TECHNICAL REPORT

The Doha Development Round and Projected Impacts on Egyptian Trade and Production: A Global CGE Analysis

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Introduction

The Doha Round of trade negotiations, started in 2001, promises to cut tariffs and improve market access for goods and services world wide for all WTO members. Five years have passed since the start of the Round, and trade ministers are behind in negotiations, with the Round lacking consensus on key elements such as tariff and subsidy cutting modalities. Still, five years of negotiations has indicated the direction of a potential deal in agricultural and nonagricultural products. This paper explores one such avenue and its implications for Egypt's economy.

In this paper, three import tariff cutting market access formulas for agriculture and non-agricultural products are considered in conjunction with the elimination of agricultural export subsidies. The first two market access formulas are for agricultural products and are based on a four tier (liner) tariff cutting formula similar to the one proposed in the Hong Kong ministerial by the group of 20. This four tier formula is then modified to consider the impacts of allowing sensitive products (up to 2% of tariff lines for developed countries and 4% for developing countries) to be exempt from the round. Keeping with the Round's goal to be carried out as a single undertaking, trade liberalization for non-agricultural goods is simultaneously modeled based on a Swiss type (Girard) formula for non-linear tariff cuts. Finally, underlying all the scenarios, it is assumed that export subsidies for agriculture are eliminated.

Proposed agricultural market access reductions based on the Harbinson, proposal would only have minimal impacts on Egypt's import tariffs, since Egypt has significant binding overhang—where bound tariffs, to be cut in the round, are significantly above applied tariff rates. Cuts to Egypt's non-agricultural tariffs would be greater than in agriculture when applying the Girard Swiss type formula. Overall, the impacts of the Doha Round on Egypt's economy have a negligible, but positive effect, on welfare (US$7 million). Overall welfare effects mask significant sector impacts for products such as textiles, apparel, dairy, live stock, rice and transportation services. Egyptian imports of apparel increase by nearly 12.9 percent or US$ 199 million while exports of the same products decline by US$20.9 million or 3 percent. The net effect of rising textile and apparel imports and declining exports is to reduce output in those sectors by between -1.8 and -4.1 percent respectively, or over US$400 million. Egypt's exports of agricultural products increases modestly by US $ 65 million, led by exports of live stock and dairy products, vegetables, fruits and nuts (US$18 million) and paddy rice (US$14 million. The overall impacts of the Doha Round scenarios on Egyptian agricultural output are estimated to increase output on that sector by a little over 0.5% or US$ 195 million.

In the following pages, the methodology and data applied in the analysis are reviewed, followed by a review of the state of play in the Doha Round of negotiations. Finally, sector by sector and country by country breakdowns of the model's results are presented.

Methodology and Data

Computable General Equilibrium (CGE) models bring together economic theory with real life data to create a practical tool for exploring economic policies, such as changes to tariffs, and their impacts on an economic system. A number of features make CGE models stand out from other types of models. CGE models are characterized by numerous economic agents (producers, consumers, and government), sectors (industries), and factors of production (labor, capitol and land) which have their behaviors represented by mathematical formulas. These economic structures are then married to a rigorous accounting system, which insures that all resource constraints, such as available land, capital and labor are enforced. Because a CGE model gatherers together all the significant elements of an economy, they can account for, in theory, all the flow through and feedback effects of policy changes.

It is because of their ability to account for feedback and flow through effects that CGE models are well suited to study the implications of multi-lateral trade agreements, such as the Doha Round of negotiations, since the policies being considered would cut across a large number of sectors and regions. Within the family of CGE models, there are two major divisions: global models which explicitly model many countries, in effect accounting for global economic activity, and single country models, which focus on the direct effects of policies, without all the feed back effects at the border, as with a global model. Each type of model has its advantages and disadvantages and hybrids borrowing on the strengths of each exist. The global model is particularly well suited to modeling changes trade policies, such as those resulting from the Doha Round, since they explicitly model all the economies engaged in trade negotiations. However, global models have enormous data requirements. Because of their data requirements, global models can be somewhat less flexible, since any change to the model is likely to require global data that is unavailable. A single country model can only approximate the feed through and feed backs effects at the border, making them better suited to modeling unilateral polices, such as domestic tax or subsidy changes or unilateral tariff liberalization. Single country models also have the advantage of moderate data requirements and greater flexibility for defining sector and economic details. Table 2-1 contrasts the impacts accounted for in the global model vs. the single country model, for the case of Egypt for Doha Round liberalization scenarios analyzed in this paper. The impacts accounted for by applying a global model vs. a single country model varies between sectors. In agriculture, the vast majority of the Doha Round impacts result from modeling *other* countries and markets than Egypt—the most significant concessions will be made abroad and will have impacts on Egypt's agricultural sector (we do not model domestic support liberalization, which would only increase the global impacts on Egypt). In the case of manufactures (NAMA), the majority of impacts resulting from the Doha Round are the result of Egypt's own liberalization with only about 1/3 the impacts on Egypt resulting from changes that occur outside of

Egypt's borders, such as preference and competitiveness erosion—still a significant portion. Services, whose proposed Doha liberalizations were not modeled here, are impacted primarily by events occurring within Egypt and the feed through (border) effects are limited.

Table 2-1
Impacts of Doha Liberalizations – counting the impacts across borders

Sector	Global Model (over the border impacts)	Single Country Model (within the border impacts)
Agriculture	100%	21%
Manufactures	100%	66%
Services	100%	85%

Source: GTAP model and database 6.2.

Against the advantages of a CGE model, certain factors must be considered carefully when interpreting their results—including those in this study. Modeling any economy requires some degree of abstractions and assumptions and CGE models can be sensitive to data and formula specifications. For example, is the textile industry best modeled as perfectly competitive, monopolistic or something in-between? Is unskilled labor really a scare resource, or is it generally available in surplus? Is the trade balance fixed or is there room for macroeconomic adjustments, such as increased foreign investment? Often these issues are not clear cut. Results can be sensitive to these assumptions. For these reasons, CGE results should be considered carefully. It is best when CGE analysis is supported by detailed industry studies and analysis from other models. In any case, key conclusion should be probed and questioned, not only to justify their validity, but so that their full consequences can be understood. One economist likens the CGE process to the "the economist's laboratory".

The CGE model employed in this paper, the GTAP model and data, is widely used and publicly available. Multi-region and multi-sector, it assumes perfect competition and constant return to scale in all markets[1]. These are rather strong assumptions and they best apply to markets with relatively homogenous products. Moreover, the standard GTAP model is a comparative static model, since investment decisions do not have any impact on industries capacity to produce in future periods. Such "dynamic" effects can be explored with the GTAP "Dyn" model, which allows for testing of investment decisions—but this extension is not employed here. Because the GTAP model is a comparative static model, and it does not model the dynamic effects of policies, its results have to be viewed as somewhat conservative. Even with these qualifications, the CGE model can provide powerful insights into the underlying data and mechanisms of economic change resulting from important policies such as Egypt and other trade ministers concluding the Doha Round of WTO negotiations.

[1] Publicly available variations of the GTAP model are available that allow for imperfect competition and increasing returns to scale. It should also be noted that a small country variation of the GTAP model can be easily employed using the Crusoe suite of applications available for free.

Modeling Assumptions (Closure)

While the main assumptions of the GTAP model are reviewed above, and its database is reviewed below, there are several key assumptions imposed on the general model in the analysis contained in this paper. CGE models are generally built on micro-economic foundations of industry supply and demand. However, at some point a modeler must make assumptions about how the macro economy (capital flows, interest rates, employment, wages, and government budgets) will behave. These aspects are often referred to by economists as closures, or how the economist views the macro economy, and closes the economic system's link between the micro and macro economy.

For the purposes of analysis in this paper, it is assumed that there is unemployment in all countries (including Egypt), except the developed countries of the US, EU, and Japan. This closure is achieved by fixing the real wage[2] of unskilled labor. Semi-skilled and skilled labor is considered to be in limited supply in all regions, but is mobile between sectors. Next, we consider the trade balance for each country. The trade balance is an important macro-economic variable because it is tied to capital markets and capital flows. For a country to systemically change its balance of trade in goods and services, it must incur significant changes to capital flows, either through domestic savings or foreign investment[3]. So, in essence, when a modeler allows the trade balance to change, they are making an assumption about savings and investment. The assumption employed in this analysis is that all countries, other then the developed countries and the emerging Asian giants (India and China), have their trade balances fixed.

GTAP Database

A global CGE model, with many sectors and countries, requires an enormous amount of information covering topics from trade flows, border protection, industry cost structures, consumption, and investment. The GTAP database provides a unique data source that summarizes these data into 57 sectors and 92 countries—no other databases can claim such comprehensive coverage. Based on consultations with staff in the Egyptian Ministry or Trade, the 92 regions were aggregated to 12 regions of strategic importance to the trade negotiations. The 57 sectors were aggregated to 26. Both aggregations are included in table 2-2.

The GTAP database is publicly available and widely used[4] and is currently benchmarked to 2001, the last year for which comprehensive data on global trade and protection was assembled. More recent data are brought into the database and include: Egypt's 2004 tariff schedule; US applied duties for 2005 reflecting the QIZ program; tariffs for the EU are adjusted for EU enlargement; and, finally, all WTO concession resulting from the Uruguay Round that were schedule for implementation through 2004 were updated. The database used for simulations are a special adjunct to the standard GTAP database created by the CEPII group in conjunction

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[2] In a CGE model, prices only matter in relative terms and must be measured against other prices to be meaningful. The real wage is therefore fixed, instead of the nominal wage.

[3] This known for the famous identity in macro-economics of S-I = X – M.

[4] The standard GTAP framework and database is documented in *Global Trade Analysis: Modeling and Applications*, T.W. Hertel (ed.), published in the spring of 1997 by Cambridge University Press. A detailed discussion of the GTPA databses can be found in Dimaranan, Betina V., Editor (2006, forthcoming). *Global Trade, Assistance, and Production: The GTAP 6 Data Base*, Center for Global Trade Analysis, Purdue University and at https://www.gtap.agecon.purdue.edu/databases/v6/v6_doco.asp

with UNCTAD and the WTO-it is discussed further below. Key elements of the GTAP database are summarized below.

Table 2-2
Sectors and Regions

Sector	Country \ Region
AGRICULTURE	Central America
Cereal and Feed	China (PRC, Taiwan and Hong Kong)
Fibers (cotton, wool, flax)	EU
Live Stock and Dairy Products	India
Other Ag	Japan
Processed Food, Beverages, and Tobacco	LDCs
Paddy Rice	MERCOSUR
Processed Rice	MEXICO
Veg, Fruit, Nuts	ROW
Veg. Oil and Fats	USA
Wheat	
NAMA	
Apparel and Leather Products	
Textiles	
Cars and Transport Equipment	
Chemicals	
Machinery and Electric Equipment	
Metal Products	
Minerals (e.g. Cement)	
Metals (Ferrous and non-Ferrous)	
Other Manufactures	
Wood, Pulp and Paper	
Energy (Coal, Oil and Gas)	
SERVICES	
Electric Distribution	
Construction	
Trade and Finance	
Transport and Communication	
Other Services	

THE GTAP BI-LATERAL TRADE DATABASE (2001)

At the core of the GTAP database are comprehensive sets of bi-lateral trade and trade barriers for over 100 countries at the Harmonized Schedule (HS) six digit level for 2001. Data are collected from the United Nations, The World Trade Organization and National sources. Trade flows (imports and exports) reported by national authorities are combined and scored for consistency and quality on an HS-6 and reporter basis over five years. Based on this quality score, bi-lateral trade flows are developed such that one countries' imports equal the partner countries' exports with adjustments for trade and transportation margins. The value of this methodology should not be underestimated, since statistical reporting of trade data are known to include high incidences of reporting errors (see text box). However, to create data of this accuracy requires data from over 100 reporting countries with significant time lags due to variation in reporting schedules. Researchers are so confronted with a trade off, utilize more recent national statistics which can often contain under or over reporting of trade data by 50 or 100% or more, or use data reported with significant lags that have been corrected based on partner data reporting. In the case of Egypt, its imports and exports are consistently under reported in important categories such that the value of using more up to date (2004) Egyptian trade data are of uncertain value, unless they are subject to extensive cross checking. This analysis therefore uses the balanced trade data for 2001.

Are More Up to Date Data Better?

Within the trade community there is a widely held belief that more up to date trade data are more accurate, since they reflect events that have recently taken place. However, errors in trade data are notorious around the world. Take the case of Egypt's reported exports of apparel in 2002 of $US 142 million[5]. Comparing this figure to US and EU imports of apparel from Egypt over the same period, the figure is estimated at US$ 981 million[6], a different of almost six times. When assembling a global trade database, the GTAP program relies on comparisons of reporters and partner's data to eliminate systematic errors such as this. For example, the GTAP database reports Egypt's exports of apparel for 2001 as US$701 million, while Egyptian exports reported to the UN are US$148 million. To make systemic corrections to trade data, a large number of reporters are required, resulting in significant lags in data reporting. While the value of crossed checked data in the case of trade statistics can be crucial, other data, such as tariffs, are reliable and more recent data are preferred.

THE GTAP PROTECTION DATABASE

The GTAP program utilizes a unique database of border protection that is the result of a joint project of the United Nations Trade and Development Committee (UNCTAD), the World Trade Organization (WTO) and *Centre d'Etudes Prospectives et d'Informations Internationales* (CEPII). The objective of this joint project is to create one of the most comprehensive databases of WTO and applied tariff protection data in existence today. A key feature of the CEPII-UNCTAD-WTO database is the estimation of ad-valorem equivalents of specific tariff rates and tariff rate quotas. Estimating the ad-valorem equivalents (AVEs) of specific duties requires representative

[5] UN COMTRADE Database
[6] Changing Trade Rules for Textiles and Apparel: Egyptian Market Access, January 2004, Nathan Associates Inc.

reference price data of a country's typical import values "but-for" the specific duties. The "but-for" specific duties caveat is a significant problem, since specific duties often distort trade values, usually shifting imports to higher value products that are less sensitive to the application of these duties; the end result is estimation of ad-valorem specific rates tends to be understated. This is especially true for less developed countries, where large segments of the consuming population are extremely sensitive to the higher prices resulting from the specific duties. The significance of these estimates is important for the agriculture, food and food product sectors, where they are commonly used in place of traditional ad-valorem tariffs. The use of specific duties is far less prevalent in the manufacturing and resource sectors, although petroleum frequently attracts a standard specific tax rates that is relatively low. The CEPII database estimates reference prices for converting specific duties based on several regional and product groupings that take into account the level of development of a given country. In this way serious error due to the utilization of distortion laden data are minimized. The GTAP\CEPII database is based on tariff and trade data available in 2001.

Another important aspect of the CEPII\GTAP protection database is its emphasis on bi-lateral protection, accounting for trade preferences which create protection rates that vary between countries on a bi-lateral basis. This is in sharp contrast to traditional protection databases, which often report protection data on a singular basis, representing either MFN duties or averages of both preferential tariffs and MFN protection. This greatly enhances the analytical power of the database, since it is a reasonably accurate representation of actual, as opposed to average protection levels.

