



OFFICE OF ECONOMICS WORKING PAPER
U.S. INTERNATIONAL TRADE COMMISSION

**FREE TRADE AGREEMENTS BETWEEN DEVELOPING
AND INDUSTRIALIZED COUNTRIES:
COMPARING THE U.S.-JORDAN FTA
WITH MEXICO'S EXPERIENCE UNDER NAFTA**

GRACE V. CHOMO
OFFICE OF ECONOMICS
U.S. INTERNATIONAL TRADE COMMISSION

JANUARY 2002

THE AUTHOR IS WITH THE OFFICE OF ECONOMICS OF THE U.S. INTERNATIONAL TRADE COMMISSION. OFFICE OF ECONOMICS WORKING PAPERS ARE THE RESULT OF THE ONGOING PROFESSIONAL RESEARCH OF USITC STAFF AND ARE SOLELY MEANT TO REPRESENT THE OPINIONS AND PROFESSIONAL RESEARCH OF INDIVIDUAL AUTHORS. THESE PAPERS ARE NOT MEANT TO REPRESENT IN ANY WAY THE VIEWS OF THE U.S. INTERNATIONAL TRADE COMMISSION OR ANY OF ITS INDIVIDUAL COMMISSIONERS. WORKING PAPERS ARE CIRCULATED TO PROMOTE THE ACTIVE EXCHANGE OF IDEAS BETWEEN USITC STAFF AND RECOGNIZED EXPERTS OUTSIDE THE USITC, AND TO PROMOTE PROFESSIONAL DEVELOPMENT OF OFFICE STAFF BY ENCOURAGING OUTSIDE PROFESSIONAL CRITIQUE OF STAFF RESEARCH.

ADDRESS CORRESPONDENCE TO:
OFFICE OF ECONOMICS
U.S. INTERNATIONAL TRADE COMMISSION
WASHINGTON, DC 20436 USA

Free Trade Agreements Between Developing and Industrialized Countries: Comparing the U.S.-Jordan FTA with Mexico's Experience Under NAFTA*

by

Grace V. Chomo

Abstract: Developing countries are participating in bilateral and multilateral trade agreements in record numbers. Despite their eagerness to improve market access, fears remain that trade liberalization with large industrialized nations will erode infant industrial sectors, hindering the process of economic development. Empirical evidence from the North American Free Trade Agreement (NAFTA) between the United States, Canada, and Mexico has not supported fears that trade liberalization with industrialized nations slows economic development in less-developed countries. NAFTA trade flows and foreign direct investment into Mexico expanded at a greater rate following NAFTA implementation, taking into account real exchange rate changes and capital flight during the 1995 peso crisis. Like Mexico, Jordan's improved access to the large U.S. market is expected to increase opportunities for Jordanian exports, attract foreign investment, and stimulate economic development with trade as the engine of growth. This study compares and contrasts Mexico's experience under NAFTA with Jordan's potential under the U.S.-Jordan Free Trade Agreement.

*The views expressed in this paper are those of the author and do not represent the views of the U.S. International Trade Commission or any of its Commissioners.

Introduction

Jordan's improved access to the large U.S. market is expected to attract investment in the export sectors, improve domestic productivity and competitiveness, and fuel economic development. Jordan is a developing economy with a relatively small population, and thus a small domestic market. Jordan is located in a region surrounded by other developing countries, limiting its potential for market growth. Without access to export markets in other parts of the world, Jordan has limited opportunities for economic growth. Of course, the great distance and high transportation costs between Jordan and the United States will influence the type of Jordanian goods that can compete in the U.S. market, even with a free trade agreement.

A developing country signing a trade agreement with an industrialized economy gains improved access to a larger market for products that match the developing country's relative factor-abundance compared with the industrialized trading partner. Theoretically, a small developing nation should not lose its industrial base by signing a free trade agreement with an industrialized country. Even for intra-industry trade, like products such as manufactures and agriculture can be produced with different combinations of resources. Most bilateral and multilateral trade agreements between industrialized and developing countries allow non-reciprocal tariff reductions for developing country members, extensive phase-in periods, and safeguard measures to protect infant industry sectors that are most likely to be injured by trade liberalization. Both the NAFTA and the U.S.-Jordan FTA give concessions to the developing country members, namely Mexico and Jordan. Government revenues from customs duties are another important issue for developing countries liberalizing trade. Developing countries, relative to industrial countries, have large informal markets that fall outside the domestic taxation mechanism. This causes developing countries to become reliant on customs duties as a primary source of tax revenue. The U.S.-Jordan FTA addressed this issue by allowing special concessions on Jordanian automobile tariffs, which are an important source of revenue.

The U.S.-Jordan FTA is an interesting case for examining the implications of trade liberalization between countries at significantly different stages of development. The United States is a large, industrialized country and an original signatory of the General Agreement on Tariffs and Trade and a member of the World Trade Organization. The United States has historically placed priority on multilateral trade liberalization, signing bilateral free trade agreements with only four countries; Israel¹, Canada², Mexico³, and Jordan⁴. The case of Mexico under NAFTA is similar to Jordan in that both countries are significantly less developed than the United States. Prior to NAFTA implementation, empirical studies predicted the largest NAFTA-induced welfare gains for Mexico, the country with the highest pre-NAFTA tariff and non-tariff barriers. Although the effect of reduced intra-NAFTA tariffs and improved regional integration stimulated some increased volume of trade between Mexico and the United States, important non-NAFTA economic factors were also present (Gould). The difficulty in measuring the trade effects of NAFTA come down to the large influence of these other factors on the economies of North America. Non-NAFTA factors influencing North American trade flows since NAFTA implementation include changes in real exchange rates (the peso devaluations), the Mexican recession, and high U.S. GDP growth rate.

The U.S.-Jordan FTA is expected to result in net welfare gains for U.S. and Jordanian consumers from phased-in, reciprocal tariff elimination. Jordan is expected to gain relatively more from tariff liberalization under the FTA for several reasons. First, Jordan's economic distortions from import tariffs is higher than for the United States. Reductions in Jordanian import tariffs on U.S. products, which currently account for 10 percent of Jordanian imports, will allow domestic resources to adjust to more

¹ The U.S.-Israel Free Trade Area Agreement was ratified by the U.S. Congress May 1985, signed into law (Public Law 99-47) June 11, 1985, and implemented September 1, 1985.

² The U.S.-Canada Free Trade Agreement (CFTA) was ratified by the U.S. Congress August 1988, signed into law (Public Law 100-499) September 28, 1988, and implemented January 1, 1989.

³ The North American Free Trade Agreement (NAFTA) was ratified by the U.S. Congress November 1993, signed into law (Public Law 103-108) December 8, 1993, and implemented January 1, 1994.

⁴ The U.S.-Jordan Free Trade Agreement was signed by the governments of Jordan and the United States on October 24, 2000, U.S. implementing legislation was signed September 28, 2001, and implemented on December 17, 2001.

optimal uses. Secondly, U.S. international trade is overshadowed by U.S. interregional trade which accounts for most of U.S. national income. Jordan is an insignificant trading partner of the United States. Impacts on the U.S. economy from trade liberalization with the small Jordanian economy will be negligible, even at the sectoral level. This study does not address the impact of the U.S.-Jordan free trade agreement on the U.S. economy. This study investigates the impact of U.S.-Jordan trade liberalization on Jordanian export potential and economic development.

Trade Liberalization Between Developing and Industrialized Countries

Research by Frankel and Romer suggests that trade, whether interregional or international, raises income. Larger countries tend to have more interregional trade and thus higher incomes than countries with small domestic markets. Their research supports the hypothesis of exports as a potential engine of growth for small developing countries. By accessing the larger international market, small countries can benefit from economies of scale, such as efficiency gains from optimal plant size, that might not be attained with limited domestic markets.

