Trade, competitiveness and employment in Jordan

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Abstract

Jordan has realized the necessity to pursue opportunities through integration into international production networks and cross-border trade. The country has recently undertaken ambitious reforms of its trade regime. These initiatives comprise the accession to the WTO in 2000, the signing of several preferential trade agreements, notably with the European Union and the United States in 2001, and the pursuit of unilateral border policy reforms. This paper discusses Jordan's recent trade performance, with special attention to the impact of trade reforms and the country's special economic zones on employment. Moreover, a set of indicators of economic competitiveness will be examined to highlight Jordan's position *vis-à-vis* a group of comparator countries. And finally, some recommendations for the attention of policy makers will be derived on how trade-related growth could be made more job-rich.

Keywords

Tariffs, services trade, incentives, special economic zones, regional integration

JEL Classification

F13; F14; F15; O24

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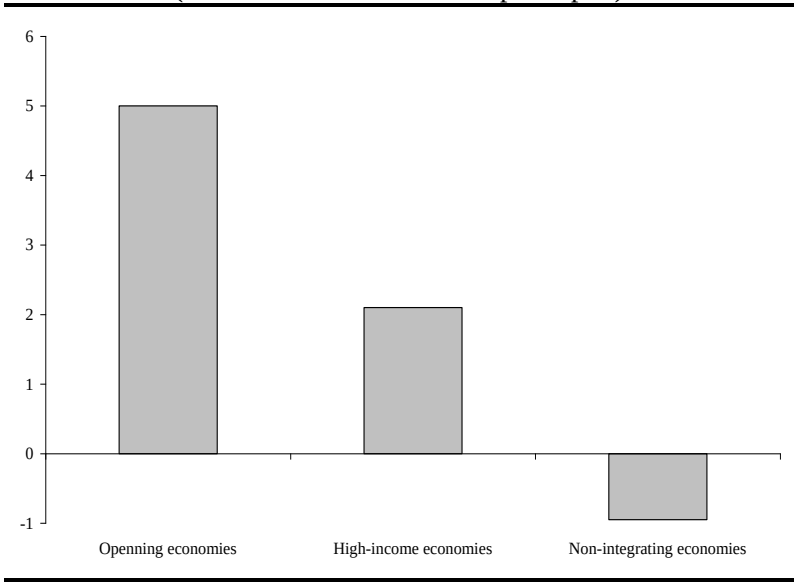
1. Background

For a relatively small country that is located in an arid climate zone and is endowed with few natural resources apart from calcium, phosphate, and potassium deposits, integration into international production networks and cross-border trade is of fundamental importance for economic development. Jordan has realized the necessity to pursue opportunities internationally, both for sourcing production inputs and consumer goods at lower prices and for finding new markets for its export products. The country has recently undertaken ambitious reforms of its trade regime. These initiatives comprise the accession to the WTO in 2000, the signing of several preferential trade agreements, notably with the European Union and the United States in 2001, and the pursuit of unilateral border policy reforms. In part as a result of these developments, the ratio of trade to GDP has surged from 110 % in 2000 to 135 % in 2005.

There is considerable, world-wide evidence that trade integration contributes positively to economic performance (Winters, 2004). Part of the benefits of trade reform depends on other policies and institutions being supportive, so that complementary policy measures should accompany changes in the trade regime. But given that trade liberalization is administratively simple to implement, – indeed a transparent and liberal policy releases administrative resources for other tasks – the case for making trade reform part of a pro-growth policy agenda is strong.

Analysts have measured the degree to which different countries have opened their markets by looking at changes in tariffs and trade-to-GDP ratios over time. Using such an approach, a team of World Bank macroeconomists found that developing countries that pursued an active world market integration strategy achieved annual economic growth of about 5 % per capita during the 1990s, i.e. more than twice the level observed in high-income countries. In contrast, developing countries that did not open their economies experienced lower, and on average negative, growth rates (Figure 1).

Figure 1: Market openness and economic growth during the 1990s
(% annual increase in GDP per capita)



Source: Dollar and Kray, 2001.

Like most policies, trade reforms are associated with winners and losers, at least in the short run. As the production structure of countries evolves to adjust to international opportunities, employment in declining sectors is lost, while new jobs in emerging industries spring up. Overall, stronger economic growth tends to support job security, employment creation, and employee remuneration, but the magnitude of the near-term adjustment needs and the extent of trade-reform related employment creation depends to a large degree on the characteristics of particular countries (Dasgupta et al., 2003). In this context, it is essential for policy makers to have a good understanding of the direction and magnitude of the impacts of existing and prospective policy programs on different economic sectors and societal groups. This information will make it possible to design complementary policies that maximize the benefits from reform, while limiting adverse effects on incomes and employment. Such carefully designed and sequenced reform programs have significantly higher chances of being sustained over time and to contribute substantially to the objective of promoting broad-based economic growth and employment creation.

The analysis in the following aims to contribute to the policy dialogue by describing and evaluating recent and prospective trade policy developments at the unilateral, plurilateral and multilateral level in the context of Jordan's growth, competitiveness, and employment agenda. In particular, the discussion will address the following set of pertinent questions: What have been the effects of increased international integration on employment? Which role have special economic zones played for job creating and how can these zones adjust to a changing international environment? What are the competitive strengths and weaknesses of the Jordanian economy in comparison to other countries in the region and beyond? And how can the country's competitive position be reinforced?

The remainder of the analysis falls into three parts: First, Jordan's recent trade performance will be discussed, with special attention to the impact of trade reforms and the country's special economic zones on employment. Second, a set of indicators of economic competitiveness will be examined to highlight Jordan's position vis-à-vis a group of comparator countries. And finally, some recommendations for the attention of policy makers will be derived on how trade-related growth could be made more job-rich.

2. What has been the contribution of trade to employment?

Jordan has run a substantial current account deficit in 2005, which amounted to no less than 18 % of GDP (Table 1). Compared with the previous year, the current account worsened significantly, with large deteriorations of public transfers, notably foreign grants, and of the trade balance. While exports more than doubled in nominal terms between 2000 and 2005, import growth was even more brisk, giving rise to a trade deficit of more than 40 % of GDP. A significant part of the surge in import value was related to the increase in world petroleum prices.

Table 1: Current account

	2000	2001	2002	2003	2004	2005
			in million JOD			
Goods	-1 541.7	-1 423.0	-1 227.1	-1 415.3	-2 395.1	-3 556.3
Exports	1 346.6	1 626.7	1 963.9	2 184.9	2 753.0	3 049.7
Imports	2 888.3	3 049.7	3 191.0	3 600.2	5 148.1	6 606.0
Services	- 60.3	- 172.5	- 82.2	- 105.9	- 62.8	- 185.3
Credit	1 160.6	1 051.1	1 252.8	1 233.6	1 458.6	1 617.0
Debit	1 220.9	1 223.6	1 335.0	1 339.5	1 521.4	1 802.3
Trade balance	-1 602.0	-1 595.5	-1 309.3	-1 521.2	-2 457.9	-3 741.6
Investment income	95.7	132.9	85.0	83.9	165.0	266.4
Current transfers	1 548.4	1 459.7	1 605.3	2 273.0	2 280.2	1 835.2
Remittances	1 053.7	1 162.5	1 241.0	1 262.6	1 289.5	1 326.4
Other	494.7	297.2	364.3	1 010.4	990.7	508.8
Current account	42.1	- 2.9	381.0	835.7	- 12.7	-1 640.0
			in % of GDP			
Goods	-25.7	-22.4	-18.1	-19.6	-29.3	-39.0
Exports	22.5	25.6	29.0	30.3	33.7	33.4
Imports	48.2	47.9	47.1	50.0	63.1	72.4
Services	-1.0	-2.7	-1.2	-1.5	-0.8	-2.0
Credit	19.4	16.5	18.5	17.1	17.9	17.7
Debit	20.4	19.2	19.7	18.6	18.6	19.8
Trade balance	-26.7	-25.1	-19.3	-21.1	-30.1	-41.0
Investment income	1.6	2.1	1.3	1.2	2.0	2.9
Current transfers	25.9	22.9	23.7	31.6	27.9	20.1
Remittances	17.6	18.3	18.3	17.5	15.8	14.5
Other	8.3	4.7	5.4	14.0	12.1	5.6
Current account	0.7	0.0	5.6	11.6	-0.2	-18.0

Note: Data for 2005 are provisional.
Source: Central Bank of Jordan.

Merchandise exports from Jordan continued to expand during 2005, but the growth rate slowed to 11 % in JOD terms after having reached 26 % in 2004. This deceleration was due both to the insecure situation in neighboring Iraq, and to the stronger competition from Asian countries that Jordanian exports of clothing are facing in the US market after the phase-out of the Multi-Fibre Agreement. Apparel, fertilizer, vegetables, and pharmaceuticals continued to be the main products exported, accounting for a combined 60 % of total overseas shipments.

Concerning services trade, Jordan continued to expand its surplus in travel-related services during 2005, due to strong arrivals of foreign tourists and Jordanians living abroad. Nevertheless, the overall services trade balance worsened, mainly as a result of higher expenses on transport (see table 2). Increased freight charges related to higher import volumes, as well as more expensive freight insurance were at the source of these developments.

Table 2: Jordanian Cross-Border Trade in Services

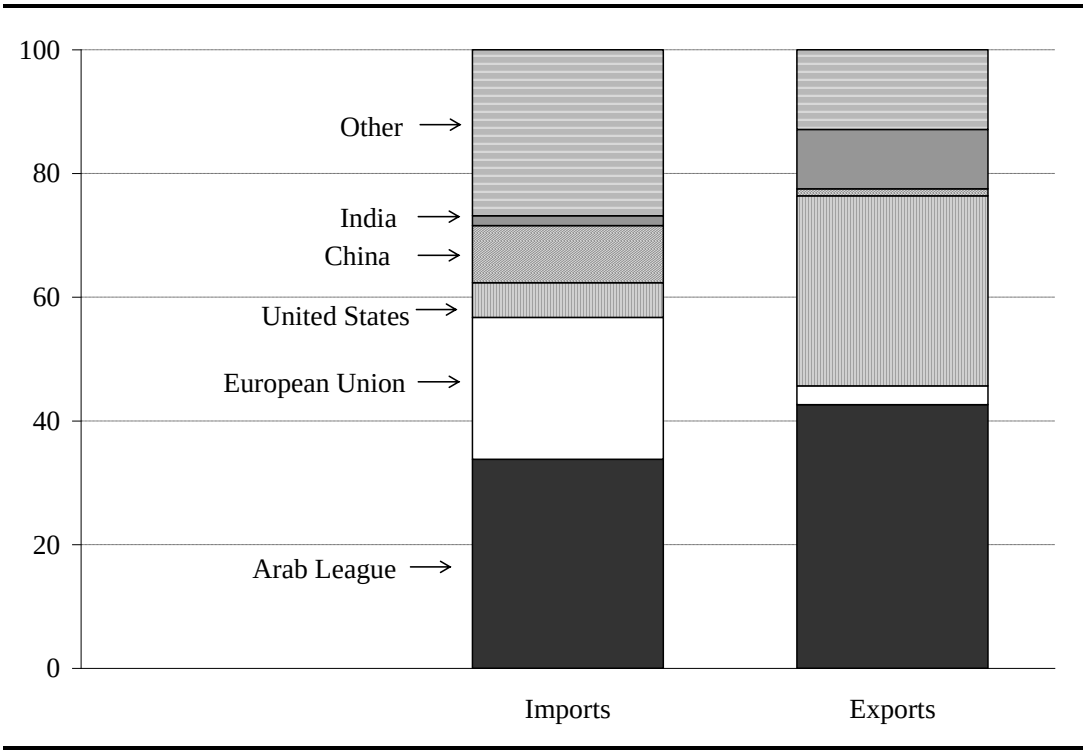
JD Million	2001	2002	2003	2004	2005
Receipts					
Travel	496.1	743.3	752.6	942.8	1021.4
Transport	184.5	207.2	215	302	331.1
Other services	233	209.8	249.5	285.1	309.4
Payments					
Travel	267.7	321.3	320.4	371.4	414.9
Transport	524	547	585.6	748.6	951.2
Other services	286.2	285.6	292	242.4	381.5

Source: CBJ Monthly Statistical Bulletin

For both exports and imports, other Arab countries in the region are Jordan's main trading partners (Figure 2). With countries outside the region, significant imbalances in trade flows exist. The EU is much more important as a source of imports than as a destination for Jordan's exports, while the reverse is true for the United States. Similarly, Jordan boosts a substantial merchandise trade surplus with India, while the country runs a significant deficit with China. These imbalances have potentially important implications for macroeconomic management. In particular, a strengthening of the Euro and the Chinese Yuan *vis-à-vis* the US Dollar would tend to further increase Jordan's import bill, while only marginally benefiting its export revenues.