The WTO Uruguay Round succeeded in eliminating most quantitative barriers to trade, requiring members to tariffy all such restrictions. Although the original intent of tariffying quantitative restrictions was to improve the transparency of protection levels, it has instead resulted in an equally complex and obscure systems of tariff rate quota levels or TRQs. TRQs obscure protection levels since they stratify the tariff data based on realized import levels, resulting in rents to quota holders. The CEPII\GTAP database estimates the value of TRQs based on their marginal values which is the level of protection for the last good entered under the stratified system. Moreover, rents are estimated based quota rights, further enhancing analytical power of these protection measures in estimating the effects of TRQs on welfare and distributional gains.

CEPII DOHA MARKET ACCESS SCENARIOS

The current Doha Round of market access negotiation launched in 2001, seeks to reduce and possibly even eliminate tariffs and trade barriers world wide. Member countries have agreed that the basis of Doha Round market access negotiations will be 2001 MFN bound duties. A significant attribute of MFN bound duties is that for many countries, and developing countries in particular, bound duty rates often exceed MFN applied rates and preferential rates. Negotiators refer to this gap between bound rates and applied or preferential rates as the "binding overhang"[7]. The importance of the binding overhand can not be overstated, since the application of WTO Doha Round tariff reduction formulas (reviewed below) require the use of bound rates rather than applied rates. To accurately calculate the effects of tariff reduction formulas, one must work through bound rates to find the effective cut to applied rates, if any. To do this, the standard GTAP database of applied and

[7] See Binding Overhand and Tariff-Cutting Formulas: A Systematic, World-Wide Quantitative Assessment, Mohamed Hedi Bchir, Sebastian, Jean and Laborde, David, May 30 2005, CEPII.

preferential tariffs must be augmented to include MFN bound and applied tariff rates. The Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) has undertaken the enormous task of converting the WTO CEP database to the HS6 level and matching it to the GTAP database of HS6 bi-lateral applied tariffs and trade. After matching WTO bound rates to the GTAP applied and preferential rates, CEPII researchers calculated 10 Doha market access scenarios in an effort to illustrate several significant possible outcomes from the negotiations[8]. The scenarios include:

- S1: Agricultural cuts based on a harmonizing (Swiss or non-linear) formula;
- S2: Agricultural cuts based on a harmonizing formula (S1) with 2% sensitive products;
- S3: Agricultural cuts based on a harmonizing formula (S1) with 5% sensitive products;
- S4: Agricultural proportional cuts based on a four tier formula;
- S5: Agricultural proportional cuts based on a four tier formula with 2% sensitive products;
- S6: Agricultural cuts with harmonizing formula (S2) with a 200% tariff cap;
- S7: Agricultural cuts with light harmonizing formula;
- S8: Agricultural cuts based on harmonizing formula (S1) and 50% cuts in NAMA for developed countries and 33% cut for developing countries and 0% cut for LDCs;
- S9:Agricultural cuts based on harmonizing formula (S1) and NAMA cuts based on a non-linear Swiss type (Girard) formula with a coefficient of 1 for developed countries and 2 for developing countries and LDCs get the round for free;
- S10: Developed countries cut (S1) and NAMA at 50% cut for all countries.

UPDATING THE GTAP DATABASE OF TRADE AND TARIFFS

To more accurately estimate the impacts of Doha trade barrier reductions, the base GTAP tariff database is updated at the HS-6 level for several important events. Prior to running any simulations tariffs are altered to account for:

- The expansion of the EU-15 to the EU 25 requiring the elimination of selected tariffs and duties for the 10 acceding countries as well as setting their prior tariffs to the EU Common External Tariff (CET);
- The balance of Uruguay Round tariff and duty reductions to be phased out by the end of 2004;
- The accession of China and Taiwan to the WTO in 2002;
- The implementation of the US QIZ program for Egypt with US average applied rates for 2005;
- Egyptian tariffs were updated to 2004 MFN bound and applied rates.

In addition to these modifications to tariff schedules, we simulate the implementation of the WTO Agreement on Textiles and Clothing (ATC) on trade shares.

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[8] Binding Overhang and Tariff-Cutting formulas: A Systematic, World-wide Quantitative Assessment by Bchir, Mohamed Hedi, Sébastien Jean and David Laborde. Paper presented at the Eighth Annual Conference on Global Economic Analysis, Lübeck, Germany and Consequences of Alternative Formulas for Agricultural Tariff Cuts by Jean, Sébastien, David Laborde and Will Martin. Chapter 4 in W. Martin and K. Anderson (eds.) Agricultural reform and the Doha Development Agenda, Washington, D.C., The World Bank

State of Play in the Doha Round

Early in 2000 WTO negotiations on agriculture and services began and the November 2001 declaration of the Fourth Ministerial Conference in Doha, Qatar, provided a mandate for negotiations on a range of subjects and other work including NAMA. Since 2001, successive rounds of negotiations in Cancun (2003), Geneva (2004) and most recently, Hong Kong (2005) have refined this work. Negotiations have grown to include not only topics of tariff cutting formulas for goods and market access on services, but are now working on special and differential treatment for developing countries which range from flexibility in tariff reductions to new tariff preferences for the least developed countries. These last points have resulted in the Doha Round of negotiations being dubbed "the development round". While these development issues are being given significant attention, the current state of negotiations continues to focus on agricultural market access (tariffs and duty reductions) and reductions in agricultural support including export subsidies and domestic support programs. Agricultural market access negotiations have been inching ahead, with deadlines being set and deadlines passing, with incremental progress in-between. Progress on NAMA has been described by one observer of the round as "almost indiscernible". This is all the more concerning because negotiators have agreed to conclude the round in a single undertaking, requiring that the final deal consider both NAMA and agricultural market access. As of July 2006, the Director General, Pascal Lamy, of the WTO has summed up the lack of progress in negotiations by claiming the round is now "in a state of crisis" and is threatened with termination. Ministers have failed to narrow their differences on the "modalities", or templates for the agreement that are needed to implement detailed cuts in tariffs and agricultural subsidies. Members have asked Pascal Lamy to try brokering a compromise "as soon as possible". The arrested development of the Doha Round posses special challenges to researchers seeking to estimate the economic impacts of the round, since without details on tariff cutting formulas, and their parameters, any analysis is an informed point estimate. Nevertheless, it would be fool hardy not to take the round's economic impacts into serious consideration, since negotiations are frequently carried out, and make significant progress, when conditions reach a crisis or when a compromise can be identified. So, while the Doha Round is in peril, it may also be at near a point to concluding, suddenly with a breakthrough (although many would say this is remote). In the following sections we review the state of play in the major market access negotiations for agricultural and NAMA tariff reductions. A review of the proposals currently being negotiated allows for the narrowing of possibilities in the proposed modalities or tariff cutting formulas. Comparing the current state of play in proposals to the ten CEPII scenarios, the field of analysis can be greatly reduced to just three of the CEPII scenarios (S4, S5, and S9).

Agriculture

Agricultural negotiations are comprised of the three pillars: market access (tariffs), export subsidies, and domestic support. Negotiations in Agriculture are among the most contentious in the round, since tariffs and support in the developed countries are significant and developing countries are seeking markedly improved access for their products. Negotiations of cotton tariffs and subsidies have become a rallying point for developing countries across the globe.

Export subsidies, payments conditional on goods crossing borders, take on a number of forms including cash payments, special loans, sales of government commodity stocks below market prices and the payment of freight charges. The European Union is by far the primary user of export subsidies as can be seen in Table 3-1. The implication of export subsidies is complex, since they not only increase the demand for locally produced products, but they also suppress world prices, putting farmers in poor countries at a disadvantage. At the same time that export subsidies put some producers at a disadvantage, they also benefit consumers in poor countries through lower prices.

Table 3-1
Agricultural Export Subsidies (Millions of Dollars)

Country\Region	WTO Reporting 1999	GTAP Database 2001
European Union*	5,853.8	4,019.0
United States	80.2	63.9
Rest of the World	175.1	284.1
Total	6,504.1	4,388.4

Source: USDA Economic Research Service, based on WTO notifications.

Note: The EUs subsidies have reportedly declined significantly since 2001 – to roughly US$ 3.3 billion.

Members have agreed to eliminate export subsidies, but the time line over which they would be phased out is a point with little agreement. The EU favors a long period to phase out export subsidies and the US prefers the subsidies to be eliminated within five years. In the scenarios that follow, the assumption is that all export subsidies are phased out—no time line of phasing is implied.

Progress on market access and domestic support has been far more contentious with the US and EU taking opposite positions on the degree of liberalization in each area—not surprising, since the US utilizes domestic support payments far more than the EU and the EU employs high tariffs as its primary means of protection. Domestic supports are subsidies and programs that governments use to assist their agricultural sectors and which are applied within the countries borders and are not conditional on exporting. Negotiators have agreed to "substantial reductions" in domestic support mechanisms that effect trade, but current offers are linked to substantial progress in other areas of agricultural negotiations, non-agricultural products and services. Domestic supports are used almost exclusively by developed countries and developing countries are pressing for their elimination. At the same time, many developing countries are unwilling to make the concession in market access The strength of domestic interest groups is strong and any deal will likely be a series of

compromises. An analysis of domestic support liberalization of tariffs in agriculture is beyond the scope of the current analysis. Instead the focus of the analysis is on market access liberalization, which is now at more developed stage, with negotiations having tentatively agreed on some basic modalities for tariff cutting while narrowing the parameters of such an endeavor.

At the end of the Hong Kong negotiations, ministers overcame two major hurdles to agricultural market access by agreeing on the use of *Ad Valorem* tariff equivalents (AVE) of specific duty rates as well as proportional and tiered rate cuts for agriculture. Two of the CEPII scenarios (crafted well before the Hong Kong ministerial) are based on a tiered formula cut known as the Harbinson proposal (July 2003). The Harbinson proposal, first drafted more than three years ago, was the result of significant consultations and negotiations, but was ultimately rejected in latter rounds. Although rejected, many observers recognized the significant input and concultation that the Harbinson proposal embodied, and many observers believe that the final deal would likely reflect many of the Harbinson proposals elements. Table 3-2 contains the Harbinson proposals and tariff cutting formulas for developed and developing countries.

Table 3-2
Harbinson Tiered Tariff Cutting Formula for Agriculture Employed in CGE Scenarios of Egypt's Market Access in the Doha Round

Band	Developed Countries		Developing Countries	
	Tariff Range	Cut	Tariff Range	Cut
1	< 15%	40%	< 20%	25%
2	15% - 90%	50%	20% - 60%	30%
3	> 90	60	60% -120%	35%
4	--	--	> 120%	40%

Source: WTO July 2003 Doc 03-1585.

The major elements of the Harbinson proposal included four tiers based on base bound rates and differential tariff cuts for developed and developing countries. The tariff cuts for developed countries range between 40 and 60 percent and the cuts for developing countries being close to two-thirds of the developed countries' cuts. Table 3-3 illustrates the current range of proposals on the negotiating table as of June 2006. Three proposals are illustrated for the US, EU and G-20 and the last row illustrating not a proposal, but a description of the CEPII\Harbinson cuts employed in this papers analysis of the Doha Round. The US proposal calls for the most aggressive tariff cuts (55% - 90%) the EU is proposing more modest tariff cuts (20%-60%) and the G-20 proposal is between the two (45%-75%). A significant observation is that the Harbinson proposal employed in this paper (and illustrated in table 3-2) is between the US and EU proposals and close to the G-20 proposal. This is important, since many observers expect exactly this type of outcome, one that is between the US and EU proposals, if any. The tariff cutting formulas tabled for developed countries are roughly 2/3 the developing countries' cuts.

Table 3-3
Ranges of Proposed Tariff Cutting Formulas for Agriculture (June 2006)

Band	Developed Countries		Developing Countries	
	Tariff Range	Cut	Tariff Range	Cut
US*	--	55- 90 %	--	2/3 developed of the countries
EU*	--	20-60%	--	2/3 developed of the countries
G-20*	---	45-75%	--	2/3 developed of the countries
CEPII- Harbinson Proposal	--	40-60%	--	2/3 (26-40)

Source: Trade Bridges, June 2006 and other sources.

A significant parameter of the cuts, the tariff ranges, is less clear, and could have significant impacts on the final cuts of the round. Table 3-4 illustrates the implications of applying the Harbinson formula to Egypt's 2004 tariff schedule. The changes reflect the impact of cutting MFN bound rates on applied rates. Of significance to Egypt, the Harbinson proposal has only minimal effects on 2004 applied agricultural tariff rates. Cuts in applied rates are minimal with a peak cut of 2.7% on certain live stock and dairy products. The minimal impacts of the Harbinson proposal on Egypt is due in large part to the fact that Egypt's MFN bound tariffs on agricultural imports are higher than Egypt's 2004 applied rates, resulting in significant binding overhand on agricultural products. Another significant attribute, and a major question to be addressed in the Doha Round, are "sin" taxes on alcohol and tobacco products, which in Egypt peak at 3,000%. Alcohol and Tobacco products are the only product area that could be significantly impacted by the Harbinson proposal. However, it seems unlikely that countries will concede to eliminating or reducing these tariffs to a meaningful level. Table 1-3, therefore, excludes alcohol and tobacco products from any tariff cutting formula – either as sensitive products or another basis yet to be defined in the round[9]. It is expected that this assumption is closer to the ultimate outcome in the negotiations then assuming meaningful reductions in these tariffs.

[9] It is possible that importing countries would simply replace import tariffs with prohibitive domestic taxes, to achieve the desired result.

Table 3-4
Trade Weighted Average Egyptian Agricultural Import Applied Tariffs 2004 with Proposed Harbinson Doha Reductions

	Cent. Amer.	China	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
BASE 2004 APPLIED TARIFF											
Cereal and Feed	2.9	3.8	2.0	5.0	--	4.5	2.0	3.5	2.4	2.0	3.2
Fibers	--	1.0	0.2	0.8	--	--	--	--	--	--	--
Live Stock and Dairy	13.4	5.9	8.4	5.0	5.1	1.9	6.2	7.3	7.8	5.1	12.5
Other Ag	4.8	66.2	23.6	37.4	2.1	3.9	26.7	35.4	20.5	10.4	9.1
Processed Food and Beverage*	587.5	273.1	197.2	49.8	222.5	47.7	8.2	45.2	43.6	30.9	26.5
Paddy Rice	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Processed Rice	2.0	2.0	2.0	2.0	--	2.0	2.0	--	2.0	--	2.0
Veg, Fruit, Nuts	11.9	2.8	7.1	4.4	11.4	16.7	18.3	5.0	5.6	20.6	19.3
Veg. Oil and Fats	7.5	5.0	4.1	2.2	8.2	2.0	3.1	4.3	7.3	1.9	4.8
Wheat	2.0	2.0	2.0	2.0	--	2.0	2.0	2.0	2.0	2.0	2.0
POST HARBINSON PROPOSAL APPLIED RATE											
Cereal and Feed	2.9	3.8	2.0	5.0	--	4.5	2.0	3.5	2.4	2.0	3.2
Fibers	--	1.0	0.2	0.8	--	--	--	--	--	--	--
Live Stock and Dairy	13.3	5.9	8.4	5.0	5.1	1.9	6.2	7.1	7.8	5.1	12.4
Other Ag	4.8	66.2	23.6	37.4	2.1	3.9	26.7	35.4	20.5	10.4	9.1
Processed Food and Beverage	587.5	273.1	197.2	49.6	222.2	47.6	8.2	45.2	43.6	30.9	26.5
Paddy Rice	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Processed Rice	2.0	2.0	2.0	2.0	--	2.0	2.0	--	2.0	--	2.0
Veg, Fruit, Nuts	11.9	2.8	7.1	4.4	11.4	16.7	18.3	5.0	5.6	20.6	19.3
Veg. Oil and Fats	7.5	5.0	4.1	2.2	8.2	2.0	3.1	4.3	7.3	1.9	4.8
Wheat	2.0	2.0	2.0	2.0	--	2.0	2.0	2.0	2.0	2.0	2.0
PERCENTAGE REDUCTION IN TARIFF											
Cereal and Feed	--	--	--	-	-	--	--	--	--	--	---
Fibers	--	--	--	--	--	--	--	--	--	--	--
Live Stock and Dairy	-0.5	-0.3	--	-0.1	--	--	-0.5	--	-2.7	-0.3	--
Other Ag	--	--	--	--	--	--	--	--	--	--	-0.1
Processed Food and Beverage*	--	--	--	--	-0.4	-0.1	-0.3	--	--	-0.1	-0.1
Paddy Rice	--	--	--	--	--	0.0	--	--	--	--	--
Processed Rice	--	--	--	--	--	--	--	--	--	--	--
Veg, Fruit, Nuts	--	--	--	--	--	0.0	--	--	--	--	--
Veg. Oil and Fats	-0.1	--	--	--	--	-1.0	--	--	--	--	--
Wheat	--	--	--	--	--	--	--	--	--	--	--

Source: Calculations from GTAP database (trade weights) and Egypt's 2004 Tariff Schedule for Base and Applied Tariff Rates.

