paper, textile, iron an steel products, but also for some high – tech products such as electric apparatus and distributors and household type equipments. Another point to note is that Jordan's G-L indices are considerably lower that G-L indices of Turkey and Israel. Lebanon's trade with the rest of the world is mostly inter-industry trade. Only soap and cleansing preparations, paper board, lime and cement, printed matter and jewellery product groups are subject to intra-industry trade. Egypt's two products which are found to be subject to intra-industry trade are textile yarn and articles of plastic, while Syria's only product subject to intra-industry trade is found to be woven fabrics.

In the last section we found that most of the trade in the countries of the region is done with EU, USA and Japan. In order to determine the structure of the region's trade with these countries, we calculated the intra-industry trade indices with the cited countries. Tables 9 - 14 shows the region's intra-industry trade with EU, USA, and Japan.

In this analysis, the tables for Israel, for Turkey and for Mashrek countries are given separately where needed, to show more clearly their different trade patterns.

Table 2.28 shows the 2-digit SITC products that are subject to intra-industry trade between EU and Israel.

TABLE 2.28: Intra-industry Trade between EU and Israel

Code	Product	Index
01	meat preparations	0.81
09	various edible products	0.90
26	textile fibres	0.94
33	Petroleum products	0.87
51	organic chemicals	0.86
54	Medicinal & pharmaceutical products	0.88
57	plastics in primary form	0.64
58	plastics in non primary form	0.79
62	rubber manufactures	0.98
65	textile yarn and related products	0.90
69	metal manufactures	0.99

71	power generating mach.	0.98
87	professional and scientific instruments	0.87
88	travel goods and handbags	0.81
89	misc. manufactures	0.99

*Calculated from OECD,2000.

According to table 2.28, thirteen products have intra-industry trade indices very close to unity, meaning that the trade between Israel and EU in these categories of products are strongly intra-industry in character.

Table 2.29 shows the intra-industry trade pattern between Turkey and EU. According to this table, 7 products have intra-industry trade indices very close to unity.

Table 2.29: Intra-industry trade between Turkey and EU

04	Cereals	0.82
07	Coffea and tea	0.87
11	Beverages	0.85
22	Oil seeds and oleaginous fruit	0.77
27	Crude fertilizer and minerals	0.59
28	Metalliferous ores and metal scrap	0.51
29	Crude animal and vegetable materials n.e.s	0.98
52	Inorganic chemicals	0.76
62	Rubber manufactures	0.92
65	Textile yarn, fabrics	0.66
66	Non metallic mineral manufactures n.e.s	0.77
67	Iron and steel	0.87
68	Non ferrous metals	0.78
69	Manufactures of metal n.e.s	0.71
77	Electrical machinery	0.51
79	Other transport equipments	0.80
81	Prefabricated building	0.77
82	Furniture	0.79
83	Travel goods	0.75
85	Footwear	0.52

Source: Calculated from OECD, 2000.

Table 2.30 shows the 2-digit SITC products which are subject to intra-industry trade between EU and Syria, Egypt, and other Mashrek countries. As it can be seen from the table Syria, Egypt, and other Mashrek countries have intra-industry trade indices for some light industry products and their indices are lower than the indices for Israel[12].

TABLE 2.30: Intra-industry Trade between EU and Mashrek Countries

Countries	Code	Product	Index
Syria	42	Fixed vegetable oils	0.72
Egypt	27	Crude fertilizers	0.76
„	28	metalliferous ores	0.76
„	68	non ferrous metals	0.73
Other Mashrek	27	crude fertilizers	0.85

*Calculated from OECD,2000.

Similarly, table 2.31 shows the 2-digit SITC products which are subject to intra-industry trade between USA and Israel; while table 13 shows it for the trade between USA and Turkey, and table 2.33 for USA and Mashrek countries. These three tables suggest that the trade in most of the heavy industry between Israel and USA is intra-industry, trade between Turkey and USA show intra-industry trade characteristics for mostly light and medium and for a few heavy industries, while the trade between USA and Mashrek countries is almost completely inter-industry. Only a few products from the light and medium industry show signs of intra-industry trade.

TABLE 2.31: Intra-industry Trade between USA and Israel

Code	Product	Index
53	dying, tanning, colouring materials	0.77
55	Essential oils and perfumes	0.91
56	Fertilizers	0.93
71	Power generating machinery	0.75
72	Specialized machinery	0.68
73	metal working machinery	0.82

[12] The high intraindustry trade ratios in homogeneous products such as non ferrous metals and crude fertilizers seem to occur mostly because of seasonal and size differences between different countries.

74	other industrial machinery	0.66
76	Telecommunication equipment	0.86
81	Prefabricated buildings	0.86
82	Furnitures	0.90
87	Professional and scientific equipments	0.78
89	Miscellaneous products	0.86

*Calculated from OECD,2000.

Table 2.32: Intra-industry trade between Turkey and USA

Country	Code	Product
02	Dairy products	0,92
11	Beverages	0,92
12	Tobacco	0,62
33	Petroleum and products	0,94
52	Inorganic chemicals	0,51
58	Plastics in non primary forms	0,88
61	Leather and manufactures	0,60
62	Rubber material	0,81
68	Non ferrous metals	0,80
69	Manufactures of metal n.e.s	0,90
71	Power generating machines	0,95
72	Machinery specialized for particular industries	0,55
73	Metal working machinery	0,89
74	Other industrial machinery	0,55
78	Road vehicles	0,52
79	Other transport equipment	0,55
81	Prefabricated buildings	0,91
82	Furniture	0,62

85	Footwear	0,52
89	Manufacturing products n.e.s	0,76

Calculated from OECD,2000.

TABLE 2.33: Intra-industry Trade between USA and Mashrek Countries

Country	Code	Product	Index
Egypt	61	leather manufactures	0.61
„	68	non ferrous metals	0.81
„	81	prefabricated buildings	0.96
Other Mashrek	66	non metallic minerals	0.87

*Calculated from OECD,2000.

Finally, table 2.34 summarizes the two digit SITC products which are subject to intra-industry trade between Japan and Mashrek countries. Here, unlike in the cases for EU and USA, Israeli and Turkey intra-industry trade with Japan is found to be for a few low - tech products.

TABLE 2.34: Intra-industry Trade between Japan and Mashrek Countries*

Country	Code	Product	Index
Israel	81	prefabricated buildings	0.81
„	82	furnitures	0.92
„	89	miscellaneous products	0.90
Turkey	08	Feeding stuff for animals	0,66
„	11	Beverages	0,63
„	24	Cork and wood	0,98
„	52	Inorganic chemicals	0,64
„	65	Textile yarn, fabrics	0,88
„	66	Non metallic mineral manufactures n.e.s	0,62
„	81	Prefabricated buildings	0,82
„	83	Travel goods	0,61
„	85	Footwear	0,83
Syria	89	miscellaneous products	0.77

*Calculated from OECD,2000.

We can conclude this section by saying that in examining the character of trade in the Mashrek region we have to make a distinction between Israel, Turkey and Mashrek countries. The trade between Israel and EU is found to be intra-industry for different kinds of products, while the trade between Israel and USA is found to be intra-industry for only high tech products. The trade between Turkey and EU is found to be intra-industry for low and medium tech products, while Turkey – USA trade is intra-industry for mostly low and medium tech, but also for some high tech products such as several industrial machinery and transport equipments. EU - Mashrek trade, and USA - Mashrek trade is found to be generally inter-industry. As what regards for Japan there are no big differences in its intra-industry trade patterns between Israel, Turkey and other Mashrek countries. The sole difference is that Israel and Turkey have significantly higher indices than other Mashrek countries.

2.5 The potential for trade between Mashrek countries, Turkey and Israel

In the last sections we tried to analyse the existing trade situation in the Mashrek region. Based on the results obtained in the last sections, in this section we will discuss the possible changes in the region's trade situation if economic ties between Israel, Turkey and Mashrek countries grow stronger. To make an assessment of the potential for trade likely to develop in the region, we will apply an approach used formerly by Arnon, Spivak and Weinblatt in 1996. Accordingly, one way of evaluating the potential for trade between countries is simply to compare the composition of the countries' exports and imports. The underlying economic logic of this is the assumption that the composition of a country's exports represents its supply of exports, while the composition of its imports reflects its demand for imports. An examination of the composition of trade between countries reflects a situation- at a given point in time-which arises from their specific demand patterns, classical comparative advantages, product differentiation, economies of scale, etc. The picture thus obtained, which is accurate only for a given situation, is static. Nonetheless, the

most informative basis for assessing the short term potential for trade is an analysis taking the existing situation as its point of departure.[13]

Table 2.35 is prepared for this purpose. It summarizes the export and import structure of each country in consideration.

TABLE 2.35: Summary Table of the Principal Export and Import Items

Code	Product	Egypt	Jordan	Lebanon	Syria	Israel	Turkey
054	Frozen&fresh vegetables		**X**	**M**			
057	Fruits and nuts			**X**	**X**		**X**
334	Petroleum oils	**X**	**M**	**M**	**X**	**M**	**M**
541	Medicinal&pharm.prod.		**XM**	**M**			**XM**
651	Textile yarn	**XM**			**XM**	**M**	**XM**
667	Pearls&stones			**X**		**XM**	
67	Iron & Steel	**M**	**M**		**M**	**M**	**XM**
684	Aluminium	**X**		**X**			
761	TV receivers		**X**	**M**		**M**	**X**
764	Telecom. Equip. parts and acs.		**XM**	**M**		**XM**	**M**
776	Thermionic valves					**XM**	
792	Aircraft	**M**				**X**	
843	Men's clothing knitted	**X**					**X**

[13] Arie Arnon, Avia Spivak and John Weinblatt, "The Potential for Trade between Israel, the Palestinians and Jordan", *The World Economy,* no. 9 (January 1996), p. 116.

892	Printed material		**X**			**X**	
893	Plastic articles					**X**	
897	Jewellery			**X**			

Source: Organized by the author based on the data of UN, 2002.

In the first column of table 2.35 we have the products that are principally traded by these countries, while in the first row we have the countries in consideration. The letter "X" in any cell indicates that the product in question is one of the main export items in the country in question, while the letter "M" in any cell indicates that the product in question is one of the main import items in the country in question. If any product group is principally exported by one country, and the same product group is principally imported by another country, the possibility of potential inter-industry trade arises.

The Potential of Inter-industry Trade in the Region

To make a rough estimation for the potential of inter-industry trade between the countries in the region we will analyse in each row the X and M letters. This analysis tells us that frozen and fresh vegetables are one of the main export items of Jordan, while it is one of the main import items of Lebanon. Therefore, a possibility of inter-industry trade arises between Jordan and Lebanon in the field of frozen and fresh vegetables. The same logic tells us that a possibility of inter-industry trade arises between Jordan and Lebanon, and between Lebanon and Turkey in the field of medicinal and pharmaceutical products. Textile yarn is one of the most traded products and it creates possibility of inter-industry trade between Israel and Egypt and/or Israel and Turkey. Telecommunication equipment can be one of the key products exported by Israel to all other countries in the region. Aircraft may be another item subject to inter-industry trade between Israel and Egypt, and iron and steel between Turkey and all the other countries in the region. Petroleum oil being one of the main export items of Syria and Egypt, give room to inter-industry trade between them and the remaining countries in consideration.

The Potential for Intra-industry Trade

The existence of potential intra-industry trade in the region can be analysed by determining the countries which are both principal exporters and importers of a given product category since by definition intra-industry trade is concerned with the simultaneous export and import of a commodity by a given country.

Table 2.35 indicated that the possibility of intra-industry trade in the region is limited.

One such possibility arises between Jordan and Turkey in the field of medicinal and pharmaceutical products. A more detailed analysis suggests that it is possible for Jordan to export "medicaments containing substances other than antibiotics" (54179) to Turkey, while it is possible for Turkey to export medicaments containing antibiotics (54171) to Jordan.

Another area of intra-industry trade in the region arises in the field of "textile yarn" (651) between Egypt, Syria and Turkey, since all the three countries are exporters and importers of textile yarn. When we go into deeper analysis of 4 and 5 digits, we can see the very similar export and import structure of these countries in "the textile yarn" category. For example all the three countries are exporters of "cotton yarn" (6513) and all of them are importers of "yarn 85% of synthetic fibres"(6514). Turkey is both exporter and importer of 6514. Therefore when we analyse the 5 digits category, we can see the possibility for Turkey of exporting "yarn 85% of synthetic fibres non textured of continuous of polyamide" (65142), both to Syria and to Egypt. This analysis tells us also that Egypt and Syria have no chance to export "cotton yarn" to Turkey, their only export item in this field, since Turkey is also an exporter but not an importer of it.

Telecommunications (76) is another product category subject to intra-industry trade. "TV receivers" (761) and more specifically "colour TV receivers" (7611) is an export item for Turkey and Jordan, while it is an import item of Lebanon and Israel. "Telecommunication equipments parts and accessories" (764) is both an export and import item for Israel and Jordan, while it is an import item for Turkey, Egypt and Lebanon. Therefore it is possible for Turkey and Jordan to export "colour TV

receivers to Israel and Lebanon and to import "TV, radio broadcasting"(7643) and "parts for apparatus"(7649) from Israel.

It should also be pointed out that these assessments are based mainly on the existing composition of exports and imports, representing a given supply of exports and demand for imports. As cited formerly, the picture given is static and completely disregards dynamic processes which may develop with time.[14]

The scenarios for both inter-industry and intra-industry trade can be valid if and only if an environment of sustainable peace can be obtained in the region.

2.6 Conclusions

Current intra- regional trade in goods is limited. In 2002 intra- regional exports accounted for about 4.9 percent of total exports of the Mashrek countries, Turkey and Israel. At the same time, intra- regional imports accounted for not more than 2.9 percent of total imports of the Mashrek countries, Turkey and Israel. Indeed, a simulation based on the discussed countries' average foreign trade and the gravity model shows that the current trade is lower by 18-28 percent than its potential. Both exports and imports potentials of all countries in the region to and from the other countries in the region are larger than the actual. The only exception is Turkey, whose actual trade volume with the other countries in the region is similar to its potential.

The present intra-regional trade is very weak. The principal trade partners of Mashrek countries are mostly found to be EU countries and USA. While Israeli trade with EU and USA is found to be intra-industry in character and principally in high-tech products, Turkey- EU and Turkey- USA trade is found to be intra-industry for mostly low and medium tech products. The trade between other Mashrek countries and EU-USA are inter-industry. Additionally, the weak trade relations between countries in the Mashrek region are mostly inter-industry; they exhibit a modest intra-industry character only for the food sector. "Mineral fuels" is the category in which Egypt and Syria have a high export performance. Furthermore, most countries in the region have a good export performance in light manufacturing products. The export

[14] Ibid, p.121.

performance in the chemical category of Jordan and Israel is also notable. Israel's export performance in machinery is remarkably better than the other countries in the region.

Inter-industry trade can be developed between Jordan and Lebanon in the category of fresh and frozen vegetables and in medicinal and pharmaceutical products. "Textile yarn" can be subject to inter-industry trade between Israel and Egypt and Israel and Turkey. Telecommunications, being one of the main export items of Israel can be exported from Israel to all other countries of the region. Similarly, "iron and steel" being one of the main export items of Turkey, can be exported from Turkey to all the other countries in the region. Additionally, petroleum oil can give room to inter-industry trade between Syria, Egypt and the remaining countries under scrutiny.

The possibility of intra-industry trade also exists, although it is more restricted. Medicinal and pharmaceutical products can be subject to intra-industry trade between Turkey and Jordan, Turkey selling "medicaments containing antibiotics to Jordan, and Jordan selling "medicaments containing substances other than antibiotics" to Turkey. Telecommunications are another category subject to intra-industry trade; e.g. Turkey and Jordan can sell "colour TV receivers" to Israel and Lebanon, and Israel can sell "TV and radio broadcasting" and "telecommunication equipments parts and accessories" to Turkey and Lebanon.

Among the criteria to form an efficient economic union, openness, complementarity, and strong intra-regional trade relations are not present in the region. However, the recent reforms fostering openness and diversification in most of the Mashrek countries together with the improvements in relations with Israel can lead, in the long run, to the improvement of economic cooperation in the region. Needless to mention, the discussed possibilities can turn into a reality, only if a secure and peaceful environment can be created, and political stability can be ensured in the region. Otherwise, the possibilities are to remain only as dreams.

2.7 References

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Chapter III: Trade in Services

3.1 Introduction

Services play an important role in economic activity, and can have a positive and significant influence in promoting prosperous regional cooperation and integration. This chapter will analyse the trade in services potential between the Mashrek countries, Turkey and Israel. It will first develop a theoretical framework for trade in services, which will be followed by an overview of the services sector in the region. Drawing on existing theory and available macroeconomic data, we will suggest several ways and approaches for the enhancement of regional trade and cooperation in services.

3.2 International Trade in Services: Theoretical Framework

Despite the fact that international trade theory developed almost three centuries ago, its prime corpus does not deal overtly with trade in services. The absence of services in trade theory is the outcome of several factors, which among others can be attributed to the fact that services were largely considered as non-tradable due to the physical proximity needed between the service supplier and service consumers; services are characterised by intangibility which on the one hand, creates a visibility barrier precluding the recognition and realisation of the scope and extent of the services existing, and on the other hand, creates a quantitative barrier as to the actual measurement of traded services; additionally, a generic trade theory for services did not develop since trade theory was traditionally considered to include all modes of trade without limiting itself to trade in goods per se (Herman: 2004).

Applying existing international trade theory faces severe problems derived mainly from the intangible nature of services and related measurements difficulties.[15] This

[15] Measurement of trade in services is by far more difficult than that of goods, and suffers from numerous flaws. Many services transactions are not measured since they are cross border traded

results in lack of information regarding the quantities, prices, origin and destination of traded services, which hamper data collection, accurate statistics formulation and policy making (Lindner et al., 2001).

The approach taken in this study will be based on the theory of comparative advantage and specialization,[16] which takes into account the macroeconomic performance and overall living standards on a comparable basis between nations. According to traditional comparative advantage theory, a nation will export those products or services where its labour productivity is relatively high to its labour productivity in other goods and services (Helpman, 1999:122). Several techniques were developed over the years to calculate specialization and comparative advantage patterns. However, since most of the indices developed utilize trade statistics, such an application may prove to be impossible in the case of services exchanged among Mashrek countries. The reason for that is that trade in services statistics in the region are rather poor and hardly provide data on neither the services traded nor their destination or measurements of inflows and outflows.

The method that will be applied in this study for measuring comparative advantage and potential trade, will be inspired by the Heckscher-Ohlin Model. According to the Heckscher-Ohlin Model, international trade is a result of differences in the relative abundance of production factors and resources among countries. Hence, a country will export the commodities (or services) that are intensive in the production factor (or resource) in which the country has relative abundance. According to this model, international trade is the outcome of indirect trade in production factor services. Given a country's relative production factor endowment, it is possible to identify and predict its exports in a state of free trade.[17] Measuring comparative advantage in the

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without any inspection or counting, like in the case of e-commerce. Another reason is that transactions which are a combination of goods and services bundled together are usually measured solely as goods transactions. In addition, the lion's share of international trade in services is carried out through foreign affiliates established in the country of consumption, and thus ignored from traditional balance of payments statistics. (Porter: 795).

[16] Despite the fact that other theoretical avenues may be useful, this paper will mainly deal with comparative advantage theory, and for the sake of completeness, will refer when appropriate to other theories, such as intra-industry trade theory.

[17] Suppose that country A is highly-skilled labour abundant, and that professional services are highly-skilled labour intensive. Assume also that country B is less-skilled labour abundant and that construction services are labour intensive. When both markets are opened for international trade, we can expect that since A has a comparative advantage in professional services and B has a comparative

various services sectors can be calculated by identifying production processes and characteristics of specific services, followed by the measurement of relative abundance of corresponding production factors and resources in countries under focus.

3.3 Trade in Services in the Mashrek countries, Turkey and Israel

The Broad Picture

Trade in services has become a central pillar of modern economic activity. Services role in the economy is reflected not only in regard to the amount of people employed in services, or to the amount of income resulting from services activity, but also to the number of internationally traded services sectors, their modes of supply[18] and their share in the nation's GDP. In the year 2000, services contributed 64 percent of world GDP, an increase of 12 percent over a decade. (WTO, 2002).

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advantage in construction services, each country will specialise in supplying the service in which it has comparative advantage. Country A might export legal, computer or engineering services to country B, which will export to country A construction services for example through movement of natural persons.

[18] Trade in services is classified in 4 modes of supply through reference to the place of presence of the service supplier, consumer, employees and the service itself. This categorisation is also important for understanding the nature of barriers and restrictions to trade in services :

cross border supply (mode 1): the service alone crosses the border, while the supplier and consumer are in different territories. An example for cross border supply can be the sale of translation services from country A to country B via the internet or fax.

