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An Empirical Estimation of the Economic Effect of a Bilateral Free Trade Area Agreement Between Israel and Jordan in the Context of the Euro-Mediterranean Partnership

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Mediterranean Programme

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ABSTRACT

The paper deals with the quantitative trade impact by sectors and at a very disaggregated level of the implementation of the free trade area agreement between the European Union and Jordan signed in 1997 and which entered into force after a long ratification process on May 1 2002. For the investigation, a partial equilibrium model is adopted, allowing for the separate evaluation of different static effects. The paper deals also with the likely comparative static effects of concluding a Free Trade Area Agreement between Jordan and Israel. Estimations also extend to agriculture even if free trade in this domain remains only a purely theoretical possibility. The focus is mainly on static integration effects although the paper tries to say something about the likely impact of the non-static (e.g. dynamic) effects of the two integration schemes. The main result is that the EU-Jordan FTA will deepen the asymmetric trade interdependence between the two partners and that Jordan's overall trade deficit will increase and even more so with the EU (by more than 30%). The static welfare effects on Jordan appear to be negative, since trade diversion losses are significant. On the other hand an Israel-Jordan FTA seems to be more attractive for Jordan, in view of its immediate positive although reduced impact on Jordanian's exports and on its negligible impact on Jordan's overall trade balance.

KEYWORDS: Trade Policy, Regional Integration Agreements, EU's External Economic Relations, Euro-Mediterranean Partnership, Economic Cooperation in the Middle East.

INTRODUCTION

This paper tries to assess empirically the trade impact by sectors and at a very disaggregated level of the implementation of the free trade agreement between the European Union and Jordan, signed in 1997, according to the economic strategy adopted in the context of the so-called Euro-Mediterranean Partnership launched in Barcelona in November 1995[1].There are few studies until now on the effects of the EU-Jordan Association Agreement. Ekholm et al. 1996,564-6 reported using a gravity model that Jordan was underexporting to the EU (15 years after getting tariff-free access into the EC!) but overimporting from there and added that an EC-type agreement between Jordan and the EU would only marginally increase Jordanian imports from the EU (by less than 12%). Lucke 2001, using a CGE Model, predicted an increase of 6% in Jordanian GDP, an increase of total Jordanian imports by 12%, imports from the EU by 34% and from the rest of the world (excluding Middle East and North African countries) by 1% and that extending the free trade regime to agricultural products would not have a significant effect. Furthermore tariff revenue would fall by 32% but overall revenue from variable taxes by only 3%. These results will be contrasted below with the ones obtained in this paper.

We also try to simulate the static effects of the conclusion of an FTA between Jordan and Israel. This is in accordance with one of the middle- or long-term goals indicated in the Barcelona Declaration of establishing FTAs among Mediterranean Non Member Countries (MNMCs). The paper will focus on the static trade effects on Jordan, although regarding free trade between Israel and Jordan, the effects on Israel are also estimated.

In the simulations made on the basis of economic models, which are presented below, we make the simplifying assumption that free trade between the EU and Jordan is being introduced right away in 1999 (and not after a transition period of 12 years, as contemplated in the 1997 Agreement). Therefore when we present later an interpretation of the simulations made, we will have to take into account that the results obtained give us an indication of the maximum effect that could derive from the implementation of the FTA.

In the first part of the paper we survey first EU-Jordan economic relations, focusing then on the trade effects of the conclusion of an industrial FTA agreement between Jordan and the EU, such as the one signed in 1997. We also explore what would happen if Jordan decided to dismantle its tariffs on agricultural imports from the EU, unlike the actual agreement concluded between the two parties in 1997[2].

In the second part of the paper we explore the effects of the implementation of a comprehensive free trade agreement between Israel and Jordan, including agriculture. This choice is based on the following:

1) The press has reported in different occasions that there have been declarations and contacts between the two countries in this respect. The Jerusalem Post was already reporting in 1994 that Jordan was interested in such an agreement provided that asymmetry in tariff dismantling would be guaranteed to Jordan under the FTA[3]. In fact article 7, par.2b of the October 1994 Peace Treaty between Israel and Jordan says: "the Parties will enter into negotiations with a view of concluding agreements on economic cooperation, including trade and the establishment of a free trade area…".

2) What hinders trade since a Peace treaty between Jordan and Israel was signed are most-favoured-nation tariffs and quantitative restrictions imposed by both countries, although since September 2000 security controls imposed by Israel on entry of goods across the Jordan river have become a headache for Jordanian exporters. Trade relations between Jordan and Israel are 'GATT-driven', since the entry of Jordan into the WTO in April 2000. It can be assumed thus, as we do, that actual 1999 trade flows between Israel and Jordan were quite close to representing the 'cruising speed' potential corresponding to a state of normalization, five years after the conclusion of the Peace Treaty between the parties and three years after the official opening of borders to trade[4]. The amount of bilateral trade that year, 41 Mo.$ is close to the predictions made by Arnon et al. 1996 using both a gravity model (48 Mo.$) and similarity tests (35 to 55 Mo.$)[5]. On the other hand, note that as from 2000 bilateral trade increases beyond 'normal mfn' conditions because of the impact of establishing Qualifying Industrial Zones (QIZ) and set by

[1] The research has been coordinated by the Truman Institute of the Hebrew University and funded by NIRP. Lior Herman provided helpful statistical and econometric assistance.We wish also to thank Miki Jungreis, from the Israel-Jordan Chamber of Commerce for his comments on an earlier draft of this paper.

[2] We do not provide simulations of what would happen to Jordanian agricultural exports should the EU drop its tariffs on Jordanian-originating agricultural exports.

[3] Jordan was asking for a 12- to 15-year transition period to open up to Israeli exports and for the immediate removal of all tariffs on Jordanian exports to Israel. In turn the latter was prepared to consider a 5-year transition period regarding its exports to Jordan. See The Jerusalem Post , July 24 1994.

[4] Observe that 1999 was a rather 'normal' year in political terms with a push being given to the peace process with the election of the Barak government and well before the Al-Aqsa Intifada. One indicator of 'normality' is the substantial amount of FDI entering Israel during that period up to mid-2000. Of course one might argue that 1999 was still not a 'normal' year, even if it was more 'normal' than 2000 for our purposes. What is clear is that in any case the method used in this paper to simulate results is based on existing data, whether 'normal' or not.

[5] Arnon et al. (1996), p.131.

the agreement signed in November 1997 for the promotion of the two countries' bilateral trade [6]. According to the Israel-Jordan Chamber of Commerce, the QIZ regime began gaining momentum since the latter part of 1999, was contributing at least 15 Mo.$ of Israeli exports to Jordan in the first nine months of 2001 and led to an Israeli trade surplus as from this year along with shipment of entire manufacturing lines from Israeli companies to Jordan (not necessarily QIZ-related).

3) Some empirical studies have indicated that potential Jordan-Israel trade is quite limited without free trade arrangements. That was the case for Arnon et al.1996, which were predicting negligible trade under mfn conditions, but jumping to about 150 Mo. $ Israeli exports to Jordan yearly and about half as much in the reverse direction (and therefore predicting an Israeli trade surplus as well).

Observe that there is a very important qualitative difference between the implementation of the 1997 industrial FTA agreement between the EU and Jordan and implementing such an agreement between Jordan and Israel. In the first case, what happens is that Jordan will have to dismantle after a transitory period its own tariff on EU-originating industrial products, whereas the EU must not reciprocate since Jordan has already duty-free access to EU industrial markets since 1977. So only simulations on changes in Jordan imports and tariff income must be made, not in its exports. In the case of the Jordan-Israel FTA, imports, exports and the tariff income of both countries would be affected since both Israeli and Jordan tariffs would be removed from scratch on mutual trade , not only on industrial goods but also on agricultural ones.

FIRST PART: EFFECTS OF A JORDANIAN-EU FREE TRADE AREA ON JORDAN'S TRADE AND WELFARE

Present overall Jordanian trade patterns

Jordan's major exports are phosphates, potash sent mostly via Aqaba to Asia, as well as fruit and vegetables, sent mostly to Gulf countries. Cement is sold to the West Bank. The low share of the EU in Jordanian exports cannot be explained by EU tariffs and QRs, since the latter have been phased out since 1977 (except for agricultural products). It seems that it is simply too expensive in terms of transport costs to send the above-mentioned goods to Europe. Environmental and technical barriers to trade play also a role in hindering exports to the EU. Current rules of origin without regional cumulation are fatal NTBs for a small country with a narrow, non-diversified industrial base (see more on cumulation

[6] Qualifying Industrial Zones (QIZs) are a special form of economic arrangement whereby goods produced or sufficiently transformed in the Zones and exported to the US are tariff-free by US decree.

below). EU markets might be interested in low-quality Jordanian produce in the future. Moreover, phosphates and potash from the Dead Sea region could in a perspective of peace conceivably be shipped from Ashdod in the Israeli coast to Europe. Of course, overland transport through Israel must be available and Israeli bureaucracy must be willing to cooperate.

Jordan's main import item is oil, mainly from Iraq. Because of low per-capita income, the Jordan final consumer tends to buy low-quality products, which are imported mainly from the Arab world: clothing from Syria, fruits from Lebanon, white goods from Egypt, and food from Saudi Arabia. Cars come mainly from Japan, Korea, and Malaysia, less so from Europe (on this, see more below). Again, as per exports, one reason for this seems clear: the only seaport, Aqaba, is on the Red Sea Machinery is imported partly from the Far East, partly from Europe, much less so from the US.

Jordan and the European Union: 'Aid vs Trade'?

Traditionally, Jordan has not had extensive trade relations with the EU (about 6% of its exports, 30% of its imports). In fact it is currently the least trade-dependent on the EU among all the 12 MNMCs. Arrangements to promote trade between Jordan and Europe go back to 1977, when the Association Agreement signed in that year between the kingdom and the European Community allowed Jordan's manufactures to enter the EC market duty-free.

Table 1: Jordanian-EU merchandise trade, 1996-2000, in millions of Jordan dinars (JD)*

	1996	1997	1998	1999	2000
Value of Jordanian imports from EU countries	964	947	888	835	1074
As percentage of total Jordanian imports	31.7	32.6	32.7	31.7	33.0
Value of Jordanian exports to EU countries	86	78	69	61	35
As percentage of total Jordanian exports	8.3	7.3	6.6	5.8	3.2

Source: Central Bank of Jordan, Monthly Statistical Bulletin, November 2001, pp 68, 70
(*JD1 = $1.41)

With the new agreement, unrestricted import into Jordan of manufactured products originating in the EU is to be achieved over a transitional period of 12 years starting from the date of entry into force of the Agreement, except for a list of specific products.

