IMPACT OF THE WTO AGREEMENT ON MENA AGRICULTURE

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Abstract

The paper reviews the status of MENA agriculture trade and policies in relation with the Uruguay Round Agreement on Agriculture and future WTO negotiations. Using country-specific economy-wide models, the paper quantifies the impact of unilateral trade liberalization and reduction in domestic policy distortions. Drawing on these results and the current status of MENA agriculture, the paper provides recommendations in designing domestic policies to mitigate the likely unfavorable income redistribution effects in the context of the new trading system and increased globalization. It also analyzes policy options that would contribute most to the expansion of developing country exports; and how the WTO process can be used to improve domestic policies to support MENA's rural economies.

I. Introduction

A major challenge facing MENA countries in the twenty-first century is to achieve sustainable economic growth by means, which alleviate poverty without jeopardizing the quality of the environment. While this is a task of regional and global significance it presents particular problems to the agricultural sector because of the direct links between production and the natural resource base, especially in some of the countries where dependence on agriculture for income and employment is still high.

Attempts by governments to achieve food self-sufficiency have created perverse incentives to agricultural mismanagement, resulting in resource depletion. Producer and consumer subsidies on red meat and cereals and on fuel and agricultural machinery, have encouraged mechanized cereal cultivation of marginal lands, while subsidized animal feed has raised the number of animals in the same areas, generating conflicts, degrading the environment and increasing vulnerability to drought. These measures also create dependencies, with social repercussions if they are withdrawn - as has happened under structural adjustment. As the subsidies are generally untargeted, they favor larger farmers. At the same time, insecure property rights have prevented farmers and communities from investing in productive land improvements and adopting sustainable cropping and grazing practices. Archaic legislation, state appropriation of traditional common pasture in the Mashreq, and incapacity of local institutions to adequately address the new resource demands of a growing population are also major contributory factors to land mismanagement issues. This has opened the way to land grabbing, degradation of common property resources, and exacerbated conflicts over range land resources (Chaherli et al., 1999).

Like most developing countries, several MENA countries face serious environmental and natural resource problems. Rapid population growth and transitional paths in terms of economic development have increased the pressure on the region's natural resource base. Increased demand for food and feeds has significantly increased the land and water degradation both quantitatively and qualitatively. Because there is a very limited potential for tapping new resources, future economic and population growth will put even higher pressure on the environment. Some environmental indicators have already reached critical levels. It is in this context that MENA countries will be negotiating the status of domestic agricultural policy in a multilateral reform framework. There have been some important developments with relevance to the region since the completion of the UR negotiations. The US and the EU, the principal trading partners of the region

have reformed their agricultural policy and have taken steps that have affected their positions within specific regional trade arrangements. In particular, the EU has initiated concrete steps for its enlargement to the East and negotiated some bilateral Association Agreements with a number of MENA countries. Yet, a lot of uncertainties remain on the horizon for MENA. How should the region position itself with respect to future negotiations on the status of agriculture in world trade? There are issues which must be addressed for a better understanding of some of the major challenges and opportunities for MENA's agriculture, arising from further implementation of bolder moves in multilateral trade reforms. The remainder of the paper is organized into four sections.

Section II analyses the broad pattern of MENA agricultural trade. It identifies the most trade-oriented states and the commodities that feature most prominently in their trade. This section also outlines the most important barriers restricting expansion of MENA exports.

Section III provides country-specific estimates and trends of the impact of reduced protection and policy distortions in agriculture. It quantifies the likely effects of further trade liberalization and required policy adjustments in specific commodity markets (e.g. meats, grains).

Section IV provides some recommendations in designing appropriate domestic policies to meet food security objectives in the context of the new trading system and increased globalization. It also seeks to analyze policy options that would contribute most to expansion of developing country exports; and provides analyses on how the WTO process can be used to improve domestic policies affecting the rural sector in developing countries and section V provides concluding remarks.

II. Overview of Key Imports and Exports in MENA[1]

Agricultural trade in MENA states tend to fully reflect the agro-ecological characteristics of agriculture as well as the socio-economic features of the overall development strategy followed by countries. As shown in Table 1, an indicator of agricultural trade orientation as computed by the ratio (X-M)/(X+M) clusters MENA countries into: oil exporting countries and commodity exporting countries

[1] Because of data availability or too much disparity in the MENA region, our analysis will cover either the entire MENA region or a smaller subset of countries from the Southern Mediterranean Region (SMR). A reference to the group composition will always be made. When the SMR is not mentioned per se, the reader should assume that the discussion covers the broader MENA region.

with positive and negative agricultural balances of trade (See Figure 1 for a graphical representation of that ranking).

Imports

MENA is considered a net food-importing region. The largest share of imported products consists of food products (cereals, livestock, dairy products and to a lesser degree, fruits and vegetables). For example, in 1996 the Arab countries imported (in US$) 6.60 billion in cereals and flour, 1.45 billion in sugar, 1.63 billion in vegetable oils, 1.64 billion in fruits and vegetables, and 2.47 billion in milk products (AOAD, 1997). Tables 2 and 3 show some basic indicators on the nature of agricultural trade in the MENA Region.

Exports

Exports of agricultural products constitute an important source of foreign currency for several MENA countries - the primary client being the EU - which receives an important share of agricultural commodities. The most important commodities exported fall within the following chapters (Stevens, 1994): Fish and crustaceans: Chapter 03); Vegetables (Chapter 07); Fruits and nuts (Chapter 08); Preparations of vegetables, fruits or nuts (Chapter 20).