Consumption abroad (mode 2): the consumer crosses the border to the territory of the supplier and consumes the service there. An example for this mode supply is the purchase of hotel accomodations (tourism services) by a tourist from country A when traveling in country B.

Commercial presence (mode 3): the supplier crosses the border to the territory of consumption and establish a commercial presence. An example for the supply of services through commercial presence can be the local establishment a branch of a bank from country A in country B.

Presence of natural persons (mode 4): temporary movement of labour to the consumer's territory. An example for the presence of natural persons can be the employment of a natural person from country A as an engineer in country B. While the supply of services through commercial presence is more focused on the local establishment of foreign legal entities, supply of services through the presence of natural persons is concerned with the country of origin of the person suppling the service.

On a national level, services are becoming more and more dominant, as their share in countries' GDP reaches more than 70 percent in developed countries, and 20 percent to 60 percent in developing countries (Adlung, 2002a).

During the 1990s world trade in commercial services[19] grew on average of 6.2 percent, while world trade in merchandise lagged behind with a 5.5 percent average growth. Developing countries enjoyed the highest growth rates of their services sectors, which in the first half of the decade grew by more than a 13.3 percent on average.[20] Over 60 percent of international trade in services is dominated by the European Union and the United States (Maurer and Chauvet, 2002: 238).

The Mashrek

In past times, the Mediterranean Basin was a region where various services, such as distribution, maritime as well as other transportation services, tourism and travel services prospered under the changing hands of the empires that dominated the area.[21] This however, radically changed in the recent times and despite their key role in the countries' GDP and employment structures, the potential of international and regional trade in services is far from being realized, as very little trade in services occurs in the region as a whole, and among the Mashrek countries in particular.

According to table 3.1, services accounted for more than 50 percent of all countries' GDP in the year 2001. The average annual growth of services' output was also relatively high and is a reflection of a long term trend of growth in this segment of the economy. Most noticeable is the significance of services' added value to GDP in comparison to the industry's added value. In Jordan for example, services accounted

[19] Commercial services are defined as services excluding services provided by government.
[20] This growth rate radically declined in the second half of the 1990s, and fell to almost a sixth of what it was before the occurrence of the Asian financial crisis.
[21] Trade in services and international trade in services appear frequently in the stories of the Old Testament, such as in the story of King David and Hiram the King of Tyre: *"Hiram, king of Tyre, also sent to David…workmen in wood, and stone cutters, and they built David a palace"* (Samuel II, **5**:11). This is an example of what can nowadays be described as trade in Governmental services under mode 4.

for 73 percent of added value in 2001 while industrial added value accounted for only 25 percent.

Table 3.1: The Service Sector in 2001

	Share of services in GDP (%)	Growth of output in services (average annual % growth)	Value added by services (% of GDP)	Value added by industry (% of GDP)
Egypt	50	4.5	49	34
Israel	70	n.a.	73.3*	20*
Jordan	73	5	73	25
Lebanon	66	4.1	66	22
Palestine	66	n.a.		n.a.
Syria	50	4.6	46	30
Turkey	61	3.7	59	25

* Data for 2000

Source: World Bank, 2003, World Bank 2003b, EUROSTAT, 2001 [22]

As aforementioned, Mashrek countries hardly trade internationally and intra-regionally. This is extremely important given the key role services play in these economies, the reason being that trade in services in these countries suffers from numerous barriers, which restrain the ability of the service sector to become more efficient and competitive. Although to a certain extent, Turkey and Israel are exceptions to this rule, as both are ranked among the 30 leading world exporters and importers of commercial services (WTO, 2000), they are nonetheless also underperforming. The next pages will describe existing barriers to trade in the region and will propose various avenues of exploration to utilize the trade potential.

Table 3.2: Mashrek's structure of trade in services (2000)

	Commercial Services exports ($ Millions)	Exports of goods ($ Millions)*	Commercial Services imports ($ Millions)	Imports of goods ($ Millions)*	Trade balance in commercial services ($ Millions)
Egypt	9687	7061	7161	15382	2526
Israel	14260	30837	12149	34187	2111
Jordan	1689	**1381.9	1485	**3292	204
Lebanon	n.a.	715	n.a.	***6207	n.a.
Palestine	n.a.	n.a.	n.a.	n.a.	n.a.
Syria	1481	5146	1468	3723	13
Turkey	19232	31664	7620	54041	11612

	Transport services exports (% of total services)	Travel services exports (% of total services)	Other services exports (% of total services)	Transport services imports (% of total services)	Travel services imports (% of total services)	Other services imports (% of total services)
Egypt	27.3	44.9	27.8	30.9	15	54.1
Israel	17.4	26.8	55.8	39.4	23.1	37.5
Jordan	17.7	47.1	35.2	38.6	23.9	37.5
Lebanon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Palestine	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Syria	16.6	73.1	10.3	47.5	45.6	6.9
Turkey	15.4	39.7	44.9	36	22.5	41.5

** Exports and imports of goods are calculated f.o.b*

*** Figures for 1999*

**** c.i.f.*

Source: World Bank, 2002, IMF, 2002

Barriers to trade in services

Restrictions and barriers to trade in services are abundant in all service sectors across the region, and in particular they protect key sectors that are essential for economic development. These restrictions block the possibility of trade enhancement among the

[22] Growth of output and value added in services is calculated on the basis of GDP less agriculture and industry, and thus may not properly reflect the sum of services output including banking and financial services.

region's countries and vis-a-vis the rest of the world, limit competition and depress prospects of efficiency and competitiveness.

Four main categories of restrictions on trade in services (Stern, 2003:247-8) exist in all countries in the region:[23]

1. Quantitative restrictions : these restrictions are usually aimed at foreign service suppliers and come in the form of quotas, local content requirements and prohibitions. Reciprocity demand can be an example of such a prohibition, as well as complete prohibition against foreign suppliers in services such as transport, telecommunications or financial services. Turkey, for instance, completly prohibits the establishment of foreign non-bank financial intermediary institutions.
2. Price-based instruments : taxes of all kinds of sorts applied on foreign services, tariffs on goods which embody services (such as software and audiovisuals) or goods used in the production of services (computers, telecommunication or medical equipment). Certain services (many services) are subject to government price control and monitoring. In these services, government subsidies to local suppliers are often used. For example, Jordan holds price-based instruments in maritime freight transport according to which service fees for pilotage, berthing and docking are less for Jordanian ships, which are also exempt from any port dues when anchoring in Jordanian waters. Jordanian ships also enjoy preferential treatment in bunker prices provided at the Aqaba Port.
3. Standards, licensing and procurements : discriminatory licensing and certification is often imposed on foreign professional services' suppliers. Standards are applied in many areas which affect service suppliers, such as in environment and transportation. Government procurement tend to favour domestic service providers, as well as goods which embody services or used for service production. In Israel, for example, financial advisory license is granted only to an Israeli resident.
4. Discriminatory access to distribution networks : occur in many cases such as access to transportation, advertisement, telecommunications and dealer

[23] Excluding FDI restrictions which will not be dealt with directly in this section.

networks. In Egypt, for example, exclusive rights to Egyptian suppliers exist in cross border telecommunications services transmission in and out of the country.

5. Foreign Direct Investments restriction : an FDI barrier can be defined as any measure imposed by the government, that discriminate foreign companies and distort their decision regarding their investment target, location and form. These restrictions which often are applied on the supply of services through commercial presence, can take the form of restrictions on the quantity of foreign investment, time-consuming screening processes, foreign-exchange limitations, such as limitations on the possible amount of money allowed to be taken out of from the territory invested in. In Israel for example, aquisitions of rights to use land and real estate by foreign nationals or companies controlled by foreign nationals are subject to the prior approval of the Israeli Land Administration Council.

Until today, only four of the region's countries have become World Trade Organisation (WTO) member states and adhered to the General Agreement in Trade in Services (GATS) dedicated to eliminating barriers to trade in services. Examining Jordan, Egypt, Turkey and Israel scheduled commitments under the agreement, reveals that with the exception of Jordan, very limited sectorial level of commitments was taken. The schedules of commitments positively lists those sectors in which each country bound[24] itself for both market access and the granting of national treatment during and after the Uruguay Round.

[24] According to the positive-listing approach, each country schedules in the agreement, those sectors to which it commits itself to free trade. Such a listing is termed as " a binding", which means that the

Table 3.3: Sectors committed in the GATS (2004)

	Jordan	Egypt	Turkey	Israel
Business services	X		X	X
Communication services	X	X	X	X
Construction and related engineering service	X	X	X	
Distribution services	X			
Educational services	X		X	
Environmental services	X		X	X
Financial services	X	X	X	X
Health related and social services	X		X	
Tourism and travel related services	X	X	X	X
Recreational, Cultural and Sporting services	X			
Transport services	X	X	X	
Other services not included elsewhere				
Total Sectors committed:	11	5	9	5

Source: Combined by the authors based on each country's GATS annexes of commitments.

Further exploration of these commitments into sub-sectors[25] shows that numerous barriers to trade still remain also in the sectors in which commitments were taken and take the form of quantitative, price-based, standards and licensing, as well as discriminatory access restrictions. These restrictions only reflect transparent barriers in those areas where commitments were taken, and do not provide an overall and broader picture of trade restrictions that exist in non-committed areas.[26] Other barriers

member state cannot impose any more restrictions on trade in that listed sector than that stated in the schedule.

[25] Given the scope of this paper, the in-depth analysis of sub-sectorial commitments is not presented here for the lack of space.

[26] An important distinction should be made here as to existing barriers and commitments. When a country tables its commitment in the GATS it lists all barriers still applied under the sector committed, thus enabling transparency with regard to trade barriers in this sector. However, many barriers can exist (and in fact exist) in those sectors not commited at all. In such a case, the service supplier is not apriori exposed to existing trade barriers that can be raised (or taken off) according to government regulation which is not subject to international commitments. Hence, the level of actual restrictions to trade is higher than reflected in the GATS schedules, and lack of transparency becomes an additional impediment to trade.

to trade in services in unbound sectors include *inter alia* restrictions on the temporary movement of workers, right of establishment and non-establishment (i.e. the right to provide a service without requiring a local establishment), investment rules, market access restrictions and licensing regimes. In addition, Most Favoured Nation (MFN) exemptions to the GATS are still retained by all countries, which allow the discrimination between trade partners.

Trade potential

Identyfing existing barriers to trade in services is essential for the liberalisation of trade in the region and for the selection of the best policy tools that can maximise the trade potential. Given the broad range of trade restrictions in WTO and non-WTO Mashrek countries, as well as the extent of harmonisation and legislation convergence required, it is not likely to envisage in the near future regional integration in services that will substanially go beyond the GATS.[27] For that reason, our analysis will focus on certain possibilities for trade potential on the basis of GATS commitments level under the assumption that those countries that are not WTO Member states will become so.[28] The analysis of trade potential will concentrate on four backbone services (information and computer technology services, financial services, transportation services and health services).[29] Liberalisaton of trade in these specific areas has a synergic effect on other sectors, and can enable the right environment for the nurturing and facilitation of export capacity in other services, and facilitate and enhance investment attractiveness, create employment opportunities and strengthen

[27] It should be noted however that certain intiatives concerning regional integration in services exist in the Mediterranean Basin, though they are at a premature stage. The Agadir Agreement, mainly focusing at goods liberalisation, foresees some limited scope integration in trade in services but does not involve all countries in this paper, and is currently open only to Arab nation states. A Euro-Mediterranean free trade area in services, involving all Euro-Med countries, is being discussed within the framework of the Barcelona Process but is far from realisation and is also targeted at bringing Mediterranean countries into GATS levels of commitments.

[28] Lebanon is currently negotiating its WTO membership.

[29] These 4 chosen categories of services sectors are part of a much broader classification of the GATS. According to the GATS W/120 classification 11 broad categories of services are defined: business services, communication services, construction and related engineering services, distribution services, educational services, environmental services, financial services, health related and social services, tourism and travel related services, recreational, cultural and sporting services, transport services, and other services not included elsewhere.

the private sector's capacity, as well as reduce government involvement and expenditures thus allowing a better and efficient resource allocation.

Information and Computer Technology services:

Information and computer technology (ICT) services are key backbone services that have a spillover effect on other services sectors such as telecommunication, business and research and development services. ICT services are diverse and include among others, counsultancy services related to hardware, systems and software, software development and implementation services, system analysis and design services, data processing and preparation services, programming, maintenance services, database services, time-sharing services and training services.[30] The ICT sector is a skilled-labour intensive sector and is also characterised by high tradability potential in all modes of service supply.

Israel committed itself in the GATS, except for the movement of natural persons, to free trade in consultancy services related to the installation of hardware, software implementation services, data processing and database services. Likewise, Jordan committed itself, with the exclusion of movement of natural persons, to open trade in consultancy services related to the installation of hardware, software implementation services, data processing and database services, maintenance and repair services of office machinery and equipment including computers and other computer services. Turkey fully bounded[31] itself to trade in consultancy services related to the installation of hardware, software implementation services, and data processing services, with the sole restriction that foreigners engaged in these services become temporary members of the Union of Chambers of Commerce. Egypt did not commit itself in the ICT sector. As noted above, the vast range of ICT services activity give scope for further commitments in ICT sub-sectors by all WTO-Mashrek countries.

Excluding Israel, Mashrek countries have not yet turned into ICT services exporting countries, although some of them have the human resources and capabilities to become such (World Bank, 2003a: 154). According to Table 3.4 high-tech exports

[30] According to GATS W/120 and United Nations CPC classifications.

accounts for a quarter of Israel's manufactured exports, and also play an important role in Jordan's export structure. These figures are important indicators as ICT services tend to be bundled together with manufactured goods in many cases. ICT is also demand driven as a correlation exists between the level of demand and countries' degree of specialisation.

Table 3.4

	ICT expenditure as % of GDP	High-tech exports (receipts $ millions	High-tech exports (% of manufactured exports)	Internet - Users (thousand)
Egypt	**2.4**	**3**	**0**	**450**
Israel	**7.4**	**7418**	**25**	**1270**
Jordan	**n.a.**	**53**	**8**	**127**
Lebanon	**n.a.**	**n.a.**	**n.a.**	**300**
Palestine	**n.a.**	**n.a.**	**n.a.**	**n.a.**
Syria	**n.a.**	**2**	**1**	**30**
Turkey	**4.8**	**1084**	**5**	**2000**

Source: World Bank, World Development Indicators 2002

Table 3.5 ranks Egypt, Israel, Jordan and Turkey network readiness vis-a-vis the rest of the world.[32] According to this scale, each country is assigned its position ranking in four categories of network access, network policy, networked society and networked economy. The index relatively ranks each country in accordance to its position with regard to the other countries. Thus, the most advanced countries recieve the lowest ranking and viceversa. The index clearly indicates Israel's relative advantage with regard to network readiness, but also shows the potential of Turkey and Jordan that are ranked among the first 50 countries.

[31] Full binding means commitment for liberalisation in a given sector without any limitation retained.
[32] The Network Readiness Index ranks 75 countries on their relative ability to leverage their information and communication networks. The index provides a summary measure based on 75 individual country profiles that quantitatively and qualitatively explore information and communication trends and ways which contribute to economic, social and national development.

Table 3.5: Networked Readiness Index*

	Egypt	Israel	Jordan	Turkey
Network Access	50	19	51	45
Information infrastructure	48	23	46	33
Hardware, software and support	52	15	56	57
Network Policy	47	22	30	45
Business and economic environment	54	19	30	41
ICT policy	39	24	30	48
Networked Sociey	57	20	54	45
Network learning	61	19	46	38
ICT opportunities	37	17	61	35
Social capital	74	25	54	62
Network economy	46	21	44	44
e-Commerce	45	16	51	33
e-Government	51	26	43	46
General infrastructure	42	20	39	52
Network Readiness Index	**60**	**22**	**49**	**41**

* No data available for Lebanon, Palestine and Syria

Source: The Global Information and Technology Report 2001-2002

Removal of trade barriers on imports of ICT services and ICT related services can enhance the ICT export capacity of Turkey, Jordan, Lebanon and Egypt, which although still underperforming in this sector, have substaintialy improved their domestic ICT services markets. Egypt produces and exports software packages to the Gulf states, as well as remote education and offshore engineering, and is considered to be a regional software content hub, with 80% of its software exported to Arabic countries. Jordan exports a wide range of data conversion services, and enjoys relatively well educated labour (Ibid.). The Lebanese software industry has advanced in recent years and improved its competitiveness and market penetration, among other things due to private sector's capacity building and collaboration initiatives. Lebanese companies are involved in software services, telephony integration and voice-software and website solutions. Israel is one of the world leading exporters of ICT and ICT related services, driven mainly by its software industry. Data security and internet-related software play a significant role in Israel's software export structure. Turkey is a net importer of ICT services, mainly due to the lack of infrastructure, government ownership and government provision of key services, as well as high costs on

internet-access which depress local demand. Although not likely to change in the near future, several initiatives were launched for the improvement of infrastructure, encourgement of ICT research and development and improving ICT education.

Opening markets in ICT can leverage companies' capacity to obtain greater market shares thus enabling them to transform their small and domestic market oriented present structure. One major area to be tackled in this context is the removal of barriers to the movement of natural persons, which is a vital component for the enhancement of technological transfer and commercial presence.[33] The elimination of trade barriers on ICT services trade in the region can have additional external positive effects. ICT services can be exported to other Arab speaking countries, and Mashrek countries can benefit from the expanding trend of outsourcing professional, back-office and administrative services from developed countries into lower-cost offshore markets. Free trade would benefit Israel the most which would likely become a net exporter to the region, insofar as language is not a barrier. Given Turkey's present infrastructure and readiness it will remain a net importer, and Jordan, Egypt (and Lebanon to a lesser extent) will import from Israel, but will export and intra-trade with the other countries.

Transport services:

Transportation services encompass land, maritime and air transport, and their capacity and efficiency have a profound overall impact on the economy as they serve as infrastructure for the facilitation of commodity trade, tourism, investment, labour market mobility and other services and sectors of the economy. The degree of efficiency, reliability, costs and flexibility in transport services, which are of utmost concern to those utilising these services, depends on the regulatory environment and organisation in this sector (Muller-Jentsch, 2003: 43).

Existing GATS commitments in transportation services taken by Jordan, Turkey and Egypt are rather limited.[34] In contrast to other sectors, the coverage of GATS rules for

[33] Due to the skilled-labour intensity nature of ICT services, greater market openness and flexible labour markets can positively contribute to higher employment rates.
[34] Israel did not make any commitments in this sector.

transport services is still minor. Maritime transport services has not yet been included in the agreement (with the exclusion of maritime insurance), and air transport services cover only a limited part of this sub-sector, notably auxiliary services of air transport. For that reason, most trade facilitation in this area will have to be taken by unilateral liberalisation, as well as by regional or bilateral agreements. Gains from trade liberalisation can be expected in all countries.

Land Transport

Land transport is characterised by road and rail transport. Until today land transport played a minor role in regional trade due to the closure of several borders. Various restrictions in road transport and related areas (such as urban and inter-urban transport or trucking industry) in all Mashrek countries increase transport costs and inefficiency (World Bank, 2003a: 162-163). Trade liberalisation in this area gives scope to a wide and diverse range of economic activities ranging from freight transport to passenger transport (WTO, 2001: 501-503). Table 3.6 reveals that roads serve as the main infrastructure for freight and passenger transportation in all countries.[35] The trucking industry is rather competitive in most countries and is largely owned by the private sector. The opening up of borders, coupled with further deregulation, harmonisation of standards[36] and liberalization of right of establishment and cabotage, gives scope to large intra-regional trade in haulage and passenger transport services (Muller-Jentsch, 2002).

[35] The relatively low figures of road density in Egypt are the result of mass concentration of the population around the Nile and its Delta, thus leaving huge areas unhabited.

[36] Harmonisation of standards in transportation may be easier , as most countries are engaged in the adoption of European Union and international standards in the context of the EuroMed Process and the European Neighbourhood Initiative.