The Agreement excludes a limited number of industrial goods originating in the EU and imported into Jordan from customs duty liberalization, including cigarettes, used cars, tomato paste, clothing (including used clothes) furniture, shoes, and carpets. On other industrial goods originating in the EU and imported into Jordan, customs duties and charges will be progressively abolished at a rate of 20% annually, starting from the first year of the entry into force of the Agreement. The list covers basic consumer commodities, medical equipment, industrial raw materials, spare parts for industrial machinery, industrial inputs including chemicals, pharmaceuticals, and fertilizers. However, for industrial

goods produced locally in Jordan that need a transitional period for adaptation, customs duties and charges will be abolished at a rate of 10% annually, starting from the fourth year of the entry into force of the agreement (i.e.2006). The Agreement gives Jordan the right to take exceptional measures of limited duration in the form of an increase or re-introduction of customs duties to protect infant industries or certain sectors undergoing restructuring or facing serious difficulty, particularly where major social problems occur. Such measures may not exceed 25% ad valorem and the total yearly value of imports of the products that are subject to these measures may not exceed 20% of the yearly value of imports of the product. No such measure may be introduced in respect of a product if more than four years have elapsed since the elimination of all duties and quantitative restrictions or charges concerning that product. The Agreement also gives Jordan an additional three years after the stated transitional period to take exceptional measures concerning industries established during that time.

The Agreement allows Jordanian agricultural products to enter the EU market as follows:
- Free of customs duties and with neither tariff quotas nor time restrictions: *molokhia*, okra, certain types of pepper, dates, dried vegetables, citrus juices, crushed red pepper, grapefruit, and orange
- Free of customs duties and with no tariff quotas but within an agreed timetable: tomato, garlic, cucumber, beans, aubergines, sweet pepper, parsley, courgettes, fennel, melon, watermelon, and celery.
- Free of customs duties but with agreed tariff quotas and timetables: new potatoes, cut flowers, lettuce, asparagus, processed fruit and vegetables, tomato concentrates, and strawberry.
- Within agreed tariff quotas and timetables, and with reduced customs duties: carrots, onion, figs, mango, guava, mandarins, and lemon.
- The EU agreed to the entry of white cheese originated in Jordan into the EU market.

There will be no concession by Jordan to EU agricultural commodities at present.

The EU has agreed in principle to give Jordan and the other Mediterranean partners the right to diagonal cumulation provided these countries have initiated negotiations (bilateral or otherwise) among themselves to set up free trade areas, and have harmonized their rules of origin with those of the EU. However, the present Agreement only provides for bilateral cumulation, a condition that Jordan has sought to remedy. (Under the Agreement, Jordan will benefit from cumulative rules of origin whereby the kingdom can add any inputs imported from Europe to its products, which would then be considered as

having originated from Jordan.)

Methodology used to estimate the impact of Jordan's tariff elimination in favour of the EU on Jordan's imports

We use a partial equilibrium approach, which is the only suited to sectoral impact studies. The methodology used to calculate the value of trade creation and diversion is similar to the one used by Buttelman and Meller 1992 and Karemera and Koo 1994.

A first potential effect deriving from the elimination of tariffs by Jordan on EU imports is what is called here the value of trade creation (VTCj), i.e., the value of new imports that Jordan does from the EU after implementation of the FTA. This increase in Jordanian imports of a given class of products can be estimated by the following equation:

$$VTCj = VMPCjo * Em * tj / (1 + tjo) \qquad (1)$$

where

VTCj = Value of trade created in sector j of Jordan

VMPCjo = Initial value of imports which Jordan does in sector j originating in the EU. This value is the product of the quantity imported from the EU times the export unit value of the good exported by the EU to Jordan (i.e. the world price augmented, depending on which case one considers, by the tariff imposed by the EU).

Em = Price elasticity of Jordan's import demand in sector j.

tj = Percent change in the tariff applied by Jordan in sector j as a result of applying the FTA regime to the EU.

tjo = Initial level of the tariff applied by Jordan on imports of sector j originating in the EU before implementing the FTA.

Equation (1) assumes that Jordan is a small importer in world terms, a realistic assumption, and that any change in its trade policy is not going to affect world prices, also realistic. From Jordan's perspective we assume simply that the export-supply price-elasticity of the ROW (Rest of the World) is infinite. The FTA is not going to affect the terms of trade between Jordan and the ROW.

The second effect produced is what we call here the value of trade

diversion (VTDj), i.e. the substitution of external supply sources derived from a change in relative prices caused by Jordan's discriminatory trade liberalization in favour of the EU. In other words it is the difference between what was imported before the FTA from the ROW and what is imported from it after the FTA is implemented. We make then the quite realistic assumption that it is the country benefiting from the preference (in our case the EU), that will export to the preference-donor country (here Jordan) this difference[7]. This effect has been estimated using Verdoorn's formula largely accepted among scholars interested in evaluating empirically the trade effects of economic integration:

$$VTDj = VTCj * (VMPCjo / VMPCjo + VMROWjo) \qquad (2)$$

where:

VTDj = Value of trade diverted in sector j of Jordan.

VMROWjo = Value of imports that Jordan makes in sector j from ROW before implementation of the FTA

The total trade effect for a given is given by the sum of VTCj and VTDj and is called the trade expansion effect between the FTA countries (TTEj), i.e.:

$$TTEj = VTCj + VTDj \qquad (3)$$

TTEj can be interpreted as the total increase in the value of Jordan's imports from the EU due to the discriminatory elimination of its tariffs on EU-originating imports. This is the value of the increase in exports by the EU to Jordan and is composed by two elements: the value of new imports by Jordan from the EU and the value of Jordanian imports that have been diverted from the ROW to the benefit of the EU (the VTDj effect).

Observe that the total effect is the sum of the two effects and not its difference; this contrasts with the formula for the estimation of the welfare impact on Jordan of implementing the FTA with the EU, which is calculated in the following section.

Methodology used to estimate the impact of Jordan's discriminatory tariff liberalization in favour of the EU on Jordan's welfare

Viner 1950 created the concepts of trade creation and trade diversion to refer explicitly to the changes that the creation of Customs Unions would have on the economic welfare of its individual consumers, the usual focus of interest of

[7] See Baldwin and Murray (1977), p.33, Sawyer and Sprinkle (1989), p.64.

neoclassical trade theory. It is important to underline that Viner was not interested in finding out what would happen to trade flows (which is the object of our previous section) but rather what would happen to welfare (and thus indirectly to national income). When a country reduces its tariffs on a discriminatory basis, there is a trade creation effect, which lifts welfare because expensive supply sources are replaced by cheaper supply sources (imports from the partner country, here pc). Trade diversion, on the other hand, reduces welfare because cheap imports from ROW are replaced by imports from the partner country, here PC, to whom a tariff preference applies. The calculation of the Gains from Trade Creation (GTC) and the Loss from Trade diversion (LTD), which is what Viner refers to when speaking of trade creation and diversion, is based on standard partial equilibrium analysis (see e.g. Michaely 1977, 160) as follows:

$$GTCj = 0.5 \; P * MTjo * Em * (tjo - tpcj)^2 / (1+ tjo) \qquad (4)$$

where:

GTCj = Gain from trade creation in sector j.

P * MTjo = value of Jordan's total imports in sector j before the FTA.

Em = Price-elasticity of Jordan's import demand in sector j

tjo = (average) mfn tariff applied by Jordan in sector j

tpcj = (average) mfn tariff applied by the EU in sector j

In this formula appear total imports, which implies that there can be a GTCj even if Jordan was not importing from the EU before the FTA[8].

It is also obvious that GTC increases more than proportionately the larger the difference between Jordanian tariffs and the EU's tariffs. Observe as well that GTC is zero if import demand is perfectly inelastic.

Regarding LTDj:

$$LTDj = P * MTjo * tpcj \qquad (5)$$

where:

[8] This contrasts with the formula calculated for VTC, where only if there was before the FTA some trade between the future members to the FTA will there be some new trade flows created.

LTDj = Loss incurred by Jordan derived from trade diversion in sector j.

Observe that LTDj is zero in two cases. Either there were no imports of products of sector j before the FTA[9] or, else, the tariff imposed by the EU is zero, which implies that EU prices are equal or below ROW prices. Therefore, in such a case, even if as a result of the FTA agreement Jordan substitutes imports from ROW by imports from the EU, this will *not* imply any additional cost for Jordan. It is obvious that LTDj will be larger, the larger is tpc, which in the present model is used as a proxy for the difference in production costs in the EU and in ROW (e.g. the US or Japan). In other words, prices applied by the EU in Jordanian markets are equal to
PROWo * (1 + tpcj).

The net welfare effect (NWEj) is the difference between GTCj and LTDj:

$$NWEj = GTCj - LTDj \qquad (6)$$

Note that both GTCj and LTDj are equal or larger than zero and that NWEj can therefore be a negative number if LTDj is larger than GTCj.

Jordan-related data used to calculate the different formulas

We use 1999 import data in Jordanian Dinars published by the Jordanian Statistical Office based on the Harmonized Commodity Description and Coding System (HS) at a two-digit disaggregation level. For each HS category a representative tariff rate was calculated, namely the arithmetic average of all 6-digit sub-categories of the published Jordanian Tariff included in a given 2-digit one. Data on EC tariffs were taken from TRAINS 1997(Trade Analysis and Information System), a program and data bank produced by UNCTAD, which integrates information on tariffs and NTBs with import data by country[10].

Assessment of Jordanian import demand price-elasticities by sectors

We were fortunate enough to dispose of import demand price-elasticities provided for by the World Bank, applied by the latter when working on developing countries[11].

[9] Note that we include here all imports before the agreement and not only imports originating in non-member countries. The idea is that the increase in import unit costs as a result of tariff discrimination in favour of the EU affects *all the units previously imported and not only those originating in the ROW*.
[10] UNCTAD. TRAINS CD-ROM, Switzerland, 1997.
[11] We wish to thank Dr. Bernard Hoekman of the World Bank for providing us with the information.

Analysis of the results of simulating discriminatory tariff liberalization by Jordan in favour of the EU15 on the basis of the model [12]

Macro-perspective

Assuming for a moment, that Jordan eliminates tariffs on all EU-originating exports, including agricultural goods, VTC represents 7.3% of Jordan imports (193 JD million in 1999), while VTD is 3% (79 JD million), the total effect on trade flows reaching 273 JD million, i.e. 10.3 % of total imports (all origins included) or 33 % of imports originating from the EU. This is certainly a very marked change in terms of trade flows. Welfare changes are also significant. Globally speaking, the trade diversion loss (LTD) reaches 113 JD million, which represents a non-negligible percentage of the gross national product, i.e. 1.5 % (and slightly more so in national consumption terms). More important, though, is that LTD is very large to lead to a net welfare loss (NWE), valued at 81 JD millions, i.e. 1.1% of the gross national product in 1999. Trade creation gains (GTC) are only 32 JD million, a very small figure. This certainly reflects the fact that import demand elasticities are also small.

In practice, the 1997 agreement does not provide for free trade in agricultural products. Taking this into account the results above must be modified as follows: VTC and VTD are reduced respectively to 175 JD million and 71 JD million, while the TTE becomes 246 Mo.JD, 9.4% of Jordan's total imports. Therefore the picture does not markedly change when agriculture is excluded. The same cannot be said of welfare changes, because the loss from trade diversion (LTD) in agricultural products is quite significant, 31 JD Mo, i.e. about 25% of total LTD. The reason for this is obviously the high unit price of EU farm products, as revealed by the high Common Customs Tariff (CCT) in our data set for some categories[13]. Let us not forget that prices applied by the EU in Jordanian markets are assumed to be equal to PROWo * (1 + tpcj). When agricultural products are excluded, the decrease in Jordan's welfare is reduced to 55 Mo. JD instead of 81 Mo. JD.