Figure 2: Geographical composition of trade, 2005

(%)



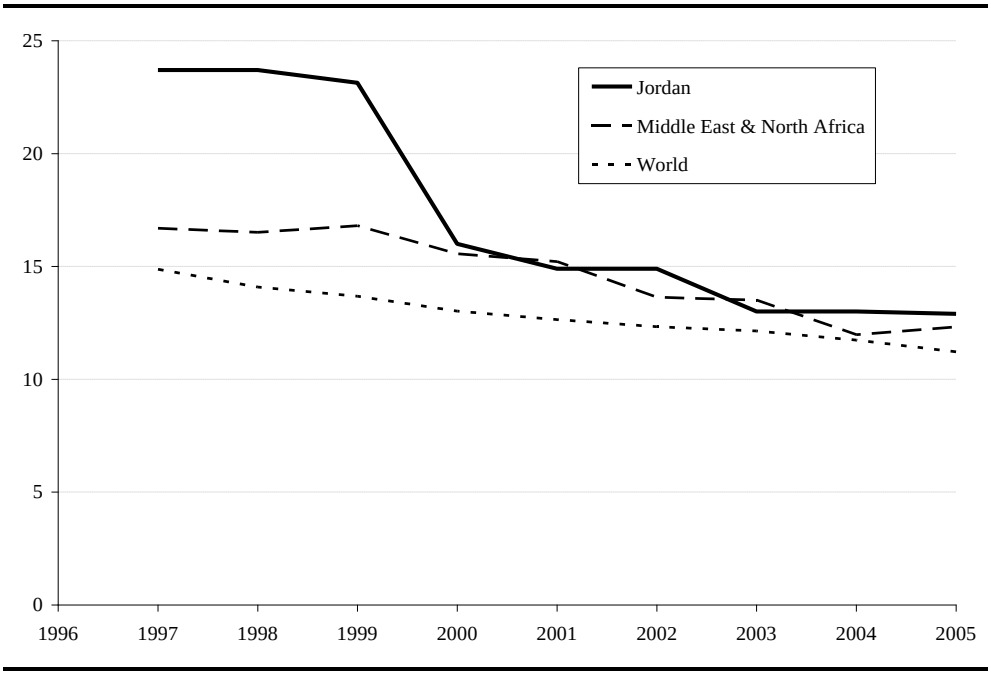
Source: Central Bank of Jordan.

2.1 Trade reforms are removing anti-export bias and domestic protection

Over the past decade, Jordan has embarked on ambitious reforms in order to better integrate with international markets. In particular, the accession to the WTO in 2000 was accompanied by a more than 7 percentage point drop in the country's average most favored nation (MFN) tariff. This drop in protection brought Jordan close to the average tariff level in MENA countries and the world (Figure 3).

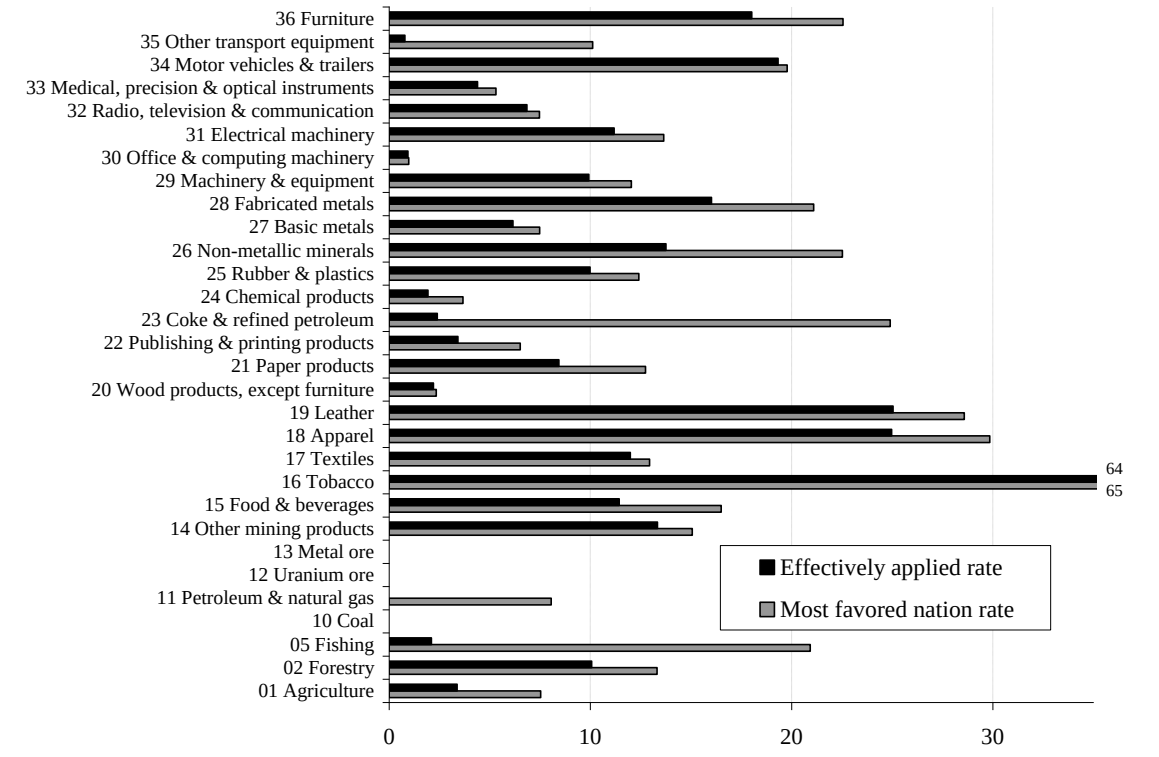
In addition to multilateral trade reform, Jordan has also concluded a number of preferential trade agreement, notably with other Arab countries, partners in Europe (EU Association Agreement signed in November 1997 and implemented since May 2002, and EFTA Free Trade Agreement concluded in June 2001 and enforced since September 2002), and the United States (Free Trade Agreement concluded in October 2000 and implemented since December 2001). These agreements offer better access to overseas markets for Jordan's exporters, while allowing partner country imports into Jordan's market at reduced tariff rates. In fact, about half of all imports currently already enter Jordan under preferential conditions. The prevalence of imports under special customs regimes means that the effectively applied import duties are significantly lower than the MFN-rates. Indeed, on an import-weighted basis, the effectively applied tariff (7.8 %) is more than a third lower than the MFN-tariff (12.0 %). Across sectors, the difference between effectively applied and MFN rates varies markedly, reflecting the differing coverage of products and the differing preference margins granted in the preferential arrangements (Figure 4).

Figure 3: Most favored nation tariffs
(rates in %)



Notes: Calculation based on simple average of import duties, which include para-tariffs and customs surcharges.
Source: International Monetary Fund.

Figure 4: Most favored nation and effectively applied tariff rates by sector, 2005
(in %)



Notes: Calculation based on import weighted averages. Sector classification according to ISIC, Rev. 3.
Source: World Bank staff based on UNCTAD Trains and UN Comtrade databases.

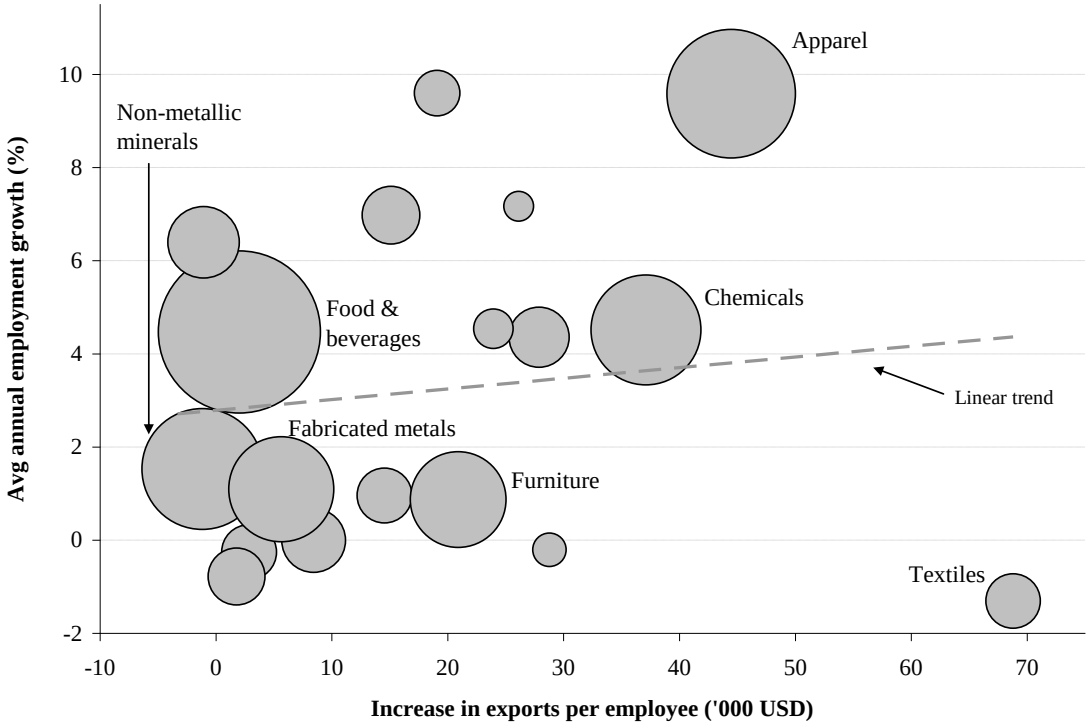
Reducing import duties not only gives consumers and domestic producers access to foreign goods at lower prices, it also reduces the anti-export bias in the trade regime. Tariff protection implies that if firms produce for the export market, they do not receive the same market price support that producers for the domestic market enjoy. Since Jordan can not influence world market prices, exporters do not receive the policy-generated transfers that producers for the domestic market obtain, thus biasing producers' decisions against selling abroad. Indeed, the higher the domestic market protection is, the stronger the anti-export bias becomes. Hence, by significantly reducing import duties, Jordan has induced producers to no longer focus their marketing attention primarily and largely on the domestic market, but pursue additional efforts to explore opportunities abroad.

The undertaken trade reforms, together with other changes in the domestic and global economy, have resulted in a marked increase in trade intensity over the past decade. Between 1995 and 2005, imports increased by an average annual rate of almost 10 %, and exports by about 8.5 % in nominal US Dollar terms. Trade growth thereby outpaced both the expansion of GDP (average annual rate of 5.5 %) and employment (3 %) in the country.

Has the increased integration into the international economy been beneficial for employment? The linkages between trade and labor market developments are complex and many non-trade

issues play a major role. But casual examination of changes of the export intensity of different manufacturing sectors and their employment dynamics suggests that activities that have increased their orientation towards international markets have experienced above average employment growth. There is a positive correlation between increases in export intensity per employee and the average annual rate of employment growth over the period 1995-2005 (Figure 5). The big exception to this trend is the textiles sector, which has shrunk in terms of overall employment, even though it became much more export oriented. But in parallel, apparel production has expanded substantially both in terms of exports per employee and employment, so that the positive correlation between export intensity and employment growth continues to hold if the textiles and apparel complex is taken as a single entity. It appears that over the past decade a structural change within the complex occurred that led to a partial shift from relatively capital-intensive textiles production to more labor-intensive apparel manufacturing (see also the discussion of QIZ-developments below).

Figure 5: Export expansion and employment growth by manufacturing sector, 1995-2005

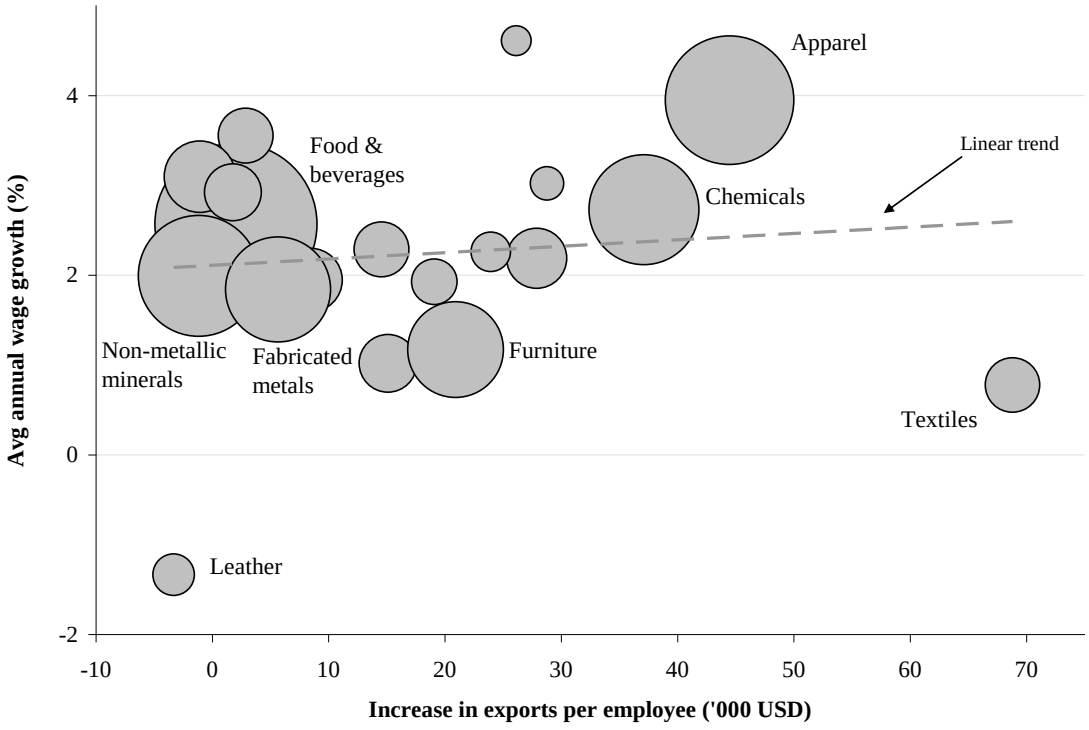


Notes: Employment data for the period 1995-2004. The size of the circle is proportional to the employment level in the sector.
Source: World Bank staff based on UN Comtrade database and Jordan's Department of Statistics.