Table 3.6: Road and rail infrastructure and density

	Lengh of roads (in km at the end of the year		Lengh of railways lines (in km at the end of the year)			Density of road (km per 1000 square km, 2000)	Density of railway (km per 1000 square km, 2000)
	2000	annual average change	2000	of which double track or more	annual average change		
Egypt	49810	5.7	4455	32.1	-3.5	49.7	4.4
Israel	16281	1.5	669	38.9	3.2	735.2	30.2
Jordan	7245	1.1	524		0	81.1	5.9
Lebanon	6598	1.2	0	0	0	634.5	0
Palestine	2495		0	0	0	414.5	0
Syria	44575	2.5	2796		0.4	240.7	15.1
Turkey	418380	3.1	8671	4.8	0.3	532.6	11

Source: Eurostat, 2003

Table 3.6 shows that Syria, Turkey and Egypt have a comparative advantage in passenger transport, and are more likely to export passenger transport services to Lebanon, Israel, Palestine and Jordan. Such a comparative advantage can enhance tourism services in the region and can facilitate the development of sophisticated intra-regional tourist packages, as well as allowing a cheap alternative for religious tourist services.[37]

Turkey, Syria, Egypt and to a lesser extent Israel, have a comparative advantage in the case of haulage services. The removal of trade barriers in this sector can enhance the flow of goods in the region and is especialy important for efficient connection between airports and sea ports. The facilitation of haulage trade between the Mashrek

countries, Israel and Turkey, depends also on simplification of customs. Reducing procedures and forms at borders, more transparency, using of electronic systems and simplification of nomenclature are crucial for transport facilitation. Until today, only Lebanon, Israel and Turkey have undergone such a reform (Ibid).

Table 3.7: Number of vehicles registered (in thousands, 2000)

	Passengers cars	Motorcoaches and buses	Goods vehicles
Egypt	1931	53	632
Israel	1422	18	349
Jordan	288	12	143
Lebanon	1399	12	88
Palestine	107	1	24
Syria	139	43	346
Turkey	4422	354	1229

Source: Eurostat, 2003

As noted before, railway infrastructure is rather poor on a regional basis. Lebanon and Palestine completly lacks railway infrastructure and with the exception of Israel, railway lines are either decreasing (-3.5 percent in Egypt) or remain constant. In addition, the railway sector is dominated by state ownership, which leads in most cases (Egypt and Jordan are en exception) to inefficiency and high costs.. Opening up of trade restrictions in rail transport services can have a positive impact on costs and costs advantage over road transport, in particular for long distance land transport (Ibid.). Connection of railway networks[38] can lead to major freight costs reduction, as well as the facilitation of passengers movement in the region and outside of the region. The linkage of efficient railway and maritime transport can maximise the region's capacity of once again becoming a central international trade route[39] where

[37] Land passenger transport services can compete with air transport services in instances like the Muslem Haj to Mecca and Medina.
[38] Further to this, much investment in railway infrastructure is needed, and can be carried out either through state financing or through international contractures.
[39] As in the days of the Spice Route.

goods originating in the Far East can be shipped through the Red Sea and Suez Canal and then carried by rail to Mediterranean ports for re-shipment to Europe.[40]

Maritime transport

Maritime transport in the Mashrek countries is extremely underperforming due to major restrictions on trade, inefficiency, high costs and low private sector participation. Elimination of trade barriers could thus promote exports, raise local standards to international level, improve efficiency and competition, lower costs and integrate the region into global production networks. Ports functional structures consist the major barrier to trade in all countries. The separation of operational and commercial functions in ports, through the creation of landlord ports, instead of the existing state-owned ports where all activities are performed by the state, can allow for private participation and extensively facilitate trade.[41] The opening-up of commercial port services can improve efficiency, lower costs of cargo handling, warehousing and bunkering and increase the containerisation of cargo traffic (World Bank, 2003a: 162).

Trade liberalisation in this sector matched by regulatory reform and customs reform (as in the case of road transport) can lead to efficient competition between ports and service suppliers. Egypt for example can leverage its Port Said Port as a regional container port, while Palestine and Israel can develop feeder shipping into their own local ports. Similar patterns of trade can develop among Lebanon, Syria and Turkey. Jordan Aqaba port can serve Israel, thus allowing the latter to make better resource allocation of its limited land in Eilat for tourism. As mentioned earlier, competition between ports combined with connection of ports to rail and road transport can facilitate regional trade. The ports of Gaza, Ashdod and Haifa can serve southern Syria and Jordan for example. Liberalisation can also lead to intra-regional passengers maritime transport and have positive implications on both intra and inter regional tourism. It can also lead to trade in services such as warehousing, maritime insurance and banking.

[40] The Red Med initiative mentioned earlier is a good example of modes of transport linkage between several countries.

[41] For example, Jordan, the most liberalised country in maritme transport services among the Mashrek countries, still maintain trade restrictions and discrimination which include inter alia market access and

Air Transport

Air transport services are dominated by state-control and ownership, with the minor exception of Turkey and Israel where some competition and reduction of state-ownership was introduced. Palestine does not yet have an air transport sector. According to international efficiency standards, Mashrek countries are underperforming by 15 to 20 percent in relation to world average standards both in passengers capacity utilisation and freight capacity utilisation (Ibid: 159-160). Given the small domestic markets for air transport (with the exclusion of Turkey), most gains from trade liberalisation can be achieved in international air transport of passengers and freight (cargo transport is one of the fastest growing sub-sectors of air transport).

Liberalisation should be aimed at air transport and auxiliary services, such as ground handling and airport management. Greater competition through the liberalisation of air transport markets can allow Mashrek countries higher stakes in the carrying of goods with high value to weight ratio, perishable products and access to production-sharing networks, just-in-time methods and supply-chain management (Ibid.). Since the liberalisation of air transport is a sensitive area for reform, due to the sector's structure of holdings and ownership, employment and association with national security, liberalisation can be better achieved on a bilateral agreement basis or a regional air service agreement, as was done in the European Union.[42].

Turkish airports account for the lion's share of passenger air transport in the region. Four Turkish airports are among the nine busiest airports in the region in terms of passenger transport in 2000 (Eurostat, 2002). These airports are those of Istanbul (Ataturk), Antalya, Ankara (Esenboga) and Izmir (Adnan Menderes). Other major airports for passenger transport are Israel's Tel Aviv airport (Ben Gurion), Egypt's Cairo and Hurghada airports, Jordan's Amman (Queen Alia) airport and Lebanon's Beirut airport. Istanbul airport, Tel Aviv airport and Cairo airport are respectively the busiest airports in the region covering a broad range of passenger transport (which is

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national treatment limitations, such as foreign equity participation limitation in commercial presence, and discriminatory payments for non-Jordanians.

[42] European Civil Aviation Area (ECAA).

not only dedicated for the purpose of tourism travel, such as in the case of Antalya and Hurghada airports). Turkey, Egypt and Israel's comparative advantage in passenger transport services is also reflected by the number of airports which host more than 100,000 passengers per year (Ibid.). Turkey has 14 airports of such capacity, Egypt has 7 airports and Israel has 4. On the other hand, Syria and Jordan each has 2 airports of that kind, and Lebanon 1 airport.

Turkish, Israeli and Egyptian airports can transform into regional passengers transport centres for Lebanon, Jordan and Palestine. Liberalisation matched with privatisation and deregulation can lead to competition between airlines in the region and drive prices down, thus not only encouraging regional trade but also transit passengers aviation. Israel, for example, had liberalised some of its air transport market, which consequently led many Israelis to prefer to fly via Turkish operators to the Far East and Central Asia rather than with local operators.

Turkey, Egypt and Israel hold the same comparative advantage vis-a-vis other Mashrek countries in freight air transport. The amount of freight and mail shipped through their airports, as well as their annual average growth exceed by far those of the other countries (Ibid.). Liberalisation allows much scope for freight and cargo transport, especially for those countries; thus enabling just-in-time transport and other types of cargo to the rest of the region. Liberalistion will also lead to better competition with other modes of transport mentioned previously, which will drive specialisation processes and enhance effiency.

Financial services:

Financial services cover banking, insurance and securities, and represent a major sector in almost all economies. The significance of financial services also results from its indirect importance to other economic segments, as this sector serves as basic infrastructure upon which all economic activities nurture. Often, financial companies and players are engaged in wide ranging financial activities, although financial services are in many cases divided and classified separately due to government regulation (Masamichi, XXXX: 7). The financial services role in the economy has grown extensively in recent decades, partly due to the globalisation of financial markets and techonological developments. Financial services are traded through all

modes of supply, although commercial presence remains an important mode of activity.

All WTO Mashrek countries have taken GATS commitments with regard to financial services. However, the scope for further liberalisation is immense as restrictions on trade are still considerably high. Market access restrictions include inter alia limitations or full prohibition with regard to the number of suppliers, transactions' value, number of operations and number of natural persons, types of legal entity allowed, and participation of foreign capital. National treatment limitations are also numerous and include among other requirements for registration, authorisation, performance, nationality and residency, technology transfer and local content and training, as well as favourable tax measures, subsidies, grants, standards and qualifications and other financial measures. Egypt, for example, restricts the type of activities that can be performed by foreign banks, as well as their ability to supply banking services through a cross-border or consumption abroad basis. In addition, an economic needs test applies for setting up a commercial presence. In Turkey, restrictions and limitations exist in regard to the legal type of entities allowed to be established in the securities market. Israel prohibits cross-border active soliciting and marketing of insurance of all kinds, and Jordan restricts access for reinsurance and retrocession supplied under commercial presence to specific legal entity forms. With the exception of Israel and Turkey, and Lebanon to a lesser extent, financial markets are still underdeveloped and are mostly dominated by the banking industry.

Almost all Mashrek countries have started reforming and liberalising their financial markets, [43] although much liberalisation can still be achieved. Thus, scope for further gains from trade liberalisation are extremely high. The banking system is the major area where trade liberalisation can attain substantial benefits. In Jordan there are sixteen banks and five investment banks, Lebanon enjoys a high degree of liberalisation in its banking regime and consequently good competitive performance although the government still plays a significant role on the borrowing side, in Egypt the banking sector is mostly dominated by four state-owned banks, the Israeli banking

[43] Syria is a notable exception to this process. For example, 95 percent of domestic bank assets is held by state-owned banks.

system is highly concentrated along with significant government holdings, [44] in Turkey three state-owned banks make a substantial portion of the banking system although its relative openess has led eighteen foreign banks to enter the domestic market, the government owns most and major banks in Syria and private activity is rather restricted. Lebanon, Jordan, and Israel would most likely benefit from regional liberalisation of banking trade, as their developed and relatively open banking infrastructure has led to a greater competitiveness of their private banking sector. Trade liberalisation will enhance competition, thus allowing access to finance at competitive costs, expand firms' capacity and export opportunities, enhance efficiency through foreign banks participation, create spillover effects of modern financial techniques and benefit small and medium enterprises (World Bank, 2003: 171-173).[45] Liberalisation of trade can also allow to reap economies-of-scale, introduce new financial products, allow investors to hold more diverse portfolios, raise governance standards and risk diversification (Muller-Jentsch, 2003: 50-55).

Since the financial market is highly regulated due to prudential and economic stability reasons, liberalisation should take into account the need to adopt international standards in banking, insurance, accounting and securities. According to Masamichi and Schuknecht, the dual objective of benifitting from trade liberalisation while safeguring financial stability can be achieved through embarking on a liberalisation process which promotes trade in a broad range of financial instruments, removal of barriers to commercial presence and local establishments of foreign financial institutions and improvement of transparency, regulation and supervision (Masamichi and Schuknecht, 1999).

It is most likely that Lebanon, which used to be a major financial centre in the Middle East, as well as Israel and Jordan, will become net exporters of financial services to the other countries of the Mashrek, including Turkey. The potential of banking services had already been mentioned, and can encompass deposits, lending (in

[44] Although Israel has a highly developed financial sector by regional and international standards, there is much scope of trade gains from trade liberalisation, as the financial market is significantly concentrated (the banking sector is largely dominated by a duopoly of two major banks, with cross holdings in the insurance sector, which is also characterised by a small number of insurance groups).

[45] Small and medium enterprises (SMEs) can benefit from greater amount of lending on lower interest margins, as well as from deeper specialisation of the banking sector which can provide them with newer opportunities aimed specifically at SMEs.

particular for commercial financing), financial leasing and trading, money transfering, and trading of various sorts (such as exhange rate and interest rate instruments).

Given Egypt and Turkey's comparative advantage in certain aspects of maritime transport services, they are likely to export maritime insurance to the rest of the region. Other types of insurance, such as life or health insurance will probably be exported by Lebanon and Israel.

Large scope also exists in the securities market. Dual registration agreements between stock exchanges, in particular vis-a-vis the Lebanese and Israeli bourses and removal of financial trade barriers can lead to growing trade in all sorts of financial instruments, such as derivative products, securities and other negotiable instruments and financial assets. Lebanese and Israeli companies can export under-writing, agent placement, money broking and investment management and consultancy services. Closer integration of financial markets will also help foster regional trade by expanding the private sector's capital raising capacity in the open markets.

The prospects for regional trade in financial services will grow with the spread of ICT services, that will allow the customers and suppliers better access and competition. Although, a potential net exporter of financial services, Israel is likely also to consume financial services from other countries, like Jordan, Lebanon and Egypt, as the Arabic language can play as an incentive for Israeli Arabs. Intra-service trade will also develop between Lebanon, Israel and Jordan as sophisticated customers will try to maximise their profits with further market liberalisation.

Health services:

Despite its large share of GDP, health services contribute very little to countries' external trade, as most of the health sector is dominated by the public sector. Cross border provision of health and social services is mainly discouraged by institutional

arrangements and monopoly rights, as well as regulatory restrictions (WTO, 2001: 369).[46]

GATS commitments taken by WTO Mashrek countries in health and social services remain very limited. Jordan and Turkey are the only countries which committed themselves to some extent in this sector. Israel and Egypt have not yet listed commitments. In the case of Jordan, it had bounded itself almost fully to hospital and medical services and to services provided by midwives, nurses, physiotherapists (excluding mode 4). However, commitments opening trade in medical services exclude market access under commercial presence and movement of natural persons for physicians who are not Jordanians. Dental services are excluded as well. Limited commitments were taken in medical labs and social services that comprise nursing and convalescent homes, as well as rehabilitation centres. The possibility for the movement of natural persons is rather narrow, and there is a specific demand that at least 3/4 of the professional staff (physicians and nurses) will be of Jordanian nationality. Jordan had also taken two MFN exemptions demanding reciprocity for medical labs and pharmacists.

Turkey confined itself to hospital services, with the requirement that foreigners who wish to establish private hospitals obtain the permission of the Ministry of Health. No commitments were taken in regard to movement of natural persons in hospital services. Israel and Egypt, as mentioned above have not committed themselves to health and social services.

[46] By the starting point of the WTO Doha Round negotiations, just a little more than 50 countries had

Table: 3.8

	Health expenditure (Public % of GDP 1995-99)	Health expenditure (Private % of GDP 1995-99)	Health expenditure (Total % of GDP 1995-99)	Health expenditure per capita ($) 1995-99	Physicians (per 1000 people, 1990-99)	Hospital beds (per 1000 people, 1990-99)
Egypt	1.8	2	3.8	48	1.6	2.1
Israel	6	3.6	9.5	1607	3.9	6
Jordan	3.6	3.8	8	139	1.7	1.8
Lebanon	2.2	9.7	12.1	469	2.1	2.7
Palestine	-	-	-	-	-	-
Syria	0.9	1.6	2.5	116	1.3	1.4
Turkey	3.3	1.4	4.8	153	1.2	2.6

Source: The World Bank, World Development Indicators 2002

Table 3.8 reveals the missed potential of trade in health and social services among the Mashrek countries, Turkey and Israel. Taking the number of physicians and hospital beds as production factors for health services, it is easy to note that Israel has a comparative advantage in producing health and social services. This can be attributed to the high level of technology and education in the country. On the other hand, it is also evident in regard to Israel that the public health expenditure as a share of GDP is almost twice as much as the share of the second highest ranking expending country (Jordan). Lebanon, as well has a comparative advantage vis-à-vis the rest of the countries in the region producing health and social services.

Given the geographical proximity, removing regional trade barriers on health and social services can facilitate trade through reducing health costs and prices; cut government expenditure and enable resources shifting to other policy areas, by allowing cross border private entrepreneurship and movement of natural persons; improve the quality of the services provided; allow movement of patients, physicians and other professionals, and make basic and advance health services available where they are scarce, thus allowing greater access to medical and health treatment, and the raising of the standard of living. Specifically, Israel and Lebanon will specialse in

bounded themselves in health and social services (Adlung, 2002a)

exporting sophisticated and expensive health services and can serve as regional medical centres, open for patients from the other countries, which can also become regional physicians training centres. Another possible avenue of trade export potential for Israel and Lebanon is e-health services, where medical treatment can be physically given in one country and analysed in a different country. Since analysis of medical tests and other examinations is rather costly and depend on expensive equipment and highly skilled labour, opening-up for competition of the regions' health markets for cross-border supply of e-health services can result in cost reduction, better efficiency and faster treatment. Intra-service trade can also develop in this field between Lebanon, Jordan and Israel in particular in distance surgeries services.

Egypt, Turkey, Syria, Palestine and Jordan can export nursing and care services, which for example can substitute the already existing large imports of such services by Israel from the Philippines and Romania. Palestine and Jordan can export dental services to Syria and Israel.[47] Egypt is already importing ophthalmology services from Turkey, and the latter can extend its exports to other countries such as Syria and Jordan. Health tourism is another area where health services can be supplied coupled with tourism and recreational services. Syria, Jordan and Israel have a strong potential of exporting health tourism services, as healing springs are located along the shores of the Dead Sea and the Sea of Galilee.[48] Regional cooperation in this field can be achieved by Syria, Israel and Jordan at their triple border jointment, for the establishment of a major health and tourism centre.

3.4 Conclusions

Financial, transportation, health and information and computer services specifically dealt in this chapter, are not the only services sectors likely to benefit from trade liberalisation. Major gains from trade can be achieved in other infrastructure services, like telecommunications, and construction. These sectors have economy of scale features and can lead to regional joint ventures in the region and in third countries

[47] Before the outbreak of hostility between Israel and Palestine, Israelies used to travel to Palestine for low-cost medical treatment services. In addition, it should be noted that rising insurance costs in countries like Israel can have an offsetting effect on the consumption and supply of services, and Israelis may import less advanced but low cost health services from other countries in the region.

(like in the Maghreb, Gulf, African and Asian countries). Other areas where trade can be facilitated are distribution services, tourism services and various modes of business services.

Given our findings, trade liberalisation of services will benefit the region in both directions of imports and exports, as well as create intra-service trade. Variaton of development levels, will effect trade and it is not surprising that Israel is most likely to benefit the most from trade liberalisation of services in terms of exports, as happen also in other North-South trade relations.

Trade potential in services among the Mashrek countries is yet to be exploited, and possible gains from trade are extremely high, and can lead to greater market efficiency, competitiveness, employment and cost reduction. Given the services unique feature of needing physical proximity for their provision, simultaneous production and absorption, and the impossibility of storage, removal of trade restrictions in the area can maximise countries' trade potential by leveraging the geographical proximity and the almost non-existence of language barriers.

WTO accession of Lebanon, Syria and Palestine as well as deepening of GATS existing commitments in Turkey, Jordan, Egypt and Israel can be a useful tool for such liberalisation as it gives a clear and positive signal on a multilateral basis for investors and markets. Further commitments in the WTO arena will also facilitate future scope for enhanced regional integration in services, and adherence to international standards and best practices.

The most effective approach of liberalisation can be in the form of bilateral or multilateral free trade areas in services, subject to the GATS article V exemption from the MFN clause. However, given the present level of trade liberalisation in each country, a more rational approach will be the gradual autonomous liberalisation of trade in each country, with or without WTO binding.

[48] These services are of particular sought by people who suffer from dermatological problem (like psoriasis).

Although regulatory reform in services and related areas were not within the scope of this paper, it should be emphasised that trade liberalisation must be complemented with and parallel to extensive regulatory reform in all countries. In this context liberalisation should be regarded as a mean for anchoring internal regulatory and market reforms.

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Chapter IV: Foreign Direct Investments

4.1 A survey

In recent decades, the free movement of capital has become one of the most important features of the global economy. Thanks to the development of new telecommunication technologies, the level of uncertainty related to international investments has substantially been reduced and capital mobility has dramatically increased. International investments enable investors to increase their profits by investing in higher return ventures abroad, and at the same time, provide entrepreneurs with the required capital at the minimum cost. Without the existence of international investments, economies poorly endowed in capital are not able to grow beyond a certain size and fully realize their economic potential. Special attention is commonly given to real investments, so called foreign direct investments (FDI), due to their long-term feature. FDIs do not only provide the receiving economy with new capital, but also new technologies, management skills, foreign distribution networks, and so on.

Investments are directly related to macroeconomic features, such as trade, structural economic reforms and privatization. Like commercial flows, FDI direction is not necessarily one way; a country can be both a destination and a source of foreign investments.

Table 4.1 shows FDI inward and outward flows and stocks into and from the Mashrek countries Turkey and Israel. As we can see, average yearly total FDI inflows into the countries of the region from 1998-2002 were no more than $US 6 billion and average yearly FDI inward stocks from 2000-2002 were only $US 68.8 billion. Looking at Table 4.1, one can also see the large variation between the discussed countries, where Israel and Turkey received almost 75 percent of total FDI that flowed into the region and the share of Israel, Egypt and Turkey in the total inward FDI stocks was more than 90 percent.