Of course these results must be put in perspective since Jordan is going to dismantle its tariff incrementally until 2014 at least. Jordan can also reduce the trade diversion loss until then by reducing its mfn tariff in WTO negotiations (e.g. in the context of the coming WTO Round after the Ministerial Meeting in Doha) or by concluding more FTA agreements with other key trade partners, as it did with the US in October 2000.

[12] See Annex 1, summing up the main results.

[13] See, e.g. the high CCT for HS 16 (preparations of meat, fish), 20 (preparations of vegetables, fruit) and 24 (tobacco and manufactures tobacco), all items imported by Jordan from the EU.

Regarding the fiscal impact of the EU-Jordan FTA, the following is of relevance:

First, according to an internal report of the IMF, customs revenue represented 5.3% of GDP in 1999, while Bayar 2001 calculates that for 1995-6 this reached 7.74 % . It represented as a percent of imports 12.3%. In spite of a decreasing trend as a result of accession to the WTO, the share of customs revenue in total government revenue, still 12 % in 2001 (down from 14 % in 2000), is quite significant.

Second, while as just explained, tariffs are still very important in budgetary terms, the other most important indirect tax is the General Sales Tax (GST), which accounted for 24% of government revenue in 2000. The GST is aimed at increasing tax income to replace customs revenue to be lost once Jordan's FTAs start to bite. As indicated, tariffs on EU-originating will be phased out over twelve years. Also under the Jordan-US FTA, tariffs on US imports will be eliminated over ten years in four stages, with US products not covered by the FTA being cigarettes, alcoholic beverages and cars. In June 1999, Jordan's Parliament approved an amendment raising the GST from 10 to 13% and harmonizing rates on domestic and imported goods. The amendment was one of several passed to facilitate Jordan's accession to the WTO and continue
implementing the IMF-backed economic reform program. Under the second stage of the GST, which took effect on 1 January 2001, the tax is imposed on the import or supply of goods and services. In November 2001, the government decision to expand the GST base, thus subjecting more merchants to the tax, was met with a claim that it would burden an already-strained sector. Thus, since 2000 discussions have been taking place for the adoption of VAT to replace the GST, but a decision has not yet taken place. Given what we find above it seems obvious that beyond the enlargement of the tax base, which is already being resisted, the general rate of 13% will have to be raised again.

Sectoral analysis

The VTC and VDC are very large (more than 5 Mo. JD) for HS 30 (pharmaceutical products), 39 (plastics), 48 (paper and paperboard), 73 (articles of iron and steel), 84 (nuclear reactors, boilers, non-electrical machinery), 87 (vehicles) and 90(optical and photographic instruments).

Welfare-wise, the GTC is large (more than 4 Mo. JD) for HS 85 and 87.The LTD is large (more than 4 Mo. JD) for the preceding categories in addition to HS 24,HS 39, HS 62 and HS 84. Only for a minority of sectors is the welfare change

positive[14]. The net welfare change is particularly negative for HS 24 (tobacco and tobacco manufactures), HS39 (plastics) and HS 84(nuclear reactors, boilers, non-electrical machinery).

SECOND PART: EFFECTS OF A JORDAN-ISRAEL FREE TRADE AREA ON JORDAN'S TRADE AND WELFARE

General Background: Trade patterns and promotion measures

Trade between Jordan and Israel has been increasing rapidly since 1995 from zero to what could be described as cruising speed levels by the years 1999 and 2000. Bilateral trade increased by 86% in 2000 in relation to one year earlier and exports of Israel to Jordan have increased by 100% and imports by 20% in the first ten months of 2001 according to Israeli authorities. Israel sells mainly machinery and production inputs (such as textiles but also fertilizers, agricultural technology) while it buys finished clothing, construction materials (sand, stone, cement), food products and some machinery (air conditioners, refrigerators).

Overall figures correspond pretty much, as stated in the introduction to this paper, to what was predicted by some of the ex-ante studies quoted above (e.g. Arnon et al.). In terms of commodity composition, we find some differences between what experts expected to happen according to various evaluation methods and what actually emerged. For instance, according to Kaufman and Harel, potential Israeli imports from Jordan would include leather and wood products, as well as inputs for construction. Halevy predicted a large Jordanian export potential to Israel of chemicals and chemical products, paper, linen, synthetic fibres, plastics, seamless iron tubes, clinker and metal structures. Prepared vegetables and animal feed would be the agricultural products with maximum export potential. An analysis of the tables in the Annex show that the expectations on prepared vegetables, animal feed, leather goods, wood products, chemicals, paper and plastics have barely materialized (yet). On the other hand, Jordan has been able to export electrical machinery (HS 85), including air conditioners and refrigerators, as well as aluminum and aluminum articles (HS 76). In the reverse direction, Kaufman and Harel predicted that Israel would export chemicals, pharmaceutical, cosmetics, textile fibres, paper products, electronic equipment and machine tools to Jordan. Halevy predicted an export potential in plywood, synthetic fibres and fabrics, aluminum plate and foil, chemicals, typeset, taps and valves, plastic articles, medical instruments, agricultural machines and measurement and control equipment. All these forecasts on Israeli exports to Jordan come quite close to the actual record, although quite surprisingly exports of precious stones used as inputs by

[14] HS 5, 14, 19, 22, 25, 26, 30, 43, 47, 65, 68, 71, 80, 83, 85, 92 and 97.

jewellery factories have also had some success; and of course exports of textile products have reached levels much beyond what was initially expected, because of the QIZ agreements, mentioned above.

One of the explanations for the poor record of Jordanian exports to Israel has to do with security barriers. For instance, the overland transport regime has already been changed several times since 1996 for security reasons. Early on, it was 'back-to-back', later on 'door–to-door' and at present 'back-to-back' again. Security checks by Israel on people and merchandise are expensive- and time-consuming for traders, not to speak of the uncertainty and psychological elements entering the benefit-cost analysis of the Jordanian potential exporter. Very easily security checks can become discriminatory against Jordan-originating imports. This might explain the low amounts of transit trade from Jordan over Israel to Europe until now. Add to it, that Jordan wants to protect Aqaba port. According to present regulations, full containers can only use this harbour. Not such problem affects airfreight. On the one hand, direct traffic from Jordan bound for Europe saves about 30 minutes when over-flying Israel's airspace; on the other hand, air freight from Jordan can transit through Ben Gurion Airport without many of the security hassles typical of overland transport.

Apart from the QIZ regime, there are two instruments for the promotion of trade between Jordan and Israel at present. First, there is a partial preferential agreement for a limited list of goods signed in October 1995 and accepted under the WTO's MFN exception for ex-Ottoman Empire territories. Tariff preferences are being applied de facto since 1996. However, most trade between Jordan and Israel is MFN-based; no quantitative restrictions afflict bilateral trade. Second, 1996 saw the creation of the Jordan-Israel Chamber of Commerce, based in Israel and with a membership of 120 firms.

Regarding future bilateral trade policies, it has been reported from time to time that both Jordan and Israel have been exploring the idea of signing a free trade agreement[15]. Amerah 1998,.271) has stated that Israel desires to establish free trade between the two countries over a period of 12 years. However politics have interfered and spoiled the project. Jordan wavered, arguing initially that it had not signed such an agreement with any other country or regional entity. Preferential trade with Israel was enough. This argument has lost validity since 1997 with the signature of FTA agreements with the EU (1997) and the US (2001). On the other hand, the few empirical studies made until now have shown that for Israel the economic case for desiring a FTA agreement with Jordan is weak, if not very weak. Worth mentioning here is that free trade between the Jordanian, Israeli and Palestinian economies was proposed in 1995 by a team set

[15] See, e.g., Financial Times, June 21 1995, p.7.

up by the Kennedy School of Government of Harvard University under the chairmanship of Robert Lawrence. Regarding the duo Jordan-Israel, this study predicted that the quantitative impact would be small for Israel, particularly in view of the losses from shifts in Palestinian import patterns. The impact on the few Israeli sectors competing with Jordan potential exporters would also be very small (clothing, textiles and building materials). The study by Arnon et al. was even more cautious. Were these forecasts reasonable? This is what we are going to find out now.

Methodology used to simulate effects of a Jordan-Israel FTA on Jordanian trade flows

The assumption made in our paper is that the Jordan-Israel FTA is to be put in place well after the Jordan-EU FTA is implemented, again a realistic assumption. We estimate therefore the *additional* static effect of the creation of an FTA between Jordan and Israel on imports and welfare of Jordan. It can easily be proven that adding this FTA to the EU-Jordan one has not any supplementary welfare effect on Jordan. The only thing that this agreement does is to affect import flows of Jordan, since the latter will increase imports of Israeli goods in which the latter is internationally competitive and which will have been evicted in favour of EU-originating goods once Jordan eliminates its tariff on the latter. This can be called *reverse trade diversion*. However, apart from this, there will be also imports from Israel that will substitute for imports originating previously from the Rest of the World (which in our case is the world minus the EU and *minus Israel*).

Regarding Jordanian exports, the assumption is that Israel would reduce its tariffs on the latter many years after having done so on imports originating in the EU, the US, EFTA countries, Turkey and several future members of the EU with whom Israel has already FTAs[16]. Israeli trade data of the year 2000 are used. The implicit assumption therefore is that until the FTA agreement of Israel with Jordan is implemented, no other new bilateral FTA is implemented by Israel with any third country. Again it must be assumed that part of the trade diverted in favour of Jordan is to the detriment not only of non-preferred countries (such as Thailand or Egypt), but also of those preferred at the time the Jordan-Israel FTA is signed (what can be called *reverse trade diversion*). In the model adopted, we assume Jordan's export supply to be perfectly elastic for lack of appropriate data and estimations. Therefore we must assume that the increase in Jordanian exports to Israel after the FTA does not imply welfare changes in Jordan. This seems pretty unrealistic but there does not seem to exist any better alternative.

[16] In any case it can be assumed that these Central and Eastern European countries would be full members by the time Israel drops its tariffs on Jordanian-originating imports.

Data used to calculate the different formulas

To calculate the effects of Jordan's elimination of its own tariffs on Israeli-originating imports, we use, as in the First Part, 1999 import data in JD published by the Jordanian Statistical Office based on the Harmonized Commodity Description and Coding System (HS) at a two-digit disaggregation level. Again, as in the First Part, for each HS category the same representative tariff rate is adopted, namely the arithmetic average of all 6-digit sub-categories of the published Jordanian Tariff included in a given 2-digit one.

In the reverse direction, to calculate the effects of Israel's elimination of its MFN tariffs on Jordan-originating exports, we use Israeli import data in Israeli Shekels for the year 2000 published by the Central Bureau of Statistics based on the Harmonized Commodity Description and Coding System (HS) at a two-digit disaggregation level. For each HS category a representative MFN tariff rate for the year 1997[17] was calculated.

Assessment of Jordanian and Israeli import demand price-elasticities by sectors

For Jordan, import demand price-elasticities provided for by the World Bank were applied as in the First Part. To assess the trade impact on Israel of eliminating its own tariffs on Jordanian-originating exports to Israel, we would have had to use ideally direct econometric estimations on the basis of Israeli data. Alas, an in-depth survey of the literature showed that they are not readily available. We discarded the possibility of using the World Bank estimations for developing countries used in this paper for Jordan, in view of the development level of Israel. Instead we were fortunate to trace a quite recent econometric study by Wehrling 1991 on Spain containing import demand price-elasticities estimations for 35 sectors, including agriculture. It seems quite appropriate to use the latter in view of the similar development and income levels of Spain and Israel.