A relationship similar to the one between export growth and employment creation can be observed between export growth and wage increases (Figure 6). The average annual growth in the compensation per employee tends to be higher in sectors that experienced a stronger increase in exports per employee over the period 1995-2005. This observation does not necessarily imply that jobs in more export-oriented industries in Jordan pay better than those in import-competing

ones, but only that the development of worker compensation has tended to be more dynamic in those sectors that increased their export orientation to a more than average extent.

Figure 6: Export expansion and wage growth by manufacturing sector, 1995-2005

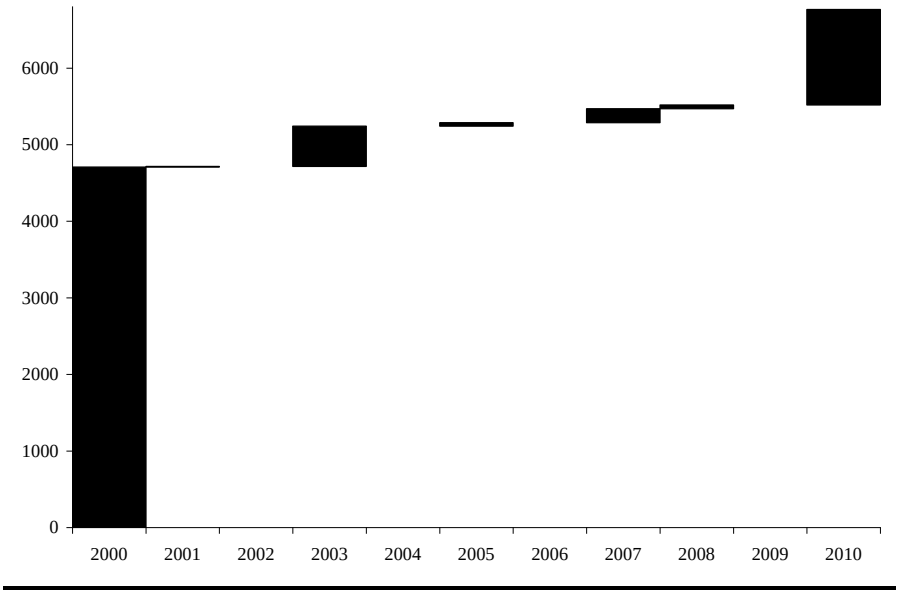


Notes: Wage measured as total compensation per employee. Employee compensation data for the period 1995-2004. The size of the circle is proportional to the employment level in the sector.
Source: World Bank staff based on UN Comtrade database and Jordan's Department of Statistics.

Jordan's integration into the international market has been in line with global trends towards trade liberalization and market opening. Yet Jordan's recent reforms have been more marked than those of many other countries, so that barriers to access in foreign markets continue to impede further growth of Jordan's exports. A team of analysts in the World Bank's Research Department has recently estimated a Market Access Overall Trade Restrictiveness Index (MA-OTRI), which provides an aggregate measure of foreign barriers. This indicator corresponds to the uniform tariff that if imposed by all trading partners on exports of a particular country (instead of the actually applied tariffs and non-tariff impediments) would leave overall exports of that country unchanged (Kee, Nicita, and Olarreaga, 2005). For Jordan in 2001/02, the MA-OTRI amounted to 25.9 % on agricultural exports and to 9.3 % on manufactured products. For all merchandise trade, the indicator value was estimated at 9.9 %. Among the 91 countries for which data are available, Jordan is thereby placed in the quartile of countries that are facing relatively low tariff and non-tariff barrier obstacles to their exports. Hence, foreign barriers do not seem to be holding back Jordan's exports to a considerable extent.

Jordan's trade policy will further develop over the medium term. The country will continue to implement its obligations under the WTO accession agreement, which entails lowering the maximum rate of import duty it can apply. By the end of 2005, almost 80 % of Jordan's 6766 tariff lines had already been adjusted such as to comply with the final bound rate that Jordan and its WTO partners had agreed upon in the accession negotiations (Figure 7). In 2007, 2008, and notably 2010, the remaining 20 % of tariff lines have to be brought into line with the country's WTO commitments, and these backloaded adjustments tend to concern politically more sensitive products whose producers receive above average import protection. However, it should be noted that the bound rates agreed upon in the WTO represent the upper limit for the tariffs that WTO members can apply, while countries are free to charge lower rates. Indeed, many countries, including Jordan, apply tariffs lower than their bound rates to imports, so that an agreed change in bound tariffs does not necessarily translate into a similar change in the rates that traders actually face.

Figure 7: Implementation schedule of WTO tariff commitments
(cumulative number of tariff lines to be brought into line with final bound rates)



Source: World Bank staff based on WTO Consolidated Tariff Schedule database.

In parallel to multilateral tariff adjustments, Jordan will continue to implement its preferential agreements, notably those with its Arab partners, the United States and the European Union. Jordan is a member of the Greater Arab Free Trade Area (GAFTA), which was concluded among members of the Arab League and has been effective since 1998. Since January 2005, trade in goods has been fully liberalized among GAFTA members, with the exception of the least developed countries within the grouping, who have been granted longer implementation periods. Also, West Bank and Gaza is exempted from the requirement of full reduction of customs duties on its imports from Arab countries, while products from West Bank and Gaza are eligible for duty free access in other GAFTA members.

The two agreements with the United States and the European Union came into force in December 2001 and May 2002, respectively, and foresee for Jordan to reduce its import tariffs on goods from the US and the EU stepwise over periods of 10 years and 12 years, respectively. The coverage of merchandise trade in the agreements is comprehensive and the number of excluded products is limited (tobacco products and alcoholic beverages, and, in the case of the EU, certain food products). Given the importance of these two trading partners, moving to free trade arrangements entails considerable economic effects, including with respect to employment and wages.

The direction and magnitude of the impacts of preferential integration depend on several factors. If the reduction of trade barriers fosters partner countries to expand output and exports of products for which they are internationally competitive, the price of final goods or production inputs on the importing country market falls to the benefit of consumers and input-purchasing producers. In this case, welfare-enhancing trade is created. Conversely, preferential integration may result in losses of government revenues, as tariffs on intra-regional trade are phased out, or promote costly trade diversion rather than welfare-enhancing trade creation, if trade is shifted from efficient producers outside the free trade agreement to preferential trading partners that produce at higher costs. In this case, the government loses tariff revenue on imports from third countries, without domestic producers and consumers benefiting to a corresponding extent from lower import prices. The risk for trade diversion to occur is particularly high if MFN tariffs remain high (World Bank, 2004).

Jordan's manufacturing sectors show a considerable diversity with respect to their degree of import penetration, the extent of tariff protection, and the relative importance of imports from the EU and the USA (Table 3). These differences in exposure to competition from EU and US producers are likely to be a fundamental determinant of the vulnerability of individual import competing sectors to further preferential trade liberalization. For example, wood product manufactures in Jordan currently receive relatively little protection against EU and US imports, so that further tariff reductions are going to have only limited impacts. By contrast, the non-metallic minerals sector (e.g. production of glass, cement, etc.) is currently shielded behind average tariffs of more than 20 %, the Jordanian market has in the past not been heavily contested, and the EU has been a supplier of imports already. Hence, non-metallic mineral production, which is providing more than a tenth of total manufacturing jobs in Jordan, could face sizeable adjustments as European goods get better market access.

Table 3: Exposure of Jordan's manufacturers to competition from EU and US producers, 2005*

	Share of imports in apparent consumption	Share of sector in manuf. empl.	Avg. MFN tariff rates	Avg. tariffs on imports from EU	Share of EU in total imports	Avg. tariffs on imports from US	Share of US in total imports
Food & beverages	39.1	20.9	16.5	15.4	17.6	1.9	5.9
Tobacco	12.0	0.9	65.2	66.4	10.5	65.8	16.6
Textiles	86.4	2.4	12.9	10.8	3.5	10.2	0.5
Apparel	..	13.1	29.9	29.8	13.6	15.0	1.4
Leather	44.6	1.4	28.6	28.6	8.6	14.6	0.6
Wood, except furniture	80.2	2.4	2.3	2.2	15.4	0.5	2.7
Paper products	54.6	2.4	12.7	9.7	38.5	1.7	8.1
Publishing & printing	3.4	4.1	6.5	5.0	35.3	0.6	11.2
Coke & refined petroleum	14.8	2.6	24.9	21.5	3.3	7.7	0.3
Chemical products	54.6	9.6	3.7	2.4	42.6	3.2	5.1
Rubber & plastics	48.7	3.3	12.4	11.3	22.4	8.0	2.5
Non-metallic minerals	14.5	11.6	22.5	22.2	26.8	7.5	1.5
Basic metals	64.2	2.7	7.5	7.2	14.1	10.9	1.5
Fabricated metals	39.1	8.8	21.1	19.2	30.0	8.1	3.4
Machinery & equipment	83.8	2.9	12.0	8.9	45.6	4.3	9.4
Office machinery	..	..	1.0	1.0	33.1	0.1	11.3
Electrical machinery	40.3	1.7	13.7	13.2	45.7	6.0	10.1
Communication equipment	..	0.0	7.5	4.1	54.9	3.6	11.0
Medical & optical instruments	78.0	0.7	5.3	3.7	45.5	1.4	21.8
Motor vehicles & trailers	63.7	1.3	19.8	15.9	43.8	17.0	3.9
Other transport equipment	99.8	0.0	10.1	0.5	61.7	0.0	34.5
Furniture	37.5	7.3	22.6	17.7	49.8	13.0	7.8
Total	43.7	100.0	9.9	9.2	29.5	4.1	5.9

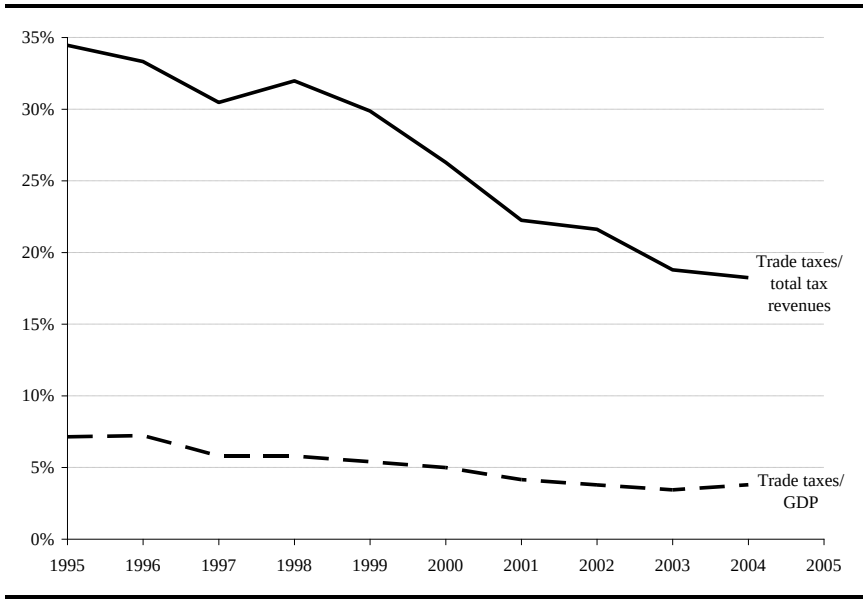
Notes: * or latest year available; tariff averages are import-weighted.
Source: World Bank staff based on UNIDO database (for share of imports in apparent consumption), Jordan's Department of Statistics (employment data), and UNCTAD Trains and UN Comtrade databases (trade data).