More relevant for our inquiry as to the economic cooperation potential among

the Mashrek countries Turkey and Israel are FDI outflows. A country, which is a substantial source of FDI can become a supplier of finance for economic projects in other countries in the region and can generate economic growth in the area. Table 4.1 reflects the low level of investments outflows from the Mashrek countries Turkey and Israel. Yearly total FDI outflows from the countries of the region from 1998-2002 were only $2.1 billion and the average outward FDI stocks from 2000-2002 were not more than $14.7 billion. This comes as no surprise since all the discussed countries are capital scarce economies. Therefore, they are receivers rather than a source of FDI. As a result, one can conclude that economic cooperation potential between the MNMCs in the field of investments is relatively limited and is not relevant for most of these countries.

Nevertheless, similarly to FDI inflows, the Mashrek countries Turkey and Israel significantly differ in the level of FDI outflows – while the total yearly average of FDI outflows from Egypt, Jordan Lebanon from 1998-2002 were only $103 million, Israel's and Turkey's yearly FDI outflows average were $1.5 billion and $0.5 billion respectively. The FDI outward stocks features also reflect this heterogeneity – Israel's and Turkey's share is more than 93 percent.

Table 4.1: Inward and Outward FDI Inflows and Stocks From and Into the MNMCs

	FDI Inflows (1998-2002 average)	FDI Outflows (1998-2002 average)	FDI Inward Stocks (2000-2002 average)	FDI Outward Stocks (2000-2002 average)
Egypt	907	35	20,145	673
Israel	3,013	1,507	24,643	9,917
Jordan	282	9	2,343	0
Lebanon	219	59	1,368	334
Turkey	1,402	511	18,429	3,798
Syria	209	0	1,911	0
Region total	6,031	2,120	68,838	14,721

Source: UNCTAD

Indeed, Turkish companies have been involved in investments in Jordan such as the nitric acid factory construction and the potassium nitrite production plant near the Dead Sea. In fact, Bromine Plant construction project had the priority for Turkish firms in recent years. Additionally, the Atilla Do_an Company undertook the $80 million Magnesium Oxide project for the Jordan Magnesia Co., which was completed in 2000; and the Turkish company IMA has been involved in several investments in the field of manufacturing in Jordan such as the $3 million- sunflower production factory, the $1.7 million starch factory and the $204 million- brass factory constructions.[49]

On the other hand, Israel's outward investments are mainly in the field of technology and human-capital intensive industries and their main destinations are North America and Europe (OECD, 2002) and therefore the countries of the region apparently are not a potential direction for Israeli FDI. However, since the early 1990s the Israeli economy has been going through a profound economic transformation that indeed has led to Israeli investments in its neighbors. In the 1990s, as a result of a highly skilled and educated immigration wave, which further increased Israel's human capital abundance, and a government scheme for exposing the Israeli economy to expanded foreign competition, the Israeli economy underwent a profound restructuring process. Besides the overall economic growth related to them, these two developments have led to a shift of the Israeli economy toward the development of capital-intensive sectors and have led to a huge development of the technological-intensive sector at the expense of traditional low-tech industries (in relative terms).

Exposing the Israeli economy to foreign competition has led to the loss of competitiveness in domestic markets of many labor-intensive factories, which had formerly been protected. This has led to the closure of many factories and put many others under a closure threat. Some firms have gained back their competitiveness by relocating parts of or even whole production processes in other countries among which are Jordan, Egypt and Turkey, where labor costs are substantially lower than in Israel. Indeed, Delta Galil, the Israeli based textile corporation has 4 sewing plants, a cutting plant, a fabric manufacturing plants (owned and outsourcing) and a logistic

[49] DE_K(Kasım 2000) "Ürdün Ekonomisi ve Türkiye -Ürdün Ekonomik _li_kileri":18-19

center in Egypt and 10 sewing plants in Jordan; The Israeli based textile company Bagir holds production facilities in Egypt, Turkey, and Jordan; The Israeli food corporation Elite has purchased the Turkish company Kocatepe; and the Israeli company Polgat Textiles was merged with the Turkish Guney Sanayi. Currently there is still a large number of uncompetitive labor-intensive factories in Israel. Therefore, there is a potential for further investments by Israeli firms in the region.

In this context of macro-economic evolution, one may consider the future accession of Turkey to the EU. Although this may attract more labor-intensive production to Turkey in the first stage, it can lead in the long run, as income and salaries in Turkey tend to grow, to the relocation of labor-intensive production in Mashrek countries.

Special attention should be given to the role of large trading blocks ability to promote inter-regional investments through commercial arrangements. Most notable example is the Qualified Industrial Zone (QIZ). The US Government, in its efforts to promote peace, has identified three qualified industrial zones, from which specific goods were permitted for export to the US under the Israeli-US FTA conditions, conditioned on the purchase of 8 percent of their inputs in Israel. This arrangement has attracted some 25 Far East manufacturers to Jordan and has been the main reason for the dramatic increase of Israeli exports to Jordan from $US9 million in 1996 to $US38.6 million in 2000.

4.2 References

DE_K(Kasım 2000), Ürdün Ekonomisi ve Türkiye -Ürdün Ekonomik _li_kileri.

OECD (2002), Investment Policy Reviews – Israel.

UNCTAD (2003), World Investment Report 2002.

Chapter V : Cooperation in Capacity- Building of Physical Infrastructure

5. 1 Introduction

Mediterranean non-Member Countries (MNMC) as a concept refers to a group of littoral states. The following states constitute the list of MNMC: Turkey, Israel, Syria, Egypt, Lebanon, the Palestinian National Authority, Tunisia, Libya, Algeria and Morocco. However, although she has no coastal line on the Mediterranean, because of her geographical proximity to the reference group, Jordan is also often considered among the MNMC. In this study only the Mashrek MNMC are taken into research. Therefore, the focus of the study will be the Mashrek MNMCs, Israel and Turkey.

The MNMC in general and Mashrek countries in particular share a long history of trade links, which dates centuries back when much of trade in the region was internal.[50] In fact, there once was an integrated system of trade and commerce in the area until the British and French divided it into separate states, put up border crossings and initiated cumbersome customs restrictions among them.[51] However, despite their common history, common historical economic and commercial practices, the MNMC never regained the necessary and sufficient elements to integrate among themselves to take advantage of an era, which fully indicates benefits of cooperation and association with such examples as the European Union. Therefore, Mashrek countries have long been suffering from a negative integration syndrome. The countries in the group have always been in a state of relative deprivation so far as globalization is concerned. There have been various attempts of integration and cooperation in the area that covers the Mashrek since the 1950s. Nevertheless, most

[50] Kalaycioglu, Sema (2001) "Turkey's Economic Prospects in the Middle East" paper presented at the Middle East Studies Association (MESA) Conference in November in San Francisco: 115

[51] McCarthy, Justin (2001) The Ottoman Peoples and the End of the Ottoman Empire, Arnold, London: 186.

regional organizations that have been established proved to be ill born, and have failed to create concrete results.

When we review factors that lead to disintegration rather than integration among the Mashrek, Israel and Turkey we find out that they are not particularly different from the factors, which create deep rifts among other MNMCs in general. It is usually possible to observe eight important obstacles, each of which either work simultaneously or consecutively to ensure failure.

. The administrative systems are opaque;
. The political climate for reform and cooperation is unsupportive;
. The confidence among the ruling elites is shaky;
. The historical wounds are yet unhealed;
. The level of economic development is low;
. The economic diversification is limited, and the level of sophistication is unattained;
. The foreign economic relations are vertically clustered according to previous colonial ties. Consequently inter- regional trade and intra-industry trade are insignificant;
. The physical infrastructure, which facilitates integration among the MNMC is insufficient or incomplete.

Although, each factor mentioned above has equally contributed to the failure of economic integration efforts in the Middle East in general and among the MNMCs of the Mashrek, Israel and Turkey in particular, the first seven of these eight factors are not primarily the concern of this study. Nevertheless, the implicit assumption of this paper's approach would be that if all of those impeding factors were overcome, the infrastructure capacity building among them would work in favor of any prospective economic integration. Any attempt, which initiates joint efforts at bilateral or multilateral levels among the MNMC to achieve what are targeted in capacity building in infrastructure, will be considered as a by-product of differences settled in those seven - problem areas.

5. 2 The Current Outlook of Infrastructure in Mashrek Countries, Israel and Turkey

The actual state of connecting roads, airline routes, dams, nuclear power plants, internet connections, pipeline constructions, harbor facilities, and sea cargo fleets must be determined to find out how much more needs to be done and to what extend cooperation in capacity building in transport and communication may promote integration among the MNMC.

Table 5. 1: The Transportation Infrastructure in Mashrek MNCs

Country		Railroads	Ports and Harbors	Airports	Pipelines
	50000km paved roads mostly around the Nile Delta, to the cost and into the Sinai Peninsula. Also 14.016km unpaved roads. Egypt has 3500 km waterways including the Nile-Lake Nasser, Alexandria-Cairo and smaller canals in the delta.	Railroads around the Nile delta and Cairo are connected to Aswan and Salloum in the west.	Alexandria, Port Said and Suez. Suez is located at the canal, which is 193 km long. There are also Al Ghardaqah, Aswan, Asyut, Bur Safajah, Damletta, and Mars Matruh ports and harbors [7]	66 Airports with permanent surface runways, 2 of which have runways over 3700 meters long.	For crude petroleum pro and for natural
Israel[6]	Total 15.965km. All of it is paved	906 km railway system running between Jaffa-Jerusalem, Haifa and North to Tel Aviv. Regular international lines between Israel Egypt, Syria and Lebanon	Ashdod, Ashkelon, Elat (Eilat), Hadera, Haifa, Tel Aviv-Yafo	58 Airports 33 o which have paved and 25 of which have unpaved runways. Also has 2 heliports as of 1999 (http.//www.photius.com)	For crude oil: 7 For petroleum km and for Nat long pipeli Transportion 20
Jordan[1]	Network links connecting Amman to the rest of the country and to neighbors.	A major link connecting Ma'an to Saudi Arabi and to Aqaba. Amman-Damascus express railway service was launched in 1999*.	The Port of Al-Aqabah	2 Major Airports. Queen Alia in Amman and King Abdullah in Marka. 13 permanent surface runways one of which is 3700 m long.	Trans-Arabia (Tapline 20 carrying oil Arabia, through Mediterranea Lebanon and c to Al-Zarqa refi
	7300km, 6200 of which are paved	399km long of of which are damaged and unusable	Antlyas, Batroun, Beirut, Chekka, El Mina, Ez Zahrani, Jbail, Jounie, Naqoura, Sidon, Tripoli, Tyre.	7 paved and 2 unpaved airports.	72 crude oil pip not operating
Syria[5]	36.377km, the 26.299km of which is paved and this figure includes 877 km of expressways. Syria has 870km long waterways	2750km long railway route	Banias, Jabiah, Latakia and Tartus ports	According to the 1999 estimates there are 104 airports in Syria. 24 of them have paved runways. Syria also have 2 heliports	For crude oil petroleum prod
Turkey[3]	Total 382.397km, 95.599 km are paved, 1726 km are expressway	Total 8607km long and 1524 are electrified	9 ports in Gemlik, Hopa, _cel,Izmir, Istanbul, Samsun, Trabzon ,Alexandretta	118 Airports 82 of which are paved	1738 km crud petroleum proc natural gas.

Source: This chart is constructed by the author

.[1]http://www.milnet.com/milnet/pentagon/centcom/Jordan/jorinf.htm,

* http://jordanembassyus.org/061599006.htm

[2] http://www.milnet.com/milnet/pentagon/centcom/egypt /egyinf.htm

[3] http://www.photius.com/wfb2000/countries/turkey/turkey_transportation.html

[4] **http://www.photius.com/wfb2000/countries/lebanon/lebanon_transportation.html**

5 http://www.photius.com/wfb2000/countries/syria/syria_transportation

6 http://www.photius.com/wfb2000/countries/israel /israel_transportation.html

7 http://www.photius.com/wfb2000/countries/egypt/egypt_transportation.html

The following table shows the electrification rates in the countries of the MNMCs in detail.

Table 5.2: The Current Outlook of Electricity Access and Electric Power in MNMCs of Mashrek, Turkey and Israel

Country	Electrification Rate %	Population without Electricity million	Population wi Electricity Million	Electricity Production Kwh	Electricity Consumption kwh per capit
Turkey	96.0	0.6	67.3	124.922.003.456	1.479
Egypt	93.8	4.0	60.0	75.727.000.000	976
Israel	100.0	0.0	6.2	42.967.998.460	6.188
Jordan	95.0	0.2	4.7	7.000.000.000	178
Syria	85.9	2.3	13.9	13.400.000.000	900*
Lebanon	95.0	0.2	4.1	6.500.000.000	1.814*

Source: World Energy Outlook, 2002: 42, and http://devdata.worldbank.org/dataonline/

* 2000 figures

Table 5. 3: The Current Outlook of Telephones and Internet Conditions in the MNMCs of the Mashrek, Turkey and Israel as of 2001

Country	Telephone Mainlin (per 1000 people	Number Internet Users	Number of Intern Users in Tot Population %
Turkey	285	2.500. 000	0.036
Egypt	104	600.000	0.010
Israel	476	1.800. 000	3
Jordan	127	212. 000	0.043
Syria	103	60.000	0.0040
Lebanon	195	300. 000	0.060

Source : World Bank, World Development Indicators, http://devdata.worldbank.org/dataonline

Installation of telephone lines has been considerably problematic in many of the MNMCs until recently. In Jordan, Lebanon, West Bank and Gaza for instance it used to take subscribers almost a decade to get connected. The situation was almost the same for Egypt until cellular phones eased the situation.[52] So far as internet access is concerned Israel looks in much better shape than the other countries. Improvement in internet access in the region carries a good potential for communication, which may lead to frequent correspondence and cooperation in many areas from commercial activities to scientific research.

5. 3 The Need for Physical Capacity Building in Infrastructure among Mashrek Countries, Israel and Turkey

The idea behind improving infrastructure or physical capacity building within and between the NMCs of the Mashrek, Israel and Turkey is to accelerate development in respective national economies and to create interdependencies among them so that they cooperate for a better future in the sub-region. The possibility of

generating new and supplementary investments depends on financial resources. Potential investments in the region were estimated as $300 – 350 billion between 1997 and 2006.[53] The ability of each country in the sub-region to invest in infrastructure within itself and between itself and other regional countries may require pooling of financial funds, expertise, and technical know-how jointly. However, more then anything else, there is a precondition of having governments involved in infrastructure projects, since infrastructure projects often bear high costs. Nevertheless, a new form of interdependency can be created by the involvement of private sectors. Private participation in infrastructure including power, transportation, telecommunication, water and sanitation, and environment may promise more efficient methods of providing services to establish link between the regional economies and to improve lives of people. Private public partnerships are also among the possibilities by means of employing various operating methods like Built-operate-transfer (BOT). Efficient infrastructure is not only a regional or sub-regional necessity for the MNMCs of the Middle East but it is also an essential way to integrate to the global economy. When countries lack quality in infrastructure, manufacturing sectors cannot advance, and service sectors cannot function at all. Without well-functioning infrastructure, countries have difficulty in attracting domestic and foreign investors, as poor and inefficient infrastructure creates high costs. Moreover, it is not possible for the regional economies to integrate with the rest of the world through international trade when transportation and telecommunication facilities are not sufficiently advanced.[54]

If cooperation among Mashrek countries, Israel and Turkey in infrastructure takes place in many areas, revival of economic activities in the sub-region is likely to nourish prosperity, and peace. Economically cost minimization through scale economies is to be expected from such cooperation from various sources. Countries, which have comparative advantage in undertaking infrastructure activities, may provide low-cost and high quality services. If pooling of funds can be done through a commonly agreed upon sub-regional supranational authority to finance infrastructure

[52] Smith, Graham R , Nemat Shafik, Pierre Guislain, and James A. Reichert (1997)"Getting Connected Private Participation in Infrastructure in the Middle East and North Africa", World Bank Middle east and Nort Africa Economic Studies, The World Bank, Washington D.C:2
[53] Ibid: 2
[54] Ibid: 5

capacity building, waste and/or duplication of expenses will be avoided. It is theoretically possible to engage Israeli, Turkish, Syrian, Egyptian companies in joint ventures to conduct construction of various infrastructure projects such as roads, railroads, airports, harbors and port facilities, irrigation and desalination plants, pipelines and refineries, power plants, electricity power grids, hospitals and schools. Capacity building in such areas has enormous spillover effects on agriculture, manufacturing and service industries. These sectors and industries within are likely to benefit from such cooperation, when trade among the participating countries in such projects increase. Joint ventures in physical capacity building in infrastructure alone are likely to induce trade in goods and services, and generate trade-related investment as well. Furthermore they have the potential to provide a natural leeway for proliferation and diffusion of knowledge, information and skills.

Therefore cooperation in infrastructure can be regarded as an indispensable source of inter-regional coherence if can be fully taken advantage off. Cooperation of projects also envisages provision of financial sources within the region. Fortunately MENA countries, especially the ones, which have oil revenues, have been investing heavily in infrastructure in the form of new investment and upgrading of old structures. Nevertheless, the most important aspect of cooperation is the countries' joint efforts to initiate and complete infrastructure projects to yield sub-regional integration. Financial funds may be searched and provided from outside sources.

5.4. Two Different Approaches to Capacity Building in Infrastructure

Physical capacity building in infrastructure among Mashrek states, Israel and Turkey must be scrutinized from two perspectives. First of all, it is important to review existing treaties concerning capacity building in infrastructure among the countries under investigation to determine whether legal and institutional fundamentals of capacity building exist or not. Existence of such treaties may indicate the goodwill exchange among the countries under investigation. However, most of the time treaties may be defunct or inoperable in hands of political elites who do not actually follow the guidelines of such treaties.

Secondly, cooperation in the area of physical capacity building infrastructure as an example of sectoral cooperation must be investigated through the following three areas:

. Building of connecting roads, harbors, railways, flight routes, and telecommunication jointly must be followed.

. Production and transfer of energy upon joint projects, such as electricity; natural gas and petroleum must be investigated.

. Effort of cooperation in the area of environmental protection in general and the rational use and sharing of water resources must be evaluated.

5.4.1. The Legal and Institutional Fundamentals of Capacity Building in Infrastructure: Major Bilateral Agreements

5. 4.1.1. The legal Background for Cooperation in Infrastructure

The legal fundamentals of capacity building in infrastructure concern treaties, which are signed and ratified at bilateral and multilateral levels between Mashrek countries, Israel and Turkey. Important treaties, which facilitate cooperation in capacity building in infrastructure, are taken into account in this part of the study. Most of the treaties, which have been signed and/or ratified among the MNMCs since 1950s on are bilateral. Furthermore with the exception of few they are either born defected or became defunct immediately after being signed, or if signed they have not been ratified to become operable. Nevertheless since they somehow indicate areas of common interest and give clue for which country pairs or trios may cooperate in what areas, it is important to review the treaties of the last decade or so.

Basic Treaties between Turkey and Israel to Facilitate or Establish Infrastructure

Turkish- Israeli economic cooperation efforts are not sufficiently exhausted even after the free trade agreement between the two countries was signed in 1996. However, two most diversified economies of the region have engaged in various agreements, which may be related to infrastructure- building since the second half of the 1990s. Israel as a regional country, which is well-endowed in high-technology in irrigation, education, and training in agricultural activities holds an invaluable source of opportunity for Turkey in the implementation of its ambitious South Eastern Anatolian Project (SEAP or GAP) energy and irrigation project. Nevertheless, the relationship between the two countries was confined to several committee meetings of both private sector representatives and public delegations and did not result in any treaty or agreement to establish the legal background of cooperation in Agro-industry. However the importance of mutual approach in that area was that it basically involved private companies and/or related associations. Purchases of know-how in irrigation technologies also concerned private parties, and results have been reported to be fruitful especially in Koc-Ata commercial farm establishments in Urfa- Harran area. In financial terms Israel granted a $70.000 funding to the SEAP for irrigation technologies, and a $60.000 funding for wastewater recycling.[55]

[55] GAP(1997): Southeastern Anatolia Integrated Development Project: 3

One of the most important treaties signed between Turkey and Israel concerned water sales from Manavgat spring of southern Turkey to Israel. A project which went beyond the controversial "peace water" sales from the Euphrates-Tigris river basin to Syria and to Israel seemed to be a promising project. The legal document was signed between the respective foreign ministers of Turkey and Israel[56], resulting in a multi-billion Dollar worth of investment to the Turkish government. The treaty was also linked to the Turkish-Israeli military cooperation treaty, which involved sales of military equipment to Turkey from Israel.