**Beverages and Tobacco product tariffs often reach 3,000 %. For purposes of this analysis, these tariffs were set to 1,000 % to minimize their distortion, since they likely carry significant "water" in the tariff..*

Non-Agricultural Market Access (NAMA)

NAMA negotiations have attracted less attention in the current round as they have in the past, reflecting the priorities of developing countries to reduce agricultural protection. Earlier rounds such as the Kennedy and Uruguay Rounds have resulted in significant NAMA tariff reductions in the developed countries. They have also largely resulted in the elimination of quantitative restrictions and subsidies and domestic support. However, textile and apparel products still retain relatively high tariffs in the US (average of 16%) and EU (average of 12%). In contrast to the developed countries, developing countries still maintain high and significant tariffs on NAMA products which the developed countries wish to reduce. This asymmetry is responsible, in part, to the goal that the Doha Round be a single undertaking, that is significant reductions in agricultural tariffs and support must be accompanied by market access for NAMA products.

Some consensus has arisen out of the NAMA negotiations, with ministers favoring a non-linear tariff cutting formula. Non-linear formulas are characterized by their tendency to reduce peak tariffs by more than lower tariffs. This is sometimes referred to as non-proportional cuts or a Swiss type formula. Swiss type formulas almost always require a "coefficient" that defines the rate of reduction. The lower the co-efficient, the higher the cuts to peak tariff rates resulting from a Swiss formula. While negotiators have largely agreed on a Swiss formula approach, there is far less agreement on the specific form of the formula and the coefficient that will be employed. The CEPII scenario (S9) assumes the application of the Girard (WTO 03-4322) "Swiss" type formula:

$$T_1 = \frac{B \times T_a \times T_0}{B \times T_a + T_0}$$

Where T_1 is the new bound tariff rate and B is the coefficient to be determined for reductions, T_0 is the base bound rate and T_a is the average of base bound rates for NAMA products. For purposes of analysis a coefficient of 1 is assumed for developed countries and coefficient of 2 is applied for Egypt and developing countries. It's important to realize that many forms of the Swiss type formulas have been proposed and there is little consensus on the coefficients to be applied. Moreover, ministers have agreed upon sector specific approaches that could result in greater reductions for specific product groups (see text box 1). Most notable of the sector specific approaches has been the zero-for-zero approach proposed by the US to eliminate tariffs between signatories.

Table 3-5
Average Egyptian NAMA Import Applied Tariffs 2004 with Proposed Girard Formula Doha Reductions

	Cent. Amer.	China	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA
BASE 2004 TARIFF										
Apparel	36.7	37.6	31.9	37.0	38.9	31.2	33.9	32.8	39.0	35.7
Textile	21.0	16.3	13.7	12.9	8.9	14.5	5.9	6.6	11.0	4.6
Cars and Transport	20.6	11.5	19.9	12.1	18.9	5.8	26.9	22.5	14.5	6.0
Chemical	22.0	8.3	6.8	7.2	11.0	5.6	7.4	6.7	7.3	6.2
Machinery and Electric	5.6	10.0	6.1	6.9	6.2	6.1	11.1	9.8	8.5	6.2
Metal Products	12.0	17.1	15.1	10.0	12.4	13.1	12.7	10.5	17.6	17.9
Minerals	15.8	27.7	11.9	14.0	12.4	19.6	0.3	28.2	6.8	11.1
Metals	9.1	13.1	8.1	11.8	7.9	2.1	11.3	9.3	2.6	9.3
Other Manufactures	20.4	17.7	18.9	23.3	25.4	14.0	13.1	10.9	17.0	12.0
Wood and Paper	5.8	17.7	11.7	16.1	15.6	10.7	10.3	12.0	9.9	11.3
Energy	6.9	5.2	7.2	11.7	12.5	7.0	7.7	8.0	9.5	5.9
POST DOHA GIRARD PROPOSAL (COEFFICIENT = 2)										
Apparel	23.9	24.5	24.1	23.2	23.6	25.1	26.1	24.0	23.8	24.4
Textile	17.4	13.9	11.8	12.1	8.4	13.7	5.4	6.6	9.8	4.1
Cars and Transport	18.0	10.1	15.9	10.5	17.3	5.4	20.3	16.6	12.7	5.6
Chemical	22.0	8.1	6.6	7.0	10.4	5.4	7.3	6.7	6.9	6.1
Machinery and Electric	5.3	8.5	5.8	6.4	5.9	5.3	10.9	8.6	7.7	6.0
Metal Products	12.0	15.3	14.2	9.7	11.9	11.9	12.1	10.5	16.0	15.0
Minerals	14.9	21.5	11.4	13.7	11.7	19.0	0.3	25.9	6.5	10.8
Metals	0.0	12.7	8.0	11.8	7.9	2.0	11.2	9.2	2.6	9.1
Other Manufactures	18.1	16.3	16.3	21.2	22.0	12.6	12.3	10.9	15.2	11.1
Wood and Paper	5.7	15.7	10.8	15.4	14.3	8.8	10.1	11.5	9.3	9.9
Energy	6.9	5.2	7.2	11.7	12.5	7.1	7.7	8.0	9.5	5.9
PERCENTAGE REDUCTION IN TARIFF										
Apparel	-34.8	-34.7	-24.7	-37.3	-39.3	-19.6	-22.9	-26.9	-39.0	-31.6
Textile	-17.3	-14.8	-13.6	-6.0	-5.2	-5.7	-7.7	0.0	-11.1	-11.2
Cars and Transport	-12.9	-11.7	-20.1	-13.1	-8.6	-7.5	-24.4	-26.0	-12.3	-6.9
Chemical	0.0	-3.0	-3.1	-2.8	-5.4	-3.8	-0.5	-0.1	-5.1	-2.6
Machinery and Electric	-5.0	-15.1	-5.4	-7.2	-5.6	-11.9	-1.6	-12.3	-9.6	-2.6
Metal Products	0.0	-10.4	-5.8	-3.1	-3.4	-8.5	-5.1	-0.4	-8.8	-16.3
Minerals	-5.7	-22.2	-4.3	-2.4	-5.8	-3.0	-5.9	-8.3	-3.3	-2.5
Metals	--	-3.2	-0.9	-0.3	-0.5	-2.9	-0.8	-0.6	-0.8	-1.6
Other Manufactures	-11.1	-8.3	-13.8	-9.3	-13.4	-9.7	-5.9	0.0	-10.6	-7.6
Wood and Paper	-1.9	-10.9	-8.3	-4.8	-8.6	-17.3	-1.6	-3.8	-6.2	-12.4
Energy	0.0	0.0	0.0	0.1	0.0	0.9	0.0	0.1	0.0	0.0

Major Side Issues–Modalities

While the WTO minister's focus on resolving the "crisis" in the Doha Round will likely be on agreeing to formulas and basic parameters and ranges for any tariff cutting formulas, they will also have to come to

agreement on issues such as special and differential treatment (SDT) for developing countries, sensitive products, binding unbound tariffs, tariff caps, phase out schedules and specific formulas for calculating *ad-valorem* equivalent tariffs. Decisions on these issues could affect the impacts resulting from the final Doha Agreement. The scenarios analyzed in this paper review one such possibility by testing the sensitivity of the results to allowing sensitive agricultural products to be excluded from the negotiations. There is no way to know exactly what set of parameters may be ultimately chosen in any final agreement, however, it is helpful to review the possibilities currently being considered in the WTO negotiations.

SPECIAL AND DIFFERENTIAL TREATMENT OF DEVELOPING COUNTRIES

Special and Differential Treatment (SDT) for developing countries was agreed upon early in the Doha Round, in principal, to achieve the round's objective to be a "development" round, supporting developing countries. SDT recognizes the special circumstances of developing countries, and provides for less than reciprocal concessions from developing members. Several areas that have been proposed under the SDT principal include:

- Allowing developing countries longer to implement concessions;
- Allowing developing countries to apply less than the full formula rate (this proposal can be worked into an infinite number of possibilities based on the percentage of tariff lines to which they apply);
- Allowing developing countries to exempt a proportion of their tariff lines from tariff cuts (simulated in this research for agriculture, but this provision could be extended to manufactures);
- Allowing developing counties to opt out of sector approaches;
- Allowing LDCs to opt-out of all tariff cutting formulas while increasing their access to developed country markets through GSP and other programs.

There appears to be little consensus on these issues, but some of their element are sure to be in any final Doha Round agreement.

SECTOR APPROACHES

Early on in the negotiations, some members indicated an interest in making more aggressive tariff cuts, even eliminating tariffs on certain products or sectors. These proposals became known as sector approaches. The reception in the WTO for sector approaches has been met with a tempered reception, with many members entertaining the idea, but few counties outside of the US and EU have actively promoted it. Indeed, as negotiations continued and sector approaches were proposed, they met counter proposals for developing countries to opt out or even for countries to opt in as a default. Perhaps the most widely known proposal for sector approaches is the US zero-for-zero approach promoted by the US trade representative early on in the negotiations in 2003 (box 1).

TEXT BOX 1

The U.S. zero-for-zero proposal would eliminate tariffs on a full-range of consumer and industrial goods from shoes, textiles and apparel, tractors, to children's toys. The proposal calls for a two-step approach to tariff elimination.

Step1: Members must cut and harmonize their tariffs in the five year period from 2005 to 2010. WTO Members would eliminate all tariffs at or below 5 percent by 2010, cut all other tariffs through a "tariff equalizer" formula to less than 8 percent by 2010, and eliminate tariffs on certain highly traded industrial sectors as soon as possible, but not later than 2010.

Step 2: Members would make equal annual cuts in remaining tariffs between 2010 and 2015. These cuts would result in zero tariffs.

The proposal also calls for a separate program to identify and eliminate non-tariff barriers, which would run on a parallel track with the negotiations on industrial tariffs.

SOURCE: *U. S. Trade Representative Office 2003 Annual Report.* www.ustr.gov/reports/2003annual/II-wto.pdf

While sector approaches are most often talked about in relation to NAMA negotiations, they have also been considered for important and sensitive agricultural products such as cotton. There is still little consensus in the WTO Doha Round on a sector approach, however, this importance of these proposals can not be under estimated. A sector approach under taken in a sensitive product category, such as textiles and apparel, which carry high average tariffs world wide could have significant impacts on a country such as Egypt.

FLEXIBILITIES

Early on in the negotiations, member countries agreed on the use of tariff cutting formulas, such as the Harbinson and Girard formulas studied in this paper. The power of such formulas is in the fact that they apply across all products within a category, such as agriculture, with equal consideration. This approach was largely considered more practical than the line by line approaches taken in earlier rounds, which left significant tariffs untouched by the negotiations. However, WTO ministers continue to consider a variety of approaches that would permit members to exempt certain or sensitive products. Flexibilities, allow for such line by line exemptions from the general tariff cutting formula approaches and the lack of agreement on flexibilities is often blamed for the lack of agreement on a tariff cutting formula. However, if members agree to a broad range of exemptions, it seems unlikely many countries will support the agreement. The EU currently supports exemptions or reduced reductions for about 8% of agricultural product lines. Meanwhile, many observers say anything more than 1 to 2 percent of exemptions would make the cuts nearly meaningless. Therefore, it seems likely some form of flexibility, perhaps limited, will be included in any final agreement to appease members concerns over sensitive products.

PEAK TARIFFS

Several modalities have been discussed for reducing peak tariffs that often exceed 1,000 percent in some WTO member countries. It has been a goal of the WTO to reduce these tariffs to more reasonable levels though the general tariff cutting formulas, and\or by setting tariff caps that define the upper limit of any tariff, regardless of the tariff cutting formula. It is unknown how such caps would coincide with any provisions for flexibilities

on sensitive products. It is also not known if such caps would provide allowances for certain types of "sin" taxes, such as those found on Egyptian imports of alcohols and beverages.

Results of GTAP Simulations

Summary Welfare Analysis by Region

A unique feature of a computable general equilibrium (CGE) model is its ability to summarize impacts across an entire economy, netting out positive and negative implications of policy changes on the many agents (consumers, producers, and governments) and the movement of resourses from one sector to another. This is in contrast to partial equilibrium models, which frequently[10] focus on impacts within a given sector, or a group of sectors without accounting for limited resources such as capital, land, or skilled labor. Since CGE models represent, at least in theory, the whole economy under examination, they also provide important perspective, so millions of dollars and thousands of jobs, numbers that are impressive without reference, take on a different meaning when compared to overall economic activity of a country. Table 4- 1 summarizes the estimates of the net welfare impacts of proposed market access liberalization under the two Doha scenarios. The two scenarios considered both assume full liberalization of NAMA products and the liberalization of agricultural export subsidies. In the first scenario, agricultural tariffs are liberalized according to the Harbinson proposal, without any allowance for flexibility for sensitive agricultural products. The second scenario allows for the developed economies to designate 2% of their agricultural tariff lines as sensitive products, exempting them from any tariff reductions in the round[11]. Similarly, developing economies are allowed to exempt double the tariff lines or 4%.

Considering the first scenario, without sensitive agricultural products, overall welfare impacts vary widely between countries and regions ranging from 1.6 percent of GDP for Central America to a loss in welfare of -0.2% for Mexico and the LDCs. Egypt falls in an intermediate position with the Doha Round of reductions having a neutral effect on welfare. The second scenario, allowing for sensitive products in agricultural negotiations, generally reduces the welfare impacts of the round. However, the reduction in benefits varies

[10] Some economist can chain together large numbers of partial equilibrium models in attempt to replicate the entire economy, but they rarely impose the rigid accounting schemes of partial equilibrium models.