Of the 22 MENA countries, six countries stand out in terms of the total value of their agricultural exports. These are Turkey, Israel, Iran, UAE and Morocco (own computations based on FAO Online Statistics.) However, MENA exports tend to be confined to specific product categories. This concentration makes the WTO outcomes very critical.

Agricultural Policy Issues in Relation with the WTO Negotiations

Agriculture production and trade in MENA is highly affected by a variety of domestic policy interventions as well as trade and agricultural policy in the EU and in the countries of the other major trading partners. The latter are and will be influenced by multilateral, regional and bilateral agreements. We briefly review the major issues shaping trade flows in the region with particular reference to the current WTO member countries.

One objective of the Agreement on Agriculture is to reform trade of agricultural commodities and to design policies that are more market oriented. The intended goal of these liberalization measures is to make agricultural markets more predictable and secure for private and public entities involved in imports and exports. MENA countries have taken a number of steps that are consistent with

these new rules and commitments. Those steps were an outcome of market liberalization programs at different but interrelated levels: unilateral liberalization (often in the context of Agricultural Structural Adjustment Programs), bilateral liberalization (via EU-Association Agreements and/or Inter-Arab Association Agreements), and multilateral liberalization.

Market access

On the market access front, MENA countries have reduced various trade restrictions confronting imports. The Gulf Cooperation Council (GCC) countries have the most liberal trade regimes with very low tariffs on most agricultural commodities. To protect their agricultural producers, most other countries tend to have relatively high tariff rates. The new rules for market access in agricultural commodities emphasize tariffication and tariff reduction by 24 percent (with a minimum of 10 percent per tariff-line). Quotas and NTB have been replaced by tariffs that are supposed to provide more-or-less equivalent levels of protection. Market access rules and commitments also make provisions to ensure that quantities imported before the Agreement on Agriculture could continue to be imported and that new quantities could be imported at non-prohibitive rates. A system of tariff rate quotas (TRQs) was put in place to allow lower tariff rates for specified quantities and higher rates for quantities in excess of an agreed quota. The last provision under this heading include the special emergency actions (or "safeguards") governments are allowed to take in order to mitigate the impact of sudden price drops and surges in imports. The record for the MENA region is a mixed one as shown by Hag Elamin (1998). Current WTO members have either set their tariffs at relatively high ceiling bindings (Bahrain, Cyprus, Egypt and Kuwait) or, for those that opted for the tariffication option, set their base tariff equivalent rates at relatively high rates (Morocco and Tunisia). While in principle the commitments have been fulfilled, the magnitude of those commitments is not satisfactory. In fact, the average cut rule for all agricultural products (-24 percent) with a 10 percent minimum cut per product was met by reducing the tariffs on the so-called "strategic" commodities (grains, meat, sugar, oil and oilseeds) less than the tariffs on products with limited importance in trade flows[2]. A possible way to circumvent this loophole in future negotiations is to apply an effective tariff reduction scheme similar to the "Swiss formula" approach (much deeper cuts in peak tariffs rates than lower rates) by taking a weighted average tariff cut. The

[2]We should recognize though that this is not a practice specific to MENA countries. Even developed countries have applied the un-weighted tariff reduction scheme.

weights could represent the importance of groups of products in imports over a specified period of time[3].

There have been limited opportunities for reductions in market access from special safeguards and tariff rate quotas. This is, for example, largely due to the high bound tariffs submitted in the cases of Morocco and Tunisia. It is important to note that currently applied tariffs tend to be much lower than the bound tariffs.

Some MENA countries that are major importers or producers of "strategic" commodities have been facing difficulties justifying the trade distortion measures imposed on grains and livestock product imports, mainly from the USA and the EU. For meat products (e.g. poultry in Egypt, cattle in Turkey and sheep in North African countries), MENA countries have invoked arguments related to SPS measures. For example, Egypt justifies the ban on poultry products on the grounds of religious reasons. MENA countries could face difficulties keeping these protective measures during future negotiations. They could be asked to let their consumers make their own choices with respect to the quality and characteristics of imported livestock products by means of imposing adequate labeling.

Domestic support

Price support policies mostly for grains and dairy products have often encouraged farmers to increase production. MENA countries have long invoked domestic support for their farmers in order to meet food self-sufficiency objectives. Agricultural structural adjustment programs and loans implemented in a Morocco, Turkey, Tunisia and Egypt have reduced government support for agriculture. Much of the support is being currently provided through general services' provisions, although some price support programs - such as for cereals - are still in place. MENA countries have calculated how much support they were providing based on AMS computations. All countries have reported zero Base Total AMS with the exception of Morocco, Tunisia, Turkey and Cyprus (WTO, 1996). Further reductions in the commitments with respect to AMS could prove difficult for these countries in the next round as the bulk of the support is given to cereal producers. The agro-ecological conditions (recurrent droughts, water shortages) will have to be dealt with through other means than price support. This could be an opportunity to implement the "green box" type of policies - supporting income rather than prices. Hag Elamin (1998) also reports some methodological

[3]Other tariff reduction formulas are described in ERS-USDA (1998) in the article on market access (e.g. linear formula, harmonization formula).

shortcomings in the AMS calculations undertaken by MENA countries that could call for a closer look at the current protection patterns in the region.

Export subsidies

While export subsidies are a key issue for a number of regions and groups (e.g. Latin America, Cairns Group), it does not seem to be a significant one in the MENA region. While most WTO signatories from MENA have reported zero export subsidies; Tunisia, Turkey and Cyprus were the exceptions, making commitments on the reduction of export subsidies (WTO, Country Schedules). Cutting both the amount of money spent on export subsidies and the quantity of exports receiving subsidies should not prove to be too difficult a task. However, those countries and future WTO members from the region could face some difficulties with some features of their export promotion packages (subsidies for storage, marketing, transport, and financing).