Basic Treaties Between Turkey and her Mashrek Neighbors to Facilitate or Establish Infrastructure

Turkey has bilateral legal documents, which regulate and ensure economic cooperation with Egypt, Jordan, Lebanon and Syria. There is one major multilateral treaty on the other hand, which was signed in 1989 between Turkey, Egypt, Syria, Iraq and Jordan to connect the electric systems and facilitate energy trade between those 5 countries. This treaty is a complementary part in the General Trade, Bilateral Establishment, and General Interconnection Treaties. All participants with the exception of Iraq signed those three treaties.[57]

Other than the trade agreements and the agreement on the avoidance of double taxation there are agreements to regulate and facilitate maritime (1988), air (1993) and land (1994) transportation and cargo hauling between two countries. Economic and Technical Cooperation Agreement (1994), Agreement on Establishment of High Commission (1994) and Mutual Promotion and Protection of Investments Agreement (1996) either directly or indirectly establish relationship between Egypt and Turkey to initiate or facilitate cooperation in infrastructure building.[58] Most of the treaties and agreements were signed in 1980s and 1990s as a result of Egypt's new infitah approach. Furthermore, relations with Egypt accelerated upon the Free Trade agreement Turkey had to sign with that country as a result of Turkey's EU Customs Union commitment after 1996.

[56] Turner, William (2003) "Water Exports from Manavgat, Turkey", htttp://www.waterbank.com/
[57] DE_K(2003): "Suriye Ekonomisi ve Türkiye-Suriye Ekonomik ve Ticari _li_kileri": 12-13
[58] Ibid.

An important protocol of intention between Egypt and Turkey was signed in February 2000 for the construction of a natural gas pipeline under the Mediterranean to realize the exportation of 4 billion cubic meters of natural gas from Egypt to Turkey. The protocol has not been converted into a treaty yet.[59].

In 1990s Turkey signed several treaties and protocols with Lebanon, which potentially enable two countries to cooperate in physical capacity building in infrastructure. In 1991 Commercial, Industrial, Technical and Scientific Cooperation Treaty was signed. In 1993 a Joint Economic Committee Protocol was signed. The Joint Transportation Commission Protocol, the Maritime Cargo and the International Cargo Treaties of 1994 followed this protocol. Additionally preparations of the Promotion and Protection of Mutual Investments were drafted between Lebanon and Turkey. [60] However, until today there has not been any development for the draft to become a protocol or a treaty. The first tour of the negotiations for the avoidance of double taxation treaty between Turkey and Lebanon was completed in Beirut in1996. However, because the second tour of negotiations has not yet been started, the draft of the treaty is still pending.

Despite the tense political relations between Syria and Turkey a series of treaties were signed between the two countries in the 1970s and 1980s. Among the bilateral treaties, the trade agreement of 1974, the bilateral air transportation treaty of 1976, the international land transportation treaty of 1982, the treaty on establishment of a Joint Commission in 1982 and the Long-term Economic Cooperation of the same year are important. However, because the persistent distrust between two countries with the exception of the land transportation treaty of 1982 no other treaty became fully operational. Furthermore since the latest Economic Cooperation Protocol of 1987, no other treaty or protocol has been signed between Syria and Turkey.

The railroad transportation between the two countries on the other hand has been regulated according to the Joint Treaty of the Middle East Railway Conference, the signatories of which are Turkey, Iran, Syria, Jordan and Lebanon.

[59] Ibid: 12

Jordan and Turkey have various treaties and protocols, which facilitate economic cooperation between two countries. Most of these are signed in the1980s and 1990s. Economic, Industrial and Technical Cooperation Treaty of 1983, The Treaty of Avoidance of Double Taxation of 1985, International land Transportation Treaty of 1988, and The Promotion and Protection of Mutual Investments Treaty of 1993 all seem to promote cooperation between Jordan and Turkey.[61].

Basic Treaties between Israel and her Arab Neighbors to Facilitate or Establish Infrastructure

One of the most important treaties, which was signed between Israel and Egypt in 1979 rekindled hopes for sub-regional economic cooperation. What followed the Camp David Agreement, and its aftermath consisted of several elements for cooperation from diplomacy to culture and military, from trade to joint efforts for establishing infrastructure, and from industry to agriculture. The treaty, which was highly effective in nominal and real terms until the outbreak of the Palestinian violence in 2000, actually stimulated few projects like transferring Egyptian oil through pipe line to Ashdod.[62]

Although the Egyptian authorities sternly deny signing a treaty to facilitate gas exports worth $3 billion to Israel, trade of gas between the two countries remain as a potential for the necessary infrastructure to be undertaken.[63]

On the other hand the Madrid Conference (1991) initiated cooperation between Israel and Jordan. The Madrid conference laid grounds for a series of 15 bilateral agreements between Jordan and Israel all signed and ratified to promote cooperation in areas of transportation, water and agriculture. The Irbid industrial zone[64] and the Hassan industrial Park in Irbid, the Eilat-Aqaba ones are among the

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[60] DE_K, 2002: 8
[61] DE_K 2000: 14
[62] ArabicNews.com (10.1.02) "Israeli Pipeline to margin Suez Canal"
[63] ArabicNews.com (2.15.2001) "Cairo Denies signing gas exports agreement with Israel"
[64] "Irbid Qualifying Zone" (Nov.16, 1997), Jewish Virtual Library, www.us-israel.org/jsource/Peace/Irbid.html

cooperation initiatives between the two countries. [65] A joint enterprise for marketing of agricultural products was established in the eastern Jordanian River Valley, to market agricultural products produced with the help of Israeli technology and know-how.

An environmental treaty was signed between Israel and Jordan in September 1995 particularly to protect the Gulf of Aqaba from pollution. The treaty was renewed between the two countries in 2000. It preserved the agenda of 1995 only adding a joint committee to give the treaty its final shape and to focus on the environmental impact of the projects around the Jordan River, as well as the impact of the Jordan Gateway industrial park and the Aqaba-Eilat airport projects.

Beyond these treaties, there is actually an Israel-Jordan Common Agenda, which defines the common interests of two countries on water security, facilitation of land and air transportation and communication.[66]

Jordan and Israel cooperate further to establish a qualifying industrial zone, namely the Irbid Qualifying Industrial Zone under the agreement, which was signed by the two countries in 1997. Although a qualifying zone may not be considered as an infrastructure project, the infrastructure such an industrial zone requires calls for recognition of the cooperative sprit that exists in the sub-region.

The two most important cooperative initiatives in the region between the Palestinian National Authority (PNA) and Israel were the Declaration of Principles (DOP) of 1993 and the Paris Protocol of 1994. The DOP aimed to bring economic growth, and upgrading of the Palestinian infrastructure like the connecting of roads between the West Bank and Gaza to ensure free flow of goods. As for the Paris Protocol, although the protocol itself did not make any reference to cooperation in infrastructure, it could have been utilized as a background agreement for cooperation in capacity building in infrastructure between Palestine and Israel. As a written document, the Paris Protocol seemed to give the PNA the authority to trade with

[65] "The Israel-Jordan Negotiations" in Jewish Virtual Library, www.us-israel.org/jsource/Politics/Arabs-html#Jordan

Israel as well as with the rest of the world and to control all ports under its jurisdictions.[67] However, the fragile political climate between Israel and the PNA at the time the protocol was signed, unraveled the shaping a road map for cooperation. In fact in the aftermath of the protocol the continuous military struggle between the two sides caused approximately $6billion worth of damage on the Palestinian economy by destroying much of its infrastructure.[68] The Paris Protocol was actually a contractual agreement between Israel and the PNA to establish a free trade area and a temporary customs union to ensure free flow of goods and services between Israel-the West Bank and Gaza. The protocol meant more than just a free trade area when services were included, and it became more of an economic union treaty when the intention of developing the Palestinian trade infrastructure as well as transport and administrative infrastructure was also mentioned. [69] As a part of the infrastructure, the creation of Industrial Zones at the dividing line of Israel and West Bank and Gaza was considered in the protocol in addition to the already existing industrial zone near Gaza.

Basic Treaties between Mashrek MNMCs to Facilitate or Establish Infrastructure

There is an attempt of forming a free trade area between Jordan and Egypt by 2004,[70] and free trade between Jordan and Syria. A memorandum and a bilateral agreement were signed between Egypt, Lebanon in 2000 to construct a $1billion - pipeline system between Egypt and Al - Arish city in Tripoli in Northern Lebanon. The pipeline will be passing through the Mediterranean then to Syria to make the Egyptian and the Syrian natural gas marketable in Turkey and Jordan.[71]

Governments of Syria and Lebanon signed a treaty to construct a natural gas pipeline to transfer Syrian natural gas to be used in the Deir Ammar Power Plant in Lebanon in 2002. The pipe-line construction could have got through Israeli territory

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[66] "Israel-Jordan Peace Treaty" Annex IV in Jewish Virtual Library, www.us-israel.org/jsource/Peace/annex4.html and "Israel, Jordan Agree to Protect Gulf" ibid.
[67] Sadaqa, 2001
[68] Sadaqa, ibid
[69] www.pna.org/nad/html/economy1.htm
[70] Awwad,Rana (June 5 2001) "Jordanian -Egyptian Free Trade Area to Come into Being Earlier than Scheduled", Jordan Times, Amman, Tuesday: 1

as well. The same year in April another treaty was signed between Lebanon and Syria to construct a 30.000 mt -petrochemical plant in Damascus. The shareholders of this joint project are Syrian and Saudi companies. 20.000mt of what the plant will produce will be consumed in Syria while the rest is to be exported.[72]

The Egyptian government made an announcement in 2000 about Egypt's determination to meet the requirements for maintaining the electricity station destroyed during the Israeli occupation in southern Lebanon. A team of Egyptian experts started their operations to maintain the Bsalin power station, which meets the electricity need of the Northern Lebanon.[73] When the Egyptian -Lebanese Higher Committee met in 2001, they decided to increase the volume of mutual investment among the two countries and form a technical committee to encourage investments under the auspices of the Egyptian International Cooperation and Lebanon's Finance Ministries. The bilateral higher committee recommended giving preference to Egyptian electricity companies, when an international tender is to implement electricity works in Lebanon, and especially as regards the six-way power grid construction.[74]

Among the agreements that concern infrastructure in Syria, one of the most important ones is the agreement between the Syria Telecom and the Investcom of Lebanon. The tender, which followed the agreement, is designed to construct a GSM network in Syria to bring GSM services to 1.7million local residents in the next 15 years.

Another bilateral treaty between Syria and Lebanon was signed in April 2002 to construct a dam on the Nahr al Kabir River, which runs between the two countries. Syria will use 60% of the waters of the dam while Lebanon will use the remaining 40%. The projected cost of the dam is100 $million and Arab funds are being planed to finance the construction.[75] .

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[71] ArabicNews.com 2000
[72] DE_K 2003: “Suriye Ekonomisi ve Türkiye-Suriye Ekonomik ve Ticari _li_kileri”: 9
[73] ArabicNews.com 2000
[74] ArabicNews.com 2001
[75] Ibid

Three consecutive agreements were signed between Egypt and Lebanon in 1998 to unify standards to facilitate trade, to ensure cooperation in the field of marine transport and establish a joint free trade zone. [76]

Most recently an agreement was signed between Syria and Jordan on the joint construction of the Al-Wahda dam project.[77] In order to pursue the project with the contribution of both sides, special pass cards are to be issued for workers and joint committee members to enter Jordan and Syria freely during the period of constructions.

The Al-Wahda dam project is considered as an important channel for joint Arab cooperation in infrastructure. Jordanian- Syrian bilateral cooperation is promoted to include environmental projects in Wadi el Yarmouk, such as combating pollution, tourism and transport.

5. 4.1.2. Institutional Fundamentals of Cooperation in Infrastructure

The institutional fundamentals of cooperation in infrastructure primarily concern prime ministerial offices, ministries of foreign affairs, and finance, and depending upon which area of infrastructure that is targeted, it concerns either related ministries from all sides like ministries of agriculture, ministries of energy. There are also specifically designated public administrations in countries, which are directly involved in cooperation such as the South Eastern Anatolian Project Administration (SEAPA) in Turkey. Since infrastructure expenses often require bulky expenses, private company involvement if at all takes place following public decision- making and sponsoring processes. Bilateral treaties are always signed between governments anyhow. However, there are also multilateral institutional set-ups, which promote or promise to promote cooperation in infrastructure building between the countries under scrutiny.

[76] ArabicNews.com 1998
[77] ArabicNews.com 14.6.03

These organizations work under The Arab Unity Council in the Arab ME. The establishment of such organizations goes as far back as early 1960s, and 1970s. The Arab Union for Cement and Building Materials (1977), and Arab General Union of Insurance (1964) are two examples of the early initiatives. Many manufacturing unions were established in 1980s and 1990s. However, as of today the activities of many of them are frozen. This is an indication of the fact that initiatives at regional level under Arab identity alone cannot guarantee sectoral integration either. The Arab Iron and Steel Union (AISU founded by 43 companies of 12 Arab countries), Arab Union of Railways (founded by 10 Arab states), the Arab Air Carriers Organization (AACO founded by Arab League states) set examples for the most notable specialized sectoral organizations. Nevertheless, again activities of some of those organizations are either frozen or they do not serve their goal. On the other hand the Arab Monetary Fund and the Islam Development Bank are two organizations, which are quite functional since their foundation. Activities of the Islam Conference and the Islam Development Bank (1975) do not automatically qualify as sectoral cooperation institutions. However, they are international funds, which are mostly financed by Arab countries, and mostly used for sector-specific purposes. The mission- specific financing facilities of those two establishments may be considered functional not only on an economic level, but also considering that the influence of those two exceeded the boundaries of the ME to embrace all Islamic countries.

The Arab Monetary Fund (AMF), which is the ME counterpart of the IMF has been acting as a well functioning regional authority for pooling and dispersing funds among its members, and extending credit facilities with low interest rates and extended repayment periods.[78]

Arab Funds beyond the AMF and some Arab Banks are also institutionally designated to promote regional cooperation among the ME countries in general and the Mashrek Arab states in particular. Among these institutions funds do create finance for capacity building in infrastructure. They especially target the funding of inadequate infrastructure, enhancement of energy, transportation, and water sanitation and communication fields. The Organization of Islamic Development, Arab Monetary

[78] Arab Monetary Fund Annual Report 2000

Fund, Arab professional chambers of various kinds may and do act as either sponsors or organizers of cooperation among Mashrek countries.

Among the multilateral organizations, which also included Israel and Turkey into its cooperative prospects, the MENA Summits constitute the most important organization. Although MENA Summits also included the Gulf States and the states of the Maghreb, they particularly provided vision for what could be plausible. Therefore, cooperation between Jordan and Israel, Syria and Turkey, Turkey and Israel as well as Gulf States and Israel immediately entered into agenda of summits. The Casablanca, the Cairo, the Amman summits of three consecutive years between 1994 and 1997 were not only few steps forward for what was called the privatization of the peace process; they had also concrete goals and projects to take advantage of the potentials of non-Arab participants of events like Israel and Turkey for sub-regional as well as regional cooperation.

The World Bank, the International Finance Corporation, the European Union are also among the organizations, which often provide complete or partial funding, technical assistance for projects in the area to turn it into an economically self sufficient region or sub-region. The role of institutions will be revisited as the study progresses.

5.4.2 Cooperation in Physical Capacity Building between Mashrek Countries, Israel and Turkey

Although there are constant political and military frictions, it is not surprising to find sub-regional infrastructure projects, which are jointly drafted, organized, administered and completed among the MNMCs. This part of the study deals with sectoral cooperation in the following areas:

5.4.2.1.Cooperation in the domain of Agriculture

Agriculture holds potential for sub-regional cooperation. Currently such opportunities are partially exploited at bilateral levels. When cooperation in

agriculture gets into the picture, Turkey, and Israel appear in the limelight. In fact, in agriculture, the most important cooperation seems to be between Turkey and Israel, in the implementation of the South Eastern Anatolian Project (SEAP) since 1995. That cooperation covers animal husbandry, vegetable seed production, fertilizers and transfer of irrigation technologies from Israel to Turkey. The GAP project also necessitates cooperation in the area of transfer of training and education to be provided to the farm population in Turkey about how to use fertilizers and irrigation. A few Israeli firms are currently active in irrigation projects in Turkey. They also get involved in irrigation equipment; production and irrigation systems, agricultural and medical equipment production, and seed and fruit juice concentrate production.[79] . Jordan is another country in the region, which actually and potentially cooperates with both Turkey and Israel when agriculture and irrigation are subjects for cooperation. Turkey seems to be investing in agro - industries of Jordan in recent years.

5.4.2.2. Construction of transport routes and establishment of telecommunication lines to promote cooperation

Construction of transport routes and telecommunication lines establishments are other areas, which offers opportunities for cooperation to the sub-region. It not only increases prospects for an integrated sub-region, but also promotes cooperation in capacity building in infrastructure at both planning and construction levels. Lebanon is one of the countries among the MNMC, which long suffered the destruction of civil war, the political violence and the aftermath of foreign invasion in its south. However, the reconstruction of the country's infrastructure has mostly been granted to companies, which are not from the region or sub-region. There are limited joint ventures with sub-regional companies, giving of tenders to other MNMCs for infrastructure investments, or utilization of regional funds for restructuring.

The Horizon 2000 restructuring program so far helped the completion of electricity, water, telecommunication and transportation infrastructure of Beirut

[79] DE_K (Kasım 1999) "_srail Ekonomisi ve Türkiye _srail Ekonomik _li_kileri"

and its close vicinity. The highway construction, which will be connecting the north Beirut to the Syrian border, and the waste- water treatment and sewage project were to be completed by 2004. The financial envelope of those two projects is estimated as $ 233 million and foreign credits are required. The Lebanese Development and Construction Council, has been searching for external funds to start the rehabilitation of south Lebanon and Bekaa valley.[80] There has been a revival in the reconstruction of infrastructure in Lebanon since 2001.

Despite the fact that some of the facilitating treaties are still pending, some Turkish Construction Companies are currently undertaking infrastructure investments in Lebanon. Turkey has been closely observing various projects in Syria to establish partnership with it. One of them is the rehabilitation project of the Latkia Harbor. The STFA Construction Inc. has also met the pre- conditions for the construction of the waste- water discharge system of the Saida Harbor in Lebanon.[81]

Transportation is a sector, which often involves Turkey since Turkey is a country, which represents a western gate of the region to the Balkans. Turkey has been signing and ratifying treaties to collaborate with her ME neighbors to her south to connect her national air, and land routes to the region. For that purpose, Turkish companies engage in cooperation attempts with their MNMC counterparts. Since 1951 arrangements were made to accommodate reciprocal airline transportation between the Israel and Turkey. Furthermore, in recent years, 5000 long vehicles have been operating to transport goods between Izmir, Mersin, and Haifa with connecting sea liners. Ro-Ro transportation has also been under consideration between Turkish ports and Ashdod.[82] However, to make the project more feasible the participation of Jordan is also expected and encouraged.

Jordan has a unique location to collect, and distribute transport routes coming from all directions in the Arabian Peninsula. Therefore, Turkey and Jordan must cooperate to modernize and coordinate road, rail and air transportation. In fact, since 1998 there have been quite a bit of efforts spent

[80] DE_K 2002
[81] Ibid

between Jordan and Turkey to improve the land transport conditions to facilitate regional trade between the two countries. To lower the transportation costs from Turkey to Aqaba and the Gulf, Turkey expects Jordan to reduce the tolls, and ease customs bureaucracies. Jordan also cooperates with Israel in the transport sectors. The Haifa-Irbid-Dead Sea-Red Sea railway line is a freight transport facility, which connects the Mediterranean to the Red Sea.[83] At the regional level, the Regional Economic Development Working Group (REDWG) had taken a strategic decision between Egypt, Jordan, Israel and the Palestinian Authority to cooperate in the development of the region's transportation and communications infrastructure. They have established a special infrastructure committee to follow matters concerning transportation and communication. [84] Unfortunately REDWG activities are paralyzed for a number of years.

"The Road Map to Peace" needs to be fortified by the construction of connecting roads, which may facilitate passenger and haul traffic so that the sub-region can be integrated as a trading zone. Israel has been aware of the potentials of a number of projects in road construction. These projects foresee the construction of a road connecting Egypt, Israel, Jordan and the Palestinian Authority, as well as the Haifa-Jordan highway; Amman-Jerusalem-Ashdod highway; and a central corridor network linking Syria, Lebanon, Jordan and Israel. However, Israel views the construction of a cross Israel highway as an essential component of all those projects.[85]

Among the 8 railway projects, the Israeli government has been trying to implement, there are 3 railway lines to connect Israel with the neighboring countries. [86] Neighboring states also view those projects as a part of a future railway network of the Middle East. The implementation of such an interregional project is based upon the following sub-projects:

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[82] Kalaycio_lu, Sema(2001) "Turkey's Economic Prospects in the Middle East", MESA, SanFrancisco: 9

[83] "Regional Cooperation, Infrastructuring the Future"(2001), Ministry of National Infrastructure of Israel:1.