[11] Sensitive products were defined by changes in tariff revenue that would result from liberalization, rather than just ordering the tariffs highest to lowest. This approach has the advantage that sectors with significant trade, and high tariffs are selected as sensitive and prohibitively high tariffs are not selected; since many prohibitive tariffs have significant "water in the tariff" they are not always the sectors that will be selected as sensitive.

across countries and regions. Japan, the EU and MERCOSUR, which all experience significant welfare reductions from the inclusion of sensitive products in the round—reflecting the importance of this option to their economies.

In the case of Egypt, overall welfare impacts are modest to neutral with total welfare impacts of market access liberalization at about 1/10th of one percent of GDP or 11 million dollars. The change in welfare allowing for sensitive agricultural products, also has minimal impact since Egypt is not a major exporter of agricultural products, nor do its import tariffs protect sensitive products, with the noted exception of tariffs on beverages and tobacco products, which have prohibitively high tariffs of 1,000 – 3,000 percent applied. Since these tariffs carry significant water in them, scheduled Doha tariff reductions have little effect on trade in these products, and the fact that they are considered sensitive, changes the results little.

Table 4-1.
Welfare Impacts of WTO Market Access Proposals for Agriculture and Non-Agriculture Products

		Millions of 2001 Dollars		Welfare Impacts as a percent of GDP	
Country or Region	GDP Millions of 2001 Dollars	NAMA and Ag Market Access w\o Sensitive Ag Products	NAMA and Ag With Sensitive Ag Products (2% and 4%)	Without Sensitive Ag	With Sensitive Ag Products
Central. America	69,474	1,093	711	1.6%	1.0%
China	1,567,390	10,838	10,659	0.7%	0.7%
Egypt	81,519	11	9	0.0%	0.0%
EU	8,281,309	3,246	1,835	0.0%	0.0%
India	477,574	1,922	1,705	0.4%	0.4%
Japan	4,196,730	9,732	2,940	0.2%	0.1%
LDCs	239,792	-580	-741	-0.2%	-0.3%
MERCOSUR	857,179	2,269	1,230	0.3%	0.1%
MEXICO	616,409	-937	-932	-0.2%	-0.2%
ROW	4,234,577	27,417	17,096	0.6%	0.4%
USA	10,098,768	-1,217	-1,547	0.0%	0.0%
Rest of Mid. East	528,569	-51	-206	0.0%	0.0%

Source: GTAP 6.2 Database for 2001. Welfare Impacts include the elimination of export subsidies, but not liberalization of domestic support.

Welfare Decomposition

The sources of welfare benefits and costs can provide further insight not only into the overall impacts of the Doha Round proposal, but they begin to indicate how different stakeholders within the economy are impacted. Table 4-2 illustrates the four main sources of welfare changes, alloactive efficiency – the gain or loss to an economy of scarce resources, such as land, skilled labor and capital being used more efficiently; the endowment effect – indicating the gain from greater utilization of unemployed factors of production, such as un-skilled labor in Egypt; the terms of trade effect – illustrating the change in the ratio of export prices to

import prices; and the investment savings effect – illustrating the change in the cost of capital exports to imports. In the case of Egypt, the relatively neutral change in overall welfare masks substantial benefits and costs due to the Doha liberalization. The most significant cost to Egypt is the terms of trade effect, indicating that, overall, import prices rise by more than Egypt's export prices costing the economy approximately $165 million dollars across all traded sectors. The endowment effect is the second largest contributor to Egypt's changing welfare, indicating a net gain in un-skilled wage payments of $159 million. Finally, Egypt gains $120 million in allocative efficiency, as constrained resources, such as skilled labor and capital move from highly protected and inefficient sectors, such as textiles and apparel to more productive uses such as in services and construction (reviewed in the following sections) .

Contrasting the results of table 4-2 with table 4-3 we can see that allowing 2% of agricultural products to be eliminated from the Doha agricultural negotiations has little effect on Egypt. Importantly, this flexibility does have significant impacts on major players in the negotiations, such as the EU and MERCOSUR (Argentina, Brazil, Chile, and Uruguay). In the case of Europe, its economies lose significant welfare benefits allowing for 2% of agricultural products to be designated as sensitive. Not surprisingly, the 2% exclusion results in significant depression of EU import prices to the determent of large exporters, such as MERCOSUR, so the terms of trade for the EU actually improve significantly ($1.4 billion dollars) under the 2% exclusion—high stakes for EU agricultural traders. While the EU gains from lower agricultural prices, the 2% exclusion reduces allocative efficiency—the benefit of labor and capital leaving the agricultural sector and moving to more productive uses-- in its member economies by over $3.0 billion dollars canceling all the benefits of suppressed agricultural import prices and illustrating the high cost of its agricultural protection to the economies of the EU.

MERCOSUR offers an example of a major agricultural exporter that loses due to the 2% exclusion. MERCOSUR members lose nearly $1.0 billion to lower agricultural export prices, resulting from the exclusion of sensitive products, underscoring their reluctance to introduce flexibilities into any Doha deal. LDCs also lose from lower agricultural prices and employment—in contradiction to the Doha "development" goals to be achieved—it would seem that special market access rules would need to be developed to achieve the Doha goals for LDCs. The emerging giants, China and India, are only modestly affected by the exclusion of sensitive agricultural products, largely because their economies are engaged in significant trade in manufactures compared to their agricultural.

Table 4-2.
Decomposition of Welfare Impacts of WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Products (Millions of 2001 Dollars)

Country\Region	Allocative Efficiency	Endowment Effects	Terms of Trade Effects	Investment - Savings Effects	Total Welfare Effect
Central America	302	554	311	-78	1,089
China	2,163	5,735	3,353	-413	10,838
Egypt	70	74	-101	-33	11
EU	6,602	0	-3,510	154	3,246
India	1,127	1,072	-289	13	1,922
Japan	8,875	0	1,020	-163	9,732
LDCs	-190	-165	-185	-40	-580
MERCOSUR	513	373	1,399	-18	2,266
MEXICO	46	-343	-713	73	-937
ROW	15,496	11,666	-242	497	27,417
USA	-254	0	-943	-20	-1,217
Rest of Mid. East	48	0	-131	32	-51

Source: GTAP 6.2 Database for 2001. Welfare Impacts include the elimination of export subsidies, but not liberalization of domestic support.

Table 4-3.
Decomposition of Welfare Impacts of WTO Market Access Proposals for Agriculture and Non-Agriculture Products – With 2% Sensitive Agricultural Products

Country\Region	Allocative Efficiency	Endowment Effects	Terms of Trade Effects	Investment - Savings Effects	Total Welfare Effect
Cent. Amer.	248	467	95	-102	708
China	2,078	5,637	3,317	-372	10,659
Egypt	67	76	-100	-35	9
EU	3,730	0	-2,092	197	1,835
India	1,016	891	-219	18	1,705
Japan	1,426	0	1,714	-200	2,940
LDCs	-258	-249	-198	-36	-741
MERCOSUR	434	334	450	12	1,229
MEXICO	5	-353	-665	81	-932
ROW	8,989	7,935	-430	602	17,096
USA	294	0	-1,643	-198	-1,547
Rest of Mid. East	10	0	-253	36	-206

Trade and Production Impacts

Doha Round liberalization of tariffs world wide will impact Egyptian trade and production through several channels. First, reduction of Egyptian import tariffs will reduce the protection Egyptian producers enjoy, increase competition from imports, improve efficiency, and change the composition of production in the Egyptian economy. These first level effects are sometimes referred to as effects from unilateral liberalization, and are often the most significant concern of policy makers when agreeing to any trade agreement. However, it is the expectation of greater exports that will win the policy debate. While this view of the world is certainly a simplification, it nonetheless underscores the principal concerns of policy makers and the structure of the following analysis and presentation.

AGRICULTURE

Table 4-4 illustrates the two Doha Scenarios and their impacts on Egypt's exports and imports of agricultural products. The first scenario estimates the impacts of implementing the Harbinson agricultural proposal in the Doha Round. The second scenario illustrates the impacts of the same agreement on Egypt considering the effects of allowing developed countries to exclude 2% of their agricultural tariff lines and developing countries to exclude 4% of tariff lines from tariff reductions. In both cases, tariffs on NAMA goods are simultaneously liberalized in accordance with the Girard formula. The impacts under each scenario are decomposed to illustrate the total impacts of the Doha Round tariff reductions, including Egypt and all other countries, and the impacts resulting if Egypt was to unilaterally liberalize its import tariffs in accordance with the Doha proposals.

Under both scenarios, Egypt's balance of trade in agricultural products improves by $151 million. However, the similarity between the two scenarios does not hold at the product level. Allowing for sensitive agricultural products to be eliminated from the round shifts exports from live stock, dairy, paddy rice, vegetables fruit and nuts to other agricultural products and, importantly, processed rice—however, the amounts are modest measured in dollar terms.

Chart 4-1
Egyptian Agricultural Exports, Percent Change Due to Doha Round

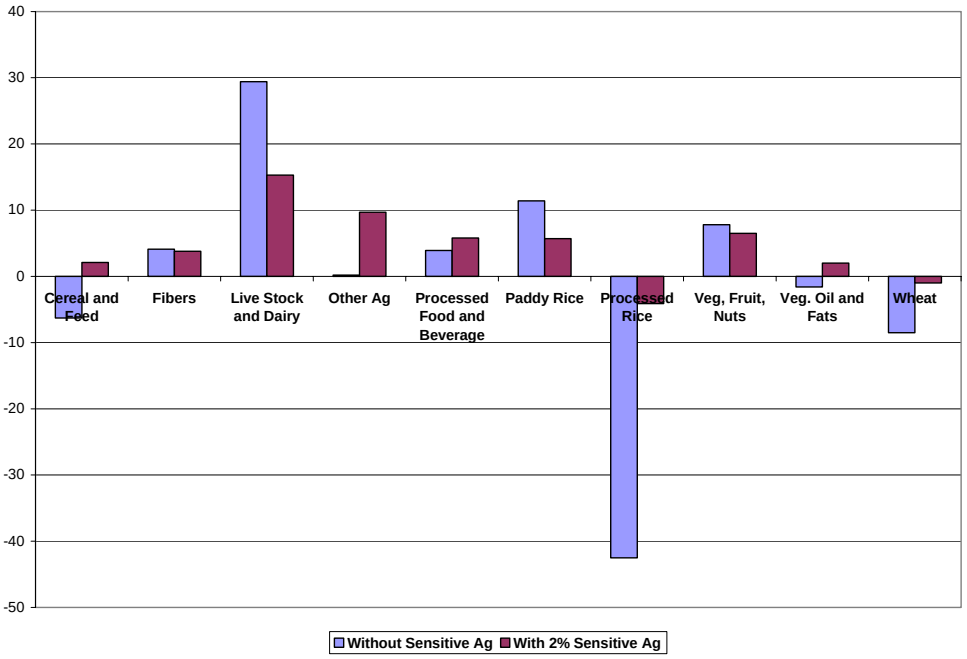


Chart 4-2
Egyptian Imports of Agriculture, Percent Change, Percent Change Due to Doha Round

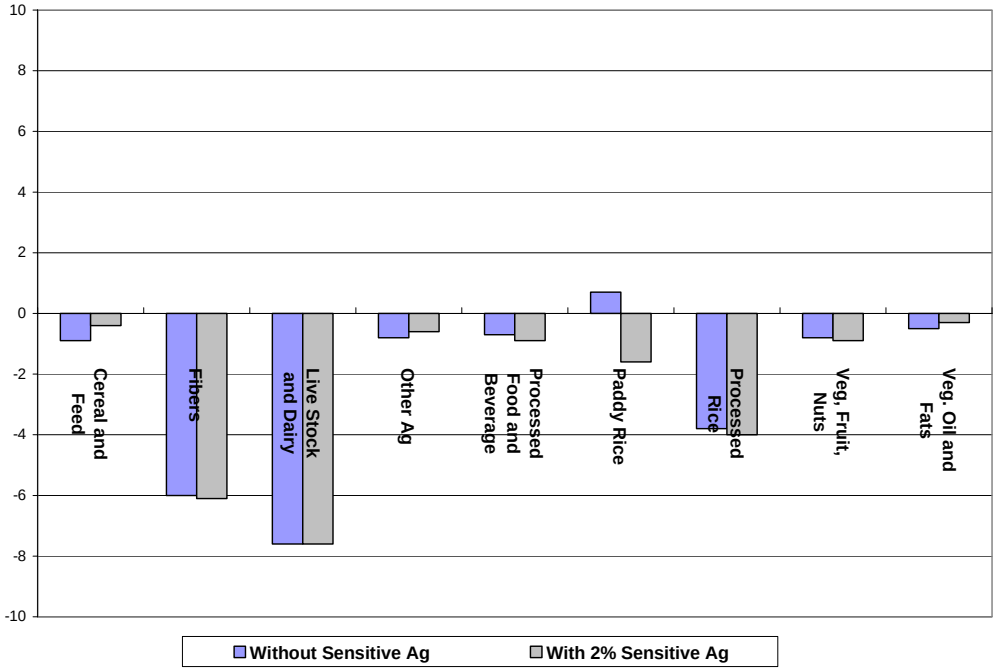


Table 4-4
Agricultural Imports, Exports and Balance of Trade Impacts of Doha Simulations (2001constant prices)