Barriers Restricting Exports

Bias against agriculture

Most MENA countries have adopted policies that affect agricultural prices either directly or indirectly through economy-wide policies (macroeconomic and trade). These policies have distorted production incentives by making export oriented agriculture a less attractive activity than other sectors of the economy and even within the agriculture sector. Agricultural production in MENA countries and in particular in SMR countries is highly protected through tariff and non-tariff barriers. Table 4 shows weighted average tariff rates in selected MENA countries.

Trade with EU has to be handled within FTA agreements

There are currently several Association Agreements between the EU and MENA states (see Table 5 for the status of selected countries). Those agreements seek to promote accelerated economic growth through the establishment of a free trade area for industrial products over a 12-year period. However, an important limitation of the benefits from these regional agreements is the special status of agriculture trade. Exports to the European market are handled through preferential access clauses in the Agreement.

Further liberalization aimed at improving market access and broadening the Agreements to Agriculture will very much depend on changes made in the context of the EU Common Agricultural Policy (CAP). Resistance to changes in CAP come mainly from the agricultural interests competing with MENA exports

(principally in fruits, vegetables and oils). Depending on the importance of agricultural exports to EU, continuing restrictions on MENA's access to the EU agricultural market are the most important barriers restricting expansion of the region's exports. This issue is of particular importance not only to current EU-Med. partners (e.g. Egypt, Israel, Morocco, Turkey and Tunisia) but also to the other MENA potential exporters (Lebanon, Jordan and Syria).At the time of writing, substantive negotiations of liberalization of trade in agriculture products has been deferred until the year 2000 in the case of Morocco and Tunisia and 2002 for Lebanon and Jordan (Ghesquiere, 1998).

There is the potential that by improving access for the signing country in specific commodities, access for other MENA states will be reduced. Considering the fact that, when it comes to international trade, MENA countries tend to have comparative advantages in the same categories of products, mainly fruits and vegetables, there seems to be more room for further trade expansion from multilateral agreements than from bilateral agreements (principally within the EU-Med. Partnership). DeRosa (1996) reports indicators of revealed comparative advantage (RCA) for MENA products (Table 6). RCA relates the importance of each country as a supplier of products to the world market. When the indicator is greater (smaller) than 1, it indicates comparative advantage (disadvantage).

Tariff escalation remains an important barrier to entry for processed food exports from MENA to the EU. This issue is particularly important for countries such as Morocco, Tunisia, Turkey, Cyprus and Egypt. There tend to be higher tariffs on food manufactures than on the raw agricultural products. This is an issue MENA countries have to put on the negotiating table given their comparative advantage in the processed products. However, they could make a case for reduced tariff escalation, only if they comply with SPS standards in the EU markets and improve the labeling of their products. The issue of labeling is addressed further below.

Norms and standards

For one of the major group of exports by MENA countries - fruits and vegetables - the issue of standardization has been a delicate issue to handle. Standards and norms are usually set to harmonize existing national commercial quality standards to: (i) facilitate fair international trade and prevent technical barriers to trade, (ii) improve producer's profitability and encourage production of high quality produce, and (iii) protect consumers' interest (Heilandt, 1999). Those standards are intended for application at the point of export/dispatching control. While most of the perishable produces grown in the region are included on internationally

used standard lists, MENA exporters do not adequately apply standards and specifications. Norms adopted by the region's principal clients in terms of commercial quality trades, tolerances for defects, presentation, packaging, marking, and minimum requirements for chemical content (e.g. pesticide residues, heavy metals, and mycotoxins) do often discourage producers to expand their production opportunities. A better handling of this issue by MENA producers, in addition to less stringent norms imposed by the EU would probably lead to an expansion of fruit and vegetable exports from MENA.

III. Simulation with Multi-market Models and CGE Models

To address the issue of trade liberalization, we use two complementary approaches. We start first with a modeling framework to answer questions of concern to policy-makers. Public discussions in the region and elsewhere involve government budget deficits, foreign exchange earnings and requirements, and the welfare of various population segments within society. The multi-market method is a good alternative to the standard tools of analysis, such as measures of comparative advantage or single market studies, because it takes into consideration important interactions between markets. In addition, the method has been adapted to include interactions between different agro-ecological regions and production systems. However, to analyze the economy-wide effects of economic policies, a more comprehensive and less disaggregated tool is required. General equilibrium models are used to give a more global perspective of the potential effects of trade liberalization at the national level.

Multi-market Models

In order to simulate the effects of further trade liberalization on selected strategic commodities, we use a simple multi-market national modeling framework with different supply regions of the type developed by Braverman, Hammer (1987) and others. Its major advantage is that it can be used to capture some important substitution relationships on the production and consumption side.

The model incorporates four classes of agents. Producers are distinguished by region and commodity, consumers distinguished by region and social group (urban vs. rural), suppliers of factors (intermediate demand factor or inputs supplied by the rest of the economy) and the government. On the production side, the model assumes that producers are profit maximizers. Their supply response functions have output and input prices as arguments. The model simulates the impact of trade liberalization on selected tradable commodities by calculating the

impact of replacing domestic prices with lower border price equivalents[4]. The evaluation is made with respect to a baseline scenario representing government policy for a base year. Table 7 shows the impact of trade liberalization on some aggregate measures of welfare in Tunisia, Morocco, Iraq and Jordan. Differences in direction and magnitude of the impact reflect country differences in supply-demand response behavior and the different kind of inter-linkages between input and output commodity markets.