Another aspect of adjustment concerns tariff revenues. As the duties on imports from the EU and the USA are reduced to zero, border tax receipts will decline. In 2005, Jordan collected about 28 % of total duty income from imports from the European Union and 3 % from imports originating in the United States. This current share of duties on EU and US imports represents the lower boundary of the prospective border tax losses following the full implementation of the free trade agreements. Actual duty losses will tend to be higher, as the preferential market access granted to the EU and the US will lead to a replacement of imports from other countries by duty-free EU and US supplies.

Hence, the Jordanian authorities will have to find alternative revenue sources in order to offset the prospective decline in border tax income and maintain sufficient funding for the proper functioning of government and the operation of social programs. Fortunately, Jordan has already managed to significantly reduce its dependence on tariff revenues over the past decade. Since 1995, the share of import duties in total tax revenues has declined from more than a third to less than a fifth (Figure 8). Over the same time, the ratio of trade taxes to GDP fell from more than

7 % to less than 4 %. These efforts of shifting the tax burden away from imports and towards other revenue sources should be continued in order to prepare for the prospective drop in border tax receipts.

Figure 8: Relative importance of trade taxes



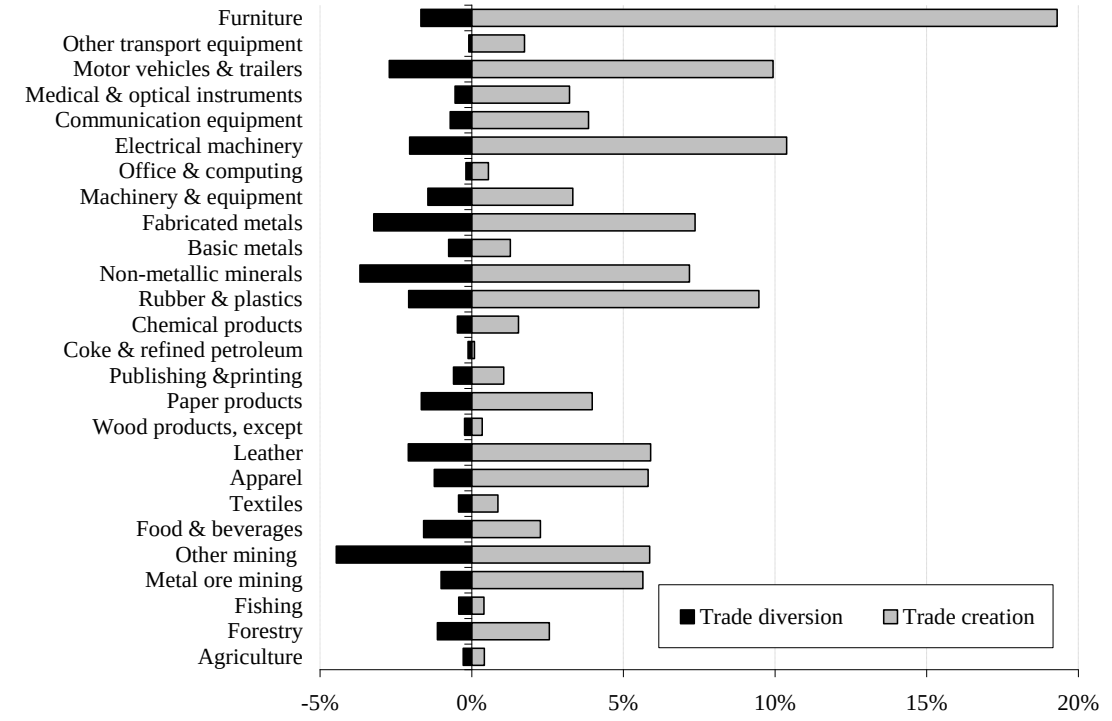
Source: World Bank, World Development Indicators database.

One means to better assess and quantify the prospective impacts of preferential trade liberalization is to make use of applied trade analysis tools, such as the partial equilibrium model SMART (Software for Market Access and Restrictions to Trade). This model can be used to derive estimates of trade creation, trade diversion, and tariff revenue impacts of trade policy reforms, such as those occurring as a result of preferential trade agreements. The model is static and focuses on a single country at a time, so that the tool does not make it possible to capture intertemporal linkages among variables or interactions between contemporaneous reforms in several countries. On the other hand, SMART works at a highly disaggregated level, so that information on the prospective impacts of tariff reforms on narrowly defined product groups can be derived. A full technical description of the model can be found in UNECA (2005).

Using SMART to simulate the impact of full implementation of free trade with the European Union and the United States suggests that the overall effect on import levels would be moderate. Total imports are projected to increase by 3 % compared with 2005 import levels. Trade creation outweighs trade diversion by a factor of three, so that the overall impact of the preferential trade reforms on economic welfare is positive. Indeed, trade creation exceeds trade diversion in all sectors. However, in some import categories, such as non-metallic minerals or fabricated metals, trade diversion is important (Figure 9), and the projected shift of imports from third countries and towards the preferential partners is resulting in a significant loss of tariff revenues. In total, tariff revenues are projected to decrease by 36 % from 2005-levels.

Figure 9: Projected trade creation and diversion effects of full implementation of EU and US preferential arrangements

(Change in imports relative to 2005-baseline)



Notes: Estimates based on analysis using the SMART model. Simulations assume full implementation of EU and US preferential agreement, while all other economic and policy variables are taken as constant.
Source: World Bank staff.

The results from the SMART model simulations should be treated with care, as they are derived using available estimates on import demand elasticities that might not fully reflect the recent economic situation in Jordan. Also, drawing inferences from the extent of the projected import changes on employment impacts might be invalid, as a partial equilibrium model, such as SMART, does not make it possible to take interactions between sectors through factor market adjustments into account. Yet, the findings might contribute to the discussion on the prospective impacts of trade reforms and help to stimulate more detailed analysis on adjustment patterns and support needs.

On the export side, the EU Association and US-FTA agreements provide Jordan's exporters with better access to the EU and US markets. Concerning the EU, industrial exports into EU-member countries became free of customs duties from the date of entry into force of the Agreement (i.e. 2002). Following further bilateral negotiations concluded in 2005, the EU agreed to fully liberalize its imports from Jordan by 2010, with the exception of seven products (cut flowers, potatoes, garlic, cucumber, citrus fruit, strawberries, and olive oil), which are subject to import quotas. Moreover, the EU will continue to apply specific duties on fresh agricultural goods, in cases where such charges are levied on imports from all countries.

In addition to the free movement of goods, the Barcelona process, in which the Association Agreement is embedded, envisages deeper integration between the EU and its Mediterranean partners in areas such as the right of establishment and supply of services; economic provisions governing payments, capital, and competition; social and cultural cooperation; and political dialogue. The extent to which Jordan will benefit from this increased integration with the EU will thereby greatly depend on the investment response and thus on improvements in the investment climate. For the latter, the country's success in upgrading the quality and lowering the costs of intermediate service inputs through greater competition will be crucial.

With respect to the US market, Jordanian exporters of industrial and agricultural goods will get full access through the gradual reduction of customs duties over a transitional period of ten years. In order to qualify for duty and quota free access, exported goods need to have at least 35 % of Jordanian value-added content. Special provisions pertain to tobacco products (chapter 24 of the Harmonized System), which are excluded from any tariff reduction, and alcoholic beverages, which will remain subject to reduced, but non-zero duties at the end of the transition period. Also, tariff rate quotas that currently limit Jordan's exports of dairy products, sugar, and chocolate to the US will be gradually expanded and altogether eliminated at the end of the 10-year period. Concerning services trade, the FTA confirms Jordan's WTO commitments in services and removes previously existing ownership restrictions for US investors. Moreover, the Agreement contains specific market-access commitments on all four modes of services supply (cross border trade, consumption abroad, commercial presence, presence of natural persons) in several sectors, including communications, engineering and construction, distribution, education, environment, finance, health, tourism, recreation, and transportation.

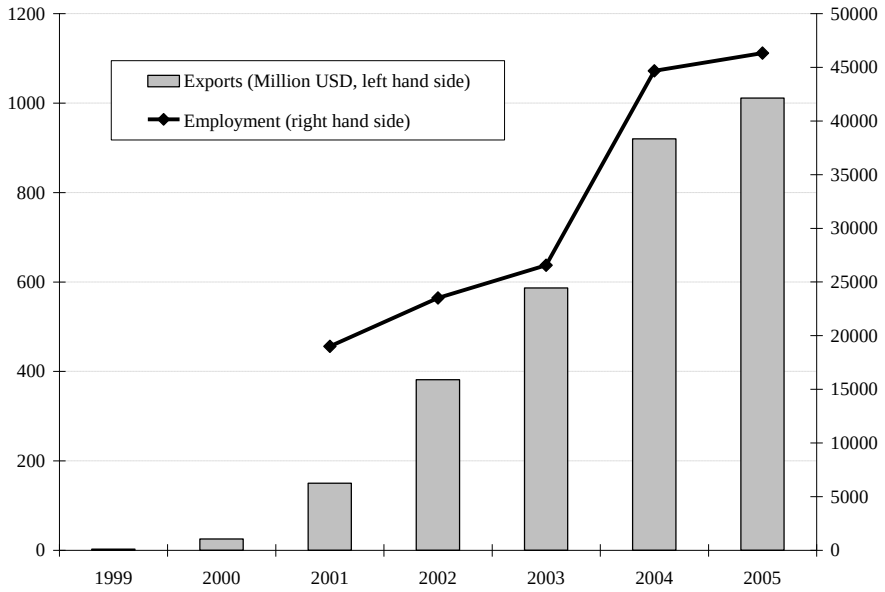
2.2 Special economic zones have prospered, but with limited impact

The implementation of the US-FTA will offer to virtually all exporters from Jordan duty and quota free access to the US market that was previously reserved to producers in Qualified Industrial Zones (QIZs). In 1997, Jordan and the USA signed the QIZ Agreement, which extended the market access-privileges of the US-Israel Free Trade Agreement to approved enclaves in Jordan that produce goods in collaboration with firms in Israel. In order to be eligible for free access to the US market, products from the QIZs have to have at least 8 % of Israeli content (7 % for high technology products), 11.7 % of Jordanian content, and a total content from Israel, West Bank and Gaza, Jordan, and the USA of at least 35 %. In case of double transformation, e.g. cutting and sewing in the apparel industry, the value of the raw material (e.g. fabric) can be counted towards the QIZs' value-added share. In 1998, the first QIZ was designated and since then a total of thirteen zones have emerged, three of which are owned and operated by the government, while the remaining ten are run by the private sector.

According to headline indicators, QIZs have been a resounding success. There are now more than 100 production units in QIZs and exports from the zones surged over time to more than USD 1 billion by 2005 (Figure 10). QIZs thereby accounted for almost a quarter of total Jordanian exports and have turned the USA into the top single-country destination for Jordan's exporters. Net-exports have been estimated to amount to a third to half of the gross amount (Saif, 2006). In parallel, the number of employees in QIZ-enterprises increased to more than

46 000, or almost 30 % of the country's manufacturing workforce. Cumulative investment in QIZs amounted to about USD 340 million, of which most funds represented foreign direct investment. QIZs thereby accounted for more than 10 % of total FDI inflows during 1999-2005.

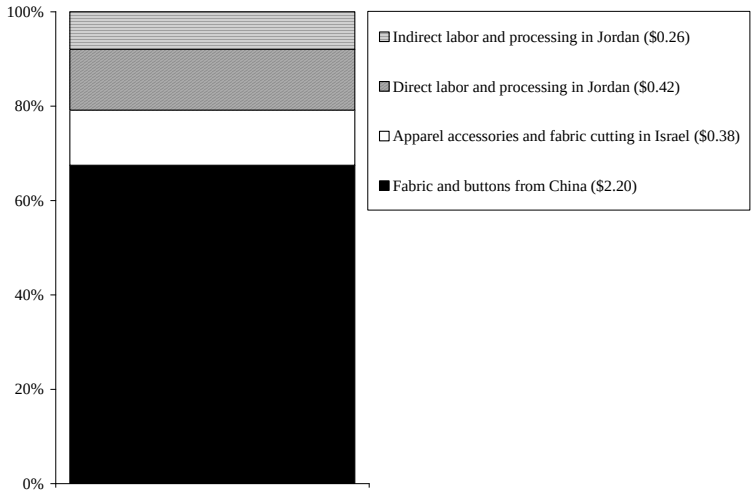
Figure 10: Exports and employment in QIZs



Source: Ministry of Industry and Trade & Ministry of Labor.