Sector	2001 Egyptian Trade ($ Millions)	Doha Impacts Without Sensitive Ag				Doha Impacts With Sensitive Ag			
		Total Impacts		Unilateral Domestic Liberalization		Total Impacts		Unilateral Domestic Liberalization	
		Percent Change	Dollars	Percent Change	Dollars	Percent Change	Dollars	Percent Change	Dollars
EXPORTS									
Cereal and Feed	19.4	-6.3	-1.2	0.8	0.2	2.1	0.4	0.9	0.2
Fibers	217.7	4.1	9.0	1.6	3.5	3.8	8.4	1.6	3.5
Live Stock and Dairy	115.9	29.4	34.1	2.6	3.0	15.3	17.7	2.5	2.8
Other Ag	120.9	0.2	0.2	1.9	2.3	9.7	11.7	2.0	2.4
Processed Food and Beverage	163.1	3.9	6.3	1.3	2.1	5.8	9.4	1.3	2.1
Paddy Rice	137.1	11.4	15.6	1.5	2.0	5.7	7.8	1.4	1.9
Processed Rice	33.9	-42.5	-14.4	2.3	0.8	-4.1	-1.4	2.8	1.0
Veg, Fruit, Nuts	237.3	7.8	18.4	1.0	2.5	6.5	15.4	1.0	2.4
Veg. Oil and Fats	17.5	-1.6	-0.3	1.8	0.3	2.0	0.3	1.8	0.3
Wheat	29.6	-8.5	-2.5	2.5	0.7	-1.0	-0.3	2.6	0.8
Total Exports	1,092.3	6.0	65.2	1.6	17.5	6.3	69.4	1.6	17.5
IMPORTS									
Cereal and Feed	460.7	-0.9	-4.1	-0.2	-0.7	-0.4	-1.7	-0.2	-0.7
Fibers	21.0	-6.0	-1.3	-1.6	-0.3	-6.1	-1.3	-1.6	-0.3
Live Stock and Dairy	529.2	-7.6	-40.3	-0.7	-3.5	-7.6	-40.2	-0.7	-3.5
Other Ag	375.9	-0.8	-2.9	-0.1	-0.5	-0.6	-2.1	-0.1	-0.5
Processed Food and Beverage	516.1	-0.7	-3.4	-0.3	-1.5	-0.9	-4.5	-0.3	-1.5
Paddy Rice	4.0	0.7	0.0	-0.8	0.0	-1.6	-0.1	-0.8	0.0
Processed Rice	0.4	-3.8	0.0	-1.6	0.0	-4.0	0.0	-1.6	0.0
Veg, Fruit, Nuts	181.1	-0.8	-1.5	-0.4	-0.7	-0.9	-1.6	-0.4	-0.7
Veg. Oil and Fats	387.9	-0.5	-2.0	-0.4	-1.4	-0.3	-1.3	-0.4	-1.4
Wheat	667.9	-3.0	-19.9	-0.6	-4.1	-2.7	-17.8	-0.6	-4.1
Total Imports	3,144.0	-2.3	-75.4	-0.4	-12.7	-2.1	-70.6	-0.4	-12.7
BALANCE OF TRADE									
Cereal and Feed	-441.3	0.7	2.9	0.2	0.8	0.5	2.1	0.2	0.9
Fibers	196.7	5.2	10.2	1.9	3.8	4.9	9.6	1.9	3.8
Live Stock and Dairy	-413.4	18.0	74.4	1.6	6.5	14.0	57.9	1.5	6.3
Other Ag	-255.0	1.2	3.1	1.1	2.8	5.4	13.8	1.1	2.9
Processed Food and Beverage	-352.9	2.7	9.7	1.0	3.6	3.9	13.9	1.0	3.6
Paddy Rice	133.1	11.7	15.6	1.5	2.1	5.9	7.8	1.5	2.0
Processed Rice	33.5	-42.9	-14.4	2.3	0.8	-4.1	-1.4	2.9	1.0
Veg, Fruit, Nuts	56.3	35.4	19.9	5.5	3.1	30.3	17.0	5.5	3.1
Veg. Oil and Fats	-370.4	0.5	1.7	0.5	1.7	0.4	1.6	0.5	1.7
Wheat	-638.3	2.7	17.4	0.8	4.9	2.7	17.5	0.8	4.9
Total Balance of Trades	-2,051.7	6.9	140.5	1.5	30.1	6.8	140.0	1.5	30.2

Source: GTAP 6.2 database and GTAP model.

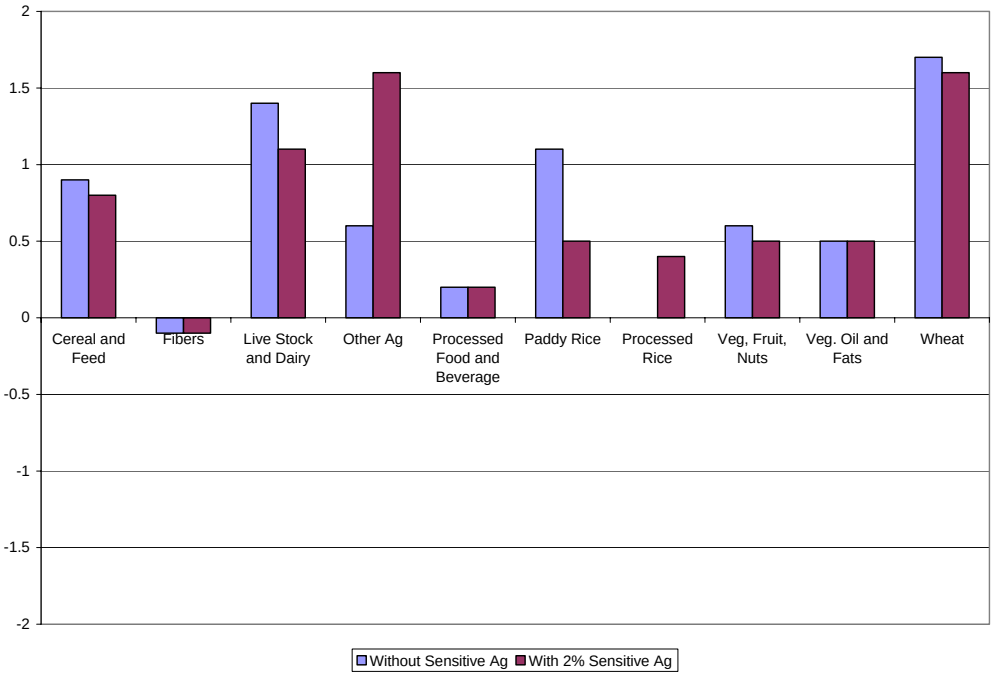
Considering the impacts due to Egypt's liberalization alone, it is interesting that Egypt's agricultural exports rise and its imports decrease. Why do agricultural imports decrease as a result of Egyptian tariff liberalization? And importantly, the agricultural tariff reductions imposed on Egypt are minimal in comparison to the liberalization of NAMA products such as apparel, textiles, transportation equipment, vehicles and chemicals. The reduction in the cost of imported inputs into the agricultural sector improves the agricultural sector's competitiveness so as to result in a reduction in imports and a rise in exports, despite a small decrease in the domestic agricultural tariffs.

Table 4-5
Agricultural Output Impacts of Doha Simulations (2001constant prices)

		Doha Impacts Without Sensitive Ag				Doha Impacts With Sensitive Ag			
		Total Impacts		Unilateral Domestic Liberalization		Total Impacts		Unilateral Domestic Liberalization	
Sector	2001 Egyptian Production($ Millions)	Percent Change	Dollars	Percent Change	Dollars	Percent Change	Dollars	Percent Change	Dollars
Cereal and Feed	1,461.2	0.9	13.7	0.1	2.0	0.8	11.1	0.1	2.0
Fibers	1,201.9	-0.1	-0.8	-0.1	-1.4	-0.1	-1.1	-0.1	-1.4
Live Stock and Dairy	5,800.5	1.4	81.2	0.1	6.4	1.1	65.0	0.1	6.4
Other Ag	1,302.8	0.6	7.6	0.4	4.8	1.6	21.4	0.4	5.0
Processed Food and Beverage	10,261.1	0.2	20.5	0.1	8.2	0.2	23.6	0.1	8.2
Paddy Rice	1,327.3	1.1	14.9	0.1	1.6	0.5	7.0	0.1	1.6
Processed Rice	1,776.0	0.0	0.2	0.1	2.3	0.4	6.4	0.1	2.5
Veg, Fruit, Nuts	4,653.8	0.6	28.4	0.1	4.2	0.5	24.2	0.1	4.2
Veg. Oil and Fats	879.8	0.5	4.2	0.3	2.7	0.5	4.0	0.3	2.7
Wheat	1,561.8	1.7	25.9	0.4	6.7	1.6	25.6	0.4	6.7
Total Output	30,226.3	0.6	195.8	0.1	37.5	0.6	187.2	0.1	37.9

Source: GTAP 6.2 Database.

Chart 4-3
Egyptian Production, Percent Change Due to Doha Reductions



NON-AGRICULTURAL (NAMA) PRODUCTS

Table 4-6 illustrates the impacts of the two scenarios under consideration on Egypt's imports and exports of non-agricultural products. The impacts are estimated based on the simultaneous liberalization of agricultural products with no allowance for sensitive products and allowance for sensitive products together with NAMA concessions. As in the case of agricultural products, each scenario is decomposed into two parts, the total impacts due to global liberalization and the impacts due to Egypt's own (unilateral) liberalization.

Egypt's balance of trade for non-agricultural products declines by US$-232 million or about -11.3 percent as a result of the Doha round simulation under consideration. This result is largely driven by losses in apparel, textiles; and transportation equipment which all suffer from dramatically higher Egyptian imports (apparel imports rise by 12.9% alone for a total increase in imports of $199 million). Many of these products also enjoy tariff preferences in major markets. Tariff cutting resulting from the round benefits the major non-preferential suppliers including China and India, eroding Egypt's margin of preference and the competitiveness of these products. The reduction in Egyptian exports is relatively modest compared with Egypt's rising imports of apparel. In contrast, the effects of the Doha Round liberalization on minerals, metals, machinery and electrical equipment is positive. Comparing this data to the case of unilateral liberalization, we again see erosion of industry competitiveness, although not as great in the cases of apparel, textiles, and transportation products. The impact of allowing sensitive agricultural products to be excluded from the Doha Round on non-agricultural products is minimal.

The Doha Round liberalization increases Egypt's imports by nearly 2%, largely driven by Egypt's imports of apparel from other regions, especially China. Table 3-5 illustrates that the Girard "Swiss" type formula, with a coefficient of 2, resulting in approximately a one-third reduction on Egypt's apparel import tariffs. This tariff reduction results in a 12.9 percent increase in apparel imports or $199 million in new apparel imports. Comparing this figure to the case of unilateral Egyptian liberalization, it can be seen that nearly all the negative impact comes from reducing Egypt's tariffs.

Several import categories including minerals, metals, chemicals and electric machinery experience a slight decrease in imports, which, occur at least in part due to Egypt's own liberalization and resulting benefits to import competing industries, through lower input prices and to the increase in import product prices. Again the effects of allowing sensitive products to be excluded in agricultural negotiations are minimal.

Table 4-6
Non-Agricultural Imports, Exports and Balance of Trade Impacts of Doha Simulations (2001constant prices)

Sector	2001 Egyptian Trade ($ Millions)	Doha Impacts Without Sensitive Ag				Doha Impacts With Sensitive Ag			
		Total Impacts		Unilateral Domestic Liberalization		Total Impacts		Unilateral Domestic Liberalization	
		Percent Change	Dollars	Percent Change	Dollars	Percent Change	Dollars	Percent Change	Dollars
EXPORTS									
Apparel	700.4	-3.0	-20.9	3.6	25.4	-2.8	-19.3	3.6	25.4
Textile	568.0	-4.8	-27.5	2.7	15.1	-4.5	-25.4	2.7	15.1
Cars and Transport	43.0	-0.6	-0.2	3.3	1.4	-0.4	-0.2	3.3	1.4
Chemical	708.9	-0.1	-0.9	2.9	20.8	0.1	0.5	2.9	20.8
Machinery and Electric	277.9	1.0	2.7	2.6	7.1	1.2	3.4	2.6	7.1
Metal Products	87.2	13.5	11.8	4.0	3.5	13.8	12.0	4.0	3.5
Minerals	257.0	2.4	6.1	2.2	5.7	2.4	6.1	2.2	5.7
Metals	483.4	1.9	9.3	2.7	12.8	2.0	9.4	2.7	12.8
Other Manufactures	112.3	-7.3	-8.2	2.1	2.4	-6.9	-7.8	2.1	2.4
Wood and Paper	144.3	1.5	2.2	2.2	3.2	1.6	2.3	2.2	3.2
Energy	1,742.3	-0.3	-5.7	0.4	6.4	-0.5	-9.4	0.4	6.4
Total Exports	5,124.6	-0.6	-31.4	2.0	103.9	-0.6	-28.3	2.0	103.9
IMPORTS									
Apparel	1,542.7	12.9	199.0	13.1	202.7	12.8	198.1	13.1	202.7
Textile	690.3	1.7	12.0	1.8	12.1	1.5	10.6	1.8	12.1
Cars and Transport	1,669.6	0.8	14.0	0.7	12.2	0.8	13.9	0.7	12.2
Chemical	2,224.8	-0.6	-12.9	-0.4	-8.7	-0.6	-12.9	-0.4	-8.7
Machinery and Electric	4,077.6	-0.3	-10.2	-0.1	-2.0	-0.2	-9.8	-0.1	-2.0
Metal Products	345.7	1.6	5.7	-0.9	-3.1	1.6	5.5	-0.9	-3.1
Minerals	526.1	-0.3	-1.3	0.3	1.3	-0.2	-0.8	0.3	1.3
Metals	1,043.8	-0.8	-8.1	-0.4	-3.8	-0.8	-7.9	-0.4	-3.7
Other Manufactures	181.1	2.7	5.0	3.0	5.4	2.6	4.8	3.0	5.4
Wood and Paper	846.8	0.3	2.9	0.5	4.2	0.3	2.9	0.5	4.2
Energy	425.1	-1.3	-5.3	0.2	1.0	-1.2	-5.3	0.2	1.0
Total Imports	13,148.5	1.5	200.7	1.7	221.4	1.5	199.0	1.7	221.5
BALANCE OF TRADE									
Apparel	-842.3	-49.8	-219.9	-40.2	-177.3	-49.3	-217.4	-40.2	-177.3
Textile	-122.3	-20.1	-39.5	1.5	3.0	-18.3	-36.0	1.5	3.0
Cars and Transport	-1,626.7	-3.5	-14.3	-2.6	-10.8	-3.4	-14.0	-2.6	-10.8
Chemical	-1,515.9	4.7	12.0	11.6	29.5	5.3	13.4	11.6	29.5
Machinery and Electric	-3,799.7	3.6	12.9	2.6	9.1	3.7	13.2	2.6	9.2
Metal Products	-258.5	4.6	6.1	4.9	6.6	4.9	6.5	4.9	6.6
Minerals	-269.0	22.1	7.4	13.1	4.4	20.6	6.9	13.1	4.4
Metals	-560.4	31.1	17.5	29.4	16.6	30.9	17.4	29.3	16.5
Other Manufactures	-68.7	-3.6	-13.2	-0.8	-3.0	-3.4	-12.5	-0.8	-3.0
Wood and Paper	-702.6	-0.1	-0.7	-0.2	-1.0	-0.1	-0.5	-0.2	-1.0
Energy	1,317.2	0.0	-0.4	0.3	5.4	-0.2	-4.1	0.3	5.4
Balance of Trade	-8,023.8	-11.3	-232.1	-5.7	-117.5	-11.1	-227.3	-5.7	-117.6

Source: GTAP 6.2 database and GTAP model.

