RESEARCH SEMINAR IN INTERNATIONAL ECONOMICS

School of Public Policy
The University of Michigan
Ann Arbor, Michigan 48109-1220

Discussion Paper No. 437

Dynamic Aspects of Euro-Mediterranean Agreements for the MENA Economies

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April 14, 1999

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Presented at Workshop on "The Dynamics of New Regionalism in MENA: Integration, Euro-Med Partnership Agreements and After," co-sponsored by The Economic Research Forum for the Arab Countries, Iran, and Turkey, OECD Development Center, and The World Bank, Cairo, Egypt, February 6-7, 1999

Abstract

This paper addresses the variety of static and dynamic impacts that the Euro-Med Agreements (EMA) may have on the MENA economies. It first considers options for trade and domestic policy reforms, including the context in which policies are designed and implemented and the range of policy options spanning unilateral measures, multilateral measures, and preferential arrangements such as the EMAs. It then sets out the comparative static and dynamic-growth frameworks for analyzing the effects of alternative policies. This is followed by a review of ex ante assessments of existing and proposed EMAs using CGE modeling and qualitative analysis and the potential dynamic effects that EMAs may bring about. Because EMAs are limited in scope, there is no guarantee that the MENA economies will realize significant dynamic benefits. Nonetheless, if EMAs result in enhancing policy credibility, the MENA economies might well improve their dynamic-growth prospects by instituting effective unilateral domestic-policy reforms and aligning their foreign trade and investment policies more closely on a multilateral basis with the global trading community.

Revised
April 14, 1999

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I. Introduction

With the proliferation of regional trading arrangements (RTAs) that has occurred in the past several years, questions naturally arise as to the motivations that countries may have in joining such arrangements and what economic benefits they may gain. A number of so-called Euro-Med Agreements (EMAs) have been negotiated between the European Union and countries in the Middle East/North Africa (MENA), including Israel, Jordan, Morocco, the Palestine Authority, and Tunisia. Discussions are also in progress involving Algeria, Egypt, Lebanon, and Syria. These EMAs are essentially Free Trade Agreements (FTAs) that amount to the unilateral removal of trade barriers by the individual MENA countries, given that in most cases they have already had virtually duty-free access for their exports of manufactures to the EU for a considerable period of time. EMAs thus can be characterized as a form of what is referred to as shallow integration, although they may also involve aspects of deeper integration insofar as they specify that MENA countries will remove or modify certain domestic barriers and harmonize particular regulations with those existing in the EU.

By entering into an EMA, a MENA country apparently expects that it will realize economic benefits. These benefits will come ostensibly from the reduction/removal of the country's trade barriers and assurance of continuing and unimpeded access to the EU market. Further, there may be an expectation of increased domestic investment and larger inflows of foreign direct investment (FDI) especially from the major EU trading partners insofar as the country's investment climate will be improved by the locking-in of its policy reforms. If all goes well, the country may enter into a virtuous circle of growth as it experiences increases in capital

* I wish to thank Hans Lofgren and Ali Bayar and other conference participants for their helpful comments.

formation and improvements in productivity resulting from the knowledge spillovers that are generated in its trade and investment relations with the economically more advanced EU partners. Transfers of income and technical assistance made available by the EU may further assist this process.

The foregoing are the issues that will be addressed in this paper. The discussion is structured as follows. Section II deals with options for trade and domestic policy reforms, and Sections III and IV set out the framework that can be used to analyze the static and dynamic effects involved. Section V reviews the ex ante assessments of the EMAs for Tunisia, Morocco, Egypt, and Lebanon, based on Computational General Equilibrium (CGE) modeling and qualitative analysis, and the extent and conditions under which these EMAs may yield dynamic benefits. Conclusions and policy implications are presented in Section VI.

II. Analysis of Options for Trade and Domestic Policy Reforms

It is clear from historical experience that effective policies and institutions are crucial underpinnings for successful economic development and growth. It is in this light that we can consider the policy options that governments have available to them. For our purposes here, these options include unilateral measures, multilateral measures, and preferential arrangements. The issue then is the framework to be used in analyzing the different options, in particular to identify and assess the static and dynamic growth effects of the different policies.

Policies and Institutions

There is an abundance of historical evidence on the crucial role that effective policies and institutions play in fostering economic development and growth. As Francois (1997, pp. 35-36) has noted:

> "[The] recent movement to market-based policies has…served to highlight the importance of political economy constraints in the economic reform process. As North (1990) has emphasized, not all stable policy regimes are

> characterized by good practice. In fact, through most of history, and across most of the world, regimes conducive to stagnation and decline have been remarkably tenacious and even robust. At this point, the fundamental problem of development economics is perhaps not so much the identification of good practices, but rather the identification of the institutional arrangements necessary for the sustainability of such practices. Not surprisingly, given the demonstrated difficulties inherent in pursuing good long-run policies both through painful short- and medium-run adjustments, and through sustained pressures of rent seeking (and rent preservation), a common theme to emerge in some of the recent development literature is the potentially positive role, at least in the economic arena, that can be played by a strong, stable central government in anchoring such policies."[1]

This then is the context in which we can consider the choice of policy options that governments have available to them.

Choice of Policy Options

It has long been recognized that it may be in a country's interest to institute policy reform and liberalization unilaterally. England's repeal of the Corn Laws and the adoption of free trade in the 1840s is the classic illustration of unilateralism. Modern counterparts of the free trade ideal can be found in Hong Kong and Singapore. There are innumerable examples of other, relatively small developing countries that have undertaken unilateral policy reforms in the past three decades in an effort to do away with the distortionary and welfare-reducing effects brought about by policies of import substitution. Thus as, Puga and Venables (1998, p. 238) have noted:

> "Unilateral liberalization can attract industry and bring a real gain in income. Although more intense competition has an adverse effect on profitability in the liberalizing economy, import supply creates beneficial forward linkages to domestic production and promotes industrialization. …these linkages arise just from the use of imported goods as inputs; in reality these linkages might come through several channels. A recent World Bank (1994: 7) study argues that
>
> 'By opening their economies, countries gain access to more affordable consumer goods and to technologies and intermediate goods that help reduce production costs. Thus, by improving the climate for investment, liberalization also helps to attract foreign capital. Foreign investment, in turn, can provide the technology and financing required to establish a more efficient production structure.'"

[1] Along similar lines, see Hall and Jones (1998) and Olson (1996).

Even though countries can liberalize unilaterally, there is no guarantee that they will be able to improve their access to foreign markets so long as trade barriers exist. Thus, multilateral liberalization carried out in the context of the GATT/WTO is an option that has merit. The multilateral option is based on the Most-Favored-Nation (MFN) principle of nondiscrimination and concessions are negotiated on a reciprocal basis. This serves to protect the interests of small, developing countries vis-à-vis the large and more powerful industrialized countries, and it also provides the small countries with improved access for their exports to the large markets of the industrialized countries. Concerted action in pursuit of freer trade globally may therefore result in significant mutual benefits to all countries involved, especially if combined with unilateral liberalization.