However, the economic impact of the expansion of QIZ activity has been less impressive. The overwhelming number of firms in QIZs are active in apparel production in order to take advantage of the significant tariff and quota protection in the US market that generates rents to those producers who enjoy preferential market access. Clothing is a labor-intensive activity that does not require large-scale, long-lasting investments and can be quickly moved to the location that momentarily offers the most favorable production and export conditions. International input-purchasing and production networks are well developed and the value-addition in any particular production location tends to be small. In the case of Jordan's QIZs, the local value-added does not significantly exceed the minimum content requirements. Indeed, it has been argued that Asian suppliers of fabric to QIZ apparel firms have benefited more from free-access to the US market than Jordan itself. In the case of some double transformation processes, less than one third of the production costs of the exported product may fall on Jordanian and Israeli firms (Figure 11). And since most QIZ-firms are owned by foreigners, the share of value-added that represents the return to capital and entrepreneurship does not necessarily stay in the country.

Figure 11: Typical production costs of girl's shirts in QIZs



Source: Jordan Investment Board.

Moreover, two-thirds of the workforce in the QIZs consists of foreigners, notably Asian workers who come to Jordan for a limited time and spend a significant share of their wage income in their home countries. These migrants are readily accepting the relatively low wages, long working hours, and difficult labor conditions in apparel production. Employers also see them often as being better trained and more committed to their work. In contrast, the appropriateness for Jordanian women to work in the garment industry has been a controversially discussed subject in Jordan (Box 1). The government has tried to provide incentives to QIZ-firms for the recruitment of more Jordanians by providing state-funded training programs for local job seekers as well as charging fees for work permits of foreigners, but the authorities are aware that their policies towards migrant workers should not become too restrictive in order not to increase labor costs to an extend that would drive investment away.

Backward and forward linkages with the mainland economy have also been very limited. Most QIZ-enterprises are foreign-owned and operators have little contacts and business interest in the domestic Jordanian economy. In any way, Jordan does not have any fiber and textiles production that could provide inputs to apparel producers, and accessories, like buttons or zippers, are procured from Israel to satisfy QIZ content requirements. This leaves catering to QIZ-workers, the provision of utilities, such as electricity and environmental services, and some export logistics as the main goods and services that are procured locally. Forward linkages are limited by nature of the QIZ-agreement, which stipulates that all production from the zones has to be exported to the United States. There might be some positive effects on economy-wide productivity from learning-by-doing and demonstration of entrepreneurial practices, but these spillovers are difficult to discern and quantify.

Box 1: Female employment in QIZs

The establishment of QIZs and subsequent development of the clothing industry have provided employment opportunities for many women in Jordan, particularly for those with no or little formal education. More than 90 % of all Jordanian workers in QIZs are female, and the about 15 000 Jordanian women who were employed in QIZs during 2005 represented about 15 % of the total female labor force. Most of these women take up their jobs with no former work experience and are often their family's main source of cash income.

Female Jordanian workers in QIZs are usually single, very young, and generally from a poor, rural background. Sometimes, they are offered the opportunity to participate in company training programs to make it possible for them to enhance their knowledge and abilities. However, employment in QIZ provides only limited career prospects and does generally not develop skills that could be easily transferred to non-apparel jobs outside the QIZ.

Moreover, working conditions have been a concern. In early 2006, a report published by the US National Labor Committee made allegations of abuse and exploitation of workers in QIZs. These allegations have reinforced criticism about the labor conditions in QIZs that some part of the population believes to be unsuitable for women. Therefore women are often discouraged by their family members to take up jobs in QIZs. Many firms, as well the Jordanian government, have made efforts to counter these beliefs. Several initiatives' such as road shows, open door policies, image campaigns, increased labor inspections, as well the provision of better transportation have been undertaken to encourage female labor participation in QIZs and to convince the population that abusive practices are not common across all employers but, if occurring at all, confined to a minority of outsiders.

Despite limited prospects for career advancement and controversy about labor standards, employment in QIZs has fostered female labor force participation and helped to lift their social status within their communities. A recent ILO survey indicates that working in QIZs has provided many women with self-fulfillment and new life experiences. By means of their salary, women contribute to family income, gain respect within the household and community, and increase their influence over decision making within their home. In this sense, QIZs have contributed to the empowerment of women in Jordan. These achievements could be even more pronounced, if public and private sector initiatives to create a more female-friendly working environment (e.g. a better separation between male and female work places), more transparent career opportunities within firms, and better training programs would be pursued more thoroughly and pervasively.

What are the prospects for the further development of QIZs? The QIZ Agreement is not time-limited and will not be superseded by the FTA with the United States. The latter will to some extent generalize the market access preferences enjoyed by QIZ-firms to producers outside the zones. However, the implementation schedule for the clothing sector is backloaded, such that mainland producer will get free access to the US market for textiles and apparel only in 2012, i.e. at the very end of the transition period. Also, differences in rules of origin provisions will remain. In particular, the US-FTA provides for a minimum content requirement of 35 % of combined value-added from Jordan and the USA, while QIZ exports have to consist of at least 35 % combined value-added from Jordan, Israel, the West Bank and Gaza, and the USA.

At the time when the QIZs were created, apparel exports from low cost producers in Asia to the US market were still restricted by import quotas under the Multi-Fiber Arrangement. These

quantitative restrictions were phased out at the beginning of 2005, leading to a surge in clothing exports from China and other Asian producers that triggered the (re-)imposition of temporary safeguard quotas since January 2006. Once these safeguards expire at the end of 2008, the intensity of competition on the US apparel market will increase.

Yet, even after full quota removal, apparel exporters from QIZs will retain tariff preferences over their competition from Asia. It has been estimated that higher labor costs and additional expenses for overseas procurement of raw materials put Jordan-based apparel producers at a cost disadvantage of about 10 % *vis-à-vis* main competitors from Asia (Saif, 2006). The tariff preferences for clothing that QIZ-producers enjoy in the US market exceed 10 % for many products, so that the QIZs do not seem immediately endangered.

However, the current tariff preferences in the US market might be eroded over time. For example, a successful conclusion of the Doha Round of multilateral trade negotiations could trigger a world-wide reduction in tariffs that would also reduce protection in the US clothing market. Moreover, the USA has signed an increasing number of preferential agreements that provide partner countries with similar market access preferences as Jordanian exporters. Recent examples include the QIZ Agreement that was concluded with Egypt, as well as the CAFTA-DR Agreement. These agreements put an increasing number of competitors into the same market access position as Jordanian QIZ producers and, hence, tend to erode the latter's profit margins.

3. How competitive is Jordan in the international economy?

As a relatively small economy with limited production capacity and a small domestic market, Jordan's economy depends much on external trade as an engine for growth and job creation. Jordan's government has done well in eliminating barriers to trade and creating an environment more friendly to trade. With increased openness to trade, it will induce the private sector to tap into the countries trade potential with partners such as EU. However, smaller-scale production and relatively higher concurrent transaction costs makes it more difficult in competing in labor-generating, low-tech and mid-tech segments of contested market where 'Asian tigers' such as China, India and other emerging economies dominate increasingly with their scale and cost advantages. At the same time openness can make the country more vulnerable to external shocks with repercussions on international competitiveness. Balancing out the different forces which affect Jordan's competitiveness is therefore paramount to ensure continued growth in exports.

The recent surge in exports implies strong improvements in Jordan's international competitiveness. In fact, the World Economic forum ranks Jordan higher in its Growth Competitiveness Index than many export champions such as India, Turkey or China, and most Arab countries. Several questions emerge: Which factors have contributed to the rise in competitiveness and export performance? In which products and geographical markets has Jordan a competitive edge? Which areas show potential for future export growth? And what are the requirements to exploit this potential?

3.1 Jordan scores well in international comparisons, but challenges remain

The magnitude of the current account deficit is concerning. Historically worker's remittances more than offset the trade deficit and helped to balance the current account. But despite a growth of 7.5%, remittances fell well short of financing the growing trade deficit—covering only 37% of the deficit. The major financing for the current account in 2005 came from other capital inflows, particularly FDI which recorded large increases.

In 2005 FDI reached a record level of US$ 1.5 billion, representing 12% of GDP. Yet, the investments have not contributed much to the development of sustainable exports. Most of it comes from Arab investors and is in non-traded sectors such as construction or in domestic network industries (telecommunication, railways etc.) following their privatization (see also Femise, 2005). Total private investment which benefited from the investment law of 1995 accounted for US$ 1.05 billion in 2005. Construction with exception for hotels and health clinics are exempted from the tax holidays and other benefits of the law. Investment in the textile and clothing industry have declined substantially from US$ 72.3 billion in 2004 to US$ 14.2 billion in 2005 and confirm the expected contraction of the industry. Investments in pharmaceuticals and manufacturing appear to increase which might eventually lead to more exports in these sectors. The prospects for more FDI remain positive, nevertheless FDI flows are unlikely to cover the trade deficit in short- or medium-term. Improving the competitiveness of Jordanian exports will therefore be critical to reduce the trade deficit and sustain the current account.

Jordan's general competitiveness has been largely unaffected by real exchange rate movements. Jordan's currency is pegged to the US Dollar since 1995. The Central Bank of Jordan has successfully maintained the exchange rate within the band. The change in the exchange rate system, paired with prudent macro-economic management, proved helpful in controlling monetary shocks and price inflation in recent years, as well as in increasing confidence in the macroeconomic stability of Jordan's economy. On the flipside the soft peg limits the possibility for adjustment in exchange rates and increases the risk of overvaluation of the Jordan Dinar. Indeed, according to IMF estimates (2004) the Jordanian Dinar suffered from overvaluation by some 10-15% in real effective terms at the end of the 1990s. The REER appreciated slightly up to 2002, reflecting the strength of the US Dollar against other currencies. This trend was subsequently reversed to its end 1990s level. There is, however, no clear evidence that real exchange rate movements have had any strong effects on Jordan's competitiveness considering the continuous increase in exports.

Efficiency gains from economic reforms which, among others, have led to an improved trade environment, better infrastructure and a larger role of the private sector have likely withered any negative impact from potential overvaluation of the Jordanian Dinar. These gains have materialized in an increase of total factor productivity growth from 1.1% between 1996 and 2000 to 3.1% in 2001-2005 and the remarkable export success[1]. Yet, some experts estimate that the overvaluation might have generated a potential loss of 3.1 % of merchandised exports.[2] But considering the average export growth of 4.5% during the same period and the present

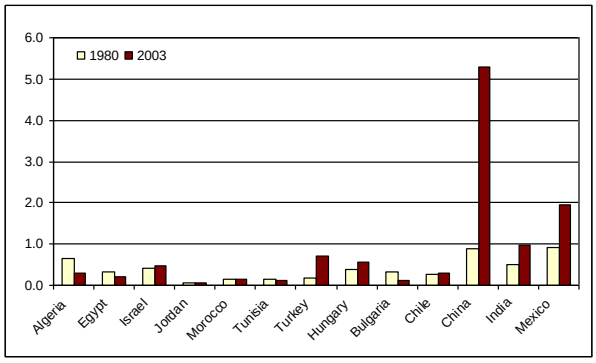
[1] TFP based on authors calculation
[2] Nabli and Veganzones (2004)

growth rate of about 16.8% in 2005 it is safe to say that the increase in competitiveness was stark enough to overcompensate for any loss from potential overvaluation.

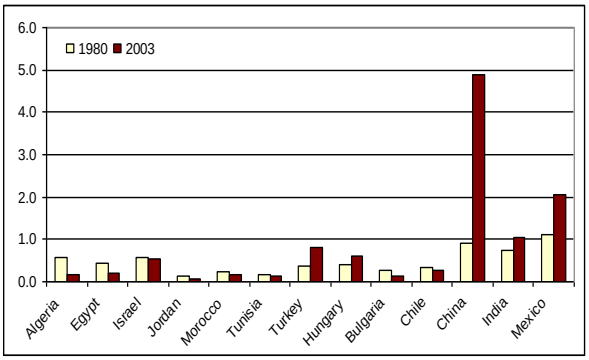
Jordan achieved higher than world average growth in trade in the recent years. Nevertheless its relative position in the global trade arena did not improve (Figure 12). Jordan's importance in world trade even decreased from 0.07% in 1980 to 0.05% in 2003 due to the fact that other emerging countries showed a stronger stance in trade. Countries like Mexico, Turkey, and Hungary show significant increases in both, market share in import and export – a clear signal for their competitive edge to other countries. Jordan's market share in world trade remains low despite the increase of trade.