Results of simulating the static effects of a not-yet-formed Jordan-Israel FTA[18] on Jordan

Impact on Jordanian imports

The total trade effect (TTE) is extremely small in absolute numbers, namely 11.2 Mo. JD, i.e. (284.7 Mo. JD – 273.5 Mo. JD) representing 0.4 % of Jordan's total

[17] Data on Israeli MFN tariffs in force in late 1997 were taken from the WTO's 1999 Trade Policy Review of Israel.

[18] See Annexes 1 and 2, summing up the main results.

imports, i.e. 15.7 Mo.$. However this amount represents 54% of Jordanian imports originating from Israel in 1999, quite substantial in bilateral terms. For Israel this amount represents a negligible share of its total exports (0.07%), but, as indicated above, more than half of its present exports to Jordan (assuming of course that Jordan's imports from Israel are identical as Israel's exports to Jordan). Note that almost 7 Mo. JD can be attributed to trade creation, while more than 4 Mo. JD to trade diversion.

By sectors, the VTC and the VTD are nil for many sectors since Israel is not exporting goods from these sectors to Jordan. On the other hand sectors with brightest perspective are by far HS 71(precious and semi-precious stones) but also HS 35 (glues, enzymes), HS 58 (special woven fabrics), HS 60 (knitted or crocheted fabrics), HS 61 (articles of apparel and clothing, knitted or crocheted), HS 62 (articles of apparel and clothing, not knitted or crocheted) and HS 84 (non-electrical machinery). These results are not surprising, since several studies have predicted a relatively strong potential of textile intra-industry trade between Jordan and Israel, in view of the intention of established Israeli exporters to locate progressively clothing production facilities in neighbouring countries, such as Jordan, where real wages for non highly-qualified workers are much lower than in Israel. Such a move implies selling more capital-intensive textile products produced still in Israel to Jordan clothing firms. Interestingly, most of the trade expansion can be attributed to trade creation in the case of special woven fabrics (HS 58) and articles of apparel and clothing (HS 61 and 62). On the other hand, it must be concluded that including agriculture in an FTA between Jordan and Israel does not make any difference as far as Jordanian imports from Israel are concerned.

b. Impact on Jordanian exports

As for imports, the total trade effect (TTE) appears to be extremely small in absolute numbers, namely about 5 Mo. $, i.e.3.5 Mo. JD representing less than half a percentage point of Jordan's annual exports in 1999 or 2000. However, this amount represents between 9.5% and 13.1% of Jordanian exports to Israel (depending on whether one relies on Jordanian or Israeli trade data). For Israel this amount is in any case negligible in terms of total imports and quite small even in terms of its imports originating in Jordan. These quite unassuming results are simply due to the fact that not only is bilateral trade small but on top of it Israel's average MFN tariffs have been reduced over the years either unilaterally or in the context of GATT Rounds. In some sense, a Jordan-Israel FTA comes too late, at a time Israel is in free trade with most OECD countries and with low average tariffs on imports from the developing world. Moreover, Israel's import demand elasticities are quite low for the kind of products imported from Jordan. Almost all the trade effect can be attributed to trade creation. In other words, the expansion

of Jordanian exports to Israel would not be to the detriment of other third countries.

By sectors, and as happened in the reverse direction, the trade creation and diversion effect are non-existent for many sectors since Jordan is not exporting currently goods from these sectors to Israel. Observe that this is what explains that farm exports are not expected to expand by much. It must be concluded that extending the FTA to agricultural goods would not make much difference for Jordan's exports to Israel. The first 24 categories of the Harmonized System, representing mainly farm and fishing products, account for 12% of the total trade effect. Clearly the two sectors with the brightest perspective for Jordanian businessmen are knitted or crocheted fabrics (HS 60) and articles of apparel and clothing, not knitted or crocheted (HS 62), because for these two categories the Israeli tariffs are still high (for instance the average 1997 tariff for HS 62 was 34.3%!). While exports of finished clothing from Jordan to Israel are already quite important, the tariff for clothing has already been reduced to an average of 5% and its elimination on Jordanian exports would not make much difference.

c. Global assessment

In terms of trade flows, Jordan's trade is more affected than Israel's in relative terms. The positive although small impact on Jordanian exports would obtain much sooner than the increase of Jordan imports from Israel, since in all likelihood Israel and Jordan would agree to apply dismantling schedules asymmetrically. Thus at the end of the transition period (maybe 10 years, until Jordan would eliminate its tariffs on Israeli exports), Jordan's net trade position with Israel would persist, but worsen slightly in absolute terms. Another finding is that extending a Jordanian-Israeli FTA to agricultural products would not make much of a difference and might not be worth the trouble.

These results contrast with the much more optimistic results of Arnon et al. 1996 about the trade potential between Jordan and Israel with free trade (about 220 Mo.$), more than three times what they predicted under MFN conditions. The gap between the two studies might be partially explained by the fact that our estimations, on the one hand, assume, for lack of other data, that trade in 1999 had attained normal levels and, on the other hand, only relate to the static effects as explained above. Clearly, given the security barriers, Jordan exports to Israel had by far not yet attained their cruising speed by 1999, something leading in turn to an underestimate in our forecast of Jordan's potential exports to Israel under an FTA regime. Another explanation for the gap in the two studies is that Arnon et al. were assuming that the Jordan-Israel trade agreement would be of an "EC-type', obviously going much beyond a simple FTA trade regime assumed in our paper and which seems to us the only realistic project.

SOME CONCLUDING REMARKS: COMPARING THE TWO FTAS

To begin with, a comparison of the different simulations shows that the overall expansion of Jordan's imports from Israel as a result of Jordan establishing an FTA with its neighbour is marginal when we compare it with the potential increase of Jordanian imports deriving from the EU-Jordan FTA (the latter being *25 times* as large!). Clearly for the Jordanian fiscal authorities and for its import-competing interests it is the FTA with the EU that is going to imply substantial changes, not the one that could be concluded with Israel. On the other hand, seen from the Jordanian exporting lobbies' perspective, clearly it is the second FTA that seems more attractive. Exports to Israel would increase by 10% in relation to 1999 figures almost instantaneously , since Israel would probably drop tariffs at once. On the other hand, the 1997 FTA agreement between the EU15 and Jordan does not modify nor increase market access for Jordanian exports. As a result, Jordan's 1999 trade surplus with Israel (17 Mo. JD)[19] would decrease to 9.4 Mo. JD after application of a FTA between both countries. Therefore a Jordanian-Israel FTA would pose neither balance of payments nor fiscal problems for Jordan. As well, Israel is a neighbouring country, not so EU members. To reach Israel, only one border must be crossed; not so if the goods travel by land to the EU. Here potential exports to the EU must travel over Middle East countries, Turkey and Balkan states and therefore cross several borders, the most problematic NTB in the Middle East and in the Balkans. This being said, Jordanian exports will benefit from the expected Enlargement to Eastern European countries and Cyprus maybe as soon as 2004 since the latter will have to apply zero duties on Jordanian-originating imports as from the date of accession.

A Jordan-Israel FTA would contribute to unravel the 'hub and spoke' structure emerging from the existence of bilateral FTAs of each of the two countries with both the EU and the US. All other things equal, the present structure tends to attract investors to the EU or the US, not to Jordan or Israel. Moreover it is politically unhealthy that Jordan and Israel, two neighbouring countries at peace, reserve for each other a much more unfavourable tariff treatment than the one applied respectively to the EU or the US.

Turning now to the EU-Jordan FTA, the analysis clearly confirms what different empirical studies have found out for other Arab countries, namely that the net static effects on Jordan's welfare are going to be globally negative (although not in a substantive way)[20]. Our results contrast dramatically with those

[19] As computed by Jordanian trade authorities, not Israeli ones for which bilateral trade was balanced that year.

[20] See, e.g. Bistolfi (1995), Bensidoun and Chevallier (1996), Galal and Hoekman (1997),

of Lucke 2001 who predicts a huge rise (6%) in Jordanian GDP due to much trade creation and negligible trade diversion. One reason for the unusual gap between the two studies might be in the initial Jordan tariff levels assumed. Also our paper relies on price elasticities of import demand, while the one of Lucke relies on a uniform elasticity of substitution of 1.5 (which is huge), determining then large trade creation gains. Furthermore Lucke assumed a large simulated inflow of foreign capital under Jordan's fixed exchange rate system. We think our results make more sense regarding trade diversion, because the share of the EU in Jordan's industrial imports is quite small and the scope for trade diversion against Japan or South Korea (e.g. in road vehicles) as well as the US is large. Not for nothing has the US found it worthwhile to sign an FTA agreement with Jordan, simply as a way for minimizing trade diversion against the US. In this respect, it is illuminating that a report prepared by the US International Trade Commission on the possible impact on the US of a US-Jordan FTA comes to the conclusion after a partial equilibrium analysis that had such an agreement been in effect in 1998, exports of cereals, electrical machinery and transport equipment would have been the ones benefiting most of the agreement in the US, but that in terms of US total exports the increase would be insignificant[21]. The important thing to note here is that all these products are currently on the EU' s export basket to Jordan.

Another conclusion of the paper is that Jordan's trade deficit with the EU would increase, all other things equal, by about 175 Mo JD, i.e. 245 Mo $, that is the amount of new industrial imports by Jordan (VTC) as a result of application of the 1997 industrial FTA agreement, its exports remaining substantially unchanged. The total trade effect (TTE) represents an increase in the 1999 Jordanian overall trade deficit (1.6 Bn JD or 2.2 Bn $) of 37%. Of course, the trade deficit with the EU will increase even by a larger percentage. Observe that our results for the TTE coincide with Lucke 2001 since EU-originating exports to Jordan are set to increase by more than 30% in both studies, contrasting with the low forecast by Ekholm et al. 1996. After a period of underlining the positive effects of the 1997 agreement on Jordan, even World Bank experts do acknowledge now that these kinds of results will obtain if only static effects on trade and welfare are taken into account. Of course, it can be argued that the so-called dynamic effects will be largely welfare-positive and largely compensate for the negative static welfare effects. However as is well known, the quantification of dynamic effects is very problematic if not outright impossible. This opens of course the possibility to exaggerate their importance. It appears as well from research done by one of the two authors of this paper on potential welfare effects deriving from FTAs between the EU and other Mediterranean Non Member

Hoekman (1995) and Dessus and Suwa (2001) for various opinions based on empirical research.

[21] U.S. International Trade Commission (2000).

Countries (Egypt, Algeria, Tunisia and Morocco) that Jordan is the worse affected by the discriminatory tariff dismantling in favour of the EU. The negative consequences are three-fold: in terms of welfare, in terms of new balance of payment difficulties and in terms of fiscal loss of tariff income.