Entry into a preferential trading arrangement such as a Euro-Med Agreement is another option that countries may have. The questions here are why countries may choose this option and what they have to gain especially in relation to the unilateral and multilateral policy options. The pros and cons of multilateral and preferential arrangements have been discussed in Deardorff and Stern (1994). As they point out (pp. 49-50), a number of criticisms can be levied against multilateralism and presumably in favor of preferential arrangements. These are:

> "1. The more countries that are involved in a multilateral negotiation, the more difficult and time consuming it will be to draw up a negotiating agenda and to conduct and conclude a negotiation. In view of the numerous parties involved…and the size and complexity of the negotiating agenda, individual countries/blocs may find themselves less able to focus on issues that concern them directly. It is possible furthermore that there may be foot dragging and a tendency for negotiating results to reflect the 'lowest common denominator' of the countries participating in the negotiations. These difficulties can presumably be avoided in negotiating preferential arrangements in which fewer countries are involved and the negotiating agenda can be more readily agreed on.
>
> 2. Because of MFN, concessions may be granted to individual countries without there being any quid pro quo. Free riding may thus occur, unless steps are taken to make concessions conditional…. [Preferential]…arrangements may therefore be appealing as a way of limiting free riding.
>
> 3. …the [multilateral] rules are inadequate in important respects. For example, it has proven difficult to resist the introduction of nontariff restrictive measures [e.g., antidumping] and effectively constrain the use of…subsidies….

> 4. …[multilateral negotiations have] been too narrowly focused on trade in goods and [have] not dealt effectively with...the "new" issues of services and trade related intellectual property rights,…investment measures,…and environmental issues…. This suggests that [preferential arrangements]…can be more focused and tailored to specific circumstances.
>
> 5. Asymmetries exist with respect to the influence of large as compared to medium size and small countries. Large countries may believe that the [multilateral]…system ties their hands because of the nondiscrimination and MFN principles, and, accordingly that their…economic and political interests would be better served in [preferential]…negotiations that are designed to protect their domestic firms and to open foreign markets to their exporters. Medium size and small countries, on the other hand, while recognizing the benefits of MFN, if their trade is predominantly with a single large trading country or trading bloc, may believe that they can get better and more assured access to its market by means of preferential trading arrangements rather than through multilateral negotiations."

Having articulated a number of criticisms of multilateralism, we can turn the discussion around and note some significant limitations of preferential arrangements and, by implication, arguments favoring multilateralism. Thus, according to Deardorff and Stern (1994, pp. 51-52):

> "1. Perhaps the chief concern over preferential trading arrangements is that they may be detrimental to world welfare because of the trade diverting effects that may result and the potentially exploitative tariff behavior that the formation of large trading blocs may engender. However,…there is no presumption that preferential arrangements need be welfare reducing. …Also, the formation of trading blocs need not in itself lead to exploitative behavior if there is a strong sense of commitment to international cooperation among governments in the design and implementation of trade policies and to the removal of trade barriers. Of course, nothing can be guaranteed one way or the other. It will depend on the circumstances. Nonetheless, it might be argued that this agnostic conclusion is fraught with danger. That is, there is a case to be made that the world needs a strong multilateral system with effective rules and discipline….
>
> 2. Critics of multilateralism have pointed to the slowness and cumbersomeness of [multilateral] negotiations and thus to the greater comparative ease of [preferential] negotiations. [But] this favorable view of preferential arrangements has been questioned,…[the point being] that the serious and definitive [multilateral] negotiations are concentrated within a relatively short period of time. Also, most of the actual negotiations involve a limited number of the major trading countries/blocs. In contrast, Schott (1989) cites some specific drawbacks of preferential arrangements, in particular: …elaborating detailed and potentially costly rules of origin; and the need in any event to cover in detail the same issues as in a multilateral negotiation and to reconcile possible divergences of rights and obligations between multilateral and preferential arrangements. Further, if existing preferential arrangements are to be extended to additional countries, a whole new set of negotiations may be required each time. A case

> can be made therefore that it is misleading and even false to believe that it may be relatively easy to negotiate preferential trading arrangements.
>
> 3. …Support for multilateralism might…be eroded if a large part of the available negotiating effort and expertise were shifted to the preferential option. Furthermore, once a preferential arrangement is created, it may become dominated by vested interests that feel threatened by, and will thus oppose, multilateral liberalization."

It should be evident from the preceding discussion that each of the three policy options mentioned – unilateralism, multilateralism, and preferential arrangements – has some particular merits as well as limitations. It is difficult accordingly to reach an a priori judgment as to which policy option or combination thereof offers a country or group of countries the greatest possible benefits. This will depend upon the circumstances of each case, thus necessitating careful and detailed empirical analysis of the various options. Let us turn then to consider the analytical framework that can be used to identify the main economic effects at issue.

III. Analytic Framework: Comparative Statics

Following long standard conventions, I will first consider the comparative static effects of changes in policies and thereafter the dynamic growth effects.

Suppose to begin with that we have a small country that opts to reduce/remove its existing trade barriers and to undertake domestic policy reforms on a unilateral basis. Traditional analysis under conditions of perfect competition suggests that there will be an intersectoral reallocation of resources away from industries formerly protected towards export industries and a corresponding change in the country's composition of trade that reflects its comparative advantage vis-à-vis its trading partners. Consumers will benefit from the realignment of domestic and foreign prices, and the nation as a whole will experience an increase in welfare. There may be some short-run domestic costs of adjustment involved to the extent that factors may not be perfectly mobile. But these adjustment costs will presumably be small in relation to the welfare gains involved and can be dealt with by redistributive policies. If instead of perfect competition,

firms are imperfectly competitive and produce differentiated products and consumers enjoy product variety, there could be even further benefits from unilateral liberalization. Furthermore, if capital is permitted to be mobile internationally, the country may experience an increase in inward investment with further consequent beneficial effects.

How is the foregoing textbook account of unilateral policy reform altered if we now consider the multilateral policy option? If it is assumed that the unilateral reform was undertaken in a setting in which there were trade barriers present in the country's trading partners, the reduction/removal of these trade barriers on a nondiscriminatory MFN basis would then reinforce the changes already described and further enhance both national and global economic welfare. The same would be true if trading partners instituted domestic policy reforms.