Taken as a whole, the results provide a clear pattern of differential agricultural supply and demand responses to trade liberalization and the existing trade-off between different objectives of government policy. *Ceteris paribus*, we note that reduction in border protection tends to reduce farm income in rain-fed agriculture for Tunisia and Jordan while rain-fed farmers in Morocco and Iraq could gain from the process. The combined effects on the government deficit and range land pressure[5] are also country specific. This lack of consistent trends with respect to the four indicators in these four countries underscores the necessity to design specifically targeted instruments to either strengthen the positive impact of trade liberalization or mitigate its potential negative impact. For example, while in Tunisia attention has to be made to income distribution by strengthening targeted income generation programs in rural areas, Moroccan policy-makers should be more concerned about range land improvement programs and the design of environmental policy to address overgrazing in those areas.

While attempts have been made to take into account the substitution patterns in production and consumption for food and feed products, the models used in this section are recognized as being still of a partial equilibrium nature. Certain problems related to the existence of inter-sectoral linkages between agriculture and other sectors in the economy, as well as substitution and complementarity across sectors and not commodities as seen in the multi-market level analysis can be addressed in a general equilibrium framework. In what follows, a Computable General Equilibrium (CGE) model is proposed to tackle economy-wide issues of

[4] It should be kept in mind that the outcomes from these simulations are to be evaluated with caution. As pointed by Sharma and Purcell (1996), the objective of multi-market modeling is not to give precise predictions but rather to indicate the broad magnitude of changes that would occur in response to changes in policy instruments.

[5] In the multi-market model, output of range land is considered as a commodity. While some livestock producers pay grazing fees for forage extracted from those areas, others face in fact an opportunity cost even when "freely" accessing the resource. The environmental indicator used looks at the demand for rangeland products in aggregate. An increased demand would mean an increased pressure on the resource.

particular interest to policy-makers when it comes to the analysis of potential macroeconomic effects at the national and micro level.

CGE Models

In this section two CGE models, one for Morocco and the other for Egypt, are used to quantitatively examine the economy-wide effects of agricultural and manufacturing trade liberalization in each country[6]. Given that agriculture plays an important role in each country's economy, this class of models has a comparative advantage in assessing the impact of agricultural trade liberalization on each country's sectoral structure, welfare, and income distribution. The two models are country specific and are used to implement similar trade liberalization simulations under different model assumptions. Both models distinguish between rural and urban household groups, and the agricultural sectoral classification is relatively more disaggregated relative to other sectors.

In Egypt, agriculture makes up around 18 percent of GDP, and in Morocco 16 percent. About half of their populations are rural (55 percent and 48 percent for Egypt and Morocco, respectively), and in both countries a large percentage of the poor rely on agriculture as a main source of income. In terms of agricultural trade, including food items, both countries are net food importers, where agricultural imports include wheat and sugar, and exports include fish and fruits and vegetables. The European Union and the United States are Egypt and Morocco's major agricultural trading partners. A careful analysis of the likely effects of changes in agricultural trade policies on welfare and trade would assist policy makers in MENA countries, particularly in countries sharing similar structural features as those of Morocco and Egypt.

Making use of the CGE models, two sets of simulations are considered for each country. The first simulates the impact of trade liberalization by reducing the applied tariff rates on all agricultural commodities by 25 percent (accompanied by a similar reduction in non-tariff barriers in the case of Morocco). The second extends the tariff reductions from the first simulation to include manufacturing (Table 8). Tables 9 and 10 show the results for the two simulations as percentage deviations from the benchmark base model for some selected aggregate variables for Egypt and Morocco, respectively.

[6] The CGE models that we use in this study are adapted from models developed earlier in Löfgren *et al*. (1999), and Löfgren and El-Said (1999). They follow the standard neoclassical trade-focused CGE models of developing countries described in Dervis, de Melo, and Robinson (1982).

In general, the first simulation implies lower import prices for agricultural products, which in turn lowers demand, prices and factor incomes for domestically produced agricultural products. Rural households, who rely on agriculture as a main source of income, experience a loss, whilst urban households, who benefit from lower agricultural prices, typically gain. Trade volumes, imports and exports expand as a result of lower tariffs. However, the expansion in agricultural imports outweighs that in exports and the end result is a real exchange rate depreciation to maintain the fixed current account deficit, which increases exports and reduces imports throughout the economy. Net food and agricultural imports increase, and the agricultural terms of trade deteriorate (simulation -1-, tables 8 and 9)[7]. The percent changes for the first simulation are stronger for the case of Morocco, a reflection of a relatively higher protection for agriculture and a higher elasticity of substitution in consumption between domestically produced food grains and imported ones.

In the second simulation, trade liberalization covers both agriculture and manufacturing. Compared to the first simulation, the effect on households is similar. In both countries, urban households gain and rural households lose, but in the case of Morocco the gains for urban households are higher, and the losses for rural households are lower. In general, the volume of trade further expands with different effects on the real exchange rate. In the case of Egypt, the exchange rate slightly appreciates to maintain the current account deficit (-0.1 percent), which boost imports compared to the first simulation. On the other hand, in the case of Morocco, the exchange rate depreciates (3.7 percent), which expands exports throughout the economy, and reduces agricultural imports compared to the first simulation. The reduction in real GDP and total absorption reflects the fact that trade liberalization is introduced into a second-best world.

IV. A Platform for Agricultural Policy in the WTO Context

In the next round of negotiations, MENA states should be concerned about the following issues: (i) the scope for increased agricultural exports; (ii) impact on world prices and potential implications on food imports; (iii) the overall effect on agricultural development in the context of limited land and water availability. In addition to the standard market access, domestic support, and export subsidy issues, MENA countries have special interests in the next round of negotiations concerning special and differential treatment (SDT), export restraints, price stability, food security, food aid, and stock policies (see Table 10).