Thus, Jordan's discriminatory tariff dismantling in favour of the EU is going to be costly. This negative outcome could be compensated by having the EU allow for the cumulation of origin with other neighbouring countries such as Israel. For instance the development of the Jordanian textile and clothing industries depends both on access to large markets (e.g. the US), close (e.g. Israeli) or both attributes together (e.g. the EU). However the latter case is dependent largely on the possibility of importing intermediary inputs (such as fabrics and articles of apparel) from Israel. As indicated above, cumulation between Israel and Jordan is accepted already by the US in the context of the QIZ-related agreements, but not yet so in the context of the Euro-Mediterranean association agreements. It seems that the possibility of both Jordan and Israel joining the system of Pan-European cumulation is now being studied in the context of the newly launched meetings of trade ministers of the 27 member countries of the Euro-Mediterranean Partnership since early 2001. Cumulation would probably increase exports to the EU (e.g. clothing exports) by leaps and bounds in view of the fact that current Jordanian exports to the EU are extremely low (e.g. about 80 Mo.$ in 1999).

One more point is worthwhile noting: Whereas in the case of Maghreb countries or Egypt the transformation of the association agreements with the EU into real FTAs including agriculture might make substantial difference, it seems that this is less the case regarding Jordan and in this we concur with Lucke 2001. In other words, cumulation with Israel as indicated above, seems much more important for Jordan to obtain from the EU than inclusion of agriculture in the 1997 association agreement.

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ANNEX 1

Effects of the Jordan-EU FTA and the Jordan-Israel FTA on Jordan's Imports (000 JD, Base Year = 1999)

REGION/ COUNTRY	VTC	VTD	TTE	IMPORTS	SHARE
	(a)	(b)	(c)	(d)	(c)/(d)*100
WITH EU15	193578	79923	273502	818244	33.4%
WITH IS	6746	4477	11222	20778	54.0%

ANNEX 2

Effects of the Jordan-EU FTA and the Jordan-Israel FTA on Jordan's Exports (000 JD, Base Year for Jordan-EU FTA = 1999; Base Year for Jordan-Israel FTA = 2000; 1 JD = 6 NIS; 1 JD = 1.4 $)

REGION/ COUNTRY	VTC	VTD	TTE	EXPORTS	SHARE
	(a)	(b)	(c)	(d)	(c)/(d)*100
WITH EU15	0	0	0	60921	0%
WITH IS	3437	67	3504	26714	13.1%

ANNEX 3

Complete Data Set and Own Calculations (see text for explanations)

HS Category	Description
1	LIVE ANIMALS
2	MEAT AND EDIBLE MEAT OFFAL
3	FISH AND CRUSTACEANS, MOLLUSCS AND OTHER AQUATIC INVERTEBRATES
4	DAIRY PRODUCE; BIRDS' EGGS; NATURAL HONEY; EDIBLE PRODUCTS OF ANIMAL ORIGIN, NOT ELSEWHERE SPECIFIED OR INCLUDED
5	PRODUCTS OF ANIMAL ORIGIN NOT ELSEWHERE SPECIFIED OR INCLUDED
6	LIVE TREES AND OTHER PLANTS; BULBS, ROOTS AND THE LIKE; CUT FLOWERS AND ORNAMENTAL FOLIAGE
7	EDIBLE VEGETABLES AND CERTAIN ROOTS AND TUBERS
8	EDIBLE FRUIT AND NUTS; PEEL OF CITRUS FRUITS OR MELONS
9	COFFEE, TEA, MATE AND SPICES
10	CEREALS
11	PRODUCTS OF THE MILLING INDUSTRY; MALT; STARCHES; INULIN; WHEAT GLUTEN
12	OIL SEEDS AND OLEAGINOUS FRUITS; MISCELLANEOUS GRAINS, SEEDS AND FRUIT; INDUSTRIAL OR MEDICAL PLANTS; STRAW AND FODDER
13	LACS; GUMS, RESINS AND OTHER VEGETABLE SAPS AND EXTRACTS
14	VEGETABLE PLAITING MATERIALS; VEGETABLE PRODUCTS NOT ELSEWHERE SPECIFIED OR INCLUDED
15	ANIMAL OR VEGETABLE FATS AND OILS AND THEIR CLEAVAGE PRODUCTS; PREPARED EDIBLE FATS; ANIMAL OR VEGETABLE WAXES
16	PREPARATIONS OF MEAT, FISH OR CRUSTACEANS, MOLLUSCS OR OTHER AQUATIC INVERTEBRATES
17	SUGARS AND SUGAR CONFECTIONERY
18	COCOA AND COCOA PREPARATIONS
19	PREPARATIONS OF CEREALS, FLOUR, STARCH OR MILK; PASTRYCOOKS' PRODUCTS

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(continued)

HS Category	Description
20	PREPARATIONS OF VEGETABLES, FRUIT, NUTS OR OTHER PARTS OF PLANTS
21	MISCELLANEOUS EDIBLE PREPARATIONS
22	BEVERAGES, SPIRITS AND VINEGAR
23	RESIDUES AND WASTE FROM THE FOOD INDUSTRIES; PREPARED ANIMAL FODDER
24	TOBACCO AND MANUFACTURED TOBACCO SUBSTITUTES
25	SALT; SULPHUR; EARTHS AND STONE; PLASTERING MATERIAL, LIME AND CEMENT
26	ORES, SLAG AND ASH
27	MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES
28	INORGANIC CHEMICALS: ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OF RADIOACTIVE ELEMENTS OR OF ISOTOPES
29	ORGANIC CHEMICALS
30	PHARMACEUTICAL PRODUCTS
31	FERTILIZERS
32	TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DYES, PIGMENTS AND OTHER COLOURING MATTER; PAINTS AND VARNISHES; PUTTY AND OTHER MASTICS; INKS
33	ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET PREPARATIONS
34	SOAPS, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LUBRICATING PREPARATIONS, ARTIFICIAL WAXES, PREPARED WAXES, SHOE POLISH, SCOURING POWDER AND THE LIKE, CANDLES AND SIMILAR PRODUCTS, MODELLING PASTES, DENTAL WAX AND PLASTER-BASED DENTAL PREPARATIONS
35	ALBUMINOUS SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES
36	EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHORIC ALLOYS; COMBUSTIBLE MATERIALS
37	PHOTOGRAPHIC OR CINEMATOGRAPHIC PRODUCTS
38	MISCELLANEOUS CHEMICAL PRODUCTS
39	PLASTICS AND PLASTIC PRODUCTS

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HS Category	Description
40	RUBBER AND ARTICLES THEREOF
41	HIDES AND SKINS (OTHER THAN FURSKINS) AND LEATHER
42	ARTICLES OF LEATHER; SADDLERY AND HARNESS; TRAVEL GOODS, HANDBAGS AND SIMILAR CONTAINERS; ARTICLES OF ANIMAL GUT (OTHER THAN SILK-WORM GUT)
43	FURSKINS AND ARTIFICIAL FUR; ARTICLES THEREOF
44	WOOD AND ARTICLES OF WOOD; WOOD CHARCOAL
45	CORK AND ARTICLES OF CORK
46	WICKERWORK AND BASKETWORK
47	PULP OF WOOD OR OF OTHER FIBROUS CELLULOSIC MATERIAL; WASTE AND SCRAP OF PAPER OR PAPERBOARD
48	PAPER AND PAPERBOARD; ARTICLES OF PAPER PULP, PAPER OR PAPERBOARD
49	BOOKS, NEWSPAPERS, PICTURES AND OTHER PRODUCTS OF THE PRINTING INDUSTRY; MANUSCRIPTS, TYPESCRIPTS AND PLANS
50	SILK
51	WOOL, FINE AND COARSE ANIMAL HAIR; YARN AND FABRICS OF HORSEHAIR
52	COTTON
53	OTHER VEGETABLE TEXTILE FIBRES; PAPER YARN AND WOVEN FABRICS OF PAPER YARN
54	MAN-MADE FILAMENTS
55	MAN-MADE STAPLE FIBRES
56	WADDING, FELT AND NONWOVENS; SPECIAL YARNS; TWINE, CORDAGE, ROPE AND CABLE AND ARTICLES THEREOF
57	CARPETS AND OTHER TEXTILE FLOOR COVERINGS
58	SPECIAL WOVEN FABRICS; TUFTED TEXTILE PRODUCTS; LACE; TAPESTRIES; TRIMMINGS; EMBROIDERY
59	IMPREGNATED, COATED, COVERED OR LAMINATED TEXTILE FABRICS; ARTICLES FOR TECHNICAL USE, OF TEXTILE MATERIALS
60	KNITTED OR CROCHETED FABRICS
61	ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, KNITTED OR CROCHETED

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(continued)

HS Category	Description
62	ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, NOT KNITTED OR CROCHETED
63	OTHER MADE UP TEXTILE ARTICLES; SETS; WORN CLOTHING AND WORN TEXTILE ARTICLES; RAGS
64	FOOTWEAR, GAITERS AND THE LIKE; PARTS OF SUCH ARTICLES
65	HEADGEAR AND PARTS THEREOF
66	UMBRELLAS, SUN UMBRELLAS, WALKING-STICKS, SEAT-STICKS, WHIPS, RIDING-CROPS AND PARTS THEREOF
67	PREPARED FEATHERS AND DOWN AND ARTICLES MADE OF FEATHERS OR OF DOWN; ARTIFICIAL FLOWERS; ARTICLES OF HUMAN HAIR
68	ARTICLES OF STONE, PLASTER, CEMENT, ASBESTOS, MICA OR SIMILAR MATERIALS
69	CERAMIC PRODUCTS
70	GLASS AND GLASSWARE
71	NATURAL OR CULTURED PEARLS, PRECIOUS OR SEMI-PRECIOUS STONES, PRECIOUS METALS, METALS CLAD WITH PRECIOUS METAL, AND ARTICLES THEREOF; IMITATION JEWELLERY; COIN
72	IRON AND STEEL
73	ARTICLES OF IRON OR STEEL
74	COPPER AND ARTICLES THEREOF
75	NICKEL AND ARTICLES THEREOF
76	ALUMINIUM AND ARTICLES THEREOF
77	
78	LEAD AND ARTICLES THEREOF
79	ZINC AND ARTICLES THEREOF
80	TIN AND ARTICLES THEREOF
81	OTHER BASE METALS; CERMETS; ARTICLES THEREOF
82	TOOLS, IMPLEMENTS, CUTLERY, SPOONS AND FORKS, OF BASE METAL; PARTS THEREOF OF BASE METAL
83	MISCELLANEOUS ARTICLES OF BASE METAL
84	NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICAL APPLIANCES; PARTS THEREOF

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(continued)