What distinguishes a preferential arrangement from unilateralism and multilateralism is that trade liberalization and domestic policy reforms are undertaken with respect to a certain designated trading partner or group of partners. Such an arrangement could take the form of a customs union that involves removal of trade barriers for member countries and a common external tariff, or a free trade area (FTA) in which member countries mutually remove their barriers vis-à-vis each other but keep their barriers intact on a sovereign basis for nonmembers. The FTA may be *trade creating* if it results in a shift from higher to lower cost sources of supply and *trade diverting* if there is a shift from lower to higher cost sources of supply. Which effect will predominate depends on given circumstances. To illustrate, in the case of Tunisia's EMA agreement, because Tunisia already has virtually free access to EU markets, the EMA would amount essentially to a unilateral removal of Tunisian barriers on EU imports and might therefore be trade diverting and thus detrimental to Tunisia's welfare. As Brown et al. (1997, p. 79) note:

> "When Tunisia eliminates its relatively high tariffs against all EU-members but keeps its tariffs in place against other ("third") countries, a first effect is to cause substitution away from the imports of third countries. The reason is that imports from the EU now appear cheaper to buyers within Tunisia, who no longer have to pay the tariff. But these imports are not cheaper to the country as a whole, since, if they had been cheaper, they would have been purchased before when all

> imports faced the same tariffs. Therefore, the country as a whole loses from this substitution.
>
> The way that this loss manifests itself within Tunisia is through the loss of tariff revenue. Initially, buyers were paying high prices for imports from the third countries, but a part of these high prices was staying within the country in the form of tariff revenues collected by the government: This tariff revenue was available to be used by the government and therefore contributed to economic welfare. …consumer incomes include both earned factor incomes plus … transfer [of tariff revenues] from the government, both of which are spent on goods and services. When tariffs against the EU fall, consumers pay less for the imports that they now buy from the EU instead of from third countries, but they lose even more as the transfer of tariff revenue is reduced as well."

It is conceivable that the trade-diverting effects could be even greater than described, depending on whether or not restrictive rules of origin are put in place. A further detraction that may arise is the establishment of a *hub and spoke* arrangement in which the EU is the main beneficiary of separately negotiated EMAs that leave intact the bilateral barriers to trade between individual MENA economies.

As already mentioned, preferential tariff reduction can be trade creating and thus welfare improving. As Brown et al. (1997, p. 82) note:

> "Trade creation occurs when buyers substitute imports from the EU for purchases of domestically produced goods. Since these two sources both now face zero tariffs, imports from the EU must be cheaper than their domestic alternatives in order to be bought, and the country therefore gains from switching to the more efficient source. …there is no loss of tariff revenue to offset the gain experienced by the purchasers. A limited amount of trade creation can occur to the extent that imports overall are made cheaper by the tariff reduction relative to domestic goods. But a greater scope for trade creation exists if the country is also able to increase exports, for then the revenues from increased exports can be spent on imports. Tariff reductions abroad…and a more general reallocation of factors toward export sectors can therefore contribute to trade creation and cause the overall welfare effect of an FTA to become positive."

While the preceding discussion of trade creation and diversion will be familiar to trade specialists, it nonetheless serves to clarify how the forces at work in preferential arrangements can be compromised in comparison to the manner in which unilateral and multilateral liberalization affects factor reallocation, consumer expenditures, and changes in trade. It should

be noted that preferential arrangements can as well have positive scale and variety effects if firms are imperfectly competitive and produce differentiated products.

One final point that has been stressed by Hoekman and Djankov (1997, pp. 130-32) is that:

> "An EMA may involve harmonizing regulatory regimes and administrative requirements relating to product standards, testing and certification procedures, mutual recognition agreements, common documents for customs clearance…, coordination and cooperation on linking computer systems of customs, etc. While such comparative efforts can be pursued unilaterally, formal agreements may be necessary to induce the administrative bodies involved to cooperate. The greater the share of trade with partner countries, the greater the benefits of such non-tariff barriers, which impose real resource costs. ...Some administrative barriers may not differentiate between sources of imports. If these barriers are reduced or removed in the context of an EMA, they will also reduce the costs of trade with non-EU countries. This will further increase the gains from an EMA."

An effort has been made in this section to identify the main economic effects that may result from trade liberalization and domestic policy reforms undertaken unilaterally, multilaterally, or on a preferential basis in a setting of comparative static analysis. In principle, unilateral and multilateral liberalization are the preferred policy options in terms of the efficiency of resource use and maximization of consumer welfare. Preferential arrangements have the downside of possible trade diversion and therefore may not enhance welfare as much as the other options. In the final analysis, the assessment of the different policy options is an empirical matter. In Section V below, I will review a number of computable general equilibrium (CGE) modeling studies of EMAs for selected MENA economies that may help to clarify the comparative static magnitudes involved. But the story does not end here insofar as the dynamic growth effects of the different policy options need to be considered.

IV. Analytical Framework: Dynamic Growth Effects

In this section, I will address a number of dynamic aspects of the effects that changes in policies may have, concentrating especially on the special characteristics of preferential arrangements such as the EMAs that may be critical to the growth process. For analytical

purposes, following Schiff and Winters (1998, p. 179), dynamics is defined "…to include both permanent increments to the rate of growth and temporary but long-lived increases of, say, more than five years as countries move from one growth path to another." The dynamic aspects to be considered include: policy credibility; capital accumulation; foreign direct investment; industrial location; and knowledge accumulation and spillovers.

Policy Credibility as a Pre-Condition for Growth

Fernandez and Portes (1998) is a seminal work that explores issues of policy credibility and political economy constraints. As they ask (p. 200): "Is there more to an RTA [regional trading arrangement] than meets the eye? Could the entry of a country into an RTA change the incentives, and hence the behavior of that country, other countries, or the private sector in ways beyond the actual provisions of the agreement? And insofar as the RTA does alter future incentives and behavior, how does it change the expectations of all parties involved?" There are apparently a number of ways in which RTAs may be beneficial. These include dealing with problems of time inconsistency, signaling, insurance, bargaining power, and coordination.

Time Inconsistency

Problems of time inconsistency arise (p. 203) "…if the government faces the temptation to undertake surprise trade policy actions when other first-best instruments are not available. This may lead to governments finding themselves in suboptimal equilibria if they cannot make a credible promise not to intervene." An RTA may be helpful in dealing with time inconsistency (p. 204) "…by making the cost of even a small deviation from an agreed trade liberalization large (either by forcing the country to exit from the agreement or by having members punish the deviating country), makes it easier to overcome small temptations that culminate in a greatly distorted economy overall."

The question arises as to whether commitment could just as well be attained through the GATT/WTO rather than an RTA. As the authors note (p. 205):

> "The answer, it seems to us, must lie in the differing incentives for countries to punish a deviating member….Within GATT, the responsibility for singling out a culprit and, if the organization delivers a guilty verdict, delivering some retaliating punishment lies with the country or countries that have been hurt by the action. In a large organization with a more diffuse trade structure, this incentive is likely to be much smaller for any single member, and the process likely to be slower and the outcome more uncertain, than within a regional agreement. In an RTA it is much clearer who has the responsibility to punish, and the reputational loss from not doing so should accordingly be greater."