[7] Ratio of producer price index of agriculture output to non-agricultural output.

Food Security

The special situation of the net-food importing countries and the least-developed countries[8] was recognized in UR-AOA (Part II, Article 16). The preservation of adequate levels of food aid, the provision of technical assistance and financial support to develop the agricultural sector as well as food import financing have been included as priority areas for trade negotiation (Diaz-Bonilla and Robinson, 1999). Given the expanding food gaps for most MENA countries, and the limited technology adoption rates in the agriculture sector for strategic commodities, it is unlikely that a reversal of trends in the status of net food importing MENA countries (with the exception of Turkey) could be achieved in the first two decades of the new millennium (Nordblom and Shomo, 1996). The limited potential for yield improvements in rain-fed and irrigated areas combined with the expected increase in world food prices as a result of reduced subsidies in the developed countries make the future situation quite distressing for net food importing countries (NFIC). While those concerns have already been addressed in the Marrakech Ministerial Decision on Measures concerning the Possible Negative Effects of the Reform Program on Least-Developed and NFIC, MENA countries should seek the establishment of buffer mechanisms in the event of increased price variability and/or higher food and feed prices. Laird (1996) reports a counter-argument with respect to the situation in MENA by claiming that Arab countries could benefit from increased prices if domestic reforms are undertaken to make the agriculture sector a more productive sector in the economy. Further trade liberalization, by enhancing overall economic performance leading to upward price trends , could raise the incomes of commodity producing farmers.

Egypt is a country where increased food insecurity will have to be addressed in a more systematic way than through food aid and food subsidies. Rather than being concerned about increases in food prices resulting from the market response to lower distortions for cereals, sugar, oilseeds and livestock products, Egypt and other NFIC of the region should propose schemes to dampen the impact of unstable food prices on the balance of trade and government budget. To avoid having market stabilizing instruments being brought to the dispute settlement body, efforts should be made to include food security related mechanisms as non-trade distorting instruments in the next round of negotiations. However, as pointed out by Laird (1986), there will be limited prospects to add another multilateral structure for handling food import assistance. In this regard, the IMF and FAO have adequate programs and facilities to deal with exceptional situations that

[8] With exception of Turkey, all other countries in MENA fall in one of these categories.

could jeopardize the food situation in the least developed countries as well as NFIC.

Research and Institutional Capacity

The MENA region has a very limited capacity to address the impact of WTO on national agriculture. With the exception of a few notable units with adequate training and research capacity (Morocco, Tunisia, Egypt and Turkey), MENA lacks adequately trained personnel and resources to assess various options with respect to WTO negotiations. Rather than relying on politically motivated analyses or outsourcing research work, MENA officials ought to explore the establishment of a formal and permanent research unit that could evaluate not only the impact of specific WTO commitments but also monitor future developments associated with agreed commitments. An "International Trade Evaluation and Monitoring Unit" with representation from different ministries and agencies should be set up with the following objectives:

- Evaluate the legal, economic and financial implications of trade policy related rights and responsibilities in the context of bilateral and multilateral arrangements;
- Act as a observatory for food security by providing updated information on seasonal and structural food and feed gaps and policy recommendations compatible with WTO membership;
- Coordinating efforts made by domestic and international partners involved in trade for agricultural and food commodities
- Study the local impact of trade liberalization and how it could affect volatility in world agricultural markets[9].

Research also has to be carried outside of the available government channels. A closer link with universities and research centers has to be established in order to strengthen agricultural and food policy analysis in the National Agricultural Research Systems (NARS). Research priorities should include issues related to socio-economics and policy research. While research on crop enhancement and production management systems should be kept as a priority, agricultural research in MENA should open itself to more strategic issues of national concern to the country or the region as a whole.

[9] We thank one of our reviewers for pointing out this additional important element in the mandate of the unit.

Trade and the Environment

The impact on agriculture should not assessed only in terms of welfare effects. Attempts should be made to evaluate environmental effects from WTO membership because of the strong linkages between agriculture and the environment. The MENA region, in addition to having the highest proportions of net-food importing countries, also has some of the most threatened ecosystems (desertification, soil erosion, loss of bio-diversity, water shortages, etc.).

While the WTO has no specific agreement dealing with the environment, a number of agreements include provisions dealing with environmental concerns (WTO, 1999). These provisions include: (i) GATT Article 20 that exempt policies affecting trade in goods for human, animal and plant protection from GATT disciplines; (ii) the explicit recognition of environmental objectives under Technical Barriers to Trade; (iii) the exemption of environmental programs from cuts in agricultural subsidies. Considering the harsh and water scarce environments in which agricultural productivity improvements and poverty alleviation have to be sought, and the strong linkages between agriculture and the natural resource base, MENA countries should seek active involvement in the decision-making process of the WTO Committee on Trade and the Environment (CTE). Farm trade and the environment are two of the most contentious issues to be discussed in the Millennium round. With respect to MENA countries, expansion of trade in live animals could generate some potential disputes. There is recognition within the responsibilities assigned to the WTO that it is only competent to deal with questions that arise when environmental polices have a significant impact on trade. The position of CTE is that the basic WTO principles of non-discrimination and transparency do not conflict with trade measures needed to protect the environment including actions taken under the environmental agreements. Within the context of the agreements on goods, services and intellectual property, CTE also notes that governments are indeed allowed to give priority to their domestic environmental policies. Several MENA countries will have to pay close attention to the provisions dealing with the relation between trade and the environment. While the protection and development of marginal lands and range land is becoming a priority in Agricultural Policy Charters and Development Plans across the region, MENA countries should be using the exception given to environmental programs in order to justify limitations on livestock imports. This should be done in a way that would not yield negative impacts on local consumers of livestock products. Similar problems could arise for other traded commodities in the region when it

comes to imports of genetically modified products and the conservation of bio-diversity in MENA.