International trade theory suggests that countries should specialize in the products of their comparative advantage, relative to their trading partners. Relative factor endowments are an important determinant of comparative advantage with a trading partner, according to the Heckscher-Ohlin (H-O) trade model. A drawback of the H-O trade model are the limiting assumptions that trading partners have identical production technologies and tastes (Yarbrough and Yarbrough). This may be realistic for countries at the same level of development, or countries from the same region with similar language, religion, or culture. However, for trade between industrialized economies and the developing world, these assumptions are not realistic. For developing countries, the business climate is another factor constraining productivity of resources, where corruption, uncertainty (non-transparency), and lack of incentives can reduce productivity. Adjustments have been made to the H-O trade model in empirical

work by defining resources to include differences in labor quality (education, skills), technology, and productivity differences.

Under the theory of comparative advantage, when a nation reduces barriers to a trading partner, national resources adjust through specialization towards areas of comparative advantage relative to the trading partner. Theoretically, Jordan attains a higher level of welfare from specializing in its areas of comparative advantage with the United States. Through increased specialization and trade, Jordan can increase consumption and attain higher net welfare. The net welfare position for Jordan will include losses to factors in those sectors which are declining, especially returns to specialized labor and capital in the industries in decline. These would include inefficient state-owned enterprises and protected domestic industries with high levels of inefficiency due to market distortions stimulated by import-substitution policies. Wages to labor and rents to capital will fall in these declining sectors and increase in the growth sectors as the economy adjusts in response to changes in relative prices brought about by trade liberalization policies and the resulting reduction in policy-induced market distortions.

Developing countries have the potential for more efficiency and welfare gains from implementing free trade agreements than their industrialized partners due to the high level of trade interventions and resulting inefficiencies observed in developing countries. Gains from trade liberalization include improved efficiency in sectors previously protected by trade barriers and increased transparency for doing business. For example, the NAFTA dispute resolution mechanism significantly improved access to legal services for Mexican producers and workers involved in trade disputes with other NAFTA members. Efficiency gains from trade liberalization should be higher for the Jordanian economy under the U.S.-Jordan FTA, than for Mexico under NAFTA, as the U.S. and Jordanian economies are significantly less integrated than the U.S. and Mexican economies were prior to NAFTA. Protected domestic producers and state-owned operations lead to domestic market inefficiencies that can affect the competitiveness of export sectors, despite the advances made through trade liberalization policies. If non-tradable input supply and service industries used by other sectors of the economy are inefficient, they can increase

market inefficiencies and reduce the competitiveness of export sectors (Gillis, Perkins, Roemer, and Snodgrass). Government focus on export policy alone is not enough for economic growth. All sectors in the economy must develop along with the export sectors to prevent bottlenecks that hinder growth. Jordan's government is in the middle of implementing numerous economic reforms designed to increase transparency and reduce domestic market failures so the economy can attain maximum benefit from recent trade liberalization policies.

When examining trade flows and trade liberalization between two countries, it is essential to look at resource endowments. The industrialized economy of the United States has a higher ratio of capital to labor than the Jordanian economy. Workers in Jordan have access to less capital than workers in the United States. Under the H-O trade model, we expect exports to be more intensive in the use of the abundant factor (Yarbrough and Yarbrough). The United States should export capital-intensive goods to Jordan and import labor-intensive Jordanian products. Trade statistics reveal Jordan as a net importer of cereals from the United States. Jordan also produces cereals domestically. The isoquant in Figure 1 illustrates two different combinations of capital (K) and labor (L) that can produce a unit of cereals. The Jordanian isocost line reflects the relative abundance of capital and labor in Jordan. The slope of the Jordanian isocost line is the relative price of labor to capital (P_L/P_K). The factor price ratio (P_L/P_K) is higher in the United States than in Jordan due to relatively greater capital abundance in the industrialized U.S. economy. This leads to a different least-cost mix of inputs to produce a unit of cereals in the United States compared with Jordanian cereal farmers. Jordanian cereal farmers substitute relatively abundant labor for relatively scarce capital. Cereal farmers in the United States have a comparative advantage over Jordanian farmers because of their access to agricultural technology and improved climate (rainfall) for cereals production. Thus, Jordan is a net importer of cereals from the United States due to comparative disadvantage.

Jordanian and United States Comparative Advantage

Jordan produces and exports resource-oriented manufactured products, such as potash and phosphate fertilizers, which is typical of many developing countries. Production of these products are located near the input source, due to high costs of transporting the raw materials. High transportation costs and distance prevent resource-oriented Jordanian products from having a comparative advantage in the U.S. market, however they are competitive in the regional market. The United States imports light manufactured products from Jordan, particularly textiles and apparel. Light manufactures are products whose weight or volume do not change significantly during the production process. These products have high value to weight ratios. Jordan produces and exports several types of light manufactures, specifically textiles, apparel, and pharmaceuticals. These products are produced with an input mix representing the relatively abundant labor compared with scarce capital in Jordan. United States apparel imports are the second highest value import sector from Jordan. According to a study by the U.S. Congressional Research Service (Ruebner), apparel “could prove to be the largest potential area of growth for Jordanian exports to the United States under an FTA”. The U.S. effective tariff rates on Jordanian apparel (HTS chapters 61 and 62) are relatively high, implying potential gains to Jordanian exporters from trade liberalization. Jordan’s share of the U.S. apparel import market was 0.1 percent in 2000. This is an insignificant share of total U.S. apparel imports \$32.7 billion in 2000 (Figure 2). The U.S. also produces apparel domestically, using a higher capital-labor mix reflecting the relative abundance of capital in the U.S. economy. If Jordan doubled apparel exports to the United States, it would still be an insignificant volume relative to the total U.S. market. Therefore, the terms of trade, how many units of exports are exchanged for a unit of imports, facing Jordanian apparel exporters is determined by the larger U.S. market. This is the small country assumption of international trade theory. Under the small country assumption, Jordanian exporters face a flat U.S. offer curve.

The highest value U.S. merchandise export to Jordan in 2000 was cereals (HTS 10). U.S. exports of cereals were \$9,684 million in 2000, compared with U.S. cereal exports to Jordan of only \$67 million,

representing less than one-half of one percent of total U.S. cereals exports. In the two goods example, the United States offers capital-intensive cereals in exchange for labor-intensive Jordanian apparel. The Jordanian offer curve represents the quantity of apparel offered to the United States for various amounts of U.S. cereals. In order for trade to take place between these two countries, the terms of trade of Jordanian apparel for U.S. cereals must be lower than the internal opportunity cost of producing these goods domestically.⁵ This is a simplification as there are numerous goods and services traded between the United States and Jordan. Figure 3 illustrates the potential gains from U.S. tariff liberalization. The U.S. offer curve shifts, resulting in greater volumes of apparel and cereals trade between Jordan and the United States.

Current Jordanian tariff rates on corn and rice are 5 percent, and zero for wheat. Under the U.S.-Jordan FTA, tariff rates of 5 percent or less should go to zero within two years. One study found that elimination of Jordanian cereal tariffs would have resulted in a 14 percent increase in U.S. cereal exports to Jordan in 1998 (USITC).⁶ Taking this percentage change and applying it ad hoc to the value of U.S. cereal exports to Jordan in 2000, we can illustrate the shift in the Jordanian offer curve from tariff liberalization and the resulting change in U.S. cereal exports from \$67 million to approximately \$77 million (Figure 4). Both the volume of cereals and apparel trade between the U.S. and Jordan increases in response to Jordanian tariff liberalization in this sector.

A commonly-used measure of comparative advantage is the revealed comparative advantage index (RCA). The RCA measures the relative trade performance of a country in a given commodity (Balassa). Balassa suggests the RCA can be calculated by dividing a country's share of exports in a given commodity by its share of all exports. An RCA index greater than one "reveals" a comparative advantage in exporting that commodity. Haddad calculated RCA indices for MENA countries using the most recent

⁵ It will not be equal to U.S. opportunity cost due to market distortions such as tariffs, quotas, transportation costs, etc. which put a wedge between Jordanian export price and U.S. import price.

⁶ The study used 1998 data and an Armington-type partial equilibrium model to estimate the effect on U.S. exports in 1998 had there been zero tariff rates on U.S. cereal exports to Jordan.