A further implication of time inconsistency arises when an incumbent government is fearful that a future government could reverse existing policies. An RTA could therefore help to resolve problems of political time-inconsistency and may even serve to strengthen the incumbent party's electoral position. This can help accordingly to sustain policy reform, and there may be advantages as well in reinforcing the commitment to democratic principles.

Signaling

Aside from time inconsistency, a government may use an RTA to signal its policy intentions, the status of its economic conditions, and its future relationships with other countries. Fernandez and Portes (p. 209) state that:

> "Two conditions are needed for a signalling explanation to make sense. First, there has to be a significant information asymmetry. That is, the government has to have superior knowledge, either about its own preferred policies or about the economy, than other agents. The information asymmetry condition is most likely to be met in cases where there is a significant degree of doubt about the government's commitment to liberalization or reform. …Second, …, there has to be a significant cost to entering the agreement…."

Insurance

An RTA can help to insure a small member country against possible future disruptions of access especially to the market of a large member country. A small country may be willing accordingly to enter into an RTA on relatively unfavorable terms for insurance purposes.

Bargaining Power

Joining an RTA may enhance the bargaining power of member countries vis-à-vis nonmembers. This is more likely, however, for a customs union with a common external tariff than an FTA in which members retain their sovereign external trade policies.

Coordination Device

Given that trade liberalization and related policy reforms will create winners and losers, an RTA may be a means of mobilizing the forces who will benefit and increasing cooperation on issues that are important to the interests of the participating countries.

Conclusions

The common theme running through the preceding discussion is the importance of reducing uncertainty or increasing the credibility about economic policies and policy reform. This is important, as Fernandez and Portes (p. 217) state, because: "Increased credibility makes it easier for the private sector to plan and invest. Indeed, in some cases the reduction in uncertainty resulting from an RTA may even be a necessary precondition to realizing gains from liberalization."[2] I will have occasion below to consider whether policy credibility may be enhanced by MENA countries entering into an EMA. For now, it will suffice to view policy credibility as preconditioning the environment for increased capital accumulation and enhanced economic growth.

Capital Accumulation

The issue here is how and the extent to which trade liberalization and domestic policy reform may affect rates of return on capital and therefore capital accumulation and economic growth. Winters (1997, p. 11) reminds us that if investment increases in response to higher rates of return, there will be "…a temporary, but generally rather long-lived, increase in growth rates as

[2] See Brunnetti, Kisunko, and Weder (1998) for an empirical study of the credibility of rules and economic

the accumulation takes place to shift the economy onto a higher trajectory: there will be higher levels of output per head once the new level of capital stock has been achieved but growth will return to its original level." Further, he notes (p. 2) that "…it is well to remember the distinction between output and welfare. Since … accumulation … requires investment, it is not free. So while future output might be higher…, total economic welfare measured over time will not increase by as much, because the investment has to be paid for in terms of foregone current consumption. It is not true to say that absolutely every increase in the rate of growth is welfare-improving."

There is a question of what model to use in analyzing how investment may respond to liberalization. Thus, for example, the simple Heckscher-Ohlin trade model would suggest that the rate of return to capital, the scarce factor, would fall in a typical MENA country that is capital scarce. However, there may be several reasons why this may not be the case. According to Winters (1997, pp. 12-13):

> "First, trade liberalization typically reduces the transactions costs on tradable goods more than those of non-tradable goods. Thus it is likely to shift demand and supply from non-tradables to tradables, and if, as we commonly believe non-tradables are labor intensive and tradables capital intensive, trade liberalization will tend to increase the demand for capital more than … the demand for labor. This, in turn, will drive up the rate of return on capital. Relatedly, … increased competition in tradable goods sectors may include improvements in efficiency and declines in markups in this sector. This will cause increased demand for inputs into the tradable sector, and thus reinforce the effect above further increasing the relative demand for capital over labor.
>
> A second route through which integration might affect the rate of return on capital is through the price of capital goods. A reduction in tariffs and trading costs on imports of capital equipment will reduce the prices which industry has to pay for investment goods. This, fairly naturally, is likely to increase the rate of return and encourage greater accumulation.
>
> …As in the case of non-tradable goods, there is also the possibility that increased competition from imports in capital goods could stimulate the domestic capital goods industry to greater efficiency and less monopolistic behavior. This is an important benefit for major producers of capital goods….

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growth, based on firm-level survey data for 73 countries.

> Third, economic integration that goes beyond tariff reductions could improve efficiency in the financial sector. If this led to reductions in lending margins it would stimulate investment by reducing the cost of funds."

It was noted in the earlier discussion that policy credibility may be of crucial importance in shaping the environment in which capital accumulation takes place. Credibility extends beyond trade policy of course to include sound domestic macroeconomic and financial policies, protection of property rights, and generally effective government. Unless these conditions are present, investment responses are likely to be limited.

Foreign Direct Investment (FDI)

FDI is often prized by recipient countries because of the potential growth-enhancing benefits that it may bring. As Winters (1997, p. 14) notes: "Many economists see inflows of FDI, first as harbingers of confidence in the economy and, second, as the route through which an economy can modernize – for example through access to modern technology, modern management, marketing networks and sources of inputs." Spillover effects from FDI may take the form of improving productivity in domestic firms through a kind of demonstration effect or because of increased competitive pressures. Workers and managers may also become better trained and more efficient in working in multinationals and possibly moving on elsewhere in the country.

The extent to which a preferential arrangement may help to attract FDI will depend importantly on sound economic policies in the host country. This will include stable macroeconomic conditions and policies, absence of labor strife, and a high degree of openness such that trade and financial flows can move efficiently across borders. In order to assess the prospects for FDI, it is important to be cognizant of the interrelated motivations involved. For example, some multinationals may be attracted to locate in countries with sizable domestic markets. Others may wish to take advantage of lower labor costs and to produce for export to third markets or back to the source country. Further, in some cases, the profitability of

multinationals may stem from particular firm-specific characteristics that are best exploited through FDI rather than other types of commercial arrangements. This complex of motivations thus suggests that it is difficult a priori to identify precisely what will generate FDI inflows in given circumstances. Also, it is by no means clear that a preferential arrangement will in itself necessarily be a crucial element in attracting FDI unless the preferential arrangement carries with it significant policy credibility along the lines discussed above.

Industrial Location

In our earlier discussion, the emphasis was on the economic effects associated with unilateralism, multilateralism, and preferential arrangements involving perfectly competitive economies with different factor endowments and levels of income and extensions to make allowance for imperfect competition, scale economies, and product variety. In contrast to this time-honored approach, Puga and Venables (1998) have developed a modeling framework in which changes in trade policy can affect industrial location and set into motion a process of agglomeration of industrial activity that is conducive to economic development in low-income countries. As they state (p. 222):

> "We use building blocks from new trade theory and from somewhat older development economics. As in new trade theory, we focus on the location of firms using technologies with increasing returns and operating in imperfectly competitive environments. From development economics, we take the ideas of forward and backward linkages between firms. Combining these linkages with imperfect competition creates pecuniary externalities between firms, thus providing the mechanism for cumulative causation. The pecuniary externalities support existing agglomeration of industrial activity and provide a mechanism for the 'takeoff' of newly industrializing economies."