Genetically Modified Products (GMP)

Discussion and negotiations pertaining to those products will have important implications for MENA countries. Not only because they are the largest cereal importing region and an important importer of dairy products but also because of the implications on two of their principal exports (fruits and vegetables). MENA countries should contribute with some serious analysis of the risks to human health and bio-diversity associated with genetically altered food. The region is known as the center of origin of dry areas crops and livestock. . Countries should continue playing an important role in the conservation of plant and animal genetic resources with the help of international and regional organizations. Conservation of bio-diversity has important implications for the WTO framework on intellectual property rights (TRIPS) and the agreement on technical barriers to trade.

While the discussion has focused primarily on agricultural issues, the potential for increasing exports and improving food security is also related to reform policies targeted at other sectors in the economy, and the overall economic performance of the country. Liberalization of trade policy should be seen as a necessary, but not sufficient, condition for expanding MENA exports. For an efficient operation of commodity markets at the national level, adequate economy-wide policies are as important as WTO negotiations on removing trade distortions and barriers. While the emphasis of this paper has been on agriculture, it should be noted that looking at the impact of trade liberalization through a sectoral approach does not take into consideration the important intersectoral linkages existing in the economy. For the specific case of MENA, important effects from further trade liberalization in other sectors such as manufacturing as well as reforms in competition policy and trade related investment measures have the potential to yield significant changes in agriculture. For countries such as Egypt, Morocco, Tunisia, Turkey, and Syria that are increasingly relying on the textile industry and/or cotton exports, discussions within and beyond the WTO Textiles Monitoring Body could have important implications for agriculture due either to the important commodity transformation processes taking place from raw materials to finished products or because of changes occurring in labor markets.

V. Concluding Remarks

In addition to the negotiations of further reductions in border measures through international agreements and the unilateral elimination of distorting domestic subsidies; reaping the benefits of joining the world system requires MENA countries to:

1. Harmonize norms and standards for export agricultural commodities;
2. improve their marketing systems through campaigns (fresh fruits and vegetables, olive oil, nuts, etc.);
3. improve the efficiency of their agricultural system via increases in productivity rather than protective measures (yields are still low when compared with “best-practice” or experiment stations);
4. diversify their client base and expand exports of commodities to countries in which they enjoy a comparative advantage to non-EU countries.

Freer trade is certainly a necessary but will not be sufficient for an increase in MENA exports and a better insertion into the world trade system. Important domestic policy reforms are required not only at the macroeconomic level, but at the sectoral level as well. As indicated by the CGE analysis, liberalizing agricultural trade for MENA countries sharing similar structural features as those of Morocco and Egypt should consider “green box” type of domestic support programs that are exempt and has minimal or least distorting impact on agricultural production and trade. These programs should aim at alleviating the unfavorable income distribution effects on rural households. Following the Agreement on Agriculture suggestion list, such programs may include expenditures on decoupled income support, and marketing promotion (for agricultural tradeables). Other programs may include expenditures on infrastructure, research and training, and disease control. Further trade liberalization could provide MENA with an enabling environment to push for more effective domestic policies.

Despite the resource constraints faced by MENA countries, the region still enjoys a great potential for agricultural production given the abundant agricultural skills acquired over many generations (water harvesting techniques, soil conservation, etc). Its geographical diversity makes it possible to produce commodities that do not necessarily make it a direct or unfair competitor to its main trading partners (especially the EU). If the countries of the region are to meet the globalization challenges and resource constraints, they must coordinate their efforts in getting ready for the millennium round of negotiations. A broader multilateral trading

system will make it easier for these countries to take advantage of the opportunities offered by free and fair trade and this without necessarily jeopardizing their food security goals.