Chart 4-3
Egyptian Imports of non-Ag Products, Percent Change Due to Doha Reductions

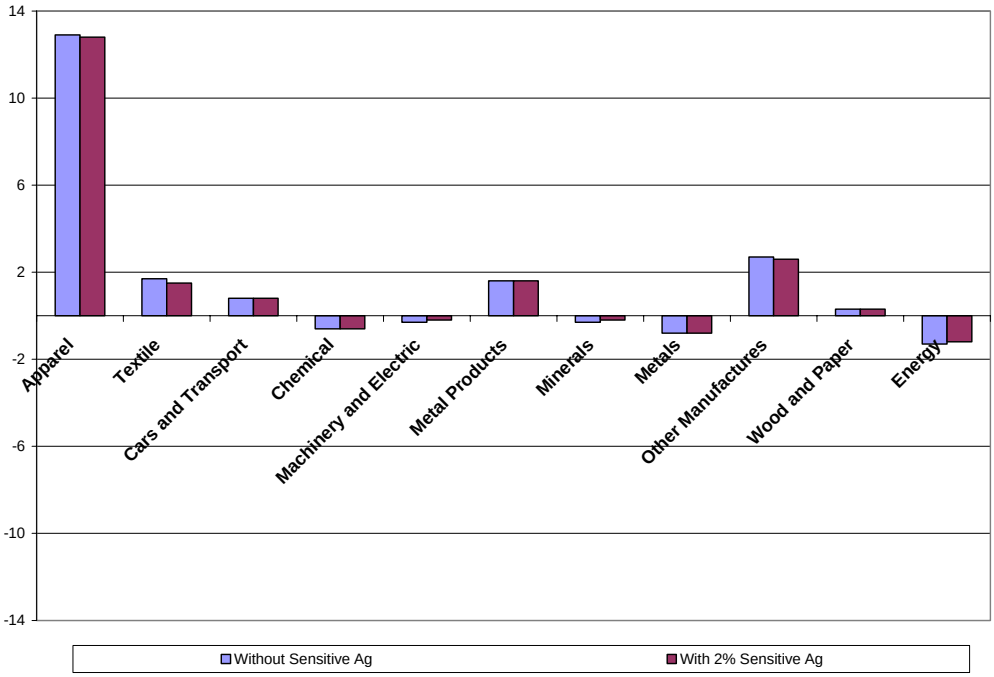


Chart 4-3
Egyptian Exports of non-Ag Products, Percent Change Due to Doha Reductions

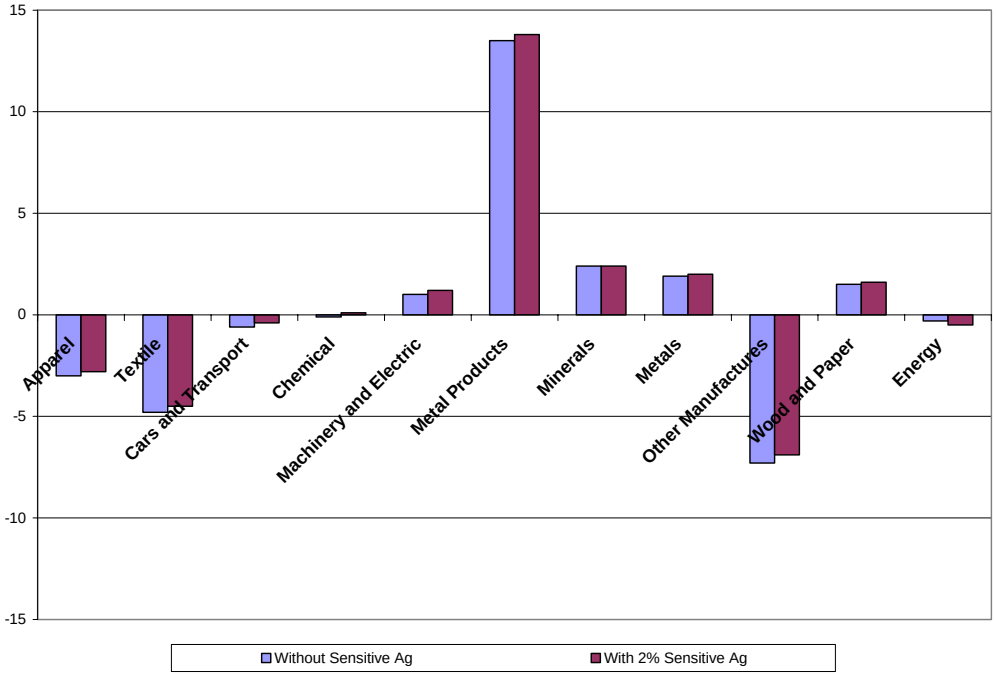
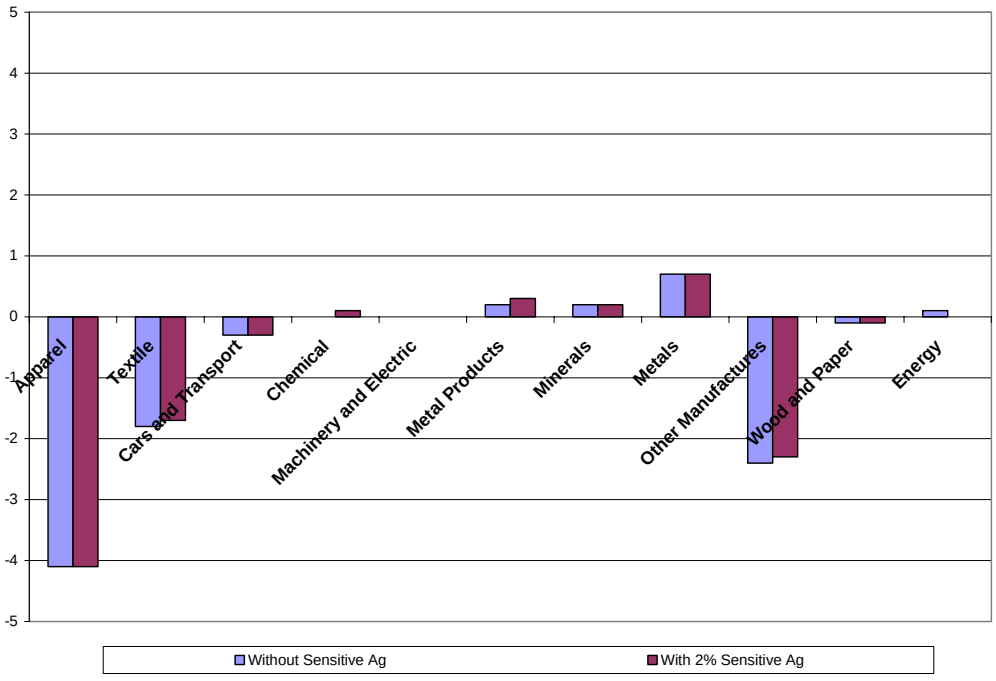


Table 4-5
Non-Agricultural Output Impacts of Doha Simulations (2001constant prices)

Sector	2001 Egyptian Production ($ Millions)	Doha Impacts Without Sensitive Ag				Doha Impacts With Sensitive Ag			
		Total Impacts		Unilateral Domestic Liberalization		Total Impacts		Unilateral Domestic Liberalization	
		Percent Change	Dollars	Percent Change	Dollars	Percent Change	Dollars	Percent Change	Dollars
Apparel	7,135.6	-4.1	-291.8	-3.5	-250.5	-4.1	-289.7	-3.5	-250.5
Textile	6,744.3	-1.8	-120.7	-0.8	-55.3	-1.7	-115.3	-0.8	-55.3
Cars and Transport	2,148.7	-0.3	-6.9	-0.2	-3.7	-0.3	-7.1	-0.2	-3.7
Chemical	4,198.3	0.0	-0.8	0.6	26.0	0.1	2.1	0.6	26.0
Machinery and Electric	2,172.6	0.0	-0.9	0.3	6.7	0.0	0.7	0.3	6.7
Metal Products	1,755.4	0.2	3.7	0.8	13.5	0.3	4.7	0.8	13.5
Minerals	3,780.6	0.2	6.4	0.4	13.6	0.2	6.8	0.4	13.6
Metals	3,042.1	0.7	20.1	1.0	30.1	0.7	20.7	1.0	30.1
Other Manufactures	613.5	-2.4	-14.7	-0.6	-3.5	-2.3	-13.9	-0.6	-3.4
Wood and Paper	2,916.0	-0.1	-4.1	0.0	-0.9	-0.1	-3.8	0.0	-0.9
Energy	8,534.8	0.1	9.4	0.3	24.8	0.0	3.4	0.3	24.8
Total Output	43,041.9	-0.9	-400.3	-0.5	-199.0	-0.9	-391.4	-0.5	-199.0

Chart 4-3
Egyptian Output of non-Ag Products, Percent Change Due to Doha Reductions



SERVICES

Services are the largest activity of any economy often comprising two-thirds or more of economic activity; however, services data are almost never of the quality of manufactured and agricultural goods. Trade data for services are usually collected at the highest levels by central banks, and even then, they are estimates based on residuals in national accounts as much as they are data reported from census estimates. The GTAP database includes 12 services sectors combined in table 4-6 into 5 services sectors. The GTAP services trade data are based on a number of estimation techniques, that start with International Monetary Fund (IMF) and national central bank estimates of services trade. These data are then reconciled with each individual countries' Input-Output table to estimate services trade and consumption (use). Unlike trade in goods, services trade rarely encounters tariffs or taxes at the border. The topic of services trade liberalization in the Doha Round is beyond the scope of this paper, since it would entail creating estimates of rules based changes in trade regimes, in contrast to tariffs and quotas, for which estimates are more readily available. The data in table 4-6, therefore, represent changes in services trade that would result from market access concessions in agriculture and non-agriculture goods. This means the impacts result from the general equilibrium mechanisms and linkages in the model initiated in the agricultural and non-agricultural sectors, but feeding through prices for inputs the production of these services.

Egypt's balance of service trade improves by 5.2 percent or $222 million dollars. This improvement in services trade is largely driven by Egypt's exports of transportation and communication services, which are driven by improvements in their cost competitiveness. The unilateral reduction in Egyptian tariffs result in nearly 75 percent of this improved competitiveness. Since a large proportion of the gains in services exports result from Egypt's unilateral liberalization, and not from market access improvement abroad, allowing for sensitive agricultural products has little effect on services trade in our scenarios.

Table 4-6

Services Imports, Exports and Balance of Trade Impacts of Doha Simulations (Dollars and Percent)

Sector	2001 Egyptian Trade ($ Millions)	Doha Impacts Without Sensitive Ag				Doha Impacts With Sensitive Ag			
		Total Impacts		Unilateral Domestic Liberalization		Total Impacts		Unilateral Domestic Liberalization	
		Percent Change	Dollars	Percent Change	Dollars	Percent Change	Dollars	Percent Change	Dollars
EXPORTS									
Electric Distribution	0.1	2.4	0.0	1.2	0.0	2.1	0.0	1.2	0.0
Construction	147.6	1.5	2.2	1.5	2.2	1.8	2.6	1.5	2.2
Other Services	1,375.3	3.9	53.2	3.9	53.4	3.9	53.1	3.9	53.4
Trade and Finance	2,150.4	1.4	30.5	1.4	29.0	1.5	33.1	1.4	29.0
Transport and Communication	4,633.9	2.3	105.7	1.6	75.5	2.2	102.4	1.6	75.5
Total Exports	8,307.3	0.0	191.6	1.9	160.2	2.3	191.2	1.9	160.2
IMPORTS									
Electric Distribution	0.5	-0.9	0.0	-0.3	0.0	-0.7	0.0	-0.3	0.0
Construction	7.8	-0.6	0.0	-0.5	0.0	-1.8	-0.1	-0.5	0.0
Other Services	810.1	-1.8	-14.5	-1.7	-13.4	-0.5	-4.1	-1.7	-13.4
Trade and Finance	2,594.5	-0.5	-12.5	-0.4	-9.1	-0.6	-15.8	-0.3	-8.8
Transport and Communication	582.0	-0.6	-3.5	-0.4	-2.4	0.0	0.0	-0.4	-2.4
Total Imports	3,994.9	-0.8	-30.6	-0.6	-24.9	-0.5	-20.0	-0.6	-24.7
BALANCE OF TRADE									
Electric Distribution	-0.4	2.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Construction	139.8	1.6	2.3	1.6	2.3	1.4	2.7	1.2	2.3
Other Services	565.2	12.0	67.7	11.8	66.7	11.6	57.1	13.6	66.7
Trade and Finance	-444.1	9.7	43.0	8.6	38.1	13.8	48.9	10.7	37.9
Transport and Communication	4,051.9	2.7	109.2	1.9	78.0	14.6	102.4	11.1	78.0
Balance of Trade	4,312.4	5.2	222.2	4.3	185.1	7.7	211.2	6.8	184.8

Table 2-1
Impacts on Sector Output, by Sector and Country\ Region
WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Agricultural Products (Percent Change in Industry Output)

Sector	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
					NAMA							
Apparel	6.9	13.0	-4.1	-3.4	12.6	-6.1	-5.6	-3.0	-11.1	1.8	-9.1	-3.5
Textile	22.7	6.6	-1.8	-1.9	3.4	-0.5	-0.5	-2.7	-8.4	1.2	-6.2	-2.8
Cars and Transport	-2.5	-3.2	-0.3	0.1	-1.4	5.4	-2.0	-1.4	-0.2	-0.3	-1.4	-1.3
Chemical	-1.9	-1.1	0.0	0.5	-1.1	0.5	0.0	-1.7	0.1	0.1	-0.1	-1.7
Machinery and Electric	-4.9	-1.9	0.0	1.4	0.0	-0.1	0.2	-3.1	0.9	0.2	-0.3	-0.2
Metal Products	-6.2	-2.1	0.2	-0.6	0.4	-0.3	-1.1	-2.0	0.6	-0.2	2.1	-1.6
Minerals	-1.4	-0.1	0.2	0.7	-0.6	0.5	-0.2	-1.4	0.1	-0.2	-0.3	0.5
Metals	-5.4	-2.3	0.7	1.0	-3.7	1.1	-0.2	-3.2	0.6	-0.3	0.5	0.4
Other Manufactures	-6.2	-2.5	-2.4	-1.0	-4.6	-0.5	-1.7	-1.8	-0.8	-7.9	18.2	-2.3
Wood and Paper	-2.2	-0.9	-0.1	0.5	-0.4	-0.3	-0.2	-1.2	0.2	-0.3	0.0	-0.4
Energy	-0.9	-0.6	0.1	0.7	0.0	-0.1	0.5	-0.7	0.4	-0.1	0.2	0.3
Total NAMA	2.1	0.5	-0.9	0.4	0.0	0.8	-0.9	-1.9	-0.3	-0.1	-0.2	-0.4
					AGRICULTURE							
Cereal and Feed	-0.3	4.8	0.9	-6.3	0.1	-11.6	-0.2	8.1	-0.3	-3.8	2.9	2.9
Fibers	2.9	6.1	-0.1	4.4	2.8	1.9	1.2	-2.9	1.2	0.9	-2.5	-5.0
Live Stock and Dairy	0.0	1.1	1.4	-4.9	0.5	-4.4	1.0	12.2	0.2	2.4	2.8	2.6
Other Ag	-2.0	-7.6	0.6	-5.7	0.1	-7.8	1.3	0.4	-0.1	5.0	-1.0	-0.2
Processed Food and Beverage	-1.5	0.2	0.2	-0.3	-0.1	0.6	-0.8	0.6	0.1	0.8	0.4	-0.8
Paddy Rice	-1.6	1.2	1.1	-38.3	0.4	-14.5	-0.4	-0.5	0.3	1.8	24.0	-2.0
Processed Rice	0.5	3.4	0.0	-51.5	0.8	-32.1	-0.4	-0.9	10.4	-5.1	36.9	-1.8
Veg, Fruit, Nuts	10.0	0.6	0.6	-2.4	-0.3	0.6	-0.3	-0.5	0.6	0.5	-0.1	-0.2
Veg. Oil and Fats	-1.9	2.7	0.5	-0.9	-1.0	1.6	-1.1	-1.4	0.5	-4.5	7.0	-1.2
Wheat	-2.5	1.0	1.7	-0.7	0.3	-35.2	2.6	-2.0	27.4	0.8	0.9	1.7
Total Ag	0.6	0.9	0.6	-2.9	0.1	-3.2	0.1	4.2	0.2	1.2	1.6	0.8

(Cont.)