To illustrate the Puga-Venables modeling framework, divide the world into two industrialized countries (North) and two developing countries (South). Assume a perfectly competitive agricultural sector and an imperfectly competitive manufacturing sector in each country and that manufacturing is nascent in the developing countries. Trade barriers are

exogenously given in each country. Now suppose that one of the southern economies engages in unilateral import liberalization. As a consequence (pp. 229-31):

> "…openness to imports of manufactures causes manufacturing production to start….Import competition obviously has a negative effect through the product market, particularly because access to the northern market is not liberalized. But the cheaper supply of intermediate inputs becomes the dominant force, enabling industry to become established. …the combination of low wages and low-cost intermediates…is sufficient to lead to industrialization."

Alternatively, assume that multilateral trade liberalization takes place in all countries. As global tariffs are lowered, it becomes profitable to begin manufacturing in the South insofar as imported intermediate goods are cheaper and there is now access to the large northern market. Only one of the two southern economies will industrialize since once the process of industrialization is started, the cost and demand linkages will reinforce the industrial agglomeration. As global tariffs are lowered further, the conditions for industrialization in the second developing country will become favorable. The shares of world industry in the southern countries will thus increase as the process of industrialization unfolds. Multilateralism will bring about a greater degree of southern industrialization than unilateralism because of the opening of the markets in the northern countries.

Now consider the formation of a preferential trading arrangement (PTA) between one of the southern countries and the North. Puga and Venables conclude (pp. 233-37) that the PTA results in a larger share of industry in the liberalizing southern economy as compared to unilateralism and multilateralism:

> "The spread of industry is larger because the southern economy benefits from both improved access to the large northern market and the low cost of northern intermediates. The liberalizing southern economy suffers from more competition from northern firms, but, because southern wages are lower, the balance of the improved reciprocal access favors the South. This spread of industry is associated with a large fall in the North's share of industry…. Compared with the other arrangements, the other (not liberalizing) southern economy loses because it does not attract any industry…."

The last point mentioned suggests that there will be an incentive for the second southern country to join the PTA. Puga and Venables analyze other trading arrangements besides those

noted above. Their modeling framework is purposefully simplified to focus on the spread of industrial agglomeration, and they use simulations to illustrate their analytical conclusions. They acknowledge that they have abstracted from issues of policy credibility and political economy constraints and from the forces determining capital accumulation and foreign direct investment. Further, they do not consider more complex structures of protection and the possibility of trade diversion that have been noted in our earlier discussion. While they highlight the potential superiority of PTAs over other policy options, clearly more research is needed to determine what the facts are that are at issue with the different trading arrangements.

Knowledge Accumulation and Spillovers

I now turn to consider the possible impact that trade has on economic growth due to the accumulation of knowledge and associated improvements in factor productivity and the possible spillover effects that may be transmitted from advanced to less developed countries. As noted in Vamvakidis (1998, p. 251), there is a large empirical literature that concludes that free trade and growth were positively correlated especially during the 1970s and 1980s-. Presumably, such trade would generate positive spillover effects.

There are several channels through which trade may lead to faster growth (p. 253):

> "…trade increases innovation through economies of scale, technological spillovers, and elimination of the replication of research and development (R&D) in different countries. …innovation of new products is a positive function of past innovations, which represent the stock of knowledge. International trade provides access to a large international market, to advanced technology, and, therefore to a larger stock of knowledge, leading to more innovations and faster growth. This implies that a country benefits from free trade with large economies and an advanced stock of knowledge, assuming that technological spillovers are absorbed to the same degree across countries."

In the earlier discussion, I discussed the role of capital accumulation and foreign direct investment in fostering growth. This raises the question of whether the sources of growth are more likely to result from greater capital accumulation or from improvements in factor productivity. This is of course an empirical question. Further, it is not clear that trade per se is

necessarily the only force behind spillover effects. Thus, as Winters (1997, p. 8) notes in his discussion of the phenomena of and evidence on convergence over time in levels of income per head in different countries:

> "…convergence [in total factor productivity growth] arises from contacts and spillovers rather than incentives to accumulate physical capital. It might also be due to the stimulating effect of overseas competition performance, to the direct consequences of technology improvements through FDI, or even to the mobility of highly skilled labor, be it permanent or temporary."

While the precise channels by which spillovers may occur remain ambiguous, there is nonetheless reason to believe that spillovers are of central importance in the growth process. The question then is how developing countries such as those in the MENA region can best exploit these spillovers. That is, would MENA countries be better off by expanding their trade with large and open industrialized economies on a multilateral or preferential basis? I shall return to this question below.

V. Ex Ante Assessments of the Euro-Med Agreements

The preceding sections have been devoted to an analysis of options for trade and domestic policy reform and the comparative static and growth effects involved. Since many of the issues raised cannot be resolved clearly on a priori grounds, it is necessary to look at the available empirical evidence with reference to the MENA economies, concentrating in particular on the effects that Euro-Med Agreements (EMAs) may have upon them. This is by no means an easy task since the existing EMAs have been in effect for a short period of time and others are still in the process of negotiation. What I propose to do therefore is to review briefly the ex ante computable general equilibrium (CGE) modeling results for selected MENA countries as well as some qualitative analyses that have been done.

CGE Modeling Assessments

Table 1 summarizes the main findings of a number of CGE modeling assessments of alternative liberalization scenarios for Morocco, Tunisia, and Egypt. CGE models are useful for analyzing the economic effects of various types of trade liberalization and related policy changes since they can incorporate economy-wide relationships both within and between countries and provide numerical estimates of the aggregate effects of different policies as well as details on how individual sectors may respond. It should be noted that the CGE modeling results indicated in the table cannot be compared precisely because the models differ somewhat in conceptual structure and the computational scenarios are not uniform. Nonetheless, the results provide a reasonably good indication of the likely comparative static effects of the different trade policy options shown.[3]

The CGE analysis for Morocco by Rutherford, Ruström, and Tarr (1993) noted in table 1 suggests that unilateral removal of import protection by Morocco would increase welfare by 2.06-3.12 per cent, depending on the elasticity of supply assumed for the resource sectors. This compares to welfare increases of 1.70-2.38 per cent for a FTA with the EU, thus suggesting that unilateral liberalization would produce larger welfare gains. Presumably, the gains from multilateral liberalization would be even greater than those indicated.