Figure 12: Relative Importance in World Trade

Exports (in % of world exports)



Imports (in % of world exports)

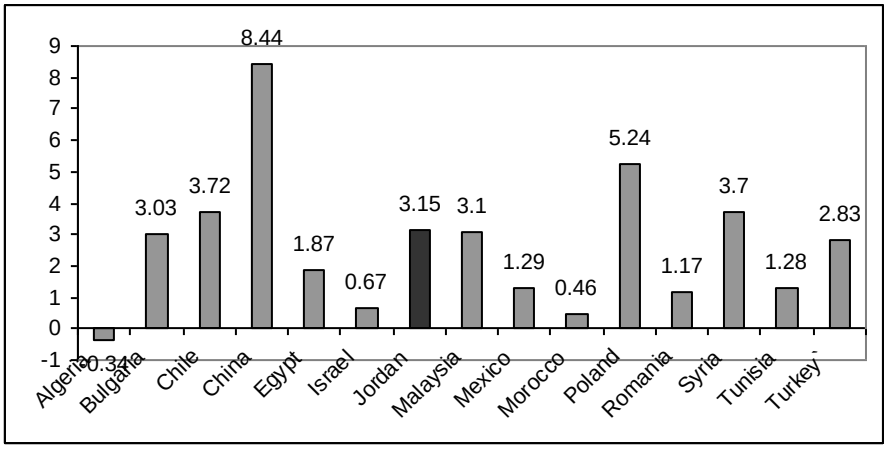


Source: UNCTAD (2006), Staff calculation

Growth of labour productivity slowed down. According to different estimates Jordan's labor productivity increased in the second half of the 1990s by 3.3%[3] and subsequently slowed down to 3% between 2000-03. This is higher on average than in other MENA countries but still low compared to other emerging economies (Figure 13). Labor productivity is the lowest in the trade and retail sector but also in manufacturing (see table). The low level of productivity in the manufacturing sector can be explained by a predominance of unskilled workers, including expatriates, in the total labor force as well as the simultaneous increase in employed labor. In 2004, for instance, 90% of all workers in this sector were unskilled.

[3] Saif (2004)

Figure 13: Growth in Labour Productivity 1990-2003



Source: WDI, Staff Calculation,
Note: Growth rates for Jordan are indicated for 1995-2003, and Tunisia for 1992-2003

Labor costs, calculated as JD/worker, outgrew with 2.5% consumer price inflation which only recorded 1.7% during 2000-03. In absence of information on unit labor costs, we cannot further examine Jordan's relative labor competitiveness; some experts, though, gauge that the costs of labor are comparable to slightly above to those of Egypt which means that they are lower than in most MENA countries in MENA and internationally fairly competitive (Seif, 2006). Existing rigidities in the labor marker are likely to prevent labor costs from sinking. In order to sustain competitiveness of its manufacturing and labor-intensive sectors Jordan will have to improve labor productivity and address present labor market rigidities. Negative future scenarios might include losing market share in labor intensive sectors such as textiles and clothing to Egypt if the country's growth in labor productivity outpaces Jordan's. High labor productive China could likewise assume a higher market share in textiles and clothing when quotas for Chinese textile imports will be abolished.

Table 4: Trends in labor productivity by sector (JOD by worker)

	Labor productivity			
	Economy-wide level	Manufacturing	Trade	Transport
1987-2005	8866	7189	6672	28550
1990-2005	8305	7117	5014	29645
1997-2005	8039	6750	3487	34836
2001-2005	7990	6757	3045	39880

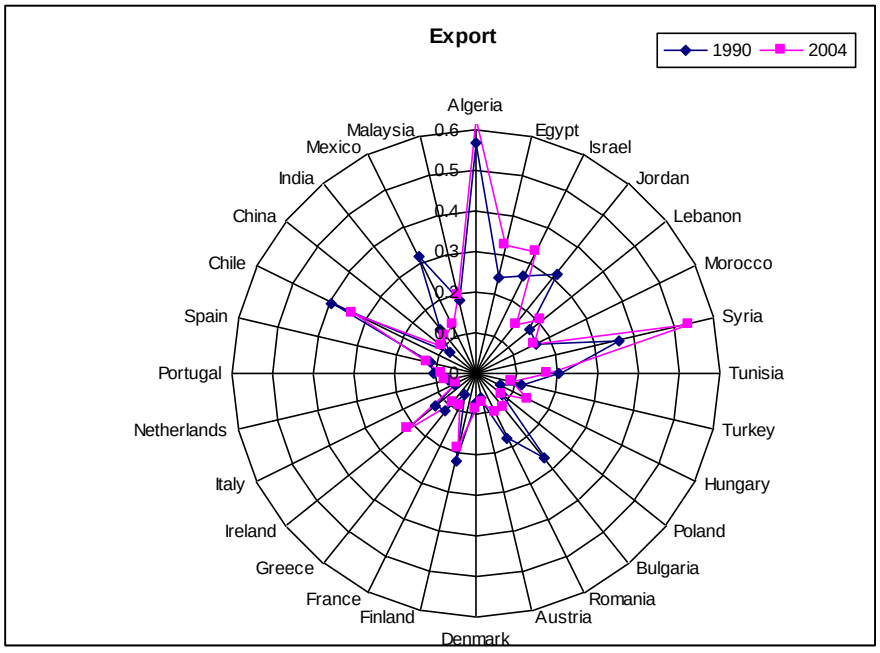
Source: Staff Calculation,

Exports are generally marked by a strong concentration in few products. Similar to other MENA countries Jordan only exports few products, mainly chemicals (fertilizers), clothing, and

food products with 30.5%, 26.1% and 13.2% of total exports in 2004 respectively. These three export sectors make up for almost two-third of the export earnings. This is not necessarily problematic. But two of these exports sectors, namely food and clothing, are both very contested on world markets and only generate little profit margins for producers. In addition, clothing is a very mobile industry in the sense that its production does not involve much sunk-costs or specific knowledge and can hence be easily moved to other countries if its production appears more favourable elsewhere. In addition, the food industry depends on the climate-sensitive agricultural production. A large part of Jordan's export base is, thus, fairly volatile. A more diversified export base could help to deal with exogenous shocks and stabilize export revenues.

Some measures of diversification indicate a trend to greater diversification. The Herfindahl-Hirschmann (HH) Index, for instance, shows a decrease from 0.3 in 1990 to 0.17 in 2004 which is a remarkable achievement. This trend, however, is based on the surge in clothing exports and, consequently, a shift in the export structure, and only partly on the emergence of new export products. In 1990 and in 2004 alike, Jordan's exports depend mostly on three industries. At a positive note, the export structure is today more balanced overall than it used to be in 1995 when exports depended to almost 50% on the production of chemicals. This development makes Jordan to the most diversified country in MENA, and the only one in the region which significantly managed to reduce its level of concentration instead of increasing it (Figure 14). Compared to other countries of note, Jordan still lacks in diversification.

Figure 14: Herfindahl-Hirschman Index of Exports



Source: staff calculation based on UNCTAD

3.2 International dynamics warrant the attention of policy makers

One could argue that a strong concentration on a small set of products shows a high degree of specialisation, hence is a sign of a comparative advantage in these products. A measure of the revealed comparative advantage (RCA) indicates though that the specialisation in only two of the three export industries is based on a significant advantage relative to other countries: Food and chemicals. Clothing products, albeit strongly competitive, does not appear in the top 15 list of products with a strong comparative advantage (Table 5) at highly disaggregated product level.

Table 5: 15 items of top specialisation: export share and RCA, 1993-2002

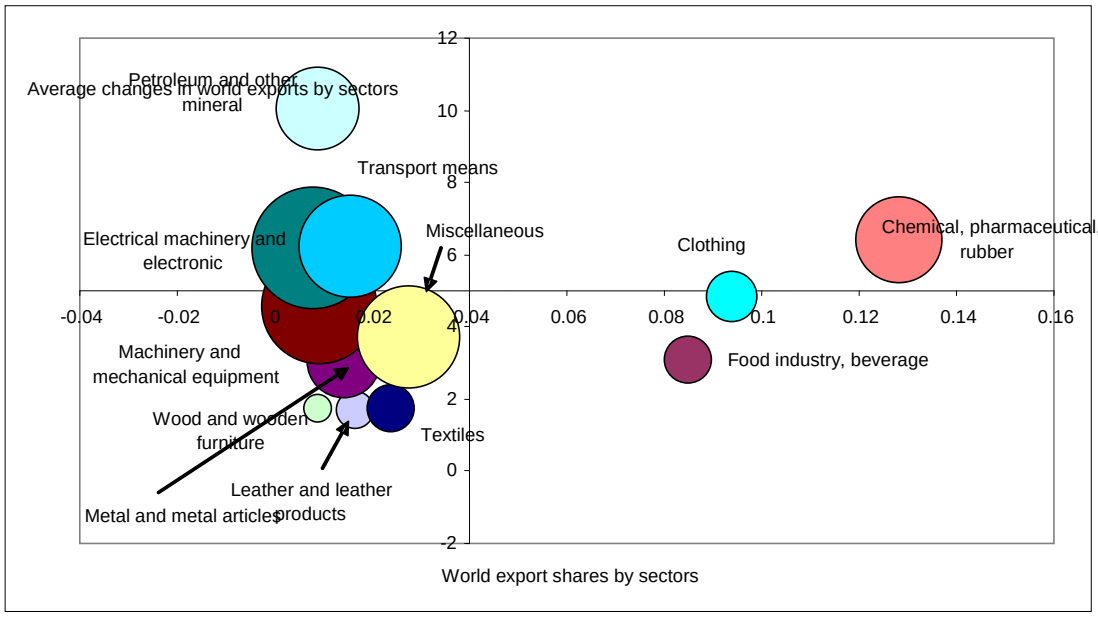
	Export share	RCA
Meat, frsh, chilled, frozen	0.23	0.88
Skins, raw, exc. Furs	0.36	0.89
Cheese and curd	0.12	0.92
Fertilizers, manufactured	3.90	0.93
Edible products, preps nes	0.32	0.93
Fertilizer, crude	17.66	0.93
Non-ferrous metal scrap	0.69	0.95
Vegetable, prsvd, prpd	0.28	0.98
Feeding for animals	0.53	0.98
Fruit, nuts, dried, fresh	1.45	0.99
Meat, prepd, prsvd	0.15	0.99
Live animals	1.87	0.99
Vegetable, fresh,	4.58	0.99
eggs, yolk, fresh, prsvd	0.37	1
other manufactured goods	0.12	1

Source: Staff calculation based on UNCTAD

Note: RCAs are calculated based on net exports. An index higher (lower) than 1 reveals a country's comparative advantage (disadvantage) in that sector.

Another problematic aspect of Jordan's specialisation is that two out of the top 3 exports are associated with non-dynamic industries. Moreover, export opportunities in dynamic industries have been missed. A dynamic market share analysis covering the period 1993-2004, helps to understand the evolution of market shares and their relationship to the degree of specialisation, measured by shares in world exports in corresponding industry. Figure 15 illustrates the findings from a dynamic market share analysis: Jordan is only specialized in one dynamic industry, i.e. and industry which grow faster than world average for industry growth, namely chemicals. Both, clothing and even more so food are industries which are losing its dynamics, e.g. whose growth rates are exactly or less than the average growth rate of world exports and whose renewed expansion is more unlikely. In two relevant dynamic industries, transportation and machinery Jordan seems to "de-specialize", e.g. export less than average of world export.

Figure 15: Dynamics in Product Markets (1995-2003)



Does Jordan sufficiently exploit its geographical advantage? Over the past years Jordan succeeded in diversifying its export markets. Arab countries have lost some of their prominence but remain Jordan's key trade partner. Arab markets absorb almost half of Jordan's exports, mainly agricultural products and pharmaceuticals which have both performed well. With the boost in clothing exports, 12.1% of Jordan's exports have diverted to the North-American market. The share of exports to the EU, previously a strong trade partner, as well as Asian countries declined (Table 6).

Historically Jordan – together with Tunisia and Morocco - was among the first Mediterranean countries for which the association agreements entered into force. The early anticipation of trade liberalization with the EU helped those countries to expand their trade with EU to a much larger extend than their neighbors Egypt or Lebanon who signed the Association Agreement at a later stage. Jordans trade with the EU alone grew by 74% between 1995 and 2004. This has, however, not much strengthened the trade links with the EU over time. As of now, exports to the EU amount to about 3% of total exports. There are several reasons which explain this shift: First and foremost, the preferential access to the US market and the development of the clothing industry has reinforced Jordan position as a trade partner with the US. Second, Jordan's has a geographic disadvantage relative to other countries in the region such as Morocco and Tunisia in respect to distance and direct access to the Mediterranean Sea. This is reflected in present developments which hint at a sub-regionalization phenomenon. Trade with the EU has been mostly reinforced countries with closer to Europe (Morocco, Turkey and Tunisia) while East Mediterranean countries – Lebanon, Egypt, Syria, Israel and Jordan – experienced a negative trend in their demand for European products and also a separation from the European export markets (Tab.6). Lastly, as indicated above, the appreciation of the US Dollar, to which the Jordanian Dinar is pegged, against the Euro and other currencies resulted in a loss of price competitiveness until 2004 in these markets.