[84] "Transport Sector" (2002): http.//www.mop.gov.jo/mena/mena1996/transport/introduction.html.:1

[85] **"Roads" (2001), http://www.asiatradehub.com/israel/roads.asp: 10-12.**

[86] ibid:4

- The Beer Sheba – Aqaba (Zin Elate) line the project cost of which is estimated as $200million;
- The Ashkelon –Gaza Line the estimated cost of which is $30 million. [87]

Turkish - Syrian transportation facilities need to be improved as well. The 1982 transportation treaty and its protocols regulate land transportation between Syria and Turkey. Transportation between Turkey and Syria does not only concern passenger and vehicle traffic, but also live animal trade necessitates regulation of transportation according to the specific needs of this trade. Therefore, if transportation infrastructure were to be completed between Turkey and Syria trade of goods and services between the two countries would probably improve.

There is also the air and railroad transportation between Turkey and Syria, which needs to be made more operational with the help of more peaceful relations. Turkey-Iraq-Syria- Lebanon can be easily connected with the railroad system, which naturally promote trade among those four and most likely another four to six countries in the vicinity. Despite the thorny relationship, land and railroad traffic between Turkey and Syria have increased since 1997. Furthermore, as of summer of 2001, Turkish Airlines have started to make twice- a- week and Syrian Airlines have started to make once-a-week flights between Istanbul and Damascus. [88]

Another project at sub-regional level in the area of transportation is the MED-TRANS, which involves Syria, Palestine, Jordan and Egypt. The MED-TRANS has many objectives among which transport data collection, upgrading of road, railway and port systems and developing common transport language seem to be the most important ones.[89] Individual countries have been providing

[87] ibid 4
[88] DE_K (Haziran 2001)," Suriye Ekonomisi ve Türkiye –Suriye Ekonomik _li_kileri":12
[89] MESTAD Program (June 2000)," MED-TRANS Project on Transport Statistics, Sub-Regional Monitoring Meeting":2

transport data for information sharing and cooperation since 1997. However, reliability of private sector transport data seems to be a problem.

There is another example of joint -venture in the area of transportation between Syria and Jordan. The Jordan- Syria Land Transport Company, though closed the 2001 fiscal year with a loss is determined to make it more functional and reduce the loss by 25% in 2002. This did not discourage the foundation of a Jordan-Syria maritime company, which is planning to modernize its trucks and fleet rapidly.[90] Transport ministries of Syria, Lebanon and Jordan have been discussing on transport cooperation projects for the last 3 years intensively. As they refer it, the railways are the backbone of the inter-Arab transportation connections. Unfortunately, not much has been done to improve in the railway sectors since the destruction of the old Hijaz railway in 1916. The Hijaz Railway, which used to be the backbone of the Arabian Peninsula, connects Damascus, Syria, with Madina, Saudi Arabia via Jordan. It is a useful route for transporting passengers and goods from Syria, through Jordan to Hijaz.[91]

There is a daily passenger service between Amman and Damascus.[92] Therefore, the joint investment projects in railroad transportation between, Jordan,

Syria and Lebanon also include modernization of the old Hijaz Railway Line. The Agreement for that project was reached in 1960s between the 3 countries. However, no further efforts have been spent on the project since 1981.[93] The Jordanian authorities have been considering the possibility of extending the 300km-long new railway line to the southeast to Saudi Arabia and to the west to Israel. The idea is to link those to the Mediterranean costal- line transport systems.[94]

[90] The Syria Report (2002),"Improved Prospects for Syrian- Jordanian Transport Company":1
[91] Syrian Transport Ministry sets new objectives Nov 30, 2001, www.infomare.it/news/review/2001
[92] http://www.kinghussein.gov.jo/economy9.html
[93] ibid
[94] "Jordan: Transport and Communications"(2002), http://www.kinghussein.gov.jo/economy9.html

Regional Funds like the Arab Fund for Economic and Social Development (funding of the Arab Highway between Mdeirej and Chtoura) in Lebanon, and national funds like Kuwait Fund (funding of Beirut Eastern Entrances) are also providing financial support to railroad and road projects at country levels.[95]

A notable Turkish Construction Company, Mensoy Construction has completed a 515 thousand Dollar - bridge construction in Jordan. [96] Other Turkish firms are currently following the procurement of a 3-dock crane tender in Syria.

Telecommunication lines must be restructured, modernized, harmonized and connections among neighboring countries in the region must be completed. There are several projects to improve international communications in the region. They are as follows.[97]

- Installation of two submarine fibre optic cables , one connecting Tartous in Syria with Tripoli, and Beirut and Saida in Lebanon with Alexandria in Egypt are projected with a cost profile of $12million. These two fibre optic cables will have the capacity to handle 9000 simultaneous calls. The second cable is to connect Lebanon with Cyprus, Crete and France.

- Beirut and Damascus will be connected by another fibre optic and Radio transmission line the capacity of which is 189 simultaneous calls. The project cost is forecasted as $1.34 million.

5.4.2.3. Possibility of Electricity Market Integration among the MNMCs

The Middle East in general and MNMCs in particular have been relatively fortunate so far as regional electrification rates are concerned. Statistics indicate that, as of 2000, 91% of the region had access to electricity. However, there

[95] Council for Development and Reconstruction (CDR)(March 2000), "Rehabilitation of Roads and services in the Southern Suburb":20
[96] DE_K 2000

is still a wide gap between urban and rural settlements. 98.5 % of the urban settlements enjoyed access to electricity in 2000, while only 77.6% of rural settlements had the same opportunity.[98]

Nevertheless, the region has been experiencing a dramatic growth in electricity demand, and infrastructures for the last 20 years.[99] The per capita electricity consumption varies from 845 kWh in Egypt, and 1.561 kWh in Turkey. However, having similar challenges to increase production, privatization of utility companies and marketing of electricity, the MNMCs have lots to benefit from cooperation, coordination of policies, and creation of a sustainable collective capacity to share among regional and/ or sub-regional partners.

How the MNMCs of Mashrek, Turkey and Israel produce electricity is also important to estimate the potentials of cooperation in the region. The following table shows the sources of electricity in MNMCs of Masreq, Israel and Turkey. However, since cooperation means transfer of energy reciprocally through interconnected lines, it is more sensible to see which sources the Magreb countries utilize for their electricity needs.

Table 5. 3: Sources of Electricity in MNMCs of Marshreq, Israel, Turkey and Maghreb 1998

Country	Electricity Production million Kwt	Hydropower %	Coal %	Oil %	Gas %	Nuclear Power %
Egypt	63.0	19.4	-	30.2	50.4	-
Israel	38.0	0.1	69.8	30.1	0.1	-
Jordan	6.7	0.2	-	89.6	10.2	-
Lebanon	8.4	9.4	90.6	-	-	-

[97] CDR 2000 op.cit:11-18
[98] "Energy and Poverty" (2002), World Energy Outlook, International Energy Agency: 17
[99] Sparrow, F.T., D.Engi, M. Al Salamah, B.H.Bowen, and et.al. (November 2, 2001) "The Economic Benefits of A Regionally Integrated Electricity Market in the Middle East" (Draft) Joint Research of partners from Purdue University in Indiana; King Fahd University of Petroleum and and Minerals in Dhahran, Saudi Arabia; American University in Beirut, Beirut, Lebanon; Isfahan Science and Technology Town in Isfahan, Iran, and Goteburg University, Goteburg, Sweden: 3

Syria	18.3	41.1	-	26.4	32.4	-
Turkey	111.0	38.0	32.1	7.1	22.4	
Tunisia	9.1	0.8	-	14.5	84.7	-
Algeria	23.6	3.2	-	3.5	93.3	-
Libya	19.5	-	-	100.0	-	-
Morocco	14.1	12.4	55.3	32.3	-	-
Iraq	30.3	1.9	-	98.1	-	-

Source: Worldbank.org/data/wdi2001/pdfs/tab3-9.pdf, World Development Indicators 2001

Açıkla

Technology allows opportunities for a MNMC power pool at minimum costs. Scale economies in production are the natural source of cost minimization. Therefore, the MNMC electricity production and trade through interconnected wires have been very important for the region from this perspective. The implementation of interconnecting the northern utility systems of Egypt, Jordan, Syria, Palestine, Lebanon, Turkey, Iraq and Iran with the southern utility systems of the Gulf area is expected to provide significant regional energy gains.[100] The largest electricity generating countries in the MNMCs are Turkey and Egypt. Most of the existing generation of the ME uses fossil fuels. However, countries like Turkey and Egypt use hydropower, thermal energy and natural gas.

The benefits of joint production and/or trade in electricity have long been recognized in the region. In fact there are already interconnected lines between Egypt and Libya, Egypt and Jordan, Syria and Lebanon, and Syria and Turkey.

There is also a five-country interconnection between Egypt, Syria, Iraq, Turkey and Jordan. The $239 million interconnection between Egypt and Jordan was completed in 1998. [101] The connection was done via underwater cable between Tabqa and Aqaba.[102] A Turkish firm undertook the construction of the Egyptian – Jordanian projects. Lebanon is already connected to Syria. The Syrian part of the project was completed at the end of 1999. Jordan and Syria are linked via 400-kilovolt cable, while Jordan and Egypt are linked via underwater cable in the Red Sea. Linking

[100] Ibid: 5
[101] Ibid: 12

Egypt, Syria and Jordan creates a network of a 45- gigawatt power pool.[103] The Syrian-Iraqi and the Turkish- Iraqi interconnected wiring systems were completed as of 2000. The Jordanian-Syrian- Egyptian grid link was completed the same year.[104] Therefore, Turkey, Jordan, Egypt, Syria, and Iraq have been fully linked by a common grid since 2002. However, political tensions spill over rational power pooling also. As a result for the time being Israel is excluded from the grid- linking project. Nevertheless Israel is in negotiating terms with Jordan so that it can also be a part of this vast project.[105] The southeastern flank of the grid-linking project also includes the Gulf States. Saudi Arabia-Kuwait, Saudi Arabia- Bahrain, Bahrain-Qatar, Qatar-UAE, and UAE- Oman interconnected lines look promising among the proposed options.

The trade of electricity offers further market externalities. It may go beyond the MNMC or the ME region. In fact there is an ambitious electricity project, which targets the entire Mediterranean from the Maghreb to the Mashrek. The project also seeks the participation of the Southern European and Balkan countries. This expansion is desired to conserve energy, to prevent power failures, and to distribute energy efficiently to avoid shortages.[106]

However, considerations of the MNMCs regional electrification projects do not pay enough attention to clean energy production. As it has been mentioned earlier fossil fuels are still consumed to produce electricity since the region is well endowed with oil.

Energy and Power Generators play an important role in the physical capacity building in infrastructure.

Cooperation in the area of physical capacity building in infrastructure in sub-regional energy and electrification is likely to create beneficial outcomes in the medium and the long run. There is an enormous need for strengthening the MNMC infrastructure, and according to the World Bank estimates, over a $370.000 million

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[102] " Jordan Looks to Increase and Diversify Energy Sources" (Jan.16, 02), Jordan Times, http://www.jordanembassyus.org/1162002004.htm

[103] "Syria" (March 03), Syria Country Analysis Brief, www.eia.doe.gov/emeu/cabs/syria.html: 6

[104] Jordan, Country Analysis Briefs (March 2003), http://www.eia.doe.gov/emeu/cabs/jordan.html

[105] Ibid.

worth of investment is needed in the years to 2006 complete the mission. Governments and aid agencies are expected to cover only 85% of this bill. The remaining part of the financial need, which approximately amounts to $45.000 to $60.000 million, must be provided by private sources.[107] However, first of all, starting with the security, safety and confidence, there are many obstacles to private infrastructure investments in almost every country in the region. Therefore, it important that the climate for private investors to improve so that their participation in funding of projects are encouraged. Furthermore, respective governments of countries must establish the basic policy framework and facilitate initiatives of private sectors, which form regional joint ventures. Governments must also provide safeguard measures to initiate and perpetuate such actions by signing treaties. Nevertheless there is already cooperation in sub-regional infrastructure projects in the region between various countries and their private sectors. Turkey plays a major role for such activities in the sub-region.

> The STFA, a private Turkish construction company has completed a 152 kilometer- long 220 kV high power line and electrical grid system project between Deir Nbouh –Ksar in Bekaa Valley. The Islamic Development Bank financed this project, which costs $21 million.[108]
>
> Another Turkish private company the Ozdil Energy, Development, Commerce and Industry Inc. has won the tender of the 21km-long Ksara Syrian Border 400kV high power energy line project. The project is Lebanon's first 400 kV power grid the cost of which is $5.9 million and financed by the Arab Economic and Social Development Fund.[109] This project is an important part of the 6-country interconnected power system, which is projected to eliminate energy bottlenecks in the region. Additionally the Ozdil Inc. also won the tender for the construction of 25 kilometers long, and 66 kV Nebatieh-

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[106] DE_K(Kasım 1999), "Mısır Ekonomisi ve Türkiye- Mısır Ekonomik ve Ticari _li_kileri":39-40

[107] O'Sullivan, Edmund (1999), 'The Debate over Sequencing Private Sector Participation in Infrastructure', *Partners for Development: New Roles for Government and Private Sector in the Middle East and North Africa* , Fawzy Samiha and Ahmed Galal eds**.** Mediterranean Development Forum (MDF), The World Bank, Washington D.C.: 150

[108] DE_K (2002) , "Lübnan Ekonomisi ve Türkiye Lübnan Ekonomik ve Ticari _li_kileri", _stanbul:10

[109] DE_K Ibid

Tibnine power line. The Lebanese Power Company (Electricite du Liban) pledged to undertake the $1.7million development cost of the project.

The other one is the tender of the construction of three 230kV- transformers, and sales of their 5 consecutive- year equipment in Banias in Syria. Ata Insaat, a Turkish Construction Firm has undertaken a $33.8 million secondary distribution project and in Jordan. The STFA, another Turkish construction company has undertaken a $1.5million -energy transfer line construction in the same country (DE_K 2000: 17).

Turkish firms have been involved in the installation of a farina mill corrosion plate, and 230kV-steel pillars; Installation of a low tension condenser, external and internal 20kV-condenser installation; Installation of an active filtering system for prevention of 2x1600 kV- transformer harmonics projects in Syria.[110]

5.4.2.4.Cooperation between the MNMCs in the Production and Trade of Petroleum and Natural Gas

The Middle East already has competency in cooperation in oil trade since eight out of 11 OPEC members are in the Middle East and they produce 75% of the OPEC output[111]. Furthermore, oil is still the most important source of energy in the world despite the trends to curb fossil fuel consumption. The Middle East as a region has a share of 6% of the total world consumption. Petroleum is a wealth-generating trading commodity for its major producers. However, decreasing oil prices after 1983 proved that oil is not a reliable source of wealth any longer. Therefore, from a sustainability point of view, it would be more sensible to treat petroleum as a source of sectoral cooperation from exploration to production, and from processing to distribution and consumption at regional level and by regional initiatives. This is especially meaningful as some of the Middle East countries have the tendency to drive western companies out of the market in their petroleum sectors. Sectoral

[110] DE_K(2003) "Suriye Ekonomisi ve Türkiye-Suriye Ekonomik ve Ticari _li_kileri", Istanbul
[111] Rivlin Paul (2000), The Oil Market, Jaffe Center for Strategic Studies- Strategic Assessment, Vol.3, No.3, November: 39

cooperation in petroleum has potentialities to enable MNCs to have access to new technologies in petroleum exploration, drilling and production.

Among MNMCs Syria, Egypt and Turkey have oil reserves and oil production. Nevertheless these countries are either not self sufficient in oil production or they can easily become net importers of petroleum soon. On the other hand Jordan, Lebanon and Israel do not have significant oil sources of their own. Jordan mostly relies on cheap Iraqi oil for most of its needs, whereas Israel obtains 20%of its oil from Egypt, and has established business contacts with Oman, Qatar, Kuwait and Bahrain. Israel also concluded an energy accord with Jordan in 1996 as an extension of the 1994 peace treaty between the two countries.[112] Therefore, cooperation among the countries of Mashrek, Israel and Turkey in the form of exploration, production, refining and trade may bring beneficial outcomes. The following table (Tablex) shows the oil reserves, oil production, oil consumption and oil trade as exports and imports for the MNMCs in recent years.

Table 5.4: The Petroleum and Natural Gas Sectors of the MNMCs

Country	Oil Res. Bar.	N. Gas Res. Bill. cub.feet	Oil Prod.	N.Gas Prod. bcf	Oil Cons. 000b/d	N.Gas Cons. bcf	Oil Trade
Egypt	360.000 (1)	620 (1)	750 bbl/d (1)	25 bcm (1)	550 bbl/d (1)	246 bcm (1)	Exports 90.8 thou..b/d, Imports 0 ***
Jordan**	890.000	230	40bbl/d	10Bcf		10	Imports 95.000 bbl/d
Israel	1.92 million bbl	44 mil cub m for 1999 (4)	4000 tonnes	365	260.000 bbl/d	10 ml.cub.m -	Imports 279.000 bbl/d for 2003 (3)
Lebanon	0	0	0	0	-	-	-
Syria*	2.5 billion	8.5	525.682 bbl/d	206	268.000 bbl/d	206	Exports 257.682 bbl/d
Turkey	-	-	3.227	562	689 (1)	3279	1519 (2)

[112] http://www.ita.doc.gov/td/energy/israel.htm

Source: * "Syria" (March 03), Syria Country Analysis Brief, www.eia.doe.gov/emeu/cabs/syria.html, p.6

** "Jordan" (March 03), Jordan Country Analysis Brief, htttp://www.eia.doe.gov/emeu/cabs/jordan.html,p.2

(1) 2003 Figures BP Statistical Review of World Energy 2004 http://www.bp.com; (2) http://www.dtm.gov.tr, (3) www.eia.doe.gov/emeu/cabs/israel.html, (4) www.worldenergy.org/wec-geis/publications/reports/ser/gas/gas.asp; *** 2001 figure, International Energy Annual 2002, www.eia.doe.gov/emeu/international/petroleu.html

In most recent years there are examples of sub regional cooperation in the oil sectors as well. For instance, Turkey's importation of oil from Egypt further enhanced her relationship with that country. The currently privatized Turkish State Oil Company's (TPAO) international venture, known as TPIC, which is fully owned by the TPAO had been involved in the new oil field expeditions in Egypt since 1990 until 2002 when the TPIC's operation licences were suspended. Throughout the 1990s three search certificates were granted to the TPIC by the Egyptian government, which enabled it to do petroleum exploration in the West Qarun, West Gebel El Zeit, and West Baharia regions. All those three exploration sites jointly cover an area of 35.000 square kilometers. The TPIC made a $44 million worth of investment in those areas since 1995 to extract 1500 barrel per day of crude oil at the beginning and 866.000 barrels per day as of 1999. The Egyptian - Turkish Petroleum Company, which was established in 1994 was producing petroleum and gas from wells in West Gebel El Zeid ever since. The large petroleum companies that own gas reserves in the Nile Delta have been in contact with their Turkish counterparts for cooperation and trade.[113]

Turkey imports oil from Syria. However she fails to have any cooperative ventures in oil production and marketing with her closest neighbour. This is an area where another source of sectoral cooperation can be developed if regional politics does not stand in the way. However, oil, natural gas and petrochemicals are viewed as pan Arab strategic interests in the area. Therefore, cooperation in those areas only includes Arab states,[114] reluctantly includes Turkey, but excludes Israel. Turkey's involvement in other new pipeline projects to transfer the Caspian oil from Baku to

[113] DE_K(Kasım 1999), Mısır Ekonomisi ve Türkiye-Mısır Ekonomik ve Ticari _li_kileri: 32-40
[114] "Arab oil investments need 300 billion; regional policy urged" (28.5.02) ArabicNews.com

the Turkish Mediterranean port of Ceyhan is another source for cooperative initiatives, which promises oil supply to regional countries like Israel.

Israel and Lebanon offer a potential for alternative oil export routes for the Gulf oil to the West. [115] However, the potential can only be a reality if there could be a comprehensive settlement for the Arab-Israeli conflict. Furthermore, such a peace settlement could rekindle the option for utilisation of the Trans-Arabian Pipeline (Tap-line) as an alternative for oil transport. The Tap-line was constructed in the 1940s to export the Saudi oil via Jordan to the port of Haifa, which used to be a part of Palestine then. After the establishment of Israel the Tap-line was re- routed from Haifa to Sidon, Lebanon, passing through Syria.[116] Nevertheless the Tap-line has not been in operation regularly since 1975. But with the possibility of a viable peace settlement reconsideration of such an alternative may be a possibility.