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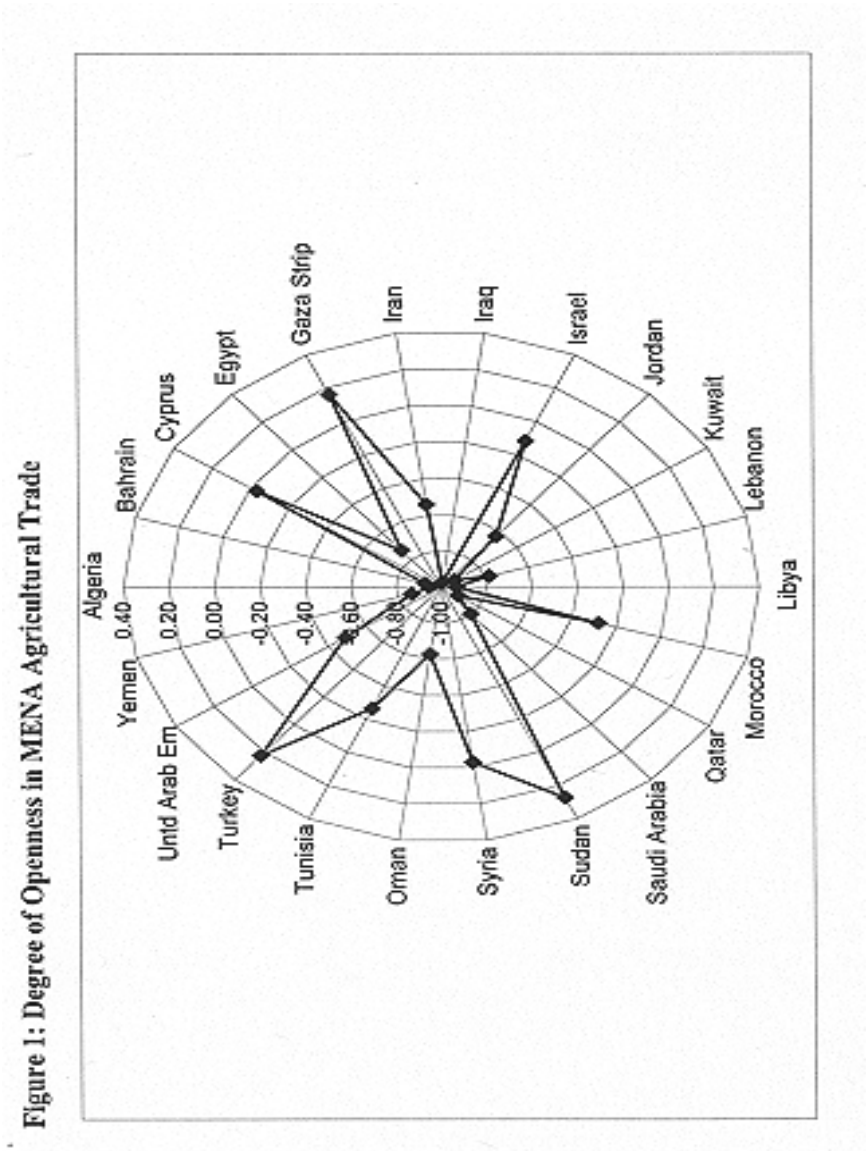

Figure 1: Degree of Openness in MENA Agricultural Trade

Table 1: Degree of Agricultural Trade Orientation for MENA Countries

	Indicator (x-m) / (x+m)	Countries
Group 1	>0	**Turkey**, **Sudan**, Gaza Strip
Group 2	[-.40, 0]	Cyprus, Israel, **Morocco**, Tunisia, **Syria**
Group 3	[-.60, -.4]	Jordan, Lebanon, **Egypt**, **Iran**, UAE, Oman
Group 4	[-1,-.6]	**Iraq**, Saudi-Arabia, Bahrain, Qatar, Kuwait, Algeria, Libya, Yemen

Notes: Countries in bold are the main agricultural commodity producing States in the region. x= agricultural exports, m= agricultural imports
Source: Author's computations based on data from FAO Online Statistics.

Table 2: Imports and Exports of Agricultural Commodities for MENA Countries

	Imports		Exports	
MENA Countries	1990-97 average (US$ '000)	Out of MENA Imports (%)	1990-97 average (US$ '000)	Out of MENA Exports (%)
Algeria	2,731,191	9.1	75,199	0.7
Bahrain	318,641	1.1	12,760	0.1
Cyprus	556,669	1.9	490,945	4.3
Egypt	2,983,745	9.9	453,961	4.0
Gaza Strip	55,938	0.2	76,089	0.7
Iran	2,752,906	9.2	816,688	7.2
Iraq	1,140,292	3.8	17,376	0.2
Israel	1,561,955	5.2	1,216,536	10.8
Jordan	762,983	2.5	173,473	1.5
Kuwait	988,881	3.3	35,687	0.3
Lebanon	1,056,356	3.5	126,569	1.1
Libya	1,218,716	4.1	42,918	0.4
Morocco	1,268,700	4.2	688,943	6.1
Qatar	298,021	1.0	13,655	0.1
Saudi Arabia	4,085,548	13.6	434,969	3.9
Sudan	272,441	0.9	480,804	4.3
Syria	804,749	2.7	765,318	6.8
Oman	736,920	2.5	179,332	1.6
Tunisia	722,544	2.4	410,852	3.6
Turkey	2,674,650	8.9	4,020,209	35.6
Untd Arab Em	2,060,735	6.9	696,298	6.2
Yemen	942,216	3.1	65,731	0.6
Total	29,994,797	100	11,294,312	100

Source: Own computations based on 1990-97 yearly data from FAO Online Statistics

Table 3: Composition, Destination and Origin of SMR* Trade: Top Three Groups for 1997 (%)

	World		SMR		EU	
Imports	Grains	44	Fruits &Veg	39	Grains	30
	Sugar	10	Grains	20	Dairy	15
	Dairy	8	Diverse	16	Sugar	14
Exports	Fruits & Veg	58	Grains	39	Fruits & Veg	80
	Grains	12	Fruits& Veg	30	Fish	12
	Fish	11	Fish	13	-	-

Notes: * (Southern Mediterranean Region) SME includes a subset of MENA only (Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Syria, Tunisia and Turkey).
Source: The Euro-Med Partnership, Analysis and Proposals of FEMISE, February 1999.

Table 4: Weighted Average Tariff rate in Selected MENA Countries and Other Regions

	Weighted Average Tariff
Algeria	21.6
Egypt	28.0
Israel	7.2
Jordan	19.8
Lebanon	24.2
Morocco	20.3
Syria	17.2
Tunisia	31.7
High Income Countries	5.8
Developing countries	21.4
World	8.2

Notes: Tariff as of March 1996 except for Algeria (1992).
Source: Havrylyshyn (1996) as reported in Alonso-Gamo, Fennell and Sakr (1997).