United Nations data at the SITC two-digit level. For Jordan, Haddad reports revealed comparative advantage in food, crude materials, animal and vegetable oils, and chemical products. Statistics on Jordanian exports correspond with the results for some of her estimated RCA indices. Food products contributed 12 percent of Jordan's export value in 1999 (Central Bank of Jordan). Phosphates, potash, and fertilizers contributed 30 percent, combined. Medicaments, a light manufactured product, contributed 10 percent of export value in 1999. Manufactured and miscellaneous manufactured products accounted for 17 percent of Jordanian exports, despite an RCA index of less than one for both categories, indicating Jordan does not have a revealed comparative advantage in manufactures. We should note that the broadly aggregated classifications under the two-digit SITC codes may include sub-categories which have comparative advantage with particular trade partners. Vollrath clarifies that "It is not unusual for a country to have a comparative disadvantage for a composite commodity and yet have a comparative advantage for a particular niche within this composite." This appears to be the case for Jordanian exports to the United States. Although Haddad calculated a revealed comparative disadvantage for Jordanian manufactured products, the top Jordanian exports to the United States were light manufactures. The RCA indices reveal Jordan has a comparative advantage in food exports with the world, although these products are not competitive in the U.S. market. Much of Jordanian agriculture is produced using traditional methods, specifically in the grains and livestock sectors, and cannot compete with capital-intensive North American agriculture. One possible explanation is high shipping costs between the United States and Jordan for high-value perishable crops such as fresh vegetables and fruit. This could contribute to Jordan's comparative disadvantage in this sector of the U.S. market while Jordan exhibits a comparative advantage in exporting these products to regional neighbors. Israel has been successful in supplying off-season tomatoes to the U.S. market under the U.S.-Israel Agreement on Trade in Agricultural Products. It appears that trade barriers may be the limiting factor preventing Jordanian high-value specialty crops from competing in the U.S. market. Taking advantage of the warmer Jordanian climate to supply high-value specialty crops during off-season months could be an area of comparative

advantage under the U.S.-Jordan FTA. It is well-known that developing countries can improve productivity and competitiveness in the agricultural sector by investing in agricultural technology (Tobey and Chomo). Jordan may reverse its comparative disadvantage in the U.S. market for specialty crops by attracting investment into this sector. Some modern farming regions have already developed in Jordan, adopting greenhouse and drip irrigation technology for production of cut flowers and vegetables. Trade liberalization under the U.S.-Jordan FTA may open this sector for Jordanian agricultural producers with access to capital.

Comparing the Jordanian and Mexican Experiences

The Mexican and Jordanian economies

The net benefits accruing to the developing Mexican economy from liberalizing trade with its industrialized North American neighbors stimulated the Mexican government to expand its free trade policy. Mexico signed bilateral trade agreements with 10 countries over the last 7 years. These countries included developing countries in Latin America as well as industrialized economies such as the EFTA members and the European Union. The new Mexican FTAs are all modeled after the NAFTA, a rules-based agreement with a clearly defined dispute settlement mechanism (Diaz). The Mexican experience under NAFTA has shown a country rapidly expanding exports, not only to North America but to the world. Mexico received increased infusions of FDI from investors around the world during NAFTA negotiations and following NAFTA implementation. Mexico has been able to maintain economic reforms, even under the severe financial crisis of 1994-95. Empirical studies of NAFTA trade liberalization have indicated significant positive impacts for the Mexican economy from trade liberalization with Canada and the United States (Kehoe and Kehoe).

The Mexican economy was expected to experience the greatest adjustments under the NAFTA, due to the small relative size of its economy and higher levels of protectionism. Lopez-Cordova reports Mexican real per capita GDP only 34 percent of U.S. GDP in 1994, suggesting large factor endowment

differences between Mexico and its northern neighbors. Large differences in factor endowments prior to trade liberalization suggest large trade and production effects from liberalization. Jordanian per capita GDP in 2000 was 5 percent of U.S. per capita GDP. Like Mexico, Jordan is expected to experience efficiency and welfare gains from resource adjustments under the trade liberalization measures of the FTA.

How do Mexico and Jordan compare as developing countries? Mexico's population is significantly greater than Jordan (Table 1). The Mexican population

Table 1
Development Indicators for the United States, Mexico, and Jordan, 2000

	GDP per capita	Population	Life expectancy	Infant mortality	Adult literacy
	<i>Million dollars</i>	<i>Millions</i>	<i>Years</i>	<i>per 1,000</i>	<i>Percent</i>
United States	34,266	281.6	77	7	100
Mexico	5,862	98.0	72	29	91
Jordan	1,694	4.9	71	26	90
World	5,150	6,054	66	54	76

Source: World Bank, found at Internet address <http://www.worldbank.org>.

is 35 percent of the U.S. population (281.6 million). By comparison, Jordan's population is less than 2 percent of the U.S. population. Mexico's economy is more developed than Jordan's economy, even pre-NAFTA. Mexico instituted significant economic reforms much earlier than Jordan, starting in the 1980s. In addition, Mexico's companies benefitted from over 30 years of production-sharing with U.S. companies. Mexico's share of GDP from industry was 28.4 percent in 2000, with the manufacturing sector accounting for 20.7 percent. By comparison, industry's share of Jordanian GDP was 24.8 percent, with manufacturing contributing only 15.6 percent. This share has been steadily increasing, from 12.7 percent in 1980. Services, primarily tourism, are the largest share of Jordanian GDP, 73 percent in 2000. This has increased from 64.1 percent in 1980. Services also account for the largest share of Mexican GDP, 67.3 percent. Agriculture's share of Jordanian GDP fell from 7.9 percent in 1980 to 2.2 percent in

2000. Although the Jordanian government's share of consumption of GDP has fallen from 28.8 percent in 1980 to 23.8 percent in 2000, it continues to burden the economy. By comparison, the Mexican government's share of GDP was 10 percent in 1980 and 11 percent in 2000.

Jordan has undertaken significant economic reforms during the 1990s and continues to pass economic reform legislation⁷. In 1995, a new Sales Tax Law was passed. This law expands the tax base and increases tax rates to provide government revenues which will be lost under recent trade liberalization policies. An Investment Promotion Law was passed in 1995 that provides incentives to domestic and foreign investors. This is necessary to encourage capital inflows into the capital-scarce economy for further industrialization. Non-Jordanians are allowed to own 100 percent of businesses, with the exclusion of mining, trade services, and construction. Investment in certain regions of the country will receive "tax holidays" over a specified period of time. In 1997, the government passed the Securities Law, creating a regulatory body called the Jordan Securities and Exchange Commission. The Commission's goal is to increase transparency and to safeguard investor's rights. The government is currently preparing a number of reforms to improve transparency, market efficiency, and the overall business climate in Jordan; The Insurance Law, the Mutual Funds and Trust Law, the Secured Financing and Leasing Law, The Safeguard Law, the Competition (Antitrust) Law, the Companies Law, the Customs Law, and Intellectual Property Rights Legislation. Effective implementation of new and pending legislation will enable Jordan's economy to capture potential welfare gains from multilateral and bilateral trade liberalization.

The socio-economic development indicators for Jordan are not significantly different from Mexico (Table 1). For example, life expectancy in 2000 was 72 years in Mexico and 71 years in Jordan⁸. The world average was 66 years and in the United States life expectancy was 77 years. Infant mortality

⁷ Economy - Legislative and Regulatory Reforms, found at Internet address <http://www.kinghussein.gov.jo>.