HS Category	Description
85	ELECTRICAL MACHINERY AND EQUIPMENT AND PARTS THEREOF; SOUND RECORDERS AND REPRODUCERS, TELEVISION IMAGE AND SOUND RECORDERS AND REPRODUCERS, AND PARTS AND ACCESSORIES OF SUCH ARTICLES
86	RAILWAY OR TRAMWAY LOCOMOTIVES, ROLLING-STOCK AND PARTS THEREOF; RAILWAY OR TRAMWAY TRACK FIXTURES AND FITTINGS AND PARTS THEREOF; MECHANICAL, INCLUDING ELECTRO-MECHANICAL, TRAFFIC SIGNALLING EQUIPMENT OF ALL KINDS
87	VEHICLES OTHER THAN RAILWAY OR TRAMWAY ROLLING-STOCK, AND PARTS AND ACCESSORIES THEREOF
88	AIRCRAFT, SPACECRAFT, AND PARTS THEREOF
89	SHIPS, BOATS AND FLOATING STRUCTURES
90	OPTICAL, PHOTOGRAPHIC, CINEMATOGRAPHIC, MEASURING, CHECKING, PRECISION, MEDICAL OR SURGICAL INSTRUMENTS AND APPARATUS; PARTS AND ACCESSORIES THEREOF
91	CLOCKS AND WATCHES AND PARTS THEREOF
92	MUSICAL INSTRUMENTS; PARTS AND ACCESSORIES FOR SUCH ARTICLES
93	ARMS AND AMMUNITION; PARTS AND ACCESSORIES THEREOF
94	FURNITURE; MEDICAL AND SURGICAL FURNITURE; BEDDING, MATTRESSES, MATTRESS SUPPORTS, CUSHIONS AND SIMILAR STUFFED FURNISHINGS; LAMPS AND LIGHTING FITTINGS, NOT ELSEWHERE SPECIFIED; ILLUMINATED SIGNS, ILLUMINATED NAME-PLATES AND THE LIKE; PREFABRICATED BUILDINGS
95	TOYS, GAMES AND SPORTS REQUISITES; PARTS AND ACCESSORIES THEREOF
96	MISCELLANEOUS MANUFACTURED ARTICLES
97	WORKS OF ART, COLLECTORS' PIECES AND ANTIQUES
99	OTHER PRODUCTS
	Total:

HS Category	Jordan's MFN Tariff	Total Imports from World (JD)	Total Imports from EU (JD)	Imports from EU as a share of total imports
1	5	24,288,957	5630426	23.18%
2	16.1	30,252,788	3855781	12.75%
3	22.6	7,135,702	500415	7.01%
4	17.5	41,580,038	30081336	72.35%
5	13.6	55,968	9384	16.77%
6	20	1,795,949	1210936	67.43%
7	23.01	19,593,221	1925621	9.83%
8	28.5	28,327,983	157129	0.55%
9	27.8	20,652,647	685177	3.32%
10	6.25	167,572,172	56604720	33.78%
11	13.2	4,352,907	1727687	39.69%
12	13.5	26,397,438	2588504	9.81%
13	16.5	298,356	200048	67.05%
14	7.7	479,444	0	0.00%
15	17.8	45,311,007	4822617	10.64%
16	24.1	11,384,929	1112470	9.77%
17	18.33	34,885,441	12400832	35.55%
18	21.78	4,904,820	2739523	55.85%
19	24.04	6,163,930	2278331	36.96%
20	25.7	7,229,152	1358963	18.80%
21	25	24,317,718	10591650	43.56%
22	113.33	5,053,441	3250813	64.33%
23	6.96	42,233,228	14247893	33.74%
24	58.8	22,328,027	2789480	12.49%
25	16.99	26,344,955	4402974	16.71%
26	5	38,905	0	0.00%
27	12.61	319,125,084	14696614	4.61%
28	7.28	50,293,514	6670513	13.26%
29	6.64	54,216,333	22389679	41.30%
30	9.69	79,775,964	55309818	69.33%
31	8.9	9,711,738	3303399	34.01%
32	10.25	11,372,836	7913659	69.58%
33	21.22	15,663,087	10073980	64.32%
34	19.83	7,811,896	3558344	45.55%

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HS Category	Jordan's MFN Tariff	Total Imports from World (JD)	Total Imports from EU (JD)	Imports from EU as a share of total imports
35	14.52	2,884,070	2024628	70.20%
36	23.33	452,207	72536	16.04%
37	22.84	4,946,435	2273220	45.96%
38	12.43	33,296,219	15812447	47.49%
39	15.71	81,159,925	25884658	31.89%
40	17.55	29,046,812	5558586	19.14%
41	21.26	83,735	33609	40.14%
42	30	1,708,982	259507	15.18%
43	20	2,554	0	0.00%
44	16.17	27,043,485	5497947	20.33%
45	13.75	50,441	45976	91.15%
46	18.5	101,371	4622	4.56%
47	5	5,519,398	965552	17.49%
48	19.81	53,250,278	22927773	43.06%
49	13.63	6,817,585	3179238	46.63%
50	8	605	0	0.00%
51	13.42	9,215,170	8364529	90.77%
52	8.9	5,457,573	783354	14.35%
53	7.16	911,392	0	0.00%
54	13.24	30,441,162	3025181	9.94%
55	14.57	14,876,666	3269700	21.98%
56	30.5	4,144,159	1081315	26.09%
57	30	3,543,109	1287254	36.33%
58	24.52	1,736,772	238816	13.75%
59	17	2,438,518	817983	33.54%
60	30	11,225,837	856538	7.63%
61	28.33	9,427,764	692082	7.34%
62	29.26	34,516,580	3437581	9.96%
63	29.84	11,995,797	6143321	51.21%
64	30	7,564,210	1716922	22.70%
65	30	118,846	31696	26.67%
66	27.5	182,089	4748	2.61%
67	30	524,373	4951	0.94%

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HS Category	Jordan's MFN Tariff	Total Imports from World (JD)	Total Imports from EU (JD)	Imports from EU as a share of total imports
68	25.79	5,366,053	2268204	42.27%
69	23.68	13,656,901	7623467	55.82%
70	22.26	16,056,034	3733195	23.25%
71	16.54	20,518,432	2803568	13.66%
72	10.91	76,745,808	8158954	10.63%
73	23.96	54,331,331	18194920	33.49%
74	15.14	7,852,337	2629274	33.48%
75	14.41	127,187	31239	24.56%
76	18.65	27,821,137	5504451	19.79%
77				
78	11.1	1,291,501	187723	14.54%
79	9.1	1,652,158	1038498	62.86%
80	13.2	65,512	23736	36.23%
81	8.6	85,298	70308	82.43%
82	15.81	6,752,064	3131610	46.38%
83	23.51	11,741,011	4184420	35.64%
84	10.11	225,823,107	118274713	52.37%
85	21.31	124,234,120	54420997	43.81%
86	3.33	1,460,417	113047	7.74%
87	19.75	291,531,613	103035326	35.34%
88	5.33	73,616,931	29615751	40.23%
89	2.94	171,100	11520	6.73%
90	15.51	59,988,617	22747609	37.92%
91	21.68	3,269,832	214589	6.56%
92	30	264,570	58494	22.11%
93	25.24		0	
94	25.79	23,427,874	6504565	27.76%
95	29.54	6,890,866	962321	13.97%
96	22.69	6,203,861	1431067	23.07%
97	27.5	277,882	39663	14.27%
99		28,349,629	15846694	
Total:		2,635,206,877	818,244,909	31.05%

HS Category	Total Imports from Israel (JD)	CCT	Import Demand Elasticities (see text)
1	83,322	1.7	-0.4
2	0	3.1	-1.15
3	0	10	-1.13
4	0	2.4	-1.1
5	354	0.4	-0.85
6	45570	8	-0.95
7	14476	10.2	-0.6
8	139831	7.8	-0.6
9	614	3.8	-0.95
10	0	1.4	-0.4
11	0	2.4	-1.1
12	2,760	1.9	-0.4
13	1,675	2.5	-0.7
14	0	0	-0.4
15	0	6.2	-1.1
16	0	17.6	-1.15
17	19,710	2.7	-1.15
18	0	5.1	-1.15
19	5,942	1.7	-1.1
20	43,085	20.3	-1.1
21	79,739	11.9	-1.1
22	63,550	3.7	-1.15
23	17,040	0.9	-0.7
24	78,989	39.9	-1.15
25	11,136	0.3	-1.21
26	0	0	-0.4
27	8,355	0.6	-1.65
28	249,823	5.5	-1.65
29	107,544	4.7	-1.65
30	268,944	0	-1.65
31	10,078	4.5	-1.65
32	5,590	5.3	-1.4
33	3,829	4.1	-1.65
34	4,135	3.3	-1.65
35	207,183	4.9	-1.4

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HS Category	Total Imports from Israel (JD)	CCT	Import Demand Elasticities (see text)
36	0	6.7	-1.65
37	0	5.7	-1.65
38	207,183	4.8	-1.5
39	444,238	7.6	-1.6
40	108,278	2.7	-1.6
41	0	2	-0.7
42	0	5	-2
43	0	1.3	-1.25
44	11,176	3	-1.4
45	0	3.7	-1.2
46	0	3.8	-0.9
47	0	0	-1.25
48	272,550	6.2	-1.4
49	300	1.9	-1.4
50	0	3.2	-1.3
51	5,180	5.1	-1.3
52	7,984	7.5	-1.3
53	0	2.8	-1.1
54	28,415	8.6	-1.5
55	1,661	8.9	-1.5
56	0	7.3	-1
57	0	8.5	-1.3
58	835,431	9.5	-1.3
59	16,238	6.7	-1.3
60	8,975,568	10.7	-1.3
61	1,183,327	12.8	-2.5
62	2,098,040	12.4	-2.5
63	10,125	10.7	-2
64	18,313	11.1	-2.5
65	0	3.4	-2
66	0	5.3	-1.5
67	0	4	-1.5
68	13,820	2.3	-1.6
69	2,428	5.5	-2.25

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HS Category	Total Imports from Israel (JD)	CCT	Import Demand Elasticities (see text)
70	13,075	5.4	-2.25
71	933,060	1.1	-2.25
72	190,450	2	-2
73	201,727	4.2	-2.25
74	0	3.6	-2
75	415	1.5	-2
76	1,706,762	6.6	-2
77	0		0
78	0	3.8	-2
79	27,700	3.2	-2
80	0	0.8	-2
81	0	4.3	-2
82	10,049	4.1	-2.5
83	258,112	3.1	-2.25
84	761,691	2.5	-2
85	215,930	4	-3.25
86	0	2.8	-2.25
87	115,650	6.8	-2.25
88	17,669	2.5	-3
89	0	1.4	-2.5
90	277,145	3.4	-2.5
91	0	3.2	-1.8
92	0	4.1	-2
93	0	3.5	-0.8
94	5,006	3.4	-1.4
95	2,556	4.6	-1.5
96	2,073	4.5	-1.25
97	317	0	-1
	0		
99	324,664		
Total:	20,777,580		