Table 6: Trade Flows with the EU

Imports from the EU in % of total imports

	Algeria	Egypt	Israel	Jordan	Lebanon	Morocco	Syria	Tunisia	Turkey
1980	73.1	48.7	30.3	44.5	n/a	58.0	48.1	72.1	36.1
1990	66.3	46.2	51.9	33.2	50.6	51.4	48.0	66.8	44.9
1995	60.2	40.2	52.7	34.0	49.6	51.9	35.2	71.3	48.3
2000	59.6	37.6	42.6	31.6	45.7	57.1	35.6	71.4	50.3
2004	62.5	36.6	41.0	23.6	49.2	63.1	30.1	73.8	46.7

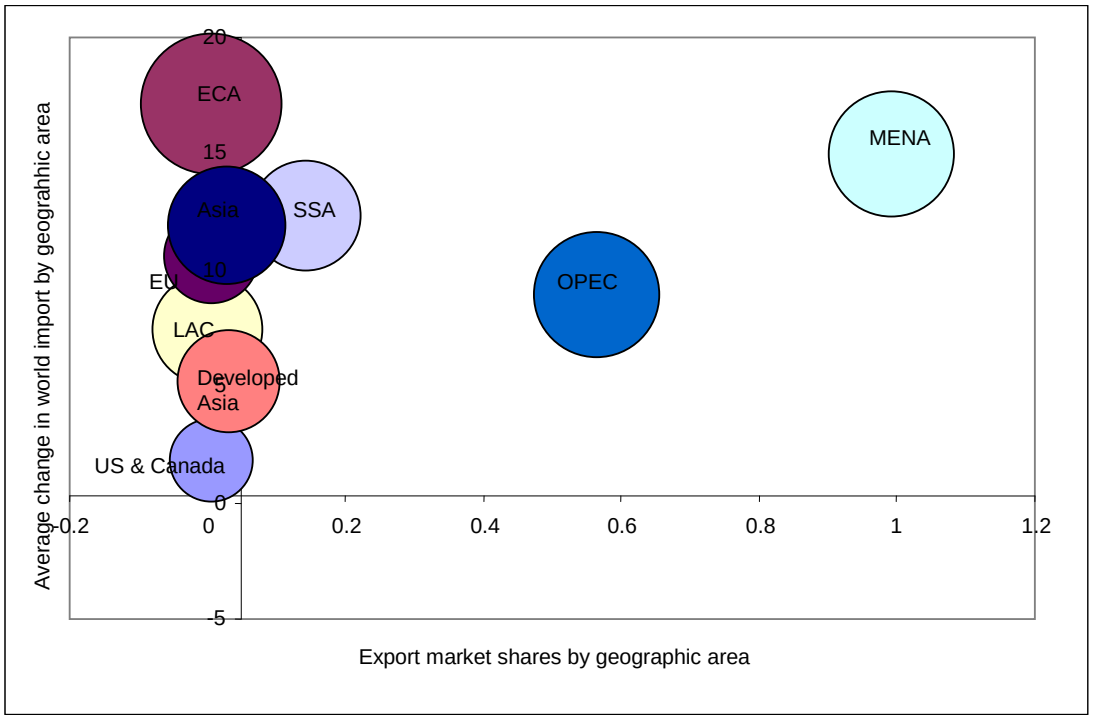
Exports to the EU in % of total exports

	Algeria	Egypt	Israel	Jordan	Lebanon	Morocco	Syria	Tunisia	Turkey
1980	52.6	48.3	42.9	3.9	n/a	72.2	65.5	66.2	34.2
1990	65.6	30.0	38.1	3.3	22.8	59.9	51.6	67.2	55.1
1995	55.4	45.6	30.5	6.3	15.7	57.6	31.3	84.1	51.6
2000	75.7	73.3	31.3	2.3	16.6	74.3	48.6	71.2	48.2
2004	54.8	42.1	27.9	3.1	18.7	69.4	47.2	78.0	54.7

Source: UNCTAD (2006)

Figure 16 illustrates the geographic market position of exports and analyses whether destination markets with better export performances are also the driving forces for world trade. It shows that Jordan is projecting important destinations such OPEC and West-African countries but to a lesser degree high-dynamic markets in Europe. In fact, European markets show greater dynamism in terms of import growth than the US which has been a preferred destination in recent years.

Figure 16: Dynamics in Export Markets (2001-2004)



Source: staff calculation based on UNCTAD

Note: The horizontal axis shows the market share in each country (or county-group). The vertical axis depicts the average change of world imports from any given country. The size of each bubble demonstrates the share of world imports from any given country. The four section of the chart sow accordingly the different dynamics of trade and can be interpreted as follows: (i.) upper right: specialisation in fast growing markets (Jordan's export was to this market was higher than average world export to this market (ii.) upper left corner: presence in dynamic markets in which Jordan's export is below average world export, (iii.) Lower right: declining exports to markets with low growth dynamics, (iv.) specialisation in low dynamic markets

Using a gravity model of trade, the International Trade Center has tried to combine the geographical and product dimension in order to specify future export opportunities in the US and other foreign markets (ITC, 2005). [4] Among Jordan's thirty most important trading partners, the study identifies highly untapped trade potentials specifically with China, Egypt, Germany, Turkey, the United Kingdom, Spain, Italy, and South Korea for different products which are being produced in Jordan. (table 7). However, it should be noted that the findings are derived using a methodology that is not Jordan-specific and that the assessment is not backed up by detailed sector studies.

[4] Such models, which have been widely used in trade analysis, derive potential export volumes from information on the relative size of the exporting and importing country, the geographical distance between them, and other country characteristics. The ITC study then compares actual with expected trade and thereby identifies untapped trade potentials.

Table 7: Export Opportunities for Jordanian Exporters

Sector	Highly untapped trade potential	Untapped trade potential
Agriculture and hunting	USA, Israel, Japan, Egypt, Germany, Italy	Algeria, China, Netherlands, Iran, Turkey, UK, Spain, South Korea
Mining and quarrying		
Food, beverages and tobacco		Israel, Japan, Germany, UK
Textiles, clothing and leather	Saudi Arabia, Syria, Lebanon, Japan, Netherlands, Egypt, Germany, Turkey, UK, Spain, Italy	India, Sudan, Kuwait, South Korea
Wood and wood products		USA, Israel, China, Egypt
Publishing and printing		
Coke & petroleum products a		Israel
Chemicals and chemical products	USA, Israel, Netherlands, Egypt, Germany, Turkey, UK, Spain, Singapore, Italy	South Korea
Rubber and plastic products		USA
Metal and metal products	USA	Israel, UK, Italy
Non-metallic mineral products	USA, Israel	Egypt, Germany, UK, Italy
Machinery and equipment	USA	Israel, China, Germany, UK
Electrical & electronic equipment		USA
Transport equipment	USA	Italy
Recycling		China, Turkey, Italy
Other manufacturing	UK	Japan, Germany, Spain

Source: International Trade Center (www.intracen.org).

Exploiting new marketing potentials could also help Jordan to increase the technological content in its merchandised exports. There is apt to believe that export structures dominated by technology intensive products have a larger growth potential. There are different arguments in the literature which underline the importance of technology intensity and (export) growth: (i.) products with higher technology content represent the most dynamic products in world trade; (ii.) technology-intensive industries are less vulnerable to entry by competitors compared to industries for which scale, skill and technology requirements are low; (iii.) export markets for low technology products are saturated - over time countries can only sustain export growth by taking shares from other low technology exporters; (iv.) technology-intensive activities have a higher learning potential, an eventually lead to faster growth in quality enhancing capabilities;

(v.) technology-intensive export sectors are likely to have larger spill-overs to other activities and to the national technology/innovation system.

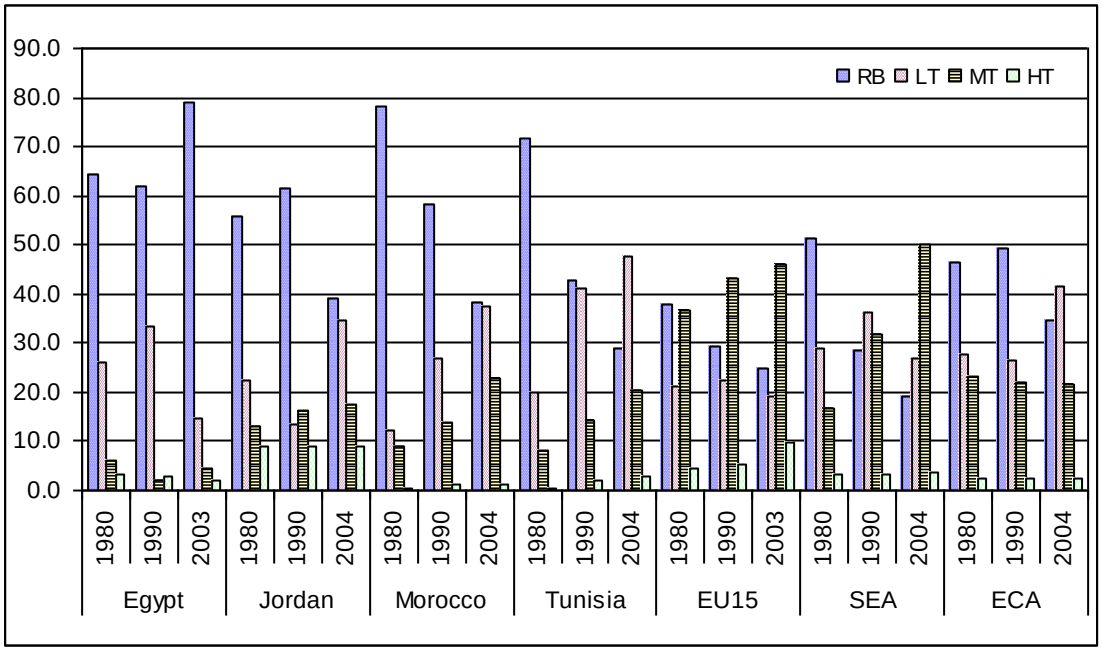
Using the product classification suggested by Lall (2000) which is sorted according to the technological intensity it is possible to analyze the dynamics of sectoral structures with regard to their technology and skill intensity[5]. The findings indicate that Jordan has a very high share in high tech exports (above 9%), resembling the export structure of the EU15. In contrast, the degree of medium tech content is on average much lower than in most MENA, LAC or ECA countries. This means that in spite of Jordan's capability to produce export with high tech content, the exports tend to be less technology intensive overall. Only 26.6% of total exports have higher technology content whereas South East Asia and the new EU members have more than 55% of exports in these categories. The most successful Asian Tigers with more depth and diversification in their industrial structures, Korea and Taiwan, have just over 60% of their exports from the medium and high tech categories.

Indeed, the share of higher technology products in total exports has fallen over the past decade and accounted for less than 30 % of total export value in 2004 (Figure 17). Again, with the development of the clothing industry the technological composition of exports has shifted drastically towards labour intensive, low technology products. This has implications for Jordan's employment and wage developments in export oriented activities which might have been even more dynamic, if Jordan's companies could have more forcefully moved into higher technology and value-added activities.

One possible explanation for Jordan's counter-intuitive technology structure is that medium technology products require both, scale and intensive skill (automobiles, machinery or chemicals). Reaching world levels of competence here requires long learning periods; engineering products also need strong local supplier and subcontractor bases, increasingly so with just-in-time production systems. Many are characterized by a high weight-to-value ratios, and consequently require both, high labour productivity and close proximity destination markets. Conversely, high technology products such electronics are complex in core production processes and product design, but final assembly is often low-skill and labour intensive. This could explain Jordan's the high level of HT exports as it reflects fairly well the distribution of skills within the economy. Another reason is the relatively high share of pharmaceuticals which is considered a HT product in Lall's product classification.

[5] Different analytical approaches yield different interpretations of export structure relevance. In approaches that ignore learning, export structure is only the result of efficient choices. As endowments and factor prices change, the structure evolves in response without cost, effort or risk. As countries grow and accumulate capital or skills, they switch to more capital or skill-intensive technologies. In the absence of dynamic learning and externalities, all structures are equally desirable. The "capability approach" developed within the evolutionary and path dependent theories (Nelson and Winter, 1982) suggests, by contrast, that structures do matter for export growth and evolution. Export structures are inflexible and difficult to change as they involve the development of capabilities, which can be expensive and slow to develop. However, some structures have greater inherent dynamism. Sanjaya Lall (2004).

Figure 17: Evolution of technological structure of exports



Source: staff calculation based on UNCTAD

The precedent analysis suggests that Jordan recent export performance may be explained by three factors: i.) a right market orientation, i.e. an orientation towards dynamic markets, ii.) a specialization in the right products, i.e. products with increasing and above-average growth in world demand, or iii.) an increase in competitiveness. A constant market-share analysis helps to decompose these different elements and can contribute to understand the driving forces behind export growth and changes in world market share respectively. The major assumption underlying this methodology is that growth in exports is demand-oriented, i.e. a specialization in dynamic products or markets triggers export growth

Table 8 gives an overview of the CMSA results. First of all, it shows that Jordan's decline in the share of world's export occurred in the 1990s while the positive export performance in the three subsequent years held the market share constant. This is also the period in which Jordan's underperformed by 63 percentage points (p.p.) in export growth if compared with the growth in worlds' exports. This is reflected in the total effect which expresses the differential between Jordan's and the word's export growth.