⁸ World Bank, found at Internet address <http://www.worldbank.org>.

rates in Jordan and Mexico are significantly below the world average of 54 deaths per 1,000 live births. Mexico had an infant mortality rate of 29 and Jordan had a lower rate of 26 in 2000. The adult literacy rate for Mexico was 91 percent and 90 percent for Jordan in 2000. The United Nations Human Development Index (HDI), constructed from life expectancy at birth, adult literacy, school enrollment, and GDP per capita, ranks both Jordan and Mexico as countries with “medium human development” in 1999. Mexico ranked 51 and Jordan 88 out of 150 countries in the 2000 report. The HDI for Jordan is 0.714, compared to Mexico’s HDI of 0.790. The largest component contributing to the difference between these two countries HDI indices is the GDP index. Jordan’s 1999 GDP per capita is less than half that of Mexico. Even Mexico’s HDI for 1990 (pre-NAFTA) is higher than Jordan’s HDI in 1999. We have to look prior to 1980 to find a Mexican HDI value equivalent to Jordan’s value in 1999. Jordan’s income constraint, relative to Mexico, is a leading factor contributing to limited domestic investment and slow economic growth.

Tariff liberalization

The U.S. effective tariff rate⁹ on imports from Mexico was relatively low prior to implementation of NAFTA (Appendix, Table 1). The average tariff rate fell from 3.1 percent in 1989 to 2.1 percent in 1993. Following implementation of NAFTA, the effective tariff rate fell to 0.2 percent in 2000. Israel, which implemented a free trade agreement with the United States in 1985, has experienced an effective tariff rate of 0.1 percent since 1993, which is lower than Mexico. Canada, which implemented a free trade agreement with the United States in 1989, faced a higher effective tariff rate than Israel. The effective tariff rate on Canadian merchandise was 0.4 the year prior to NAFTA implementation, falling to zero in 2000. The effective tariff rate on U.S. imports from Jordan in 2000 was higher than the effective tariff rate on U.S. imports from Mexico in 1993, prior to NAFTA implementation. This is partly due to the mix

⁹ Import duties as a percentage of total imports at customs value. Calculated from official statistics of the U.S. Department of Commerce.

of products imported from Jordan, mostly textiles and apparel which face significantly higher tariff and non-tariff barriers entering the United States. Production-sharing between Mexican and U.S. companies through the maquiladora program also contributed to lower average effective tariff rates on U.S. imports from Mexico. Obviously, production-sharing is more feasible when two countries share a border, a situation which does not exist for Jordan and the United States. Prior to NAFTA, Mexican products could enter the U.S. with special duty provisions under HTS 9802.00.60 and 9802.00.80 if they were assembled or processed using U.S. inputs. The final products entering the U.S. market under special rules-of-origins pay tariffs only on the value-added in Mexico. Mexican imports of U.S. inputs entered maquiladoras duty-free, if the final products were re-exported. The maquiladora program was implemented by Mexico in 1965.

Effective tariff rates on U.S. imports from Jordan have come down in the late 1990s, partly in response to initiation of a U.S. program to allow qualifying goods from Jordan, Israel, West Bank, Gaza Strip, and Egypt to enter the United States duty free¹⁰. Jordanian qualifying products enter the United States duty-free as products of Israel through a production-sharing scheme called Qualified Industrial Zones (QIZ), under provisions of the U.S.-Israel Free Trade Area Agreement of 1985. Legislation was passed in October 1996 authorizing the U.S. President to eliminate duties on articles produced in these qualifying regions. The President authorized the U.S. Trade Representative to designate QIZs in the participating countries. The first zone was designated in March 1998. Four additional zones have been authorized.

The tariff phase-ins under NAFTA were scheduled over 15 years, through 2008. For the U.S.-Jordan FTA, tariff liberalization will be phased-in over 10 years, with 2001 designated as the first year of tariff reductions¹¹. Tariffs less than 5 percent will be eliminated over two years, tariffs between 5 and 10

¹⁰ USTR, "U.S. Trade Representative Designates Three New Duty-Free Zones in Jordan and Israel," Press Release 99-86, October 13, 1999, found at Internet address <http://www.ustr.gov>.

¹¹ U.S. Trade Representative, "The U.S.-Jordan Free Trade Agreement Fact Sheet," found at Internet address <http://www.ustr.gov>.

percent will be eliminated over four years, tariffs between 10 and 20 percent will be eliminated over five years, and tariffs greater than 20 percent will be eliminated over 10 years¹². Some non-reciprocal concessions were given to Jordan under the U.S.-Jordan FTA due to its developing country status. For example, Jordan can maintain high tariffs to restrict imports of socially-unacceptable products, such as tobacco and alcohol. Jordan can apply temporary safeguard measures to protect domestic industries during a 15 year grace period. The multilateral Agreement on Textile and Clothing (ATC) will be implemented by 2005, thus removing any trade-diverting welfare gains to Jordanian apparel exporters from special access to the U.S. market. Given the long tariff phase-ins negotiated under the U.S.-Jordan FTA, the welfare gains will be spread out over time and difficult to measure, as was the case with NAFTA. For sectors with the highest tariff rates, liberalization will come near the end of the 10 year phase-in period. Given the higher effective tariff rate facing top U.S. imports from Jordan, relative to Mexico, the potential welfare gains to Jordan are higher than for Mexico under the NAFTA.

Trade flows

Mexican exports to the United States rose steadily since NAFTA implementation, however, Mexican exports to the world also increased significantly (Appendix, Table 2). This export growth cannot be attributed solely to tariff liberalization. As we have seen, NAFTA tariffs that were not already low or zero in 1993 were scheduled to be phased-in over 15 years, to be completed in 2008. Part of the post-NAFTA growth in Mexican exports can be attributed to the effect of the 1995 peso devaluation on Mexico's real exchange rate (Krueger). The fall in the relative price of Mexican exports increased North American and world import demand, compounding the price effect of North American tariff liberalization. The growth in Mexican exports to North America would have been smaller if NAFTA tariff liberalization did not begin in 1994. Lustig refers to this rise in Mexican exports as the "engine of

¹² Jordanian Ministry of Industry and Trade, "Jordan and the United States of America," found at Internet address <http://www.mit.gov.jo>.

Mexico's recovery". But tariff liberalization alone cannot explain the phenomenal growth in intra-NAFTA trade.

Mexico was the number three trading partner of the United States in terms of volume of trade prior to NAFTA. Mexico replaced Japan as the number two U.S. trading partner in 1999, when growth in U.S.-Mexico trade outpaced the growth in U.S.-Japanese trade. U.S. imports from Mexico grew 31 percent in the five years prior to NAFTA (1989-93) and 48 percent in the five years following implementation (1994-1998). By comparison, growth in the value of imports from Japan fell from 14 percent in the period 1989-93 to only 3 percent in 1994-98. Peso devaluation and the economic downturn adversely affected Mexican import demand, with U.S. exports to Mexico growing only 35 percent in the five years following NAFTA implementation, compared with 40 percent growth over the five years preceding NAFTA. By comparison, U.S. exports to Japan grew only 7 percent during 1989-1993 and 1994-1999 periods. Jordan trade flows with the United States are extremely small compared with total U.S. trade flows, and Jordanian exports to the United States are an insignificant share of total Jordanian exports. Primary destinations for Jordanian exports in 1999 were India (20 percent), Saudi Arabia (14 percent), Iraq (12 percent), other Arab countries (35 percent), the European Union (9 percent), China (4 percent), and all other destinations combined (35 percent). On the other hand, the United States is a significant supplier of Jordanian imports. Jordanian imports in 1999 were supplied by the European Union (32 percent), Iraq (11 percent), the United States (10 percent), Arab countries (10 percent), other European countries (7 percent), Japan (6 percent), South Korea (4 percent), and all other sources combined (20 percent). The Jordan economy will experience welfare gains from removing import trade restrictions on U.S. goods.

Seven of the top 15 U.S. import categories from Mexico in 2000 at the HTS two-digit chapters ranked by value are also in the top 15 U.S. import categories from Jordan (Appendix, Tables 3 and 4). Two of these chapters (HTS 98 and 99) are special provisions. As would be expected, Mexico and Jordan are both net exporters of apparel products to the United States. In 1993, Mexican apparel entering the

United States under HTS chapters 61 and 62 accounted for 3 and 5 percent, respectively, of U.S. apparel imports from all sources. They were the 5th and 9th highest value Mexican export categories to the United States. These products faced U.S. effective tariff rates of 5.5 and 6.6 percent, respectively in 1993, the year prior to NAFTA implementation. The effective tariff rate on U.S. apparel imports from all sources in 1993 was 17.6 and 13.9 percent, giving Mexican apparel producers an obvious competitive advantage. Mexico had a price advantage over foreign competitors primarily due to special duty rates granted under production-sharing with U.S. firms. Under NAFTA, the effective tariff rate for Mexican apparel in the United States fell to 0.4 percent by 2000 in both HTS chapters. Mexican exports of apparel significantly increased their share in the U.S. market, to 13.3 and 15.6 percent, respectively for HTS chapters 61 and 62.