HS Category	VTCj	VTDj	TTEj	GTCj	LTDj	NWEj
1	107246.2095	24860.75654	132106.9661	5038.223652	412912.269	-407874.0453
2	614899.0975	78370.17391	693269.2714	253214.0115	937836.428	-684622.4165
3	104238.1588	7310.049977	111548.2088	52207.84568	713570.2	-661362.3543
4	4928218.877	3565350.467	8493569.344	443775.7834	997920.912	-554145.1286
5	954.9211268	160.1089882	1115.030115	364.8364732	223.872	140.9644732
6	191731.5333	129276.8425	321008.3759	10236.9093	143675.92	-133439.0107
7	216121.6448	21240.42687	237362.0717	78412.4336	1998508.542	-1920096.108
8	20909.77354	115.9818476	21025.75539	283383.4421	2209582.674	-1926199.232
9	141592.524	4697.50637	146290.0304	442141.1752	784800.586	-342659.4108
10	1331875.765	449898.4159	1781774.181	74197.01489	2346010.408	-2271813.393
11	221607.9085	87957.10604	309565.0145	24668.52384	104469.768	-79801.24416
12	123153.4943	12076.29742	135229.7917	62591.00013	501551.322	-438960.3219
13	19833.08498	13298.10355	33131.18853	1756.843056	7458.9	-5702.056944
14	0	0	0	527.8780828	0	527.8780828
15	801586.0854	85315.75302	886901.8384	284666.9784	2809282.434	-2524615.456
16	248445.6571	24276.68545	272722.3426	22287.07646	2003747.504	-1981460.428
17	2209104.522	785276.9886	2994381.511	414128.5327	941906.907	-527778.3743
18	563449.1097	314707.1239	878156.2336	64432.8055	250145.82	-185713.0145
19	485715.7769	179531.7779	665247.5548	136403.3283	104786.81	31616.51834
20	305631.5355	57453.75783	363085.2933	9223.638805	1467517.856	-1458294.217
21	2330163	1014909.003	3345072.003	183619.1978	2893808.442	-2710189.244
22	1986016.186	1277578.433	3263594.619	1637049.981	186977.317	1450072.664
23	648987.7963	218943.9244	867931.7208	50751.18363	380099.052	-329347.8684
24	1187812.579	148395.5315	1336208.111	288796.0864	8908882.773	-8620086.687
25	773706.2928	129307.8197	903014.1125	379504.3586	79034.865	300469.4936
26	0	0	0	18.52619048	0	18.52619048
27	2715434.679	125053.4581	2840488.137	3372282.486	1914750.504	1457531.982
28	746888.5361	99061.07753	845949.6137	12254.26222	2766143.27	-2753889.008
29	2300274.973	949942.8568	3250217.83	15785.82966	2548167.651	-2532381.821
30	8062002.234	5589501.573	13651503.81	563386.6179	0	563386.6179
31	445458.35	151520.4249	596978.7749	14243.8824	437028.21	-422784.3276
32	1030031.806	716735.9553	1746767.762	17692.88343	602760.308	-585067.4246
33	2909753.025	1871456.998	4781210.024	312438.5041	642186.567	-329748.0629
34	971603.4091	442568.5085	1414171.918	146957.0919	257792.568	-110835.4761
35	359383.8455	252288.8128	611672.6583	16314.45768	141319.43	-125004.9723
36	22640.37178	3631.615627	26271.98741	8365.790725	30297.869	-21932.07827
37	697399.6167	320502.0902	1017901.707	97595.11551	281946.795	-184351.6795
38	2622281.191	1245327.055	3867608.246	129307.3013	1598218.512	-1468911.211
39	5622995.104	1793364.215	7416359.319	369064.6411	6168154.3	-5799089.659
40	1327818.757	254099.9939	1581918.751	435931.9846	784263.924	-348331.9394

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HS Category	VTCj	VTDj	TTEj	GTCj	LTDj	NWEj
41	4124.766106	1655.571315	5780.337421	896.5408255	1674.7	-778.1591745
42	119772.4615	18187.31395	137959.7755	82162.59615	85449.1	-3286.503846
43	0	0	0	46.51605521	33.202	13.31405521
44	1071382.665	217812.3533	1289195.018	282643.0152	811304.55	-528661.5348
45	6669.046154	6078.707123	12747.75328	268.7296933	1866.317	-1597.587307
46	649.4202532	29.61024761	679.0305008	831.8452933	3852.098	-3020.252707
47	57473.33333	10054.26533	67527.59866	8213.389881	0	8213.389881
48	5307393.843	2285184.713	7592578.557	576292.6779	3301517.236	-2725224.558
49	533892.6297	248969.6478	782862.2775	57787.19562	129534.115	-71746.91938
50	0	0	0	0.838933333	19.36	-18.52106667
51	1286612.352	1167846.749	2454459.101	36557.26675	469973.67	-433416.4033
52	83226.86667	11945.98751	95172.85418	638.4708909	409317.975	-408679.5041
53	0	0	0	889.2178565	25518.976	-24629.75814
54	530555.4103	52725.52167	583280.9319	43406.88194	2617939.932	-2574533.05
55	623717.3213	137085.0515	760802.3728	31308.48701	1324023.274	-1292714.787
56	252721.1303	65941.28	318662.4103	85461.76782	302523.607	-217061.8392
57	386176.2	140302.4457	526478.6457	81890.10676	301164.265	-219274.1582
58	61134.74796	8406.374567	69541.12253	20452.99531	164993.34	-144540.3447
59	154507.9	51828.54322	206336.4432	14372.35415	163380.706	-149008.3519
60	256961.4	19606.30674	276567.7067	209075.6012	1201164.559	-992088.9578
61	381958.2923	28039.14681	409997.4391	221479.4482	1206753.792	-985274.3438
62	1945374.053	193744.0176	2139118.071	948830.7698	4280055.92	-3331225.15
63	2823732.265	1446097.639	4269829.904	338457.7537	1283550.279	-945092.5253
64	990531.9231	224830.6235	1215362.547	259808.7937	839627.31	-579818.5163
65	14628.92308	3901.505695	18530.42877	6468.51352	4040.764	2427.74952
66	1536.117647	40.05451504	1576.172162	5278.867221	9650.717	-4371.849779
67	1713.807692	16.18134779	1729.98904	20450.547	20974.92	-524.373
68	744058.9066	314510.011	1058568.918	188306.3049	123419.219	64887.08585
69	3284106.741	1833232.837	5117339.578	410575.438	751129.555	-340554.117
70	1529339.699	355587.3958	1884927.095	419973.1742	867025.836	-447052.6618
71	895270.1486	122326.6349	1017596.784	472189.4397	225702.752	246486.6877
72	1605160.727	170646.878	1775807.605	549337.6504	1534916.16	-985578.5096
73	7912940.765	2649950.25	10562891.02	1925285.676	2281915.902	-356630.2255
74	691457.5015	231527.4078	922984.9093	90820.59076	282684.132	-191863.5412
75	7869.137138	1932.775952	9801.913091	1852.811436	1907.805	-54.9935644
76	1730434.238	342368.8424	2072803.08	340471.8622	1836195.042	-1495723.18
77				0	0	0
78	37510.80648	5452.292429	42963.09891	6194.787425	49077.038	-42882.25058
79	173241.6462	108894.6112	282136.2574	5271.45921	52869.056	-47597.59679

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HS Category	VTCj	VTDj	TTEj	GTCj	LTDj	NWEj
80	5535.60424	2005.634117	7541.238357	889.8520424	524.096	365.7560424
81	11135.33702	9178.448205	20313.78522	145.2265212	3667.814	-3522.587479
82	1068792.723	495706.495	1564499.218	99934.23486	276834.624	-176900.3891
83	1792124.985	638701.6954	2430826.681	445494.047	363971.341	81522.70603
84	21719323.38	11375482.22	33094805.6	1187711.412	5645577.675	-4457866.263
85	31069674.39	13610131.07	44679805.46	4986453.648	4969364.8	17088.84818
86	8197.083591	634.5144632	8831.598055	44.66370146	40891.676	-40847.0123
87	38234925.25	13513278.88	51748204.13	4593060.782	19824149.68	-15231088.9
88	4495925.743	1808690.141	6304615.884	83963.34929	1840423.275	-1756459.926
89	822.5374004	55.38065957	877.91806	49.27394113	2395.4	-2346.126059
90	7636036.178	2895575.427	10531611.61	952023.2728	2039612.978	-1087589.705
91	68820.85089	4516.500411	73337.3513	82594.79543	104634.624	-22039.82857
92	26997.23077	5968.840067	32966.07084	13652.01552	10847.37	2804.645515
93	0			0	0	0
94	1867030.955	518366.4641	2385397.42	653571.3252	796547.716	-142976.3908
95	329168.1605	45968.88597	375137.0465	248155.5963	316979.836	-68824.23971
96	330822.7059	76312.06716	407134.7731	104567.8811	279173.745	-174605.8639
97	8554.764706	1221.049339	9775.814045	8241.108333	0	8241.108333
99						
Total:	193,578,692	79,923,917	273,502,609	31,919,821	112,840,085	-80,920,264

HS Category	Jordan's Imports from EU + Israel (JD)	VTCj	VTDj	TTEj
1	5713748	108833.2952	25602.00601	134435.3012
2	3855781	614899.0975	78370.17391	693269.2714
3	500415	104238.1588	7310.049977	111548.2088
4	30081336	4928218.877	3565350.467	8493569.344
5	9738	990.9443662	172.4166709	1163.361037
6	1256506	198946.7833	139189.825	338136.6083
7	1940097	217746.3554	21560.98025	239307.3357
8	296960	39517.63424	414.2602269	39931.89447
9	685791	141719.4077	4705.92919	146425.3369
10	56604720	1331875.765	449898.4159	1781774.181
11	1727687	221607.9085	87957.10604	309565.0145
12	2591264	123284.807	12102.06393	135386.871
13	201723	19999.14721	13521.72563	33520.87284
14	0	0	0	0
15	4822617	801586.0854	85315.75302	886901.8384
16	1112470	248445.6571	24276.68545	272722.3426
17	12420542	2212615.694	787775.2257	3000390.92
18	2739523	563449.1097	314707.1239	878156.2336
19	2284273	486982.5477	180469.4546	667452.0022
20	1402048	315321.376	61154.57311	376475.9491
21	10671389	2347705.58	1030247.966	3377953.546
22	3314363	2024840.728	1328017.324	3352858.052
23	14264933	649763.9639	219467.9367	869231.9006
24	2868469	1221447.568	156918.6782	1378366.246
25	4414110	775663.1504	129962.7374	905625.8878
26	0	0	0	0
27	14704969	2716978.399	125195.6839	2842174.083
28	6920336	774860.8877	106620.0643	881480.952
29	22497223	2311323.848	959090.4653	3270414.314
30	55578762	8101203.722	5643991.636	13745195.36
31	3313477	446817.353	152446.3513	599263.7043
32	7919249	1030759.394	717748.8796	1748508.273
33	10077809	2910858.988	1872879.906	4783738.894
34	3562479	972732.468	443597.6861	1416330.154
35	2231811	396160.0944	306564.8394	702724.9338
36	72536	22640.37178	3631.615627	26271.98741
37	2273220	697399.6167	320502.0902	1017901.707
38	16019630	2656639.699	1278174.709	3934814.408
39	26328896	5719498.141	1855448.631	7574946.771
40	5666864	1353683.889	264095.8497	1617779.738
41	33609	4124.766106	1655.571315	5780.337421
42	259507	119772.4615	18187.31395	137959.7755
43	0	0	0	0
44	5509123	1073560.527	218698.7732	1292259.301
45	45976	6669.046154	6078.707123	12747.75328
46	4622	649.4202532	29.61024761	679.0305008