Production and transfer of petroleum and natural gas as joint projects are two areas of sub-regional cooperation attempts, which exceptionally involved Turkey, Syria, Jordan, Israel, Lebanon, and Egypt. A notable development has so far been in the path of realization to the transfer natural gas from Egypt to Turkey via pipeline. The protocol signed between the two countries in 1999 considers the possibility of three alternative routes for natural gas transfer, and they are as follows:[117]

. By land via Egypt- Jordan-Syria- Turkey,
. By sea via Alexandria Egypt – Turkey (Ceyhan),
. By sea and by land: Via Egypt - Lebanon – Syria- Turkey (Ceyhan).

The compatibility of those three alternatives has been under research from the perspectives of cost efficiency, technical applicability, and security since 1999.

The sub-Mediterranean part of the Egyptian-Syrian-Lebanese natural gas pipeline project has been granted to the Al-Sharq (orient) Inc. On the other hand, the land crossing part of the pipeline the projected cost of which is $ 200 million will be

[115] "Jordan" (March 2003), Country Analysis Briefs, htttp://www.eia.doe.gov/emeu/cabs/jordan.html:2
[116] Ibid:2
[117] DE_K(1999), Mısır Ekonomisi ve Türkiye-Mısır Ekonomik ve Ticari _li_kileri, op.cit.

constructed and managed by the Arab Company. The same company will be responsible for marketing the natural gas upon importing 12cm/d from Egypt, which will be marketed to Turkey via Syria.

Among the prospective projects in Lebanon the construction of a natural gas pipeline has the utmost importance. Although the feasibility reports of the project have not been completed yet, the Turkish and Lebanese governments have already signed the memorandum of agreement. This pipeline is going to be constructed to convey Egyptian natural gas to Turkey and to Europe via Lebanon, Jordan and Syria.

On the other hand, due to the desire to alleviate the heavy reliance of the Jordanian economy on the Iraqi oil, Jordan has been considering to construct a natural gas pipeline from Egypt to supply natural gas to the Jordanian power plants.[118] Egypt seems to be natural and ideal supplier of petroleum and natural gas to her closest neighbours like Israel. Furthermore, a pipeline from Egypt to Israel could not only supply oil to Gaza, but could also be extended to Jordan, Syria and Turkey. Israel obtains 20% of its crude oil from Egypt anyhow. [119] Extending cooperation may benefit both countries. Egypt, Jordan, Syria and Lebanon have been going ahead with the construction of a $ 1billion - natural gas pipeline project since June 2002 without Israel.[120] In fact the talks of Egyptian gas exports to Israel were frozen in 2002. [121]

There is a separate contract between Syria and Lebanon to pump Syrian gas to Lebanon through pipeline. However, the construction of the pipeline was granted to a state owned Ukrainian company instead of a regional one. Furthermore, the Syrian Petroleum Company has been supplying 1.5 million cubic a day of gas to the northern Lebanese power station since a contract was signed between Syria and Lebanon in 2001. According to the contract, the Homs - Banias gas pipeline is being linked to the Syrian-Lebanese border via a 12-km pipeline, which is complemented by a 33-km pipeline to the northern Lebanese power station.[122] The four countries also agreed to

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[118] "Jordan" (October 1998), The Energy Division, International Trade Administration, htttp://www.ita.doc.gov/td/energy/jordan.htm
[119] www.ita.doc.gov/td/energy/israel.htm
[120] www.dawn.com/2002/06/17
[121] The Middle East Economic Survey (MEES) (17 June 02) "Middle East Gas Pipeline Systems Highlight Need for Greater Price Transparency, Benchmarks, htttp://www.mafhoum.com/press3102E15.htm
[122] The Syria Report (2.5.03), "Syrian Gas to feed Lebanese Power station before year-end", htttp://www.syria-report.com/News253.htm

establish an Arab company for the transportation and marketing of the gas. Egypt has already started the construction of the pipeline, which will be running 250 kilometers from El-Arish in the Mediterranean to Aqaba in the Red Sea. The "Arab gas pipeline", which will stretch 370 kilometers from Aqaba to Syria is going to be completed in 2005, and make Syrian imports of natural gas from Egypt a possibility. Gas trade is expected to reach 3.3 trillion cubic feet annually during the next 20 years if all connections are made.[123] The pipelines are going to be built on the BOT principle (Built-Operate-Transfer). The section of the pipeline going from Egypt to Jordan has been completed. The extension of the pipeline to Syria is to be built. Turkey is also among the regional countries, which is going to benefit from this project through importing natural gas from Syria.[124]

Inclusion of Israel in the Arab gas pipeline project may be a possibility if private operations can be insulated against public intervention. There is an informal cooperation between Israel, Egypt and Jordan anyhow. However to make it a part of multilateral cooperation at state levels unanimity is required.[125] For the Israeli pipeline connection to be a peace pipeline and to become a part of the regional natural gas grid, the Italian ENI and Amoco of the USA have already offered technical and financial assistance. The following table shows the new cross border gas line projects in MNMCs of the Masrek, Turkey and Israel.

Table 5.5 : Gas Pipeline Projects in MNMCs of Mashreq, Turkey and Israel

Route	Status	The Middle East Economic Survey Reference
Egypt-Libya	Joint Vent. Established to study gas pipeline to carry 3-5 bn cm/y to Libya	13 August 01
Egypt-Jordan (Arab Gas Pipeline)	Line to Aqaba under construction. Energy ministers meet to discuss terms of refernce for pipeline downstream of Aqaba. 100mn cf/d first stage supply to Jordan from mid 2003	25 March 02, 24/31 December and 1 October 01

[123] ahram.org.eg
[124] "Syria" (March 03), Syria Country Analysis Brief, www.eia.doe.gov/emeu/cabs/syria.html: 6
[125] "Egypt, Jordan, Syria, Lebanon agree to gas pipeline mechanism" (June 2002), http:// www.dawn.com/2002/06/17/int5.htm

Syria-Lebanon	EPC tender for 32 km line closed 2 April. Deliveries initially of around 50mn cf/d rising to 200 mn cf/d	18 February 02

Source: The Middle East Economic Survey (MEES) (17 June 02) "Middle East Gas Pipeline Systems Highlight Need for Greater Price Transparency", Benchmarks, htttp://www.mafhoum.com/press3102E15.htm

Turkey is also engaged in other regions for natural gas trade. The most important of which is the controversial "Blue stream" project of transferring the Russian natural gas to Turkey via underwater gas pipeline. The natural gas, via "Blue Stream", which is already in operation, can potentially connect to the Arab gas pipeline to create a regionally rational natural gas supply system.

5.4.3. Building Bridges over Troubled Waters[126] in the MNMC's of Mashrek, Turkey and Israel

Water is one of the most important and vital issues in the ME in general and the MNMCs in particular, which seems to be responsible of most of regional conflicts, from the Euphrates-Tigris basin, to the Orontes, the Levant Rivers, and Nile basins. However, conflict resolution can be accomplished by treating the water issue not solely from a water- sharing perspective, but also from the perspective of environmental sustainability, agricultural and climatic necessity.

The reason why water is the major source of conflict in the region is because it is relatively scarce in both ground and underground resources, especially in comparison to other regions of the world. The following table shows the per capita total available fresh water resources as well as the level of access to safe water in the MNMCs.

[126] Kalaycioglu, Sema (2002) "Towards a More Functional Economic Cooperation in the Middle East", Middle East Studies Association (MESA) Conference, November, Washington DC.

Table 5. 6: The Availability of Fresh Water in the MNMCs of Masreq, Israel and Turkey

Country	Total Fresh Water resources per capita cu.m3 and in 1999	The Annual Fresh Water Withdrawals as % and in 2000			Access to Improved Water Resources % and in 2000	
		Agricul.	Industry	Domestic	Urban	Rural
Egypt	930	86	8	6	96	94
Israel	180	64	7	29	--	--
Jordan	148	75	3	22	92	84
Lebanon	1.124	68	4	28	100	100
Syria	2.845	94	2	4	94	64
Turkey	3.162	73	11	16	82	84

Source: World Development Indicators 2001

If we compare the per capita total fresh water resources of the region with other regions of the world such as the USA with 8906 cu.m3, Norway with 88.117 cu.m3, and Venezuela with 35.686 cu.m3 in 1999, the root cause of the problem is easily understood. Additionally, in the sub-region that is under scrutiny, all Arab countries are downstream riparian states, and they not only lack sufficient water resources, but also blame the upstream country namely Turkey for preventing them from getting sufficient water. Arabs also blame Israel for occupying territories, which also have head- waters. However, Turkey does not have excess water sources either. Nevertheless currently it is a relatively more water rich country than her immediate neighbours to its South East borders, which seems to be the cause of existing problems.

The massive rural development project of the South East Anatolia (SEAP) of Turkey foresees the completion of several dams and hydro-electric power plants on the Euphrates and Tigris Rivers. The GAP is an ambitious regional development project, which not only is designed to turn the backward region into an agricultural power- house, by irrigation but also claims to transform the region into a major supplier of water for the Middle East. However, all actions of Turkey concerning the GAP, which is taking place by the border of Syria and Iraq, have been considered as a source of conflict rather than a project for resource sharing among neighbours.

In 1970s when the SEAP project started, a water pipeline to tap waters of the South East Anatolia to the arid lands of the Arabian Peninsula was considered by Turkey. In 1982 a $5.600 million –project was considered to tap drinking water through a 3750 km long pipeline from Alexandretta in Turkey to Jeddah and Medina in Saudi Arabia by the Islamic Conference Organization when a special working group met in Jeddah. This project has never been realized because of the political terror around the South East border-line of Turkey.

Another project was to pump the waters of Seyhan and Ceyhan rivers of the Turkish Mediterranean region to the Arab lands.[127] Turkey called it the "Peace Pipeline" with the hope that it will normalize the relations between Turkey and its neighbors by settling the complex dispute. Two pipeline routes were proposed at the time. The western route was to run south, through Syria and Jordan to reach the Red Sea shores of Saudi Arabia. The eastern route was to cross Syria, to eastern Saudi Arabia, the Gulf States, Bahrain and Qatar.[128] However, despite the fact that an American engineering company found the plan feasible, the high cost of implementing the project prevented its realization.

On the other hand, after occupying the south of Syria and Lebanon in1967, Israel became the upstream country for the Banias and the Hatzbani rivers. As for Israel, which also has water- related problems of its own, complications also clash with problems of occupied (or disputed) territories such as the Golan Heights and the West Bank. By controlling those two locations, Israel also controls tributaries of the Jordan River and uses waters of the river, and also in the West Bank it controls the underground water sources.[129] In addition to the Euphrates-Tigris basin water conflicts, Israeli occupation of Golan Heights, and West Bank aquifers in 1967, and South Lebanon after 1982 created new sources of conflicts. These conflicts are about sharing the waters of the Litani, the Jordan, the Banyas, the Yarmouk and the Dan rivers.[130] Most plans, which favor Israeli control of headwaters, only deepened the existing sub-regional conflicts in the ME. However, there have been attempts for

[127] Al-Majzoub Tarek (1993), " The Water Issue and Its Effects on Arab-Turkish Relations, Center for Arab Unity Studies: 5
[128] Ibid: 6
[129] "Water Issues Between Turkey, Syria and Iraq"(June-August 1996), Perceptions Journal of International Affairs, Volume 1, Number 2: 1
[130] Jad Isaac, Leonardo Hosh (1992), "Roots of the Water Conflict in the Middle East", The Middle east Water Crisis Creative Perspectives and Solutions, University of Waterloo, Canada: 4

cooperation especially between Jordan, Israel and the PNA. In 1994 PNA alone promulgated 200 projects. Those projects were followed by the Israeli project of "Development Options for Regional Cooperation" the same year and the Jordanian project of 1994 on increasing water supply and transportation. These projects were followed by the Israeli project of "Development Options for Regional Cooperation" the same year and the Jordanian project of 1994 on increasing water supply and transportation. [131] Jordan and Israel engage through treaties for water sharing. Jordan seems to be continuing her cooperative efforts with Israel in the Dead-Sea development project, as well as water management.

Contrary to the situation in the Euphrates –Tigris and the Levant river basins, the Orontes is the river, where Syria is the upstream country and therefore, in this case Syria reduces the flow of Orontes by holding its water Destan and Maherde dams[132] and Turkey suffers.

Obviously, cooperation on a thorny issue such as water can only start with a consideration to find mutually satisfying criteria for sharing trans-boundary waters. However, so far there has not been a single method found yet, which has taken all socio-economic, climatic and geopolitical conditions into consideration to remedy the regional problem. Taking also the environmental hazards into account, a water resources inventory in the region, including Turkey, Syria, Lebanon, Israel, Palestine and Jordan can be completed. Joint technical committees may collect data on temperature, rain and snow fall, evaporation to determine the water capacity of the river systems as well as the aquifers. Since Egypt is not directly linked to the water problems of the basins other than the Nile River basin, this is perhaps the only issue, where Egypt can be considered as an observer, rather than a party in the water - sharing problem. So far, in 2002, the Arab and Israeli delegations agreed to implement a number of projects, which mostly depend upon collecting, analysing, and storing of water related data in national data banks. The purpose of this is said to prepare the necessary background so that they could at some point collaborate in the

[131] Lyndon LaRauche, Macia Merry(1993), "Creating a Mideast Oasis" The Oasis Plan for Middle East Peace, *The American Almanac*, http://members.tripod.com/american_almanac/oasis.htm, 16.9.2002: 1-13
[132] Ibid: 5

creation of a regional data bank and use the necessary information for joint water projects.[133]

Since water is used for both agricultural production and consumption rational techniques can be employed to reduce the amounts used. Modern irrigation techniques are available for those countries, which desire to employ them. Another step that may be taken is the utilisation of methods for water treatment and encouragement of reuse of waste- water. Since increasing amounts of sewage water have been threatening the environment in the area by endangering groundwater, other sources of fresh water processing of sewage water to produce purified water can be a remedy not only for water shortages, but also for a safer environment. Israel has the technological superiority in both modern irrigation techniques and in water purification. However, it is a pity that because of the continuous political and military confrontation between Israel and her Arab neighbours, the potential of this country in establishing water supply systems, introducing modern irrigation methods and reclaiming sewage water cannot be used for the entire region. Israel can even use saline water for irrigation of certain crops such as cotton, tomato, and melon. Furthermore it employs drip irrigation systems to avoid excessive use of water and evaporation, and to irrigate sandy or loamy- sandy soil.[134] Since there are companies in Israel, which also utilise measures to control water quality, expansion of their expertise in irrigation and water purification, through inclusion of Israel in water projects might have helped turn a problem area into a knowledge and expertise sharing experience.

Riparian states may cooperate and benefit from establishing joint water authorities for water treatment and at times of need, for just water rationing, despite the existing differences. Same authorities may function as agents, which build reservoirs, hydro- electric power plants, waste- water treatment and recycling systems. Sub- regional arrangements for cooperation in the water sector are bound to include Syria-Turkey and Iraq; Syria, Lebanon, Israel, Jordan and Palestine; Egypt, and her Nile water partners.

[133] Lowi Mirriam(2002) "Political and Institutional Responses to Transboundary Water Disputes in the Middle East", Water Disputes in the Middle East, http://web.macam.ac.il/-arnon/Int-ME/water/Lowi%20Water%20D

There are also other rare cooperative initiatives to share river waters in the region. Syrian and Jordanian Al-Wahda dam is a joint Arab initiative, which was officially started in February 2003. It was first proposed in 1955, designed in 1987. Jordan first gave priority to Israel to build the dam under the peace agreement of 1994. However, the project could not find opportunity to be implemented. As the Jordanian-Syrian relations were normalized, the project has been revived to transform it into a Jordanian-Syrian joint project.[135] The main purpose of the project is to facilitate sharing of the water of Al-Yarmouk River between Syria and Jordan.[136] The cost of the project was first estimated as 145 million Jordanian dinars. However according to the latest estimates it is approximately 85 million Jordanian Dinars. The tender guarantees Jordanian and Syrian companies to have, no less than 40% of the total construction works.

Turkish contracting companies undertook several infrastructure projects between 1994 and1999 in Jordan. Ata In_aat, a Turkish construction firm undertook the construction of a $30million water reservoir in Jordan.[137] The Amman Water Procurement Project is another one, which Turkish firms are undertaking in Jordan[138]

Desalination is another method, which is used to increase availability of water in many countries of the area except in Turkey. By means of desalination it is technically and economically feasible to produce a large amount of water of suitable quality from sea- water, brackish water, or through the reuse of other waters. [139] Several methods for desalting saline water have been investigated in Israel since the early 1960s. Among these, reverse osmosis was found to be efficient and relatively inexpensive. [140] Israel's water use efficiency can and must be employed by the entire region under scrutiny through cooperation.

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[134] Sitton Dov (1998) "Development of Water Resources", Israel at Fifty 1948-1998, Israel Information Center, http://www.israel-mfa.gov.il
[135] ArabicNews.com, "Al-Wahda dam foundation starts in February", 20.8.02
[136] Ibid.
[137] DE_K (2000), "Ürdün Ekonomisi ve Türkiye- Ürdün Ticari ve Ekonomik _li_kileri", _stanbul.
[138] Ibid:18-19
[139] Ghassan Ejjeh, "Desalination, A Reliable Source of New Water", http://circe.cps.unizar.es/spanish/waterweb/ponen/ejjek.pdf
[140] Sitton Dov (1998) "Development of Water Resources", op.cit.

Israel is in favor of collaboration in water efficiency use methods if cooperation starts. In fact it presented a report at the Economic Summit for the MENA in 1994, which offered development options for regional cooperation. This report mainly included a seawater conveyance route from the Mediterranean to the Jordan valley, to be desalinated in Jordan and to irrigate the West Bank, as well as the Gaza strip, and therefore serving Israel, Jordan and Palestine.[141] This proposal also included a power- generating project. The need to find options for joint projects between Syria and Israel for solving water shortage is also emphasized in many documents.[142] Nevertheless, disputes over water, where national borders pass, obstruct possible progress in sectoral cooperation between Israel and Syria.

Another channel for cooperation in the MNMCs lies in the area of water trade. Sales of water through tankers and pipelines can be used as another channel to increase the amount of water where the scarcity is felt most dramatically. As an example to this a treaty was signed between Turkey and Israel in 1999 to sell water from the Manavgat fall of Turkey's Mediterranean coast to Israel.[143] The sales of water from Turkey to Israel had been considered as a rational source of trade, and a good channel for sub-regional cooperation for peace until it disappointed both parties last year. Although Turkey made the necessary infrastructure investment in the south of the country, Israel failed to purchase water from Turkey, with the argument that the import cost of water from Turkey exceeded desalination costs of water in Israel. Therefore, currently even if there were some sales to Israel it is not sufficient to recover the cost of the Turkish investment.[144]

Another water- related issue is the upgrading of the Suez Canal from the Mediterranean to the Red Sea. Since new waterway corridors need to be opened from Gaza to Beersheba, and from the Gulf of Aqaba, to the Dead Sea, cooperation between Israel, Jordan and Egypt are needed.[145]

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[141]Baker Marcia Merry, (2001), "Generating Water and Power in the Desert: Beautiful and Necessary", htttp://www.schillerinstitute.org: 2

[142] Mirak -Weissbach, Muriel(2000),"Solving the Water Shortage is the Key to Middle East Peace", http:// www.schillerinstitute.org, 2000: 1

[143] Saribrahimoglu Lale (February 13, 2000), "Barak Advocates Water Purchases from Turkey", Turkish Daily News, Ankara.

[144]Denk Erdem (18 Mart 2000), "Su Satmak Kolay De_il", Yorum, Radikal Gazetesi.

[145] LaRauch, Lyndon,and et.al op.cit.

5.5 Undiscovered Options, Unexhausted Possibilities and Future Prospects between Mashrek Countries, Israel and Turkey: Towards a More Functional Cooperation in the Sub-Region

5.5.1. MNMC Partnership in Environmental Issues

There are five major environmental challenges in the region: increasing water shortages, waste management, pollution and endangered ecology, preservation of coastal areas and desertification. All of these, which need special environmental protection programs, and common policies to observe regional climatic change, and approaching the water resources problem from environmental perspective constitute an unexhausted area for cooperation for the MNMCs of the Mashrek, Turkey and Israel.

Climate change is an imminent threat that could easily affect countries, which already have security problems among themselves.[146] Among the current environmental problems, severe water- shortages, and losing of the top- soil may be accelerated by climatic change. Interim solutions to such problems include transfer of desalinated water from desalination plants of Israel to Jordan, as well as sales of water from Turkey to whoever may need it most and diverting water from the Nile to Israel under a treaty with Egypt. Nevertheless, because of the expected effects of global warming in about 30 to 50 years from now, instead of fighting over scarce water resources sustainable solutions must be produced to remedy potentially growing environmental conflicts in the region.[147] In addition to the water resources related problems of climatic change, increasing water sharing problems of fast growing population of the region must be dealt with. Under the heavy toll of existing security problems, Turkey is probably the only country in the region, which may deal with the

[146] Becker, Sarah, Dele Ogunstein (2002), "Climate Change, Water Resources, and Environmental Conflict in Arab-Israel Relations, Department of Environmental Analysis+Design, School of Social Ecology, University of California at Irvine, USA, beckers@uci.edu

population growth of its own without necessarily relating the matter with a water-sharing solution at regional level.