By comparison, Jordanian apparel entering under HTS chapters 61 and 62 accounted for only 0.1 percent of U.S. apparel imports in 2000 and paid effective tariff rates of 8.2 and 9.7 percent. This was slightly lower than the effective tariff rates from all sources, which were 13.1 and 12 percent in 2000¹³. Only Jordanian apparel exports produced outside of the QIZ program face the high U.S. effective tariff rates. Under the Multi-fiber Arrangement (MFA), developing country textile and apparel exports faced substantial tariff and non-tariff barriers in the industrialized nations, including the United States. The 1995 ATC phases-out the MFA over ten years, by 2005. At that time, Jordanian apparel exports will lose their competitive advantage under the QIZ programs. However, Kheir-El-Din and Abdel-Fattah point out that textiles and apparel exports represent a higher share of Mediterranean merchandise exports than world exports in this sector, implying that the Mediterranean producers have a comparative advantage. If this is true, Jordanian apparel and textile exporters should remain competitive in the U.S. market.

¹³ Note that these are averages for the whole 2-digit chapters. There may be tariff peaks within these chapters, with some tariff lines entering duty-free. It would be necessary to look at 8-digit classifications to determine when Jordanian apparel tariffs will be liberalized under the U.S.-Jordan FTA phase-in schedule.

Trade patterns between the United States and Mexico did not change significantly following NAFTA implementation. The top four U.S. import categories from Mexico in 2000 were also the top four U.S. import categories in 1993. The mix of products within the broad 2-digit HTS chapters have changed somewhat. For example, under the electrical machinery chapter, insulated ignition wiring sets (HTS 854430) was the top U.S. import category from Mexico in 1993. This product category was bumped to second place in 2000 by reception apparatus for color television (HTS 852812), which wasn't even in the top 15 U.S. imports of electrical machinery from Mexico in 1993. Despite some changes in the mix of products within the 2-digit HTS chapters, it is generally apparent that NAFTA did not significantly change Mexico's comparative advantage vis-a-vis the United States. What is noticeable is the substantial increase in volume of trade in these categories. Insulated ignition wires contributed \$1,621 million of U.S. imports from Mexico in 1993. This rose to \$4,171 million in 2000. Passenger motor vehicles from Mexico (HTS 870323) accounted for \$3,416 million in U.S. import value in 1993. This rose to \$9,291 million in 2000.

Inferring from the Mexican experience, it is unlikely that tariff liberalization under the U.S.-Jordan FTA will stimulate significant changes in the mix of U.S. imports from Jordan. Jordan's top export categories to the United States in 2000 were apparel, jewelry, leather goods, and art. Apparel accounted for the top two value HTS chapters of U.S. imports from Jordan in 2000. These Jordanian exports face high U.S. effective tariff rates. The volume of these exports should expand as U.S. tariff and quota barriers are reduced. However, nine of the 15 top U.S. import categories from Jordan paid zero or less than 1.1 percent *ad valorem* in 2000, therefore we wouldn't expect to see great increases in trade flows in these categories.

Except for apparel, none of the top Jordanian exports to the United States were in the top 15 U.S. imports from Mexico, such as electrical machinery and vehicles. At first glance it appears unlikely that Jordan's economy will expand into the top areas of Mexico's comparative advantage with the United States. Machinery and vehicles would require substantially more capital investment per worker and

would have significantly higher transport costs to the U.S. market due to the great distances between Jordan and the United States, relative to Mexico and the United States. Top Jordanian exports to the world also differ significantly from Mexico's top exports to the United States, suggesting a significantly different resource mix for Jordan relative to Mexico. Jordan's comparative advantage may change over time as more capital enters the Jordanian economy and labor becomes more highly specialized. However, light manufactures appear to have the most potential for growth under the FTA, given the great distance between Jordan and the U.S. market. It may be more enlightening to examine Israeli trade with the United States. Israel was the first country to sign a free trade agreement with the United States in 1985 and has a more advanced economy than Jordan. However, if we look at the mix of products imported from Israel, we can see many similarities with Jordan (Appendix, Table 5). The top U.S. import from Israel in 2000 was jewelry. This was the third highest value U.S. import from Jordan in 2000. The second highest value import from Israel in 2000 was electrical machinery. Unlike Mexico, which exports high weight per value electrical machinery (televisions) to the U.S. market, the Israeli electrical machinery exports (semiconductors) are light manufactures. For light manufactures, transportation costs are low relative to product value. It is possible for Jordan to diversify its exports to the United States within the category of light manufactures (electrical machinery, pharmaceuticals) under the improved market access offered by the FTA. Lack of investment capital will be the most likely factor limiting diversification of Jordanian exports to the United States.

Domestic economic and regulatory reforms are essential to move Jordan away from previous import-substitution policies towards trade liberalization and export promotion. Amerah lists necessary reforms in fiscal, monetary, and commercial policies to enhance Jordanian "domestic producers' competitiveness through market forces." Many of these reforms have been implemented, such as trade liberalization through the WTO and the U.S.-Jordan FTA, the Euro-Mediterranean Association Agreement, and other Jordanian bilateral trade agreements. The QIZ program and Economic Free Zones

have been launched to stimulate growth in the export sectors. Other significant reforms were discussed on page 13.

Foreign direct investment

Kehoe and Kehoe report that the potential Mexican welfare gains from NAFTA trade liberalization are substantially increased if NAFTA results in large capital flows into Mexico. Lustig notes that NAFTA was significant in stimulating inflows of FDI into Mexico. Firms with FDI employ 20 percent of the formal sector workforce in Mexico, enjoying wages 48 percent higher than the national average (Lustig). Improved market access to the United States is one component that stimulated post-NAFTA investment into Mexico (Lopez-Cordova). Another important factor is investor confidence in Mexican reforms and trade liberalization. Although the 1995 peso crisis caused a temporary flight of capital from Mexico, Standard and Poor's suggests the capital flight would have been greater without NAFTA. Under the framework of NAFTA, the Mexican government was more likely to maintain its package of economic reforms and not use trade barriers to remedy temporary balance of payments problems. Raising trade barriers to solve balance of payments problems has been a regular device used by developing countries. India extended implementation of tariff reductions under its WTO accession package by claiming balance of payments problems. Argentina violated its tariff obligations to its regional trade bloc (Mercosur) by adjusting tariffs to protect its domestic economy. The Mexican peso crisis was the first real test of the will of a small, developing country to adhere to its bilateral trade liberalization obligations with a large, industrialized economy.

The Mexican economy was successfully attracting foreign direct investment (FDI) long before implementation of NAFTA (Appendix, Table 6). Between 1980 to 1993, FDI in the Mexican industrial sector rose 255 percent, while FDI in the services sector rose 2,000 percent, equivalent to simple annual average growth rates of 20 and 145 percent, respectively (Mutti). Mutti jointly attributes the higher growth in services investment to Mexican privatization of state-owned enterprises and NAFTA

negotiations which were launched in June 1991. Standard & Poor's reports FDI in Mexico increased substantially during the NAFTA implementation period. NAFTA improvements in investment security, transparency for foreign investors, and protection of intellectual property rights (IPR) are all factors contributing to the increased investment flows into Mexico. A NAFTA dispute settlement mechanism that provides for investor-state disputes is another investor-friendly feature that encouraged intra-NAFTA investment. Canadian direct investment in Mexico rose from 530 million Canadian dollars in 1993 to 2,246 million Canadian dollars in 1998, a 300 percent increase over the first five years of NAFTA, with only a slight dip in 1995 representing the capital flight under the peso crisis¹⁴. U.S. direct investment in Mexico rose from \$16,968 billion in 1994 to \$26,657 billion in 1998, with only a slight dip in 1995¹⁵.