There have been two CGE analyses done for Tunisia. Rutherford, Ruström, and Tarr (1995) provide results for scenarios involving elimination of Tunisian tariffs and NTBs on imports from the EU, improved access of Tunisian agricultural exports to the EU, harmonization of standards, and improvements in the efficiency of trade-related activities. Taking all of these together, they estimate that a FTA between Tunisia and the EU would increase Tunisian welfare by 3.11 per cent in the short run, with sector-specific capital, and 4.65 per cent in the long run

[3] In what follows, I will concentrate on the overall effects of the policy options. The individual studies can be consulted for the detailed results of the sectoral effects.

with mobile capital. A multilateral liberalization is estimated to increase Tunisian welfare by 3.71-5.33 per cent.

The CGE model simulations for Tunisia by Brown, Deardorff, and Stern (1997) focus on a FTA between Tunisia and the EU, with allowance for sector specific and mobile capital and possible changes in foreign direct investment (FDI) inflows into Tunisia. The FTA results for sector specific capital indicate a welfare decline of –0.2 per cent, thus suggesting possible trade diversion. With mobile capital, however, there is a 3.3 per cent increase in welfare. It is conceptually difficult to incorporate FDI into CGE models. But on the basis of assumptions of how FDI inflows might respond to changes in rates of return, Brown et al. conclude that welfare effects range between –0.1-1.0 per cent. These FDI results reflect worsened terms of trade as Tunisian exports expand to enable servicing of the FDI inflows. Brown et al. did not simulate either unilateral or multilateral liberalization options for Tunisia.

The results of two CGE analyses for Egypt are summarized in Table 1. Konan and Maskus (1997) estimate a 2.7 per cent increase in welfare in the case of unilateral liberalization against all trading partners, including allowance for the lowering of red-tape costs of imports. Taking account of the lowering of red-tape costs for both Egypt's imports and exports yields an estimated welfare increase of 1.9 per cent. A FTA between Egypt and the EU that involves both removal of tariffs and NTBs and the lowering of red-tape costs produces the same welfare gain of 1.9 per cent, suggesting the possibility of trade diversion. The final simulation refers to a broadening of a FTA to include the EU, United States, and the MENA economies together with a common 10 per cent tariff on imports from the rest of world.[4] This welfare increase of 2.4 per cent is roughly comparable to the unilateral liberalization option shown.

Dessus and Suwa-Eisenmann (1998a) first calculated a benchmark scenario based on sequential equilibria for the period, 1995-2010, using assumed values of exogenous

[4] For a further elaboration of this simulation that focuses on a FTA between Egypt and the United States, see Hoekman, Konan, and Maskus (1998).

macroeconomic and policy changes. They then calculated a number of scenarios in relation to the 2010 benchmark. Their Scenario 2 refers to removal of Egyptian import tariffs on EU manufactures and shows a welfare loss of 0.18%. With an increase in EU financial transfers and assumed improved market access in the EU for Egyptian manufactured exports in Scenario 3, there is a welfare increase of 0.49%. In order to make allowance for possible dynamic productivity gains, the authors adapted their model to include an export-led externality in which the increasing amount of exports of manufactures enhances the productivity of physical capital and labor. Thus, in Scenario 4, there is a welfare improvement of 5.24%, which reflects how significant the dynamic productivity improvements may be. Finally, in Scenario 5, unilateral liberalization with the rest-of-world coupled with the export-led externality indicates a smaller increase in welfare compared to Scenario 4. This is due mainly to the decline in tariff revenues.[5]

The foregoing CGE modeling results conform fairly well to a priori expectations. That is, they suggest that the unilateral and multilateral liberalization options produce greater comparative-static welfare gains than FTAs. In themselves, FTAs can be trade diverting and welfare reducing in the short run, but may yield significant welfare gains in the long run. Finally, to the extent that trade liberalization is accompanied by a reduction in the costs of administering import/export trade, greater facilitation of trade through liberalization of financial services and telecommunications, and dynamic productivity improvements, the welfare gains will be even greater.

[5] Dessus and Suwa-Eisenmann (1998b) use the same model adapted to allow for labor-market segmentation and unemployment and inward foreign direct investment in the context of an EMA between Egypt and the EU. They note the need for Egypt to introduce labor-market reforms in the course of trade liberalization so that manufacturing firms may be induced to adopt more labor-intensive technologies, thereby creating more employment opportunities for Egyptian workers.

Other Assessments

Besides the CGE results just noted, there have been a number of other assessments of the trade and domestic policy reforms undertaken by MENA economies in the context of existing and possible future EMAs.

Hoekman and Djankov (1997)

Hoekman and Djankov have analyzed the details of the 1995 EMA negotiated with Tunisia and considered the implications of this EMA for Egypt. As they note (p. 133), the Tunisia-EU EMA has the following major elements:

1. Political dialogue

2. Free movement of goods – Liberalization will occur mostly on the Tunisian side since Tunisia already benefits from duty-free access to EU markets for manufactured goods. Tunisian tariffs on particular groups of products will be reduced in stages over a 12-year period, with the reductions to be backloaded for goods with the highest average tariffs. A general safeguard mechanism is provided. The status quo of access of agricultural exports to the EU is locked in. Somewhat flexible rules of origin may be implemented.

3. Right of establishment and supply of services – The EMA does not explicitly address commitments on these matters.

4. Payments, competition and other economic provisions – There is a 5-year period for implementation of rules.

5. Economic and social cooperation – The emphasis is on upgrading Tunisian infrastructure and providing support for restructuring of the economy.

6. Financial cooperation – There is a link between EMA implementation and the provision of financial resources by the EU, with specific details to be determined.

7. Institutional provisions – An Association Council is responsible for implementation and operation of the EMA, including dealing with disputes. Details have to be worked out.

The authors provide (pp. 141) an overall evaluation of the Tunisian EMA as follows:

> "The transition path to free trade with the EU is a long one, with liberalization of goods competing with domestic production only starting five years after the entry into force of the agreements. By lowering tariffs on intermediates and capital goods first, domestic industries are granted some up front compensation for the adjustment costs that must be incurred later, and are given time in which to restructure. The tariff liberalization strategy ensures that tariff revenues will

> initially decline slowly, giving more time to mobilize alternative tax bases. But the backloaded nature of the tariff reductions may reduce the incentives to initiate rapid restructuring, and may create problems in implementing tariff reductions in the future…. Much therefore depends on the credibility of the EMA. This in turn depends on the extent to which complementary actions are pursued to improve the functioning of the economy. Important in this connection is the fact that the EMA does little to ensure investors of national treatment or grant the general right of establishment. …FDI is especially important in the services area, where establishment often remains the best way to contest a market. Efficient services are crucial in terms of being able to participate in the global economy By limiting commitments…, the EMA risks sending a signal that liberalization is not on the immediate agenda. It also puts the burden on unilateral efforts to move forward."