Obviously the cooperation once more must include Israel, Palestine Jordan, Egypt, and Turkey. Nevertheless, lack of peace in the region causes lack of cooperation in environmental issues. Once the attempts of the 1950s and the Maqarin Dam project of 1976 and 1981 failed, the incentives to revive initiatives at inter-governmental level faded away. However, the developments of the1990s gave a flickering hope of cooperation when working groups in Egypt and Israel started communication under the auspices of the United Nations. Nevertheless all organisations represented lacked information about the problem. All parties mostly concentrated on finding solutions to immediate problems. In 1994 water issues became a part of the peace treaty between Jordan and Israel when Jordan showed willingness to cooperate. Discussions over diverting the waters of Nile to Israel went on throughout the 1990s, and Turkey and Israel agreed to deal with water trade.

When it comes to working on sustainability issues, it must be noted that Israel and Egypt signed the Kyoto protocol; Jordan, Israel, and Egypt ratified the framework convention on climatic change[148], and Turkey ratified it in October 2003.[149]

Soil quality in relation to irrigation of arid lands is an important but yet untouched environmental problem in the area. All countries in the area must improve their irrigation techniques for water conservation and for retaining the quality of already problematic top- soil, especially from salinization. All countries do produce a variety of crops from grain to fruits, oil seeds, olive, dates and cotton, which require different irrigation patterns, and frequencies. Water management is related to the irrigation method employed through full or partial irrigation control. Although surface irrigation is the most widely employed technique, sprinkler irrigation and micro

[147] ibid.
[148] ibid
[149] Kalaycioglu, Sema (30.10.2003), "Kyoto Protokol'unun Türkiye için Önemi", Finansal Forum Gazetesi, Istanbul.

irrigation techniques are also used in countries like Jordan.[150] Obviously Israel is a country among the MNMCs, which has the know-how and experience to conserve water, and retain the soil quality with highly sophisticated irrigation methods.

One of the most important developments is the establishment of the Friends of the Environment in the Middle East (FOEME) in the region. FOEME is a regional environmental organisation, which brings Palestinians, Israelis and Jordanians together to promote sustainable development, to protect shared ecosystems and advance efforts for peace building in the region.[151] The project aims to promote regional sustainable water management practices by focusing on conservation, efficiency and fair water allocation. It also focuses on creating educational community activities so that knowledge is shared about the importance of water conservation and responsibility for the environment to be respected under good neighborly practices. Palestine, Israel and Jordan have teams of "water- trustees" to strengthen and publicise the mission. The project, which is supported by the EU, and the Wye River program of the United States is implemented by a team of regional and international experts.[152]

The FOEME initiative also has pollution control programs. One of the most important accomplishments of the initiative is the elimination of the phosphate dust-pollution over Aqaba, which has been eliminated.[153]

5.5.2 MNMC Partnership in Renewable Energy

It may not be easy for the MNMCs of Mashrek, Turkey and Israel to join around a goal to produce and consume renewable energy in the sub-region, while it is surrounded by oil producing neighbors. However, since the twenty-first century represents an era when substantial changes are expected in the area of energy, public

[150] "Water managed areas and irrigation" (2003), Irrigation in the near east region, file:// Irrigation in the near east3.htm
[151] "Good Water Makes Good Neighbors", Good Water Neighbors Project, Friends of the Earth Middle east, Wye River Program, www.foeme.org
[152] Ibid.
[153] Rajabi (2000)op.cit.:64

opinion formation in sustainable energy in the region may become a part of capacity-building efforts of infrastructure in renewable energy production. Such an effort attracts significant support from other regions like Europe as well. The idea of switching to renewable energy sources has solid foundations since the fossil energy sources of the Middle East are expected to deplete progressively by 2050.[154] If cooperation in sustainable energy production and consumption in the region at large and the sub-region in particular starts soon, the smooth transition from the fossil to non-fossil can be accomplished with greater ease.[155] This process of cooperation makes sense especially as one of the main fuel importers in the world like Europe is likely to substitute its fuel imports with renewable energy production in the future. It is possible for countries of MNMCs to transform their energy production to renewable sources, even though at present the percentage of renewable energy utilization in the MNMCs is not significant. Even so, Turkey, Syria, Lebanon and Jordan hold increasing potentialities in hydropower, and Israel and Egypt have the option of solar power. Since solar and hydro energy are also transferable, what the Magheb has to offer to Mashrek in terms of solar energy also is important for the scope of cooperation in the Mediterranean south in general.

Natural gas is preferable because it is a reasonable substitute for fuel oil, coal, and diesel in both power and industrial use and it helps improve air quality and reduce effects green- house gas emissions. Therefore, cooperation in building natural gas pipelines among the countries of the MNMC group is important for environmental reasons.[156]

5.6 Conclusions

Catching up with global trends, restructuring the inert, mismanaged and malfunctioning public and private institutions, increasing the level of openness through further liberalization in the region with harmony, increasing the weight of private initiatives in intra-regional relationships are necessary but not

[154] Eberhard Rhein (1997), "Towards a Euro-mediterranean Partnership in Renewable Energy", Mediterranean Politics, Vol. 2, No.3: 103
[155] Ibid.
[156] The Middle East Economic Survey (MEES) (17 June 02) op.cit:3

sufficient steps to be taken in the MNMCs before starting or promoting regional cooperation. Infrastructure deficiencies must be overcome to facilitate regional physical and geographic integration. It is also important to take political security related problems into account as major impediments for actual and potential cooperation in the area, and therefore develop ways and means to bring solutions to such problems.

5.6.1 Reassessment of General Conditions

The economic, social, political, and cultural environment in the ME in general and in MNMCs in particular are not yet sufficiently mature to nurture close economic cooperation in the form of economic unions and common markets. The administrative structures of many of the MNMCs are also not ready for a regional customs union.. Formation of free trade areas and customs unions in the region does not seem to be functional either although it seems to be a more feasible option. Since overall regional integration among poorly diversified economies in the form of across-the-board free trade areas or customs unions tends to generate more costs (in the form of trade diversion and trade deflection) rather then concrete benefits (in the form of trade creation and scale effects), the only sensible option for cooperation among the MNMCs still seems to be at sub- regional and sectoral levels.

Sub- regional cooperation arrangements between the Gulf Countries already set good examples for the rest of the ME, despite their failure to extend cooperation into industrial targeting. Therefore, this option with sectoral targeting may be a perfect choice for the MNMCs. It is our contention that there are undeniable benefits to include non-Arab ME countries in any sub-regional arrangement as much as possible. While setting country pairs and trios, economic and institutional similarities among countries, and their common needs and priorities must be taken into account. Establishing futile political alliances must be avoided, since they produce destructive competition for regional leadership. Depending upon the choice of sectoral cooperation, bilateral, trilateral and sub-regionally multilateral country combinations may be formed. Egypt – Syria- Turkey; Jordan- Iraq –Syria –Lebanon; Jordan

–Turkey –Syria – Lebanon; Jordan- Israel- Turkey and Egypt hold great economic potentials for sub-regional cooperation practices in different areas.

Having these country groups in mind, it is logical to assume that a rudimentary sectoral cooperation option, which once facilitated successful European integration, may work in the case of the MNMCs as well. Sectoral cooperation inevitably leads to common sectoral policies. It provides opportunities for such practices as harmonization of domestic regulations, and targeting. The EU new neighborhood initiatives combined with sectorial free trade agreements among the MNMCs of the Maghreb and Mashrek could prepare a favorable climate to promote any sectoral sub-regional cooperation initiative especially in capacity building in infrastructure. There may not be a clear division of labor as to decide which country may have to take which part of the physical capacity building process. However, depending upon the infrastructure investment in mind, technology and know-how from Israel, labor and raw materials from Turkey, Egypt, Syria, Jordan, Lebanon and Palestine, and financial funds from a common pool designated for the cause of enhancing and initiating infrastructure can be organized. The EU funds and technical assistance may also help overcome deficiency of capital resources and expertise. However, most importantly inclusion of non-Arab countries of the region like Turkey and Israel may facilitate knowledge and human resource based needs of sectoral and sub-regional cooperation.

Cooperation in capacity building in every sphere of infrastructure may not only fulfill the criteria for economies of scale and cross-border externalities and therefore improve economic efficiency for the MNMCs, but it may also help overcome the regional obstacle of having poor infrastructure before any other type of economic cooperation plan is made. This part of the research helped us to find out about what kind of projects are being drafted and/or implemented concerning capacity building in infrastructure among the MNMCs of Mashrek, Turkey and Israel. There are already various treaties and protocols, which have been signed and ratified at bilateral and multilateral levels to enable cooperation in capacity building in infrastructure. Major regional projects include completion of regional transport and energy networks to facilitate further cooperation. These ambitious projects also have extra regional extensions to serve the Balkans and the entire East Mediterranean

region. Other sector based cooperation initiatives include joint ventures in, agriculture, heavy and light industry and services.

5.6.2 Opportunities for country groups

This chapter enabled us to discover what kind of opportunities there would be for the MNMCs of Mashrek, Turkey and Israel had there been a favorable political and security related climate in the region. Agriculture certainly is among the areas, which tops the list of opportunities and it offers cooperation potentialities between high- tech and low- tech countries with complementarities in the MNMCs. Israel with its high technology endowment and expertise in agricultural production may be an asset for all countries in the region. Turkey with its relatively vast and fertile lands, intensive farming techniques, and highly diversified agricultural production may ensure a level of self-sufficiency for its regional partners. Turkey's South Eastern Anatolian project may be coupled with Egypt's ambitious Toshka project to ensure sustainability of food supply for the MNMCs. Cooperation in agricultural infrastructure among different country groups has the potential to enhance agricultural productivity. Transport networks may provide easy access for consumers to agricultural produce. Free trade agreements, which may include agricultural products, have the potential to bring price advantages to regional consumers and to prevent food shortages.

There are also other opportunities for different countries and in different areas. Some of them are as follows:

Cooperation between Israel and Jordan in water issues and environment, as well as transportation, medicine, electrification and light industries, and oil refineries; In transportation Aqaba and Eliat ports must be coordinated by a bilateral authority to supplement in each others deficiencies and to accelerate trade from these ports;

Between Israel, Syria and Turkey in agricultural production and irrigation as well as water trade, medicine, transportation and electrification;

Between all countries in the region in electrification, transportation and oil sectors, light industries and environmental sustainability;

Between Israel and others in medicine, medical services and agriculture.

Between Turkey and Egypt in oil, textile, consumer electronics and automotive industries, as well as agriculture, transportation, and tourism;

Between Turkey and Jordan, in almost every area, especially in infrastructure, agriculture, distributive trade, and tourism;

Between Turkey and Syria in areas from services to agriculture, energy transportation and environment.

Cooperation in transportation including the construction of oil and natural gas pipeline infrastructure, communication, electrification and irrigation projects promises a road map for building and renovating of the regional infrastructure in the entire region, which in turn facilitates and promotes regional trade and investment.

Environmental protection and sustainable development issues prep opportunities for cooperation with partnership among the MNMCs as well. Prevention of air, water and soil pollution; investing in clean energy sectors, especially changing preferences for renewable energy sources such as solar energy, and more utilization of hydropower are likely to create genuine sources for sub-regional cooperation for the MNMCs. As explained earlier, production of clean energy and energy conservation with joint efforts are two sources of cooperation for the MNMC states, which are already involved in regional electrification projects. There are already a few regional environmental initiatives, which need to be supported by the EU environmental funds.

Water sanitation, treatment and conservation must be in the immediate agenda of riparian states, and states which share the border-crossing river waters and lakes. Controlling air and soil pollution in the MNMCs requires close technical cooperation. The sea pollution control in the Mediterranean also deserves joint technical projects at

both regional and sub-regional levels, since the Mediterranean is getting more and more polluted everyday. Such projects can be implemented without national politics getting on the way, even though every country may have a national pollution control program. Prevention of desertification creates another source of cooperation for the countries of sub-region. Even desalination of salty waters must be regarded from a regional environmental perspective. The seawaters may be plenty at this very moment. However, considerations for sustainability force us to treat every consumable item as potentially depleting.

5.6.3 Existing Constraints and Prospects for Cooperation in the Near Future

It is our contention that even the most frequent friction issues among close neighbors hold opportunities for cooperation. Among many, water- sharing issues can and should be treated as a major area for cooperation, since it has to be evaluated from environmental sustainability point of view. However, politics, terror and security related problems are likely to interfere with any prospective cooperation incentive in the region.

The ever deepened and unresolved Israeli-Palestinian conflict, which constantly nurtures retaliation of terror and horror between both sides, not only overshadows the viability of any initiative for Palestinian-Israeli cooperation but also causes destruction of existing infrastructure. Furthermore, the Palestinian-Israeli conflict cripples any hopes for cooperation between Israel and her Arab MNM neighbors.

The pending Israeli-Palestinian problems also take Turkish-Israeli prospects for cooperation politically captive. As a result Turkey and Israel could neither improve nor diversify cooperation among each other. Therefore they cannot engage their efforts for further regional cooperation in capacity building in infrastructure either. The same argument seems to be true for Israeli-Egyptian cooperation as well.

MNMC cooperation especially in infrastructure cannot be easily implemented without the inclusion of Syria in the scheme. Therefore, Syria must fully normalize its

relationship with its neighbors and with the rest of the world to be a part and a partner in the MNMC cooperation. The EU-Syria rapprochement of recent years and the EU fund allocation for the renovation and restructuring of Syrian infrastructure are favorable developments. These developments increase prospects of Syria's involvement in MNMC initiatives in the future. So far as Syria's relations with respect to its regional neighbors are concerned there are still preconditions. Israel-Syria economic relations may have future prospects for cooperation in capacity building in infrastructure. However cooperation can only be achieved if a level of understanding is developed and/or settlement is reached over issues of conflict between the two countries. The same argument is true for Israel-Lebanon relationship also.

Turkey's economic relations with Syria have been progressing since 2002. Nevertheless, any further relation with Syria beyond trade is conditional to sustainability of border security and prevention of terrorist infiltration from Syria to Turkey. Mutual confidence is to be built and maintained between two countries before cooperation in any area is full heartedly supported and therefore accomplished.

Therefore, as unfortunate as it may be, cooperation prospects at full length even at sub-regional levels and in various sectors of infrastructure among the MNMCs of Mashrek, Israel and Turkey are conditional to regional security and politics. At this very moment there is only a dim prospect for cooperation at regional level, but some chance for modest, overcautious bilateral cooperation between country pairs.

So far as capacity building in infrastructure is concerned, favorable initiatives between Arab countries of the region for cooperation are indispensable. However, for a region to have complete infrastructure networks and sustainable agriculture and environment, inclusion of Turkey, Israel and a viable Palestinian community is a must.

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General conclusions

Seen from Europe, the sub-region this report focuses on coincides by and large to what German and Anglo-Saxon scholars call the Near East (in contrast with the more wider concepts of the Middle East or MENA countries). As such, there is a tendency to rely too much on colonial history and travelers' recollections of other times to draw an overall economic picture of the region. Unfortunately, this leads to stress too much the commonalties among the different economies, such as their tourism potential , the region being the berth of Western civilization; or the semi-arid character of the land.

This report has shown that the economies of the sub-region under focus are extremely diverse: on the one hand, there are some small middle-income, resource-based or service-based developing countries, such as Syria , Jordan, the PA and Lebanon. All four are small markets. On the other hand , there are three fairly diversified middle-sized emerging economies (classified as such by the British weekly The Economist), namely Turkey, Egypt and Israel. The latter has in some sense characteristics of an extremely open post-industrial economy, based since a decade on the development of high-tech hardware and software, but also on polished diamonds. It is by far the richest economy by regional standards and therefore a non-negligible market. However its demographic base is very small. This contrasts with Turkey and Egypt, the first economy being more diversified than the second. Both are strategically located politically and economically, at the intersection of important traffic sea-, air- and land lanes . Egypt is oil- and gas-rich; Turkey is water-rich and mineral-rich.

Therefore *a priori* we have a collection of complementary economies, which at present are by and large not exploiting this feature. The reason is well-known: unsolved political conflicts have led to the economic dislocation of the Near East economy since at least 50 years now, although the trend towards economic disintegration can be traced back to the dissolution of the Ottoman Empire in 1918. Therefore , and again *a priori*, the resolution of political conflicts should lead as one of its significant secondary outcomes, the re-composition of the Near East as an economic region which would be able to exploit the complementarity mentioned above.

We have shown in Chapter II that total inter-regional trade in goods could be about twice of what it was during the period 1995-2001 for which data was collected and a gravitational model was run (from $2 to $3 billion nowadays to $5 to $6 billion after

normalization of trade relations). Although in absolute terms this is very significant, one must not loose the overall perspective: If nowadays 5% of total trade is made regionally, normalization would elevate this share to 10%. This means that the main trade partners of the countries of the region would remain the EU and the US.

We have found not surprisingly that normalization would make the largest difference for Israel, which could see its trade with all its neighbours increase to three times as much than at present (still representing not more than 5% of its foreign trade). But less obvious is the fact that Lebanon does not trail far behind Israel in spite of the fact that its frontiers are open for trade with all the countries of the region, but for Israel. At the other extreme it is shown that , again not surprisingly, Turkey is exploiting its trade potential already now , since it is practicing "hot peace" with all the countries in the sub-region (something that Jordan and Egypt do not).

An inquiry about the relative factor endowments of the countries under focus points in the direction of a comparative advantage of Egypt in agricultural and labour-intensive products; of Israel in human capital-intensive products; of Jordan in exporting labour-intensive goods to all countries of the region, leaving Egypt aside, and of capital-intensive goods to Egypt; of Lebanon in exporting capital-intensive products to Egypt and Syria; of Turkey and Syria in exporting agricultural goods to all the countries of the region (although not among themselves). Most potential bilateral trade in goods should be inter-industry in character: frozen and fresh vegetables, crude oil, pharmaceutical products, textile yarn, telecommunication equipment, aircraft, iron and steel. The potential for intra-industry trade appears to be limited to a few but important sectors, namely the textile, pharmaceutical and telecommunication industries, all three easily allowing for the vertical geographical fragmentation of the production process.

Regarding trade in services, it appears in Chapter III that there is a huge non exploited potential for Israel of supplying the whole region with ICT (Information and Communication Technology) services. Egypt, Syria and Turkey have very significant comparative advantages to exploit in all what concerns trade in road haulage and passenger transport services. Turkey, Egypt and Israel hold comparative advantages vis-a-vis other Mashrek countries in air cargo services. On the other hand , Lebanon,

Israel and Jordan can easily become much beyond existing levels exporters of financial services to Egypt, Turkey , Syria and the PA. It is also likely, give relative factor endowments, that Israel and Lebanon become regional medical centres, with Egypt, Turkey , Syria and Palestine becoming in turn huge exporters of nursing and care services to Israel , allowing for the partial replacement of current imports from the Philippines and from Romania.. Health tourism services would be exported mainly by Jordan, Syria and Israel to other economies in the region, while Jordan would specialize in dental services.

The free movement of capital in the region should allow for the deepening of the current trend of relocation of Israeli-owned textile, clothing and food firms to Jordan, Turkey and Egypt. After full resolution of the Arab-Israeli conflict, Syria and the PA would surely become, as well, host countries of Israeli FDI in labour-intensive operations (as illustrated in Chapter IV). But the success of such industrial strategies will critically depend on concluding suitable trade agreements with the US and the EU, allowing for the cumulation of value, such as the QIZ (Qualified Industrial Zones) arrangement initiated by the US Administration several years ago in order to promote Jordanian-Israeli trade.

Not only that. Infrastructure deficiencies must be overcome to facilitate economic integration, as spelled out in Chapter V. Cooperation in this domain seems *a priori* feasible because it is mostly devoid of political connotations (a current example being the creation on Jordan's territory of QIZ). In this respect, it seems that at this stage the most suitable type of voluntary cooperation (going beyond sheer normalization) is of a sectoral (e.g. dealing with renewable energy) or a functional one (e.g. dealing with trans-border environmental problems). Comprehensive across-the-board agreements should be avoided (including FTAs, customs unions and common markets). They have the disadvantage of concerning whole societies, part of which have not desire yet to cooperate with the former enemy. Any infrastructure project leading to widespread positive externalities should be given priority, such as water-sharing projects or joint ventures for the cleaning of common waterways(such as the Jordan river).