FDI is encouraged by the Jordanian government through economic and regulatory reforms and investment agreements with the United States and other trade partners. Jordan has undertaken commitments to protect intellectual property rights in accordance with its obligations under the U.S.-Jordan FTA. Proposed legislative IPR reforms in Jordan are likely to stimulate Arab and non-Arab investment inflows. Domestic reforms, including reducing the lions share of GDP consumed by government, must continue if Jordan is to achieve potential welfare gains from specialization and trade under the U.S.-Jordan FTA and the WTO.

The countries of the Middle East region have chronically suffered from lower than world average foreign direct investment. U.S. FDI in the Middle East has been very small (Appendix, Table 6). The primary recipients of U.S. FDI in the region have been Israel and Saudi Arabia. The sectors receiving U.S. FDI also differ significantly between North America and the Middle East. The petroleum sector received 24 percent of U.S. FDI in the Middle East in 2000. Financial and banking services received 26 percent with 9 percent going into other services, such as tourism. The manufacturing sector received only

¹⁴ Department of Foreign Affairs and International Trade, found at Internet address <http://www.dfait-maeci.gc.ca>.

¹⁵ Bureau of Economic Analysis, found at Internet address <http://www.bea.doc.gov>.

21 percent of U.S. FDI in the Middle East. By comparison, 58 percent of U.S. FDI in Mexico went into the manufacturing sector in 2000. Capital accumulation is essential for Jordan's economic development. Foreign capital investment in Jordan has been minimal for a number of reasons. Prior to recent reforms, the Jordanian economy lacked necessary safeguards and regulatory infrastructure to attract foreign capital. The recent reforms were made in preparation for Jordan's accession to the WTO. For Mexico, FDI inflows increased significantly while the NAFTA agreement was still being negotiated as investors anticipated improved market access. The U.S.-Jordan FTA and Jordanian accession to the WTO should signal international investors that Jordan is serious about recent economic reforms and will have greater market access.

Mexico is geographically linked to the United States. Lopez-Cordova suggests that the geographic location of Mexico is one of the key factors leading to the FDI flows and employment growth that developed following NAFTA implementation. He suggests this unique proximity of a developing country to the U.S. market would not be available for other hemispheric countries joining FTAs with the United States. The amount of investment in maquiladora firms in many Mexican states increased substantially following implementation of NAFTA¹⁶. GAO reports "...growth in shared production activity and two-way trade suggests that increases in sector specialization, a mechanism through which productivity may be improved, have occurred." Lopez-Cordova reports maquiladora employment doubled from 1994 to 1999. Large firms and foreign-owned firms contributed the bulk of manufacturing employment growth in Mexico. Jordan is not geographically located near the United States, or even in the Western Hemisphere. Thus production-sharing with U.S. firms is less likely to be stimulated by the FTA than the maquiladora industry of Mexico. The U.S.-Jordan FTA does encourage production-sharing through rules-of-origin. The FTA allows Jordanian exports with 35 percent Jordanian value-added to qualify for the preferred U.S. duty-treatment. Up to 15 percent value can come from U.S. inputs. For

¹⁶ NAFTA Works, Embassy of Mexico, various issues, found at Internet address <http://www.secofi.org>.

example, if the maximum 15 percent value-added is from U.S. inputs, then Jordanian value-added needs to be only 20 percent to qualify under the FTA. However, it is unlikely that the FTA will stimulate large amounts of U.S. production-sharing with Jordan due to transportation costs. It is more likely that the U.S.-Jordan FTA will stimulate regional production-sharing, as neighboring countries use Jordan's special trade status to access the U.S. market. Production-sharing opportunities between Jordanian and Israeli firms which exist through the Qualified Industrial Zone (QIZ) program should increase, as QIZ products will continue to receive special tariff treatment under the U.S.-Jordan FTA.

Conclusions

U.S.-Jordan trade liberalization will improve economic development of Jordan by eliminating tariff distortions that led to resource allocations in inefficient sectors, and opening access to U.S. markets. However, like Mexico under NAFTA, maximum gains to Jordan will come if FDI inflows are stimulated to invest in export sectors given the new access to U.S. markets. Jordan stands to gain improved productivity from multinationals and regional production-sharing. Improved competitiveness will benefit Jordan's exports in the U.S. market as well as other world markets, multiplying the positive economic effects of the U.S.-Jordan FTA. The key for Jordan is to attract investment funds. The Middle East chronically suffers from lower than world-average foreign direct investment and Jordan has not been a big recipient of the limited U.S. FDI in the region. However, Jordan has made great strides in improving its investment climate, including a Bilateral Investment Treaty (1997) and a Trade and Investment Framework Agreement (1999) with the United States. These steps, over time, should increase Jordan's attractiveness for FDI.

Internal factors slowing Jordanian economic development include a small domestic market and the lack of investment capital. Jordan's small domestic market hinders the process of industrialization and economic growth, especially when the government sector consumes such a large share of GDP. External economies of scale have been stimulated by government policies to promote industrial

agglomeration through establishment of industrial estates. Locating these estates near Aqaba harbor and the international airport have been especially beneficial in cutting transportation costs to export destinations. Companies locating in these industrial estates benefit from pooled labor, shared information, improved transportation and public services, and lower costs to their input suppliers. Further efforts should be taken to identify and support development of cost-effective input supply industries to improve efficiency of the domestic input and service sectors.

The pre-NAFTA effective tariff rate for U.S. imports from Mexico was less than half the effective tariff rate facing Jordanian exports. Thus, the potential welfare gains to Jordan from U.S. tariff liberalization under the U.S.-Jordan FTA are relatively greater than for Mexico under the NAFTA. The Mexican maquiladora program has been an integral part of U.S.-Mexico production-sharing since 1965. The number of maquiladoras grew substantially under NAFTA, contributing to the rapidly increasing volume of intra-NAFTA trade. U.S.-Jordan production-sharing is less viable due to transportation costs. However, the 35 percent rules-of-origin under the U.S.-Jordan FTA should encourage Jordanian production-sharing with other countries in the region. For example, the U.S. Qualified Industrial Zones program authorized in 1996 stimulated production-sharing between Jordan, Israel, Egypt, and the Palestinian territories. Regional production-sharing is a key to improving the Middle East's share of world trade and investment.

Integration with regional and international markets is the most likely engine of growth for small, developing countries like Jordan. Jordan's trade policy objectives have changed significantly, from protectionism to export promotion. Jordan acceded to the World Trade Organization in April 2000, signing a Euro-Mediterranean Association Agreement with the industrialized countries of the European Union, and supporting regional integration through a Mediterranean Arab Free Trade Area with Morocco, Tunisia, and Egypt. The Jordanian economy has a lot of potential gains from trade liberalization with the industrialized countries and its regional neighbors. Given Jordan's top export products to the United States (jewelry, apparel), it is unlikely to stimulate industrialization by focusing resources on expanding

exports in these sectors alone. Jordan will gain most from the FTA by diversifying exports to the United States into other light manufactures such as electrical machinery and pharmaceuticals.

Domestic economic reforms are essential for developing countries who sign multilateral and bilateral trade agreements with industrialized countries. Trading agreements with industrialized countries can give incentives to maintain economic reforms in times of macroeconomic crisis. NAFTA membership helped Mexico maintain its economic reforms during the financial crisis of 1994-95. Jordan's recent bilateral and multilateral trade agreements give incentives for the government to implement reforms. Economic and regulatory reforms, along with laws on intellectual property rights, should encourage necessary FDI, bringing capital, modern technology, and improved skills for domestically hired labor.