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Table 2-1 (Cont.)

Impacts on Sector Output, by Sector and Country\ Region

WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Agricultural Products (Percent Change in Industry Output)

SERVICES

Sector	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
Electric Distribution	-0.2	-0.2	0.1	0.2	-0.3	0.3	0.0	-1.0	-0.1	0.2	0.0	-0.1
Construction	4.9	0.8	0.4	-0.2	0.9	0.0	-0.6	1.0	-0.1	1.4	-0.1	0.1
Other Services	0.3	0.4	0.7	0.1	0.3	0.1	0.0	0.0	-0.1	0.5	-0.1	0.0
Trade and Finance	0.3	0.0	0.2	0.1	0.4	0.0	-0.1	-0.2	0.1	0.4	0.0	0.0
Transport and Communication	-0.5	-0.1	1.3	0.6	0.5	0.1	0.2	-0.2	0.3	0.5	0.1	0.3
Total Services	0.6	0.2	0.6	0.1	0.4	0.1	-0.1	0.0	0.0	0.5	-0.1	0.0

Table 2-2

Impacts on Sector Output, by Sector and Country\ Region

WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Agricultural Products (Change in Output Millions of Dollars)

	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
NAMA												
Apparel	424	20,816	-291.8	-5,035	1,362	-3,931	-776	-616	-2,164	2,335	-7,349	-284
Textile	991	13,591	-120.7	-2,258	1,283	-204	-74	-437	-1,879	2,233	-6,585	-211
Cars and Transport	-51	-3,097	-6.9	828	-266	18,958	-97	-571	-437	-867	-8,132	-80
Chemical	-100	-2,744	-0.8	3,965	-542	1,429	-2	-1,089	101	546	-585	-466
Machinery and Electric	-230	-9,437	-0.9	15,999	4	-329	6	-1,514	1,454	1,578	-3,162	-42
Metal Products	-67	-1,945	3.7	-1,991	79	-401	-35	-413	187	-187	5,123	-81
Minerals	-24	-204	6.4	1,740	-62	428	-27	-418	27	-484	-409	37
Metals	-77	-3,510	20.1	3,125	-1,084	2,181	-12	-1,146	361	-837	1,040	39
Other Manufactures	-65	-2,388	-14.7	-2,161	-770	-343	-108	-297	-140	-7,160	13,055	-489
Wood and Paper	-93	-1,129	-4.1	2,773	-74	-497	-31	-554	137	-781	173	-78
Energy	-9	-644	9.4	1,419	6	-40	105	-309	137	-265	452	463
Total NAMA	699	9,311	-400.3	18,402	-65	17,252	-1,050	-7,364	-2,217	-3,889	-6,379	-1,193
AGRICULTURE												
Cereal and Feed	-2	486	13.7	-864	5	-29	-13	465	-47	-1,392	619	29
Fibers	3	469	-0.8	52	157	6	29	-40	3	111	-183	-53
Live Stock and Dairy	2	1,789	81.2	-21,978	228	-3,487	258	7,643	149	9,111	8,035	765
Other Ag	-80	-367	7.6	-4,441	29	-1,911	228	76	-9	5,545	-436	-8
Processed Food and Beverage	-106	242	20.5	-1,441	-19	1,284	-231	411	62	2,644	1,352	-114
Paddy Rice	-11	301	14.9	-967	70	-3,776	-49	-8	0	622	440	-6
Processed Rice	1	677	0.2	-386	72	-5,217	-37	-12	3	-1,577	345	-10
Veg, Fruit, Nuts	377	718	28.4	-1,239	-79	128	-34	-39	87	609	-25	-22
Veg. Oil and Fats	-23	410	4.2	-519	-220	74	-47	-333	17	-2,054	1,847	-37
Wheat	-9	95	25.9	-92	41	-298	20	-73	175	314	56	32
Total Ag	153	4,820	195.8	-31,874	285	-13,225	124	8,089	439	13,933	12,050	575

(Cont.)

Table 2-2 (Cont.)
Impacts on Sector Output, by Sector and Country\ Region
WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Agricultural Products (Change in Output Millions of Dollars)

SERVICES												
	Central America	**China**	**Egypt**	**EU**	**India**	**Japan**	**LDCs**	**MERCOSUR**	**MEXICO**	**ROW**	**USA**	**Rest of Mid. East**
Electric Distribution	-5	-116	3	398	-119	487	1	-296	-5	605	-79	-18
Construction	298	2,551	45	-2,073	568	26	-209	971	-1	7,465	-1,129	49
Other Services	71	1,500	161	1,515	246	2,094	15	-5	-120	6,129	-4,523	-12
Trade and Finance	74	-142	44	5,567	471	770	-84	-522	21	6,521	-1,497	-27
Transport and Communication	-56	-140	189	5,977	374	273	52	-154	83	3,448	546	187
Total Services	382	3,652	442	11,383	1,539	3,650	-225	-6	-22	24,167	-6,681	179

Table 2-3
Impacts on Sector Output, by Sector and Country\ Region
WTO Market Access Proposals for Agriculture and Non-Agriculture Products – With 2% Sensitive Agricultural Products (Change in Output from Basecase Percent)

	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
						NAMA						
Apparel	2.0	0.0	-4.1	-0.3	-0.5	-0.3	-0.1	1.1	-0.1	-0.2	0.1	0.0
Textile	3.7	0.2	-1.7	-0.3	-0.3	-0.5	0.0	1.4	0.0	-0.3	0.2	0.1
Cars and Transport	0.5	0.0	-0.3	-0.2	-0.1	-0.4	-0.1	1.5	0.0	0.0	0.1	0.0
Chemical	0.9	0.0	0.1	-0.2	-0.2	-0.2	-0.1	1.0	0.0	0.0	0.1	0.1
Machinery and Electric	2.0	0.0	0.0	-0.3	-0.1	-0.4	-0.1	1.9	0.0	0.2	0.2	0.1
Metal Products	0.9	0.0	0.3	-0.1	-0.1	-0.2	-0.1	1.0	0.0	0.0	0.1	0.1
Minerals	0.5	0.0	0.2	-0.1	-0.1	-0.2	-0.1	0.9	-0.2	-0.1	0.0	0.0
Metals	1.7	0.0	0.7	-0.4	-0.2	-0.4	-0.2	2.6	0.0	0.1	0.1	0.0
Other Manufactures	0.9	0.1	-2.3	-0.1	-0.2	-0.6	0.0	0.5	0.0	0.0	0.2	0.1
Wood and Paper	0.4	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	0.9	0.0	-0.1	0.0	0.0
Energy	0.2	-0.1	0.0	-0.2	-0.1	-0.1	-0.1	0.7	-0.1	0.0	0.0	-0.1
Total NAMA	1.5	0.0	-0.9	-0.2	-0.2	-0.3	-0.1	1.3	0.0	0.0	0.1	0.0
						AGRICULTURE						
Cereal and Feed	1.2	-3.0	-0.2	1.0	0.0	11.7	0.2	-4.9	0.4	3.5	-1.4	1.6
Fibers	2.2	0.2	0.0	-0.5	-0.3	-1.5	-0.4	2.1	-0.6	-0.4	0.1	0.0
Live Stock and Dairy	1.1	0.5	-0.3	1.8	-0.1	3.2	0.3	-9.3	0.0	-0.3	-1.5	0.0
Other Ag	1.3	4.6	1.1	3.6	0.2	6.0	-1.0	0.9	0.2	-3.6	2.0	1.1
Processed Food and Beverage	0.8	0.3	0.0	-0.2	0.3	-0.7	0.6	0.3	0.0	-0.3	0.0	1.0
Paddie Rice	1.2	-0.8	-0.6	25.2	-0.2	13.4	0.5	0.6	0.4	-1.4	-20.7	2.3
Processd Rice	1.0	-2.3	0.4	36.5	-0.6	29.1	0.5	1.4	-7.7	4.7	-30.2	2.0
Veg, Fruit, Nuts	-10.2	-0.2	-0.1	2.5	0.3	-1.1	-0.1	1.6	-0.2	-0.5	0.4	0.3
Veg. Oil and Fats	1.2	-2.3	0.0	0.3	0.8	-1.4	0.6	0.9	-0.1	4.3	-5.0	0.9
Wheat	3.4	0.6	0.0	-3.0	0.1	33.6	0.4	2.6	-24.5	0.9	0.1	0.0
Total Ag	-0.6	0.0	0.0	1.1	0.1	2.6	0.1	-2.7	0.0	-0.2	-0.7	0.5

(Cont.)

Table 2-3 (Cont.)
Impacts on Sector Output, by Sector and Country\ Region
WTO Market Access Proposals for Agriculture and Non-Agriculture Products – With 2% Sensitive Agricultural Products (Change in Output from Baseline Percent))

SERVICES

	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
Electric Distribution	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	0.7	0.0	-0.1	0.0	0.0
Construction	-0.3	0.0	0.0	0.1	0.0	0.0	0.0	-0.4	0.1	-0.3	0.0	0.0
Other Services	-0.6	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	-0.2	0.0	0.0
Trade and Finance	-0.1	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.1	0.0	-0.2	0.0	0.0
Transport and Communication	0.2	0.0	0.0	-0.1	-0.1	0.0	-0.1	0.2	0.0	-0.2	0.0	-0.1
Total Services	-0.2	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	-0.2	0.0	0.0

Table 2-4

Impacts on Imports, by Sector and Country\ Region

WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Agricultural Products (Change Imports Percent)

Sector	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
					NAMA							
Apparel	11.6	6.5	21.1	4.1	21.1	22.0	-1.2	8.2	-2.3	13.5	15.2	3.5
Textile	15.2	13.6	7.1	1.6	15.6	10.0	-2.5	4.6	-0.3	7.2	12.8	-0.3
Cars and Transport	3.4	11.9	1.8	0.7	17.3	2.8	-0.4	6.8	-0.1	4.9	0.9	0.1
Chemical	3.3	5.5	-0.4	0.3	11.0	2.6	-0.4	2.2	0.0	2.1	2.5	-0.6
Machinery and Electric	5.8	6.8	0.8	1.9	0.5	7.0	0.9	9.1	0.2	2.6	-0.1	1.7
Metal Products	4.0	2.1	-0.2	0.2	5.5	1.3	-0.5	2.8	-0.2	1.2	0.7	0.2
Minerals	3.6	3.5	2.0	0.3	4.4	1.2	-0.9	1.2	0.8	2.5	3.7	0.2
Metals	-0.2	1.5	-0.3	0.4	12.7	2.2	-0.9	0.3	-0.3	1.1	1.6	-0.6
Other Manufactures	6.7	7.6	9.1	-0.2	13.3	1.9	-0.4	11.4	6.7	30.0	1.8	0.5
Wood and Paper	4.3	2.7	1.5	-0.1	5.4	1.6	-0.7	2.7	-1.6	2.2	0.0	0.2
Energy	0.2	1.2	-0.8	0.3	0.9	0.2	-0.2	0.1	-0.3	0.6	0.0	0.0
Total NAMA	5.3	4.4	3.6	0.6	7.7	3.5	-0.7	3.2	-0.1	3.3	2.4	0.2
					AGRICULTURE							
Cereal and Feed	1.6	6.1	-1.1	-3.0	14.3	-1.0	-2.7	2.1	3.2	23.8	-2.1	-0.7
Fibers	4.4	9.2	-7.7	-1.5	4.2	-0.8	-1.1	1.4	-1.1	1.4	-4.4	-2.3
Live Stock and Dairy	5.5	8.1	-8.3	5.1	8.2	22.6	-16.2	0.7	-1.5	1.4	-1.3	-10.5
Other Ag	5.5	5.5	-1.0	8.5	-0.5	24.8	-2.0	4.0	2.1	8.4	4.3	-1.7
Processed Food and Beverage	2.7	5.3	-1.0	0.3	12.3	2.7	1.3	2.4	-0.2	3.2	1.6	1.4
Paddy Rice	40.9	6.1	-0.1	44.8	56.9	297.1	0.2	4.2	-1.2	1.5	3.6	-0.1
Processed Rice	0.5	14.8	-5.3	12.6	37.8	952.6	-0.4	10.7	-2.8	165.2	45.9	1.3
Veg, Fruit, Nuts	5.4	6.7	-1.2	1.9	8.6	-0.5	-0.3	2.2	1.4	5.6	0.4	-0.1
Veg. Oil and Fats	2.3	3.5	-0.9	0.7	10.0	-0.6	-0.3	2.5	-0.9	23.9	7.4	1.5
Wheat	4.8	6.2	-3.6	-2.1	85.0	10.5	-2.3	1.6	1.3	6.8	3.5	-2.1
Total Ag	3.8	5.8	-2.7	2.9	8.7	27.2	-2.2	2.2	0.0	8.5	1.4	-2.4

(Cont.)

Table 2-4 (cont)

Impacts on Imports, by Sector and Country\ Region

WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Agricultural Products (Change Imports Percent)

SERVICES

Sector	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
Electric Distribution	1.3	0.7	-1.4	-0.5	-1.1	1.5	-0.8	0.7	0.5	1.4	-0.7	0.4
Construction	8.1	2.1	-1.3	-0.8	0.4	1.1	-0.9	3.1	-0.8	1.6	0.1	-0.1
Other Services	4.0	2.3	-3.0	-0.6	0.2	1.0	-0.5	2.0	-0.8	1.2	0.1	-0.2
Trade and Finance	3.0	1.4	-0.8	-0.5	0.2	0.7	-0.5	1.9	-0.5	1.0	-0.1	-0.1
Transport and Communication	1.9	1.7	-1.1	-0.3	0.2	0.7	-0.5	1.2	-0.8	0.8	0.0	-0.2
Total Services	2.8	1.6	-1.3	-0.4	0.2	0.8	-0.5	1.6	-0.6	1.0	0.0	-0.2

Table 2-4

Impacts on Imports, by Sector and Country\ Region

WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Agricultural Products (Change Imports Millions of Dollars)

	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
						NAMA						
Apparel	344	1,530	467	4,078	85	5,247	-24	176	-72	5,178	12,643	191
Textile	533	4,397	59	1,160	266	1,038	-180	126	-15	3,543	4,569	-18
Cars and Transport	310	2,924	35	2,103	450	413	-53	893	-23	7,190	1,780	19
Chemical	161	3,426	-11	895	1,009	755	-48	458	-4	3,480	2,553	-98
Machinery and Electric	40	377	4	1,133	3	323	19	186	8	810	-26	60
Metal Products	247	4,105	-8	1,425	665	1,295	-84	1,025	-84	5,459	2,573	89
Minerals	30	496	14	180	119	141	-26	39	22	993	861	12
Metals	-2	450	-4	432	803	286	-37	11	-17	862	647	-79
Other Manufactures	48	706	20	-100	832	199	-7	219	150	9,127	1,054	55
Wood and Paper	68	473	16	-147	111	304	-22	100	-95	1,205	-27	10
Energy	4	291	-4	423	119	105	-11	5	-12	639	2	1
Total NAMA	1,784	19,174	586	11,583	4,463	10,106	-471	3,237	-142	38,485	26,630	242
						AGRICULTURE						
Cereal and Feed	5	84	-5	-94	0	-30	-6	6	53	2,038	-11	-10
Fibers	3	71	-2	-27	30	-3	-5	2	-6	51	-4	-1
Live Stock and Dairy	40	625	-50	3,000	38	3,618	-302	8	-57	345	-148	-559
Other Ag	8	146	-5	1,964	-1	1,398	-24	28	12	1,292	339	-27
Processed Food and Beverage	50	481	-9	299	55	602	73	63	-4	1,472	435	102
Paddie Rice	12	18	0	609	3	5,906	2	5	0	47	11	-1
Processd Rice	0	1	0	70	0	4,023	0	10	-3	2,460	17	2
Veg, Fruit, Nuts	15	170	-3	564	130	-17	-2	14	10	570	29	-3
Veg. Oil and Fats	6	304	-4	75	315	-13	-4	11	-13	2,478	104	16
Wheat	11	26	-26	-79	1	335	-28	17	5	512	12	-20
Total Ag	149	1,925	-103	6,381	571	15,817	-297	164	-3	11,265	783	-500

(Cont.)