Hoekman and Djankov go on to consider the implications for Egypt of emulating the Tunisian EMA. They calculate Effective Rates of Protection (ERPs) for Egyptian sectors based on the Tunisian stages of tariff reductions as well as proportional reductions and reducing the maximum tariff rates through time. They conclude (pp. 146-49) that:

> "The results suggest that *if* nothing is done to improve the cost efficiency and quality of the service sector, the costs associated with the Tunisian approach may not be very high in comparison with alternative approaches given that it insures that industries are compensated to some extent for the lack of improvement in services. However, this is of course very much a second best situation – it would be better to reduce the inefficiency of the service sector concurrently with the reduction in tariffs.
>
> …reductions in the inefficiency of the service industries will require greater competition, in part through the encouragement of FDI, which will only materialize if the regulatory and institutional environment is conducive to private sector investment. Indeed, in the absence of improvements in the legal and regulatory framework, opening up to trade with the EU may result in greater competition from imports without much in the way of new investment. If so, the potential negative impact of an EMA is significant and the political viability of its implementation may well decline."

Finally, Hoekman and Djankov suggest the desirability of Egypt taking some complementary actions outside of the EMA framework, including reduction of MFN tariffs, reducing hub-and-spoke investment diversion incentives, and pursuing a vigorous privatization program to reduce the role of the state and to enhance the credibility of the liberalization program.

Page and Underwood (1997)

The authors consider the comparative static and potential growth impacts of the EMAs for Morocco and Tunisia. They examine in particular the possible effects on investment behavior, particularly FDI, and the potential channels for accelerating productivity change.

For investment, the questions considered are whether the EMAs will improve: (1) access to foreign portfolio investment and improve investor perceptions of macroeconomic management; (2) improve credibility of investment rules; and (3) change strategic motivations for FDI. They conclude (p. 113):

> "…the harmonization of laws and regulations combined with both economies' prior track record for good macroeconomic management may induce larger portfolio investments by European investors, but financial markets will require substantial strengthening if those increased flows are to be used efficiently. Expanded FDI will depend as much on changing strategic perceptions of investors and reductions in bureaucratic impediments to business as on macroeconomic stability and credible rules."

Page and Underwood calculate measures of total factor productivity (TFP) for an 85-country sample and conclude that both Morocco and Tunisia lag substantially behind the European economies. The same is true for TFP in a number of sectors reported for Morocco. In considering whether the EMAs will improve the acquisition of technology, they consider the potential benefits flowing from: (1) imports of new technologically superior equipment; (2) inward FDI; (3) technology licensing; and (4) transfer of non-proprietary technology. They suggest that the benefits of certain types of FDI may be limited as there is no guarantee that there will be technology spillovers from multinational firms and that these firms may be hesitant to make their technology easily accessible. Information provided by purchasers of exports and programs for technological upgrading are considered to be especially important.

Overall, Page and Underwood conclude (p. 121) that:

> "…[while] the EU integration agreements with Morocco and Tunisia…offer both countries an important opportunity to accelerate growth and raise incomes towards Southern European levels, substantial benefits will not accrue to each country automatically. What can Morocco and Tunisia do to ensure that the EU agreements fulfill their promise? First, they can accelerate and generalize the

> liberalization of trade embodied in the agreements. Second, they can move aggressively to improve the investment climate; and third, they can adopt policies intended to accelerate the rate of productivity change."

Galal and Hoekman (1997)

The authors address the issues of how Egypt can best achieve the maximum benefits from a partnership agreement with the EU.[6] They view the key elements of the growth process as follows (p. 284):

> "…the evidence is abundantly clear that beyond the initial conditions in a given country, policies matter. Policies can foster the accumulation of capital, improve the allocation of resources, and contribute to productivity growth. Our reading of the literature and the empirical evidence suggests that the key to the accumulation of physical and human capital is savings, domestic and foreign. The key to the efficient allocation of resources is openness of the economy to trade and financial flows. And the key to productivity improvement is competition (domestic and international), private ownership and the acquisition of technology."

To evaluate how an EMA for Egypt might work, Galal and Hoekman focus on the foregoing elements of the growth process. With respect to the openness of Egypt's trade regime, they identify the key issue as the lowering of trade-related transactions costs. The importance of this has already been noted from the Konan-Maskus CGE calculations cited in table 1. The question then is how vigorously this objective of lowering trading costs will be pursued and whether and how the necessary institutions can be created or improved.

As has already been noted in our earlier discussion, fostering more investment is crucial to the growth process. An EMA for Egypt conceivably could influence investment positively, depending on how expectations are affected and whether the credibility of policy reform is locked in, including the right of establishment and national treatment. It is also important that the administrative costs of trade be reduced, trade barriers be lowered with respect to other countries, and that investment in services especially be encouraged. Further, measures should be instituted to encourage productivity growth more directly, including arrangements for outsourcing inputs

[6] For related discussion and analysis in the context of a prospective Egypt-U.S. FTA see Galal and Tohamy (1998), Lawrence (1998), and Hoekman, Konan, and Maskus (1998).

and re-exporting to the EU. Finally, issues of competition policy need to be addressed so that markets can be made more contestable, particularly in key services sectors.

An EMA in itself may not be the key to greater growth for Egypt. Other, complementary policies will be required, as Galal and Hoekman (pp. 303-04) note:

> "Increasing savings and investment in productive activities is key in the medium term. For this, Egypt should increase public sector savings (by reducing the size of the public sector) and reducing the tax burdens (by lowering tax rates and improving tax administration). In addition, a comprehensive privatization effort is crucial for fostering national savings (public and private), encouraging private sector investment and the repatriation of capital. Greater openness and exchange rate reform are also essential for fostering savings and domestic competition and promoting manufactured exports.
>
> …the set of recommended policy reforms should be designed and pursued in a credible, comprehensive and consistent fashion to be successful. The policy initiatives have to be *credible* to evoke a sustained investor response (especially from foreign investors) and overcome cynicism bred by years of patchy implementation and wavering commitment. They have to be *comprehensive* to have their full impact and signal that the effort is not selective and piecemeal. Finally they have to be *consistent* to ensure that they can be implemented without being derailed by internal contradictions."

Winters (1997)

The final study that will be considered is the effort by Winters (1997) to assess the possible dynamic benefits of an EMA for Lebanon. Winters first reviews the experience of the accession of Greece, Portugal, and Spain to the EU and implications for Lebanon. He concludes that both Portugal and Spain showed strong improvements in their economic indicators with EU accession whereas Greece did not. The differences can be attributed to credible programs of economic reform, thus suggesting that Lebanon would be best advised to concentrate on the effectiveness and credibility of its macroeconomic policies in particular.

With respect to trade, FDI, possible spillover effects and the convergence of output per head, Winters notes that most of the beneficial effects have been found primarily in relations among already advanced countries rather than between advanced and developing countries. This is not to suggest that Lebanon and other MENA countries would not benefit from the dynamic

effects involved in expansion of trade and FDI associated with an EMA, but there is nothing automatic about this. Indeed, Winters points out that there might be something akin to trade diversion that could result if trade were shifted away from advanced countries like the United States and Japan, which have the highest stocks of knowledge accumulation, towards the EU which has lower stocks.