Table 5: Progress Made on Negotiations of EU-Med. Association Agreements

	Start of Negotiations	End of Negotiations	Signature	Entry into Force
Tunisia	3/94	6/95	7/95	3/98
Israel	2/94	9/95	11/95	-
Morocco	2/94	11/95	2/96	-
Palestinian territories	10/96	12/96	2/97	7/97
Jordan	7/95	4/97	11/97	-
Egypt	1/95	-	07/99*	-
Lebanon	11/95	Negotiations	-	-
Algeria	3/97	Negotiations	-	-
Syria	5/98	Negotiations	-	-
Turkey	-	-	-	CU** since 1996

Notes: * Expected. ** Customs Union
Source: Newsletter, EU Commission Delegation in Syria

Table 6: Revealed Comparative Advantage of MENA Region in Agricultural Trade 1992-94

Categories of Products	International Trade	Intraregional Trade
Fruits and Vegetables	1.62	5.40
Livestock, Meats and Dairy	0.24	1.52
Food , Live Animals	0.63	1.55
Agricultural products	0.54	1.42

Source: DeRosa (1996).

Table 7: Impact of Protection Reduction on Selected Aggregates in the MENA Region (Multi-Market Simulations for Cereals and Livestock Products)

	Tunisia	Morocco	Iraq	Jordan
Income of farmers in rainfed agriculture	Negative (-9.1%)	Positive (1.3%)	Positive (3.0%)	Negative (-8.8%)
Agricultural government Budget	Positive	Negative	Positive	Negative
Agricultural balance of trade	Positive	Positive	Negative	Positive
Environment	Positive	Negative	Negative	Positive

Source: Synthesis of various simulations conducted by researchers in the ICARDA-IFPRI Mashreq & Maghreb Project (Tunisia: Lachaal-Thabet-Mahfoudhi-Chaherli; Morocco: Doukkali-Moussaoui-Chaherli-Bendaoud; Iraq: Shideed-Chaherli; Jordan: Jabarin-Chaherli). Summary of papers presented at the Mashreq & Maghreb Project Policy and Property Rights Workshop, Hammamet, Tunisia, November 25-27, 1998.

Table 8: Trade Liberalization Simulation: Definition

	Trade Liberalization Simulations	
	-1-	-2-
	Agricultural	Agricultural + Manufacturing
Egypt		
Agricultural tariffs	-25%	-25%
Manufacturing tariffs	-	-25%
Morocco		
Agricultural tariffs	-25%	-25%
Non tariff barriers	-25%	-25%
Manufacturing tariffs	-	-25%

Table 9: Agricultural Trade Liberalization Simulation Results from a CGE Model for Egypt

		Trade liberalization simulations	
	Base	-1- Agricultural	-2- Agricultural + Manufacturing
		(% change from base)	
Real per capita household consumption at 1996-97 L.E. prices			
Rural households	2465.3	-0.3	-0.3
Urban households	4318.1	0.4	0.4
Foreign trade data (US$)			
Imports	15565.3	0.2	1.1
Exports	5345	0.3	1.3
Net food and agriculture imports			
Imports	2885.0	2.2	2.8
Exports	372.5	4.3	6.8
Net other goods and services imports			
Imports	12680.3	-0.2	0.8
Exports	4972.5	0.2	1.1
Real GDP at mkt prices (L.E. bn. 1997)	257.6	0.1	0.0
Real total absorption (L.E. bn. 1997.)	264.9	0.1	0.0
Agricultural terms of trade	100	98.5	98.6
Real exchange rate	1.0	0.4	-0.1

Notes: Trade Liberalization Simulations: 1: Agricultural = 25% reduction in tariffs for agricultural commodities (wheat, legumes, rice, maize, fruits, and livestock); 2: Agricultural + manufacturing = simulation -1- + 25% reduction in tariffs for remaining commodities.

Source: Löfgren and El-Said (1999). Computed simulation results using a CGE model for Egypt.

Table 10: Agricultural Trade Liberalization Simulation Results from a CGE Model for Morocco

		Trade liberalization simulations	
	Base	-1- Agricultural	-2- Agricultural + Manufacturing
		(% change from Base)	
Real disposable household income (Dh. bn. 1994)			
Poor urban households	3.0	4.8	7.6
Non-poor urban households	13.6	3.2	3.3
Poor rural households	2.7	-9.2	-8.5
Non-poor rural households	6.5	-3.2	-4.1
Real trade quantities (Dh. bn. 1994)			
Imports	86.3	0.4	3.1
Exports	70.8	0.6	4.2
Aricultural imports			
Imports	4.9	6.6	3.3
Exports	5.7	4.6	5.2
Other imports			
Imports	65.3	-0.7	4.1
Exports	36.3	1.0	6.9
Real GDP at market prices (Dh. bn. 1994)	279.2	0.5	0.3
Real total absorption (Dh. bn. 1994)	294.7	0.5	0.1
Agricultural terms of trade	100	88.6	89.8
Real exchange rate (1994=1)	1	1.7	3.7

Notes: Trade Liberalization Simulations: 1: Agricultural = 25% reduction in tariffs for agricultural commodities (soft wheat, hard wheat, barley, maize, sunflower, other industrial crops, vegetables, citrus , olives, other fruit, livestock (including beef, sheep-goat meat and wool), forestry and fishing) + a 25% reduction in non-tariff barriers (NTBs). 2: Agricultural + manufacturing = simulation 1 + 25% reduction in tariffs and NTBs for remaining manufacturing commodities.

Source: Löfgren *et al*. (1999). Computed simulation results using a CGE model for Morocco.

Table 11: Status of MENA Membership into WTO in 1998

	MENA signatories	WTO membership requested
North Africa	Egypt, Mauritania, Morocco, Tunisia	Algeria, Sudan
Middle East	Bahrain, Cyprus, Israel, Kuwait, Turkey	Jordan, Saudi Arabia

Note: Oman and Iran have requested observer status