Non-economic external factors continue to hinder Jordan's economic development. The Gulf War, the Israeli-Palestinian conflict, Palestinian refugees, and U.N. sanctions on Iraq are regional events stifling Jordan's economic growth. Iraq is Jordan's neighbor and historical trading partner. Economic sanctions that hinder the Iraqi economy indirectly damage the Jordanian economy. The lack of solutions to the Palestinian refugees has stretched Jordan's limited resources, reducing capital funds available for economic development projects. Regional instability adversely affects the Jordanian investment climate. Tariff liberalization under a free trade agreement with the United States will have a minimal impact on FDI in Jordan if regional instability continues. Although theoretical models discussed in this paper illustrate welfare gains to Jordan from a U.S.-Jordan free trade agreement, these models do not include parameters for non-economic factors. Anticipated dynamic gains to the Jordanian economy from tariff liberalization with the United States will continue to be overshadowed by the negative impact of external regional factors.

References

- Amerah, Mohamad. "Trade Liberalization and Foreign Investment in Jordan," in R. Safadi, ed., Opening Doors to the World: A New Trade Agenda for the Middle East. Cairo, Egypt: American University in Cairo Press, 1998.
- Balassa, Bela. Comparative Advantage, Trade Policy and Economic Development. New York, NY: New York University Press, 1989.
- Central Bank of Jordan. Thirty Sixth Annual Report. Research Department, Amman, Jordan: Central Bank of Jordan Press, 1999.
- Diaz, Miguel. "Will the U.S. Recognize Mexico's Pivotal Role as Momentum Builds for a Free Trade Area of the Americas?" North American Free Trade and Investment Report, 2001, Vol. 11(8), pp. 15-20.
- Frankel, Jeffrey A. and David Romer. "Does Trade Cause Growth?" The American Economic Review, 1999, Vol. 89(3), pp. 379-399.
- Gillis, Malcolm, Dwight H. Perkins, Michael Roemer, and Donald R. Snodgrass. Economics of Development, 3rd edition. New York, NY: W.W. Norton & Co., 1992 .
- Gould, D.M. "Has NAFTA Changed North American Trade?" Economic Review, First Quarter 1998. Federal Reserve Bank of Dallas (Dallas, TX).
- Haddad, Mona. "Export Competitiveness: Where Does the Middle East and North Africa Region Stand?" Amman, Jordan: 7th Annual Conference of the Economic Research Forum, October 26-29, 2000.
- Kehoe, Patrick J. and Timothy J. Kehoe. "Capturing NAFTA's Impact with Applied General Equilibrium Models." Federal Reserve Bank of Minneapolis (Minneapolis, MN), Quarterly Review, 1994, Vol. 18 (1).
- Kheir-El-Din, Hanaa and M. Maamoun Abdel-Fattah. "Textiles and Clothing in the Mediterranean Region: Opportunities and Challenges of Returning Textiles and Clothing to GATT Disciplines." Working Paper No. 2008, Economic Research Forum for the Arab Countries, 2001. Found at Internet address <http://www.erf.org>.
- Krueger, Anne O. "NAFTA's Effects: A Preliminary Assessment". The World Economy, 2000, Vol. 23(6), pp. 761-775.
- Lopez-Cordova, J. Ernesto. "NAFTA and the Mexican Economy: Analytical Issues and Lessons for the FTAA". Occasional Paper 9, Inter-American Development Bank (Washington, DC), July 2001.
- Lustig, N. "Life is Not Easy: Mexico's Quest for Stability and Growth." Journal of Economic Perspectives, 2001, Vol. 15(1), pp. 85-106.
- Mutti, John. NAFTA: the Economic Consequences for Mexico and the United States, Economic Strategy Institute (Washington, DC), 2001.

O'Driscoll, G.P., K. R. Holmes, and M. A. O'Grady. 2002 Index of Economic Freedom, The Heritage Foundation and The Wall Street Journal (Washington, DC), 2001.

Ruebner, Joshua. U.S.-Jordan Free Trade Agreement. Report RL30652, Congressional Research Service, Library of Congress (Washington, DC), August 21, 2000.

Standard & Poor's. "The Impact of NAFTA on Mexican Trade: An Empirical Study." Lexington, MA: The McGraw-Hill Companies, April 1997.

Tobey, James and Grace V. Chomo. "Resource Supplies and Changing World Agricultural Comparative Advantage", Agricultural Economics, 1994, Vol. 10, pp. 207-217.

U.S. General Accounting Office. "North American Free Trade Agreement: Impacts and Implementation." U.S. General Accounting Office (Washington, DC), GAO/T-NSIAD-97-256, September 1997.

U.S. International Trade Commission. Economic Impact on the United States of a U.S.-Jordan Free Trade Agreement. U.S. International Trade Commission (Washington, DC), Publication 3340, September 2000.

Vollrath, Thomas L. "A Theoretical Evaluation of Alternative Trade Intensity Measures of Revealed Comparative Advantage." Weltwirtschaftliches Archiv, 1991, Vol. 127 (2): 265-280.

Yarbrough, Beth V. and Robert M. Yarbrough. The World Economy, 5th edition, Harcourt College Publishing, 2000.