A further question is whether an EMA will increase the rate of return to investment in Lebanon and thus encourage capital accumulation. There are a number of different channels through which the rate of return might be increased as noted in our earlier discussion. But what is most important is for Lebanon to institute effective domestic policies that will create a favorable climate for both domestic investment and FDI. So long as this is the case, and given that Lebanon may be in a favorable position to undertake reforms in its financial sector and that it is well endowed with human capital, prospects for capital accumulation appear to be favorable. Finally, Winters notes the strong potential of Lebanese migrants residing abroad. If an EMA were to succeed in harnessing the skills and entrepreneurial activities of these migrants, there could well be further beneficial growth effects as a result.

VI. Conclusions and Policy Implications

This paper has addressed options for trade and domestic policy reform, including unilateral measures, multilateral measures, and preferential arrangements such as the Euro-Med Agreements (EMAs). In evaluating the economic effects of these measures, attention was given to the comparative-static and dynamic-growth frameworks that can be used to analyze the different policies. A review of some CGE modeling studies of the EMAs for Morocco, Tunisia, and Egypt suggested that there could possibly be some trade diversion, but that there might nevertheless be significant welfare gains in the long run and with allowance made for reductions in administered trade costs, harmonization of standards, improvements in trade facilitation, and export-related dynamic productivity effects.

Qualitative analyses of EMAs for the aforementioned countries and Lebanon identified the various channels through which dynamic growth effects could be realized. A common theme running through these analyses was that the growth benefits of the EMAs would not necessarily be realized automatically. Rather, it was emphasized that individual countries should institute effective domestic policies to anchor the setting in which liberalization was to take place. Furthermore, to obtain the maximum benefits, complementary measures were recommended so that individual countries could align their foreign trade and investment policies more closely on a multilateral basis with the global trading community.

Clearly, the next step in the individual MENA countries is to move beyond these broad generalizations and to modify and redesign existing institutions and policies along the lines suggested in the qualitative analyses that have been reviewed. This is of course not an easy matter, given that decisions have to be made in a political and social context in which there will be competing interest groups with conflicting objectives and influence. Yet, so long as governments remain fixed on the long-run goal of economic and social betterment of their citizenry overall, their policy designs and dictates will be self-reinforcing in the continued pursuit of efficiency, equity, and growth objectives.

Table 1
Ex Ante CGE Modeling Results of Alternative Trade Liberalization Scenarios for Selected MENA Economies

Morocco

Rutherford, Ruström, and Tarr (1993) – Based on 39-sector CGE model, with constant returns to scale, a 1980 Social Accounting Matrix, 1991 tariffs adjusted for duties collected, VAT replacement tax to offset loss of tariff revenue, Armington assumption but fixed terms of trade, and high (H), medium (M), and low (L) elasticity of supply in resource sectors.

	% Change in Welfare		
Scenarios	**H**	**M**	**L**
Unilateral removal of import protection against all imports	3.12	2.37	2.06
Free trade agreement with the EU, including increased export prices for citrus fruits and vegetables	2.28	1.52	1.20

Tunisia

Rutherford, Ruström, and Tarr (1995) – Based on 19-sector CGE model, with constant returns to scale, 1990 input-output matrix, 1993 tariff rates adjusted for duty collections, VAT replacement tax to offset loss of tariff revenue, Armington assumption, and allowance for harmonization of standards with the EU and improvements in the trading environment through more efficient telecommunications and financial services. Short-run with sector-specific capital and long-run with mobile capital.

	%Change in Welfare	
Scenarios	**Short Run**	**Long Run**
Elimination of tariffs on all imports from EU	0.50	1.56
Elimination of NTBs on all imports from EU	0.08	0.15
Improved access to agricultural markets in EU	0.20	0.14
Harmonization of standards	1.14	1.31
Improvements in efficiency of trade related activities	1.20	1.33
All expected effects from an FTA with the EU	3.11	4.65
FTA with the EU plus 100% across-the-board tariff liberalization	3.71	5.33

Tunisia

Brown, Deardorff, and Stern (1997) – Based on 29-sector CGE model, with perfect competition in the agricultural sector and monopolistic competition with free entry in the manufacturing and services sectors, 1990 input-output matrix and base year for other data, pre-Uruguay official (statutory) tariff rates, revenues from tariffs assumed to be redistributed to consumers, and endogenous allowance for economies of scale and product variety. The model has eight countries/regions, including Tunisia, Greece/Portugal/Spain, France/Italy, and the rest of the EU.

	Percentage Changes			
Scenarios	**Terms of Trade**	**Welfare**	**Real Wage**	**Real Return to Capital**
Free trade, with sector-specific capital: trade only	-5.0	-0.2	2.5	6.6
Free trade with sectorally mobile capital: trade only	-4.9	3.3	-1.7	6.5
Free trade with sectorally mobile capital: trade and FDI	-7.0	-0.1	4.6	7.1
Free trade with sector specific capital: trade and FDI	-5.1	0.9	3.5	6.6
Free trade with sector specific capital and capital tax: trade and FDI	-5.1	1.0	3.6	6.6

Egypt

Konan and Maskus (1997) – Based on 38-sector CGE model, with perfect competition, 1989/90 input-output table, 1994 trade and tariff rates based on duties collected, alternative replacement taxes to offset loss of tariff revenues, and Armington assumption. The model includes Egypt, the EU, United States, MENA, and rest-of-world. Allowance is made for reductions in administrative trade costs.

Percentage Change

Scenarios, with Prior Trade Reform and Lump-Sum Tax Replacement	Welfare	Real Wages		Real Rental Rate
		Prod. Workers	Non-Prod. Workers	Mobile Capital
Unilateral tariff elimination against all trading partners, including lower red-tape costs of imports	2.7	8.1	10.4	9.0
Reduction of red-tape costs of imports and exports	1.9	4.7	5.7	5.5
FTA with the EU	1.9	6.5	8.1	7.3
FTA with the EU, U.S., and MENA and common 10% tariff on imports from ROW	2.4	7.1	9.0	8.0

Egypt

Dessus and Suwa-Eisenmann (1998a) – Based on 30-sector CGE model, with perfect competition, Social Accounting Matrix using 1991/92 input-output table updated to 1995, single household with homogeneous labor, three different capital stocks, and four trade partners (EU, NAFTA, South-Mediterranean Rim, and rest-of-world). The model employs sequential equilibria running for the period, 1995-2010.

Scenarios	%Change in Welfare from Benchmark 2010
1. Benchmark scenarios for growth, 1995-2010	--
2. Reduction of import tariffs on EU manufactures	-0.18
3. Scenario 2 plus EU capital transfers to Egypt and more secure market access in EU for Egyptian exports of manufactures	-0.49
4. Scenario 3 plus export-led externality that increases capital and labor productivity	5.24
5. Scenario 4 plus unilateral liberalization with rest-of-world	4.60

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