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HS Category	Jordan's Imports from EU + Israel (JD)	VTCj	VTDj	TTEj
47	965552	57473.33333	10054.26533	67527.59866
48	23200323	5370484.585	2339837.118	7710321.703
49	3179538	533943.009	249016.6367	782959.6457
50	0	0	0	0
51	8369709	1287409.127	1169293.649	2456702.777
52	791338	84075.12084	12190.73716	96265.85801
53	0	0	0	0
54	3053596	535538.8252	53720.65673	589259.4819
55	3271361	624034.1682	137224.3647	761258.5329
56	1081315	252721.1303	65941.28	318662.4103
57	1287254	386176.2	140302.4457	526478.6457
58	1074247	274997.5696	170094.4708	445092.0404
59	834221	157575.0778	53906.69208	211481.7699
60	9832106	2949631.8	2583423.625	5533055.425
61	1875409	1035033.448	205893.0457	1240926.494
62	5535621	3132683.554	502406.3469	3635089.901
63	6153446	2828386.147	1450868.285	4279254.432
64	1735235	1001097.115	229652.3699	1230749.485
65	31696	14628.92308	3901.505695	18530.42877
66	4748	1536.117647	40.05451504	1576.172162
67	4951	1713.807692	16.18134779	1729.98904
68	2282024	748592.4027	318354.2595	1066946.662
69	7625895	3285152.697	1834400.757	5119553.454
70	3746270	1534696	358082.5491	1892778.549
71	3736628	1193226.455	217299.4204	1410525.875
72	8349404	1642629.116	178706.4919	1821335.608
73	18396647	8000671.505	2709035.96	10709707.47
74	2629274	691457.5015	231527.4078	922984.9093
75	31654	7973.676077	1984.469659	9958.145737
76	7211213	2266989	587601.4539	2854590.454
77				
78	187723	37510.80648	5452.292429	42963.09891
79	1066198	177862.5445	114781.2069	292643.7513
80	23736	5535.60424	2005.634117	7541.238357
81	70308	11135.33702	9178.448205	20313.78522
82	3141659	1072222.364	498892.937	1571115.301
83	4442532	1902670.524	719927.3291	2622597.854
84	119036404	21859196.16	11522470.57	33381666.73
85	54636927	31192951.71	13718349.08	44911300.78
86	113047	8197.083591	634.5144632	8831.598055
87	103150976	38277841.3	13543631.34	51821472.64
88	29633420	4498608.049	1810848.944	6309456.993
89	11520	822.5374004	55.38065957	877.91806
90	23024754	7729069.659	2966561.599	10695631.26
91	214589	68820.85089	4516.500411	73337.3513
92	58494	26997.23077	5968.840067	32966.07084

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HS Category	Jordan's Imports from EU + Israel (JD)	VTCj	VTDj	TTEj
93	0	0		
94	6509571	1868467.847	519164.6546	2387632.502
95	964877	330042.4569	46213.40419	376255.8611
96	1433140	331301.9256	76533.31395	407835.2395
97	39980	8623.137255	1240.645409	9863.782664
99	16171358			
Total:	839,022,489	200,324,437	84,400,310	284,724,748

HS Category	Israel's MFN Tariff	Import Demand Elasticities (see text)	Total Imports from World ($)	Total Imports from Jordan ($)
1	20.1	-1.25	29,190.00	1,194.00
2	42.5	-1.25	149,433.00	
3	15.8	-0.95	89,938.00	168.00
4	95.5	-0.55	24,632.00	
5	4.1	-1.25	3,447.00	
6	14.2	-0.95	5,995.00	7.00
7	36	-0.95	31,675.00	349.00
8	36	-0.95	84,312.00	335.00
9	11.2	-0.95	52,746.00	168.00
10	10.9	-1	386,941.00	15.00
11	5.6	-1	42,266.00	5.00
12	10.9	-1	178,425.00	220.00
13	5.3	-0.95	14,037.00	
14	5.4	-1	7,179.00	
15	6.8	-1.25	59,966.00	691.00
16	19.6	-1.25	32,441.00	
17	3.8	-1	141,051.00	
18	2.9	-1	52,009.00	
19	13.2	-1	71,127.00	73.00
20	20.5	-0.95	93,610.00	55.00
21	12.1	-1	174,558.00	122.00
22	23.3	-1.3	53,145.00	109.00
23	2.2	-1	67,412.00	15.00
24	8.2	-0.35	113,868.00	714.00
25	0.3	-1.35	107,008.00	
26	0	-1.35	2,863.00	
27	1.8	-0.05	3,587,152.00	38.00
28	0.4	-0.3	156,247.00	217.00
29	1.1	-0.3	666,610.00	11.00
30	7	-0.3	573,166.00	5.00
31	6.2	-0.3	18,494.00	
32	2.2	-0.3	180,702.00	470.00
33	10.3	-0.3	161,722.00	15.00
34	8.6	-0.3	127,712.00	439.00

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HS Category	Israel's MFN Tariff	Import Demand Elasticities (see text)	Total Imports from World ($)	Total Imports from Jordan ($)
35	9.2	-0.3	49,304.00	1.00
36	6	-0.3	4,747.00	
37	3.8	-0.3	114,823.00	28.00
38	2.6	-0.3	516,400.00	28.00
39	6.8	-1	992,670.00	246.00
40	5.9	-1	194,395.00	168.00
41	0	-2.35	16,194.00	1.00
42	10.8	-2.35	55,181.00	40.00
43	1.8	-2.35	260.00	22.00
44	8.1	-2.9	304,731.00	
45	8.9	-2.9	3,163.00	
46	12	-2.9	4,005.00	
47	0	-1.85	79,689.00	
48	5.9	-1.85	564,952.00	331.00
49	2.8	-1.85	65,591.00	130.00
50	0	-3	1,767.00	
51	4.2	-3	25,266.00	
52	9.7	-3	165,255.00	304.00
53	0	-3	3,430.00	
54	3.7	-3	152,361.00	625.00
55	7.1	-3	128,767.00	17.00
56	9.7	-3	80,393.00	
57	20.8	-3	25,829.00	49.00
58	11.2	-3	34,278.00	28.00
59	11.7	-3	33,487.00	
60	12.1	-3	102,701.00	4,386.00
61	31.5	-3	172,218.00	60.00
62	34.3	-3	263,725.00	2,420.00
63	23.8	-3	60,454.00	107.00
64	20.6	-2.35	193,892.00	26.00
65	1.8	-1.4	14,532.00	1.00
66	1.4	-1.4	3,548.00	
67	4	-1.4	8,006.00	
68	5	-1.35	120,598.00	1,598.00

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HS Category	Israel's MFN Tariff	Import Demand Elasticities (see text)	Total Imports from World ($)	Total Imports from Jordan ($)
69	7.7	-1.35	166,950.00	43.00
70	7.6	-1.35	128,967.00	13.00
71	4.3	-1.35	7,074,221.00	96.00
72	2.2	-1.5	543,184.00	35.00
73	6.7	-0.05	395,248.00	1,248.00
74	4.4	-1.5	150,590.00	67.00
75	0	-1.5	22,886.00	
76	5.3	-1.5	270,850.00	1,434.00
77				
78	0.5	-1.5	3,796.00	
79	0	-1.5	25,785.00	
80	1.6	-1.5	3,040.00	
81	0	-1.5	133,071.00	
82	8.3	-0.05	121,600.00	2.00
83	8.3	-0.05	108,282.00	5.00
84	5.1	-0.05	4,255,995.00	4,389.00
85	5.5	-1.3	5,352,849.00	1,261.00
86	0	-0.75	30,676.00	
87	4.3	-0.05	2,322,077.00	117.00
88	0.6	-0.75	462,893.00	17.00
89	6.4	-0.75	22,582.00	
90	3.2	-0.95	1,285,994.00	63.00
91	5.7	-0.95	46,144.00	21.00
92	10.3	-1.4	10,868.00	
93	0.6			
94	13.1	-2.9	379,633.00	690.00
95	10.7	-1.4	116,641.00	49.00
96	10.3	-1.4	73,476.00	101.00
97	16.6	-1.4	23,592.00	
99			112,667.00	10,947.00
Total:			35,742,248.00	36,649.00

HS Category	VTCj	VTDj	TTEj
1	249.7856	10.21733473	260.0029301
2	0	0	0
3	21.776166	0.040676865	21.81684267
4	0	0	0
5	0	0	0
6	0.8268827	0.000965501	0.827848163
7	87.763235	0.966988765	88.73022406
8	84.242647	0.334724437	84.5773715
9	16.07482	0.051199518	16.12601966
10	1.4743012	5.71522E-05	1.474358324
11	0.2651515	3.1367E-05	0.265182882
12	21.623084	0.026661502	21.64974536
13	0	0	0
14	0	0	0
15	54.995318	0.633721859	55.62904021
16	0	0	0
17	0	0	0
18	0	0	0
19	8.5123675	0.008736525	8.521104016
20	8.8890041	0.005222682	8.894226831
21	13.168599	0.009203641	13.17780311
22	26.777048	0.054919526	26.83196738
23	0.3228963	7.18484E-05	0.32296813
24	18.938817	0.118754306	19.05757131
25	0	0	0
26	0	0	0
27	0.0335953	3.55887E-07	0.033595641
28	0.2593625	0.00036021	0.259722759
29	0.035905	5.92484E-07	0.035905637
30	0.0981308	8.56042E-07	0.098131697
31	0	0	0
32	3.035225	0.007894521	3.04311957
33	0.4202176	3.89759E-05	0.420256564
34	10.429282	0.035849839	10.46513161
35	0.0252747	5.1263E-07	0.025275238
36	0	0	0

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HS Category	VTCj	VTDj	TTEj
37	0.3075145	7.49885E-05	0.307589439
38	0.2128655	1.15419E-05	0.212877039
39	15.662921	0.00388153	15.66680288
40	9.3597734	0.008088901	9.367862272
41	0	0	0
42	9.1624549	0.006641746	9.16909662
43	0.9141454	0.077350763	0.991496146
44	0	0	0
45	0	0	0
46	0	0	0
47	0	0	0
48	34.115817	0.019988132	34.13580494
49	6.5505837	0.012983121	6.563566778
50	0	0	0
51	0	0	0
52	80.64175	0.148347052	80.79009728
53	0	0	0
54	66.899711	0.274429278	67.17413998
55	3.3809524	0.000446358	3.381398739
56	0	0	0
57	25.311258	0.048017796	25.35927607
58	8.4604317	0.006910907	8.467342562
59	0	0	0
60	1420.2658	60.6545793	1480.920413
61	43.117871	0.015022078	43.1328928
62	1854.1921	17.0144844	1871.206592
63	61.710824	0.109224504	61.82004841
64	10.43665	0.001399505	10.43804959
65	0.0247544	1.70344E-06	0.024756124
66	0	0	0
67	0	0	0
68	102.72857	1.361218736	104.0897902
69	4.1502786	0.001068955	4.151347506
70	1.2395911	0.000124952	1.23971603
71	5.3430489	7.25073E-05	5.343121405

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HS Category	VTCj	VTDj	TTEj
72	1.130137	7.28202E-05	1.130209807
73	3.9182755	0.012371999	3.930647538
74	4.2356322	0.001884503	4.237516687
75	0	0	0
76	108.26496	0.57320269	108.83816
77	0		0
78	0	0	0
79	0	0	0
80	0	0	0
81	0	0	0
82	0.0076639	1.26051E-07	0.007664023
83	0.0191597	8.84715E-07	0.019160626
84	10.648858	0.010981648	10.65983988
85	85.461137	0.020132549	85.48126999
86	0	0	0
87	0.2411793	1.2152E-05	0.241191443
88	0.0760437	2.79275E-06	0.07604653
89	0	0	0
90	1.855814	9.09151E-05	1.855904869
91	1.0758278	0.000489606	1.076317421
92	0	0	0
93	0		0
94	231.76923	0.421250969	232.1904817
95	6.6307136	0.002785513	6.633499153
96	13.20417	0.018150433	13.22232088
97	0	0	0
	0		0
99	0	0	0
Total:	4,862.50	93.34	4,955.84

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