Table 8: Results of the Constant Market Share Analysis

	1980-1990	1990-2000	2000-2003
Share of Jordan's exports in world exports	0.04	0.03	0.03
Growth of Jordan's exports	85.36	20.78	123.17
Growth of world exports	87.32	83.68	17.29
Total effect	-0.02	-0.63	1.05
Product effect	-0.11	-0.09	0.06
Market effect	-0.06	0.65	0.09
Residual (Competitiveness) effect	0.15	-1.19	0.90
Decomposition of product effect			
RB	0.055	0.139	0.032
LT	0.029	-0.064	0.015
MT	-0.193	-0.110	-0.020
HT	-0.030	-0.168	-0.015

Source: UNCTAD , own calculation based on export values

The product effect was negative until 2000 which implies that the country had a disadvantageous product specialization. Consequently, Jordan lost 11 and 9 p.p. in export growth in the respective periods. A wrong market specialization only played a role in the 1980s when Jordan lost 6 p.p. of potential export growth. In fact, the market orientation towards dynamic markets contributed positively with 65 pp. in the 1990s. Yet, this advantage was overcompensated by the highly negative competitiveness effect which explains why the country has lost market share in this period.

The situation presents itself differently in 2000-2003 when Jordanian's exports grew considerably by 123.17% as compared to 17.29 growth in world exports. Both, the right market and product orientation account for the export performance which helped to stabilize the market share in world exports. But foremost increased competitiveness was the main driver behind the observed export performance contributing with 90 p.p to the total effect.

The results should be treated with caution: The competitiveness effect is a residual in the analysis which captures anything from the influences of increased product quality to gains from labour productivity, the creative (innovative) potential of firms, or improved total factor productivity i.e. the efficiency of the entire productive system including it technological progress. Or in other words: the competitiveness effect measures everything that is not demand-related. To this end this type of analysis is not able to derive insights about the likely sources of increased competitiveness. Yet, the changes in the macroeconomic framework, improvements in the investment environment and trade incentive system, as well as the apparent advantage in the economy's creative potential (see below) give apt to believe that enhanced competitiveness is the champion of export growth.

A further decomposition of the product and market can also shed more light on the question whether Jordan's market share had grown if exports would have had another product structure by taking the competitiveness and market effect as given. The results indicate appositive contribution from the specialisation in resource-based and low-technology products in the 1980s

and 1990s. This positive contribution was, however, largely offset by exports of medium and high technology products. Put differently, the positive impact from the lower-tech sectors stems from the fact that Jordan is strongly specialised in lower tech products (fertilizer, clothing) which grew in line with world demand for total exports. Conversely, the country is to a lesser extend specialised in medium and high-tech sectors and was therefore unable to capitalise on the very strong growth in world export demand for these products. The growing specialisation in products with higher technology content has helped to overcome the structural weaknesses of the product portfolio which appears to be now better aligned with international demand.

The growing specialisation in high-tech exports was made possible by Jordan's well-developed innovative and technological capacity. With over 90% Jordan's literacy rates are the highest in the region, and with more than one third of its population being educated above secondary level, Jordan provides over a large pool of highly skilled workers, particularly engineers. This explains partly why Jordan was able to developed high technology intensive industries such as ICT and pharmaceuticals. To further promote high tech intensive industries, different government initiatives (e.g. REACH) have been launched and new institutions (e.g. technology centres, Incubators, research networks) created to enable private R&D and the penetration of new communication technologies. Such initiatives make Jordan to one of the most innovative and knowledgeable economy in the MENA region. The World Economic Forum ranks Jordan at place four in its Technology Index, right after oil-rich countries like UAE, Bahrain or Qatar (Table 9). This factor endowment bears a rich potential for the development of new exports attractive to dynamic markets and provides the country with great competitive advantage over its neighbours.

Table 9: Technology Index for Arab countries

	Technology Index		Innovation Subindex		ICT Subindex		Technology Transfer Subindex	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Algeria	12	2.67	9	1.89	11	2.31	12	3.4
Bahrain	3	4.5	6	2.33	2	4.56	3	5.14
Egypt	7	3.68	1	2.7	8	3.16	7	4.71
Jordan	4	4.03	3	2.44	4	3.78	4	4.89
Lebanon	8	3.62	2	2.66	7	3.55	11	4.03
Morocco	10	3.31	10	1.84	10	2.97	9	4.24
Oman	9	3.56	11	1.76	9	3.13	6	4.74
Qatar	2	4.61	5	2.37	3	4.41	1	5.63
Saudi Arabia	6	3.83	8	2.1	5	3.63	8	4.67
Tunisia	5	3.87	4	2.37	6	3.56	5	4.78
United Arab Emirates	1	4.73	7	2.14	1	4.93	2	5.33
Yemen	11	2.85	12	1.73	12	2.15	10	4.17

Source: World Economic Forum (WEF), Competitiveness 2006.
The GCI rankings and scores of the 12 Arab World countries are shown in the table, with scores on a scale of 1 to 7 with 7 signifying the highest level.

3.3 Growing service exports pave the way for the future

Notwithstanding its recent performance and its further potential in export of merchandised products, Jordan remains a service-based industry. In 2005 the service sector accounted 68.9% of GDP and provided jobs for around 76% of all employees (incl. public services). In 2004 service export reached US$ 2.1 billion which represents around 20% of total exports In 2002 Jordan signed the GATS agreement and made a large number of commitments for facilitating foreign access to different industries incl. air transport, telecommunication, finance and other network industries. By the end of 2004 the country has reached many of its goals, with most achievements made in backbone services incl. deregulation in the cellular market, adopting international standards and practice at the Amman Stock Exchange and the introduction of a new regulatory framework of the energy sector. The liberalization of port and road tranportation, as well as the privatization of air transportation remains critical.[6] Other sectors excluded from the commitment schedule include postal service, integrated engineering services, dental and vetinerian services, cargo handling and shipping agency. The most common form of market access restriction requires Jordanian nationality for certain profession or impose a 50% equity cap on foreign investors.

A recent study by the Amir project (2005) highlights the benefits of service sector liberalization and underscores the importance of increased competition for labor productivity and growth of value added. This is exemplified by two services subsectors, namely telecom and banking wich are the most open to foreign competition. Both have increased output and value added per worker by more than 100% between 1996 and 2003. In contrast, transport and retail trade which are both considered the most protected service sectors have of all service sectors restructured the least. These subsectors are characterized by relative low output growth and declining value added per worker (table 10). The results suggest that greater liberalization can clearly yield significant benefits the development of service sectors. At the same time international experience demonstrates that greater international openness, particularly of backbone services, can positively influence the economic strength of non-service sectors: transportation, telecommunication or financial services serve as inputs in the production process in manufacturing; removing barriers to trade will lower their costs and make the production in other industries more efficient.

Table 10: Change in Key Performance Indicators of Service Subsectors 1994 and 2003

	Change Output	Change GVA per Employee
Telecom	212%	110%
Transport and Storage	51%	-3%
Wholesale and retail trade	51%	-1%
Construction - Contractors	37%	13%
Hotels, Professions and Other Profit-oriented Services	127%	18%
Banks and financial institutions	95%	127%

Source: Amir (2005)

[6] Femise (2005)

With service trade growing in global importance, the country's service sector offers a rich source for more export revenues. ICT, medical services and tourism are considered as sunrise service industries in Jordan.

The ICT sector in Jordan is relatively small and with an industry growth of 14% lingers below estimated output potential. Exports revenues reached US$79 million in 2004, reflecting a feeble share of 4% in total service export. Major export destination are the UAE and, and with increasing importance, Saudi Arabia. The ICT sector is considered as one of the key strategic sectors by the government and receives as such strong support and attention for its regulatory and policy reform requirements. Different public initiatives promote the presently low telecommunication connectivity, PC penetration, and private sector participation. The proclaimed goal is to become a regional hub and serve as a gateway for outsourcing in the MENA region. Spending for ICT as a percentage of GDP is among the highest in the world.[7] More than 4000 students graduate each year in ICT related studies and limit supply constraints. Yet, this human capital is underutilized by the domestic ICT industry which employs with 9000 workers at the end of 2004 only a small fraction of the available human resource. To further build up its comparative advantage in the ICT industry, Jordan needs to accelerate its present efforts to foster domestic demand, enhance sector capabilities and resolve remaining regulatory issues relating IPR, e-commerce and e-government legislation.

The medical service industry is performing below potential. A growing number of foreigners, mainly from Yemen, Libya and other Arab countries are visiting Jordan to obtain medical treatment. The latest available data indicate that over 29,000 patients visited Jordanian hospitals in order to take advantage of qualified medical staff, relatively more advanced and price competitive medical services. In 2003 the industry generated export revenues of US$500-600 million. The biggest constraint to growth is the present capacity of the sector to absorb the increasing foreign demand. The biggest weakness in this regard appears to be a lack of training opportunities for health management skills in the private sector which are required to seize its available output potential. As of now the industry is missing out on synergies and opportunities that can be created through clustering (e.g. such as concerted marketing efforts, particularly for emerging plastic surgery and dental services, fostering linkages). The ICT industry, for instance, provides a good role model for an industry cluster with a strong, well-equipped and very competent sector association (Int@j) and effective public-private partnership relations. There is also a need to address the weaknesses in laws and regulations in the health sector to ensure better quality services and transparency.

Jordan is endowed with rich cultural heritage such as Petra or Jerash and has an extensive inventory of modern hotels. Tourism is therefore considered as a plausible choice of economic activity in Jordan. The WTO indicates that nine out of 30 emerging tourism destinations are in the MENA region whose tourism sector shows great dynamism with 12.2% annual growth in tourism arrivals between 1995 and 2002. Jordan is not among them. In fact, Jordan achieves with 5.8% annual growth even less than the world average (7%) despite the fact that security risk are comparable with those of its neighbors Egypt, Lebanon, or Israel. Only recently tourism receipts started to increase, in part due to Jordan's role as logistic facilitator in Iraq's reconstruction

[7] World Bank Development Indicators (2005)

process. Tourism receipt have more doubled between 2001 and 2005 and now exceed JD 1 billion – a record level after years of low growth in the tourism sector. Nevertheless, there is scope for improvement: addressing the many supply constraints such as limited air access to enhance visitor capacity, lack of sufficient entertainment facilities to increase visitor spending, a lack of concerted tourism marketing and over-reliance on traditional cultural attractions as opposed to highlighting other available tourism segment (business, medical etc.) could help to foster the development of the tourism industry.[8]

4. Summary of findings and recommendations

The preceding discussion highlighted a number of issues and reform priorities that might warrant the attention of policy makers. A set of corresponding recommendations is listed in the following:

- Continue efforts for sound macroeconomic management
- Continue to reduce the anti-export bias in the trade regime by fully implementing the scheduled multilateral and preferential trade policy reforms.
- Provide increased opportunities for worker retraining in order to facilitate employment shifts from contracting to expanding sectors.
- Continue to broaden the tax base to counter prospective revenue shortfalls in trade taxes due to tariff reductions.
- Improve the quality of training available to enhance productivity of workers, especially of prospective apparel industry workers, notably women, as well to increase the share of Jordanian employees in QIZs.
- Step up efforts to foster linkages between special economic zones and the Jordanian mainland to broaden the economic benefits from these zones.
- Step up efforts to improve the investment climate to promote private investments, particularly FDI for a better integration in global production chains. Likeweise important is to ensure the competitiveness in labor cost and productivity as well as improve logistics in order to minimise transportation costs.
- Support agglomeration and the creation of industry clusters in order produce economies of scale. Clusters have proven to faciltate a better diffusion of knowledge on production methods and market opportunities. Furthermore clusters promote firm cooperation which in markets dominated by small firms helps to harness business opportunities in international trade. The public sector can play a enabling role in the creation of clusters e.g. though providing incentives by limiting access to public funds to groups of entrepreneurs with decisive strategic development objectives or identifying and training so-called "network broker" - enterpreuners of recognized standing who initiate the

[8] National Tourism Strategy 2004 - 2010

formation of cluster. First steps for the government would include identifying and formulating an appropriate model for cluster policy.

- Continue the promotion of private R&D through the establishment of industry-university-government networks; step up support in the commercialization and marketing of innovations; strengthen incubation system and build up on present national and international best practice; technical and financial support to SME's for technology applications which involve high risks. Moreover, linkages between innovation, education and industrial policy need to be strengthened.
- Deeper integration in services, especially with prospective trade partners such as EU . In the context of the New European neighborhood policy, the pending action plan with the could provide a good vehicle for negotiation on the liberalization and deregulation of service sectors and their integration with EU markets.

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