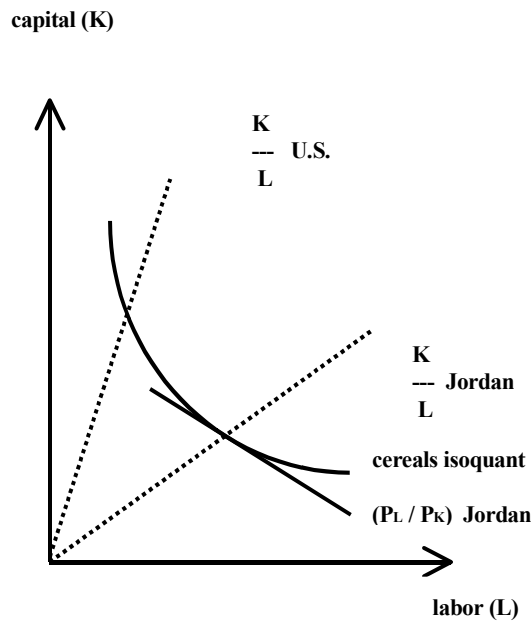


Figure 1

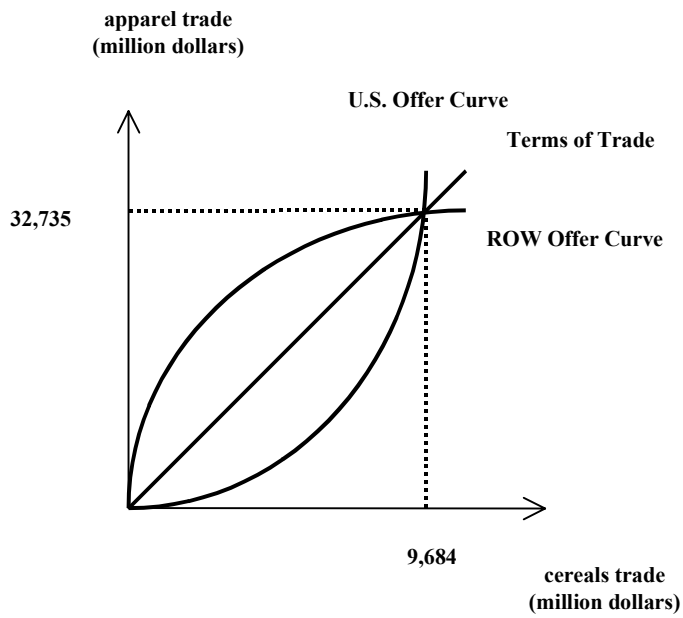


Figure 2

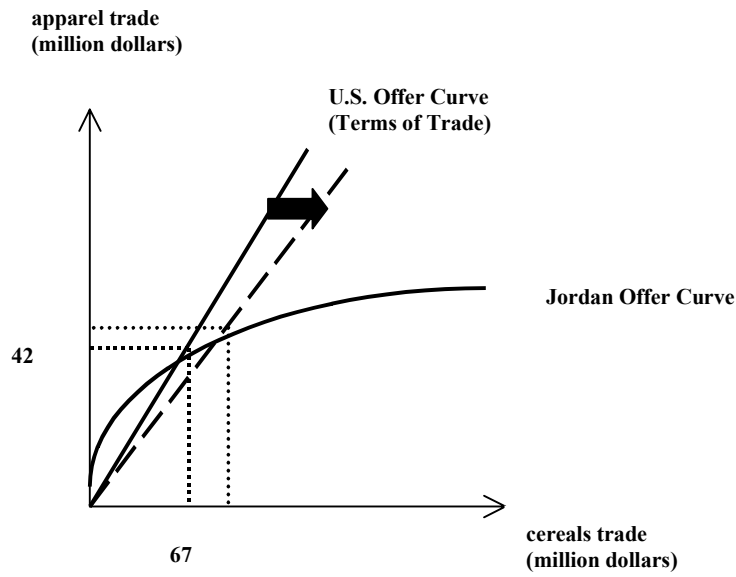


Figure 3

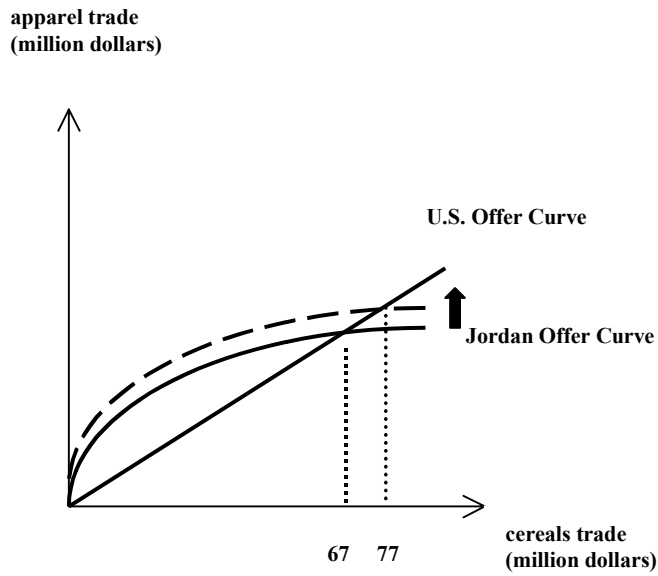


Figure 4

APPENDIX

Appendix Table 1**Average tariff rates¹ (percent) for U.S. imports from FTA partners, 1993-2000**

Exporter	1993	1994	1995	1996	1997	1998	1999	2000
Mexico	2.1	1.4	0.8	0.6	0.6	0.5	0.5	0.2
Canada	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.0
Jordan	13.1	13.2	10.7	9.1	2.4	3.7	1.6	5.7
Israel	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

¹ Import duties as a percent of U.S. imports by customs value, annual data.

Source: Compiled from official statistics of the U.S. Department of Commerce

Appendix Table 2**U.S. trade flows with FTA partners, million U.S. dollars, 1993-2000**

	1993	1994	1995	1996	1997	1998	1999	2000
<i>Total U.S. exports</i>	439,295	481,887	546,464	582,137	643,222	634,705	642,189	712,287
Mexico	40,265	49,136	44,881	54,686	68,393	75,369	81,381	100,442
Canada	91,866	103,643	113,261	119,123	134,794	137,768	145,731	155,601
Jordan	361	287	332	342	398	351	270	306
Israel	3,952	4,368	4,813	5,069	4,835	5,680	6,338	6,191
<i>Total U.S. imports</i>	574,863	657,885	739,660	790,470	862,426	907,647	1,017,435	1,205,339
Mexico	38,668	48,605	61,721	74,179	85,005	93,017	109,018	134,734
Canada	119,482	128,753	144,882	156,299	167,881	174,685	198,242	229,059
Jordan	19	29	29	26	26	16	31	73
Israel	4,424	5,218	5,722	6,421	7,320	8,619	9,863	12,949

Source: Compiled from official statistics of the U.S. Department of Commerce

Appendix Table 3
Top 15 U.S. imports from Mexico in 2000, by 2-digit HTS chapters

HTS	Description	Import value (million dollars)
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television recorders and reproducers, parts and accessories	35,640
87	Vehicles, other than railway or tramway rolling stock, and parts and accessories thereof . . .	26,011
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	17,037
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	11,338
62	Articles of apparel and clothing accessories, not knitted or crocheted	5,118
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	4,452
98	Special classification provisions, nesoi	4,369
94	Furniture; bedding, cushions etc.; lamps and lighting fittings nesoi; illuminated signs, nameplates and the like; prefabricated buildings	3,821
61	Articles of apparel and clothing accessories, knitted or crocheted	3,499
73	Articles of iron and steel	1,584
07	Edible vegetables and certain roots and tubers	1,582
99	Special import reporting provisions, nesoi	1,524
22	Beverages, spirits and vinegar	1,264
39	Plastics and articles thereof	1,184
72	Iron and steel	1,068

Source: Compiled from official statistics of the U.S. Department of Commerce.

Appendix Table 4
Top 15 U.S. imports from Jordan in 2000, by 2-digit HTS chapters

HTS	Description	Import Value (million dollars)
62	Articles of apparel and clothing accessories, not knitted or crocheted	26.1
61	Articles of apparel and clothing accessories, knitted or crocheted	16.3
71	Natural or cultured pearls, precious or semiprecious stones, precious metals; precious metal clad metals, articles thereof; imitation jewelry; coin	9.4
42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of gut (other than silkworm gut)	8.7
98	Special classification provisions, nesoi	4.0
97	Works of art, collectors' pieces and antiques	1.8
76	Aluminum and articles thereof	0.7
49	Printed books, newspapers, pictures and other printed products; manuscripts, typescripts and plans	0.6
57	Carpets and other textile floor coverings	0.5
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	0.5
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations	0.5
39	Plastics and articles thereof	0.4
99	Special import reporting provisions, nesoi	0.3
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	0.3
63	Made-up textile articles nesoi; needlecraft sets; worn clothing and worn textile articles; rags	0.3

Source: Compiled from official statistics of the U.S. Department of Commerce.

Appendix Table 5
Top 15 U.S. imports from Israel in 2000, by 2-digit HTS chapters

HTS	Description	Import value (million dollars)
71	Natural or cultured pearls, precious or semiprecious stones, precious metals; precious metal clad metals, articles thereof; imitation jewelry; coin	5,649
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television recorders and reproducers, parts and accessories	2,401
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	909
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	771
98	Special classification provisions, nesoi	525
61	Articles of apparel and clothing accessories, knitted or crocheted	373
88	Aircraft, spacecraft, and parts thereof	332
30	Pharmaceutical products	279
29	Organic chemicals	253
39	Plastics and articles thereof	211
62	Articles of apparel and clothing accessories, not knitted or crocheted	103
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal ...	103
94	Furniture; bedding, cushions etc.; lamps and lighting fittings nesoi; illuminated signs, nameplates and the like; prefabricated buildings	78
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes	71
54	Manmade filaments, including yarns and woven fabrics thereof	67

Source: Compiled from official statistics of the U.S. Department of Commerce.

Appendix Table 6
U.S. Direct Investment Abroad in FTA partner countries, 1994-2000

	1994	1995	1996	1997	1998	1999	2000
	<i>Million dollars</i>						
<i>All countries</i>	612,893	699,015	795,195	871,316	1,000,703	1,130,789	1,244,654
<i>N. America</i>	91,189	100,371	108,943	120,676	124,857	143,313	161,835
Canada	74,221	83,498	89,592	96,626	98,200	111,051	126,421
Mexico	16,968	16,873	19,351	24,050	26,657	32,262	35,414
<i>Middle East</i>	6,367	7,198	8,294	8,836	10,739	10,519	11,851
Jordan	¹	1	1	1	1	1	1
Israel	1,483	1,831	2,045	2,071	2,837	3,051	3,426

¹ Suppressed by BEA-DOC to avoid disclosure of individual company data.

Source: Bureau of Economic Analysis, U.S. Department of Commerce, found at Internet address <http://www.bea.doc.gov/be/di>.