Table 2-4 (cont.)

Impacts on Imports, by Sector and Country\ Region

WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Agricultural Products (Change Imports Millions of Dollars)

SERVICES

	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
Electric Distribution	1	3	0	-65	-1	0	-2	14	0	81	-11	0
Construction	3	54	0	-112	0	51	-6	2	0	76	1	0
Other Services	19	213	-24	-426	1	109	-18	92	-21	421	24	-26
Trade and Finanace	49	641	-21	-1,427	13	301	-61	216	-44	1,143	-34	-22
Transport and Communication	18	244	-6	-372	6	191	-30	109	-32	596	30	-14
Total Services	90	1,154	-51	-2,402	20	652	-117	433	-96	2,318	9	-62

Table 2-5

Impacts on Imports, by Sector and Country\Region

WTO Market Access Proposals for Agriculture and Non-Agriculture Products – With 2% Sensitive Agricultural Products (Change in Output from Baseline Percent)

	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
						NAMA						
Apparel	2.0	0.0	0.0	-0.3	-0.5	-0.3	-0.1	1.1	-0.1	-0.2	0.1	0.0
Textile	3.7	0.2	0.1	-0.3	-0.3	-0.5	0.0	1.4	0.0	-0.3	0.2	0.1
Cars and Transport	0.5	0.0	0.0	-0.2	-0.1	-0.4	-0.1	1.5	0.0	0.0	0.1	0.0
Chemical	0.9	0.0	0.1	-0.2	-0.2	-0.2	-0.1	1.0	0.0	0.0	0.1	0.1
Machinery and Electric	2.0	0.0	0.1	-0.3	-0.1	-0.4	-0.1	1.9	0.0	0.2	0.2	0.1
Metal Products	0.9	0.0	0.1	-0.1	-0.1	-0.2	-0.1	1.0	0.0	0.0	0.1	0.1
Minerals	0.5	0.0	0.0	-0.1	-0.1	-0.2	-0.1	0.9	-0.2	-0.1	0.0	0.0
Metals	1.7	0.0	0.0	-0.4	-0.2	-0.4	-0.2	2.6	0.0	0.1	0.1	0.0
Other Manufactures	0.9	0.1	0.1	-0.1	-0.2	-0.6	0.0	0.5	0.0	0.0	0.2	0.1
Wood and Paper	0.4	0.0	0.0	-0.1	-0.1	-0.1	-0.1	0.9	0.0	-0.1	0.0	0.0
Energy	0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	0.7	-0.1	0.0	0.0	-0.1
Total NAMA	1.5	0.0	0.0	-0.2	-0.2	-0.3	-0.1	1.3	0.0	0.0	0.1	0.0
						AGRICULTURE						
Cereal and Feed	1.2	-3.0	-0.2	1.0	0.0	11.7	0.2	-4.9	0.4	3.5	-1.4	1.6
Fibers	2.2	0.2	0.0	-0.5	-0.3	-1.5	-0.4	2.1	-0.6	-0.4	0.1	0.0
Live Stock and Dairy	1.1	0.5	-0.3	1.8	-0.1	3.2	0.3	-9.3	0.0	-0.3	-1.5	0.0
Other Ag	1.3	4.6	1.1	3.6	0.2	6.0	-1.0	0.9	0.2	-3.6	2.0	1.1
Processed Food and Beverage	0.8	0.3	0.0	-0.2	0.3	-0.7	0.6	0.3	0.0	-0.3	0.0	1.0
Paddie Rice	1.2	-0.8	-0.6	25.2	-0.2	13.4	0.5	0.6	0.4	-1.4	-20.7	2.3
Processd Rice	1.0	-2.3	0.4	36.5	-0.6	29.1	0.5	1.4	-7.7	4.7	-30.2	2.0
Veg, Fruit, Nuts	-10.2	-0.2	-0.1	2.5	0.3	-1.1	-0.1	1.6	-0.2	-0.5	0.4	0.3
Veg. Oil and Fats	1.2	-2.3	0.0	0.3	0.8	-1.4	0.6	0.9	-0.1	4.3	-5.0	0.9
Wheat	3.4	0.6	0.0	-3.0	0.1	33.6	0.4	2.6	-24.5	0.9	0.1	0.0
Total Ag	-0.6	0.0	0.0	1.1	0.1	2.6	0.1	-2.7	0.0	-0.2	-0.7	0.5

(cont.)

Table 2-5 (cont.)

Impacts on Imports, by Sector and Country\Region

WTO Market Access Proposals for Agriculture and Non-Agriculture Products – With 2% Sensitive Agricultural Products (Change in Output from Baseline Percent)

SERVICES

	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
Electric Distribution	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	0.7	0.0	-0.1	0.0	0.0
Construction	-0.3	0.0	0.0	0.1	0.0	0.0	0.0	-0.4	0.1	-0.3	0.0	0.0
Other Services	-0.6	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	-0.2	0.0	0.0
Trade and Finanace	-0.1	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.1	0.0	-0.2	0.0	0.0
Transport and Communication	0.2	0.0	0.0	-0.1	-0.1	0.0	-0.1	0.2	0.0	-0.2	0.0	-0.1
Total Services	-0.2	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	-0.2	0.0	0.0

Table 2-6

Impacts on Exports by Sector and Country\Region

WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Agricultural Products (Percent Change in Industry Output)

Sector	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
					NAMA							
Apparel	14.9	20.0	0.8	-2.1	17.4	18.3	-7.8	-10.8	-27.2	11.2	12.5	-3.9
Textile	44.2	12.1	-2.0	0.0	11.2	14.5	2.6	-1.1	-20.0	7.5	4.1	-4.5
Cars and Transport	1.8	2.7	4.6	0.7	5.3	11.8	-5.3	2.5	-0.9	3.2	-4.3	-2.7
Chemical	-3.9	1.1	3.1	1.3	6.4	3.6	0.6	-3.6	2.5	2.1	2.3	-2.5
Machinery and Electric	-6.1	-1.7	4.5	2.3	8.2	-0.1	0.4	-4.4	1.8	0.6	0.3	0.3
Metal Products	-17.6	-6.7	17.4	-1.9	2.6	-5.1	4.6	-7.1	2.4	0.0	36.4	-1.7
Minerals	-4.7	3.8	4.4	2.9	1.2	4.2	0.0	-3.9	0.4	-0.8	3.4	1.8
Metals	-6.8	-1.0	4.8	1.8	6.6	3.4	-0.2	-4.1	7.1	0.2	1.0	1.3
Other Manufactures	-11.8	-3.7	-4.4	-3.2	-1.2	-2.4	-3.6	-9.7	-2.1	2.0	90.5	-3.7
Wood and Paper	-5.8	-2.0	4.4	1.7	2.2	0.9	0.1	-4.4	3.3	0.3	-0.7	-0.4
Energy	1.3	1.3	0.1	1.9	10.6	3.5	0.6	-1.1	0.7	-0.2	1.8	0.5
Total NAMA	9.0	4.0	1.6	1.3	7.7	3.6	-1.5	-3.2	-0.4	1.5	3.2	-0.3
					AGRICULTURE							
Cereal and Feed	-9.7	50.6	-5.5	-16.4	-6.8	41.4	-10.4	13.1	-1.9	6.3	5.2	-7.4
Fibers	-1.0	-5.1	5.9	6.3	-3.1	12.0	3.3	-4.8	4.7	1.4	1.1	-19.0
Live Stock and Dairy	-1.3	-10.7	32.2	-21.4	16.2	24.6	0.0	107.5	17.2	17.4	39.6	10.6
Other Ag	-4.3	-14.5	2.0	-14.8	-1.1	24.6	3.9	1.6	-1.4	30.5	-3.8	-3.5
Processed Food and Beverage	-5.4	1.0	5.1	0.2	0.0	12.8	-2.6	1.2	2.7	2.6	6.4	-1.2
Paddie Rice	-35.1	44.3	12.9	-73.4	8.1	57.6	-9.4	-8.6	-11.6	15.4	94.0	-7.2
Processd Rice	5.4	931.0	-40.9	-73.3	34.9	-70.1	-41.7	-19.8	19.5	34.7	117.2	-9.3
Veg, Fruit, Nuts	19.0	23.4	8.8	-3.8	0.3	20.4	-1.0	-1.8	3.2	5.3	-0.5	-2.4
Veg. Oil and Fats	-7.0	69.0	0.2	-2.5	14.0	6.9	-8.2	-3.5	-0.2	4.8	16.5	-6.5
Wheat	-15.6	-10.1	-6.0	0.0	6.0	68.8	4.0	-5.1	153.8	6.2	-0.2	4.1
Total Ag	2.8	7.7	7.6	-8.4	3.7	-6.1	0.0	13.3	5.6	10.7	14.3	-0.6

Table 2-6 (cont.)

Impacts on Exports, by Sector and Country\Region

WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Agricultural Products (Percent Change in Industry Output)

SERVICES

Sector	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
Electric Distribution	-3.8	-1.4	3.4	1.5	2.3	-1.5	2.1	-3.4	0.4	-1.6	0.8	0.4
Construction	-4.8	-2.8	3.3	1.2	1.7	-1.8	0.7	-3.6	1.2	-0.6	-0.2	0.3
Other Services	-6.0	-3.4	7.0	1.4	0.2	-1.3	1.0	-4.0	1.7	-1.3	0.0	0.4
Trade and Finanace	-4.9	-2.7	2.8	1.5	0.4	-1.0	1.0	-4.0	1.8	-0.9	-0.1	0.3
Transport and Communication	-2.7	-1.0	4.0	2.0	2.2	1.2	1.5	-1.3	1.7	0.7	0.8	1.6
Total Services	-3.7	-2.2	4.1	1.7	0.9	0.2	1.3	-2.8	1.7	-0.2	0.2	0.9

Table 2-7
Impacts Exports, by Sector and Country\Region
WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Agricultural Products (Change in Exports Millions of Dollar)

Sector	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
					NAMA							
Apparel	633	19,234	6	-1,249	1,307	138	-685	-406	-1,617	6,177	1,206	-86
Textile	1,001	5,948	-12	-17	921	1,451	78	-16	-762	4,085	585	-88
Cars and Transport	14	349	2	2,601	60	11,555	-79	278	-234	3,764	-4,708	-55
Chemical	-64	415	22	4,619	404	1,494	12	-293	181	2,726	2,181	-395
Machinery and Electric	-173	-3,281	12	14,911	335	-228	8	-437	1,310	2,403	842	39
Metal Products	-29	-1,151	15	-1,190	40	-333	10	-77	69	0	5,463	-22
Minerals	-14	425	11	1,713	27	305	0	-341	11	-312	525	47
Metals	-35	-108	23	2,026	141	706	-6	-517	229	238	175	59
Other Manufactures	-39	-1,687	-5	-1,947	-91	-210	-92	-83	-43	593	13,362	-418
Wood and Paper	-43	-373	6	2,238	16	30	5	-369	161	283	-213	-4
Energy	1	96	2	843	133	36	82	-65	75	-480	199	485
Total NAMA	1,253	19,868	84	24,550	3,293	14,944	-667	-2,325	-621	19,477	19,616	-438
					AGRICULTURE							
Cereal and Feed	-1	367	-1	-516	-2	0	-9	262	0	129	302	-4
Fibers	0	-5	13	55	-1	0	35	-18	2	43	26	-50
Live Stock and Dairy	-6	-399	37	-12,289	83	92	0	4,915	158	5,196	5,257	113
Other Ag	-87	-228	2	-1,713	-17	44	209	74	-9	5,058	-128	-22
Processed Food and Beverage	-92	82	8	153	0	271	-134	136	94	1,228	1,167	-24
Paddy Rice	-2	264	18	-383	52	12	-38	-5	0	420	446	-5
Processed Rice	0	404	-14	-104	51	-657	-7	-7	0	142	338	-2
Veg, Fruit, Nuts	386	494	21	-637	2	7	-25	-52	93	571	-26	-27
Veg. Oil and Fats	-14	405	0	-163	57	3	-36	-314	0	435	1,324	-13
Wheat	0	-5	-2	-1	24	1	0	-86	119	358	-6	1
Total Ag	183	1,379	83	-15,599	251	-227	-4	4,903	456	13,579	8,701	-33

(Cont.)

Table 2-7 (cont.)
Impacts Exports, by Sector and Country\Region
WTO Market Access Proposals for Agriculture and Non-Agriculture Products – Without Sensitive Agricultural Products (Change in Exports Millions of Dollar)

SERVICES

Sector	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
Electric Distribution	-3	-6	0	191	0	0	15	-62	0	-122	7	0
Construction	-1	-35	5	192	0	-74	2	-2	5	-19	-7	2
Other Services	-47	-199	96	1,026	2	-34	24	-86	23	-418	-28	10
Trade and Finanace	-89	-2,109	59	4,316	36	-214	33	-310	67	-993	-64	45
Transport and Communication	-98	-370	185	4,963	97	468	86	-110	110	992	613	214
Total Services	317	-42	433	-5,816	521	-728	87	3,874	873	14,525	10,853	197

Table 2-5

Impacts on Imports, by Sector and Country\Region

WTO Market Access Proposals for Agriculture and Non-Agriculture Products – With 2% Sensitive Agricultural Products (Change in Output from Baseline Percent)

Sector	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
					NAMA							
Apparel	2.7	0.1	0.2	-0.6	-0.7	-1.4	-0.1	4.5	-0.1	-0.2	0.4	0.0
Textile	4.7	0.3	0.4	-0.4	-0.6	-1.0	-0.1	4.2	0.0	-0.5	0.8	0.0
Cars and Transport	0.9	0.0	0.2	-0.3	-0.5	-0.7	0.0	3.6	0.1	0.2	0.3	0.0
Chemical	1.7	0.0	0.2	-0.3	-0.5	-0.9	-0.1	3.3	-0.3	0.2	0.4	0.2
Machinery and Electric	2.6	0.0	0.3	-0.4	-0.4	-0.8	-0.1	4.5	0.1	0.3	0.4	0.1
Metal Products	1.5	0.0	0.2	-0.3	-0.4	-0.8	-0.1	3.7	0.0	0.2	0.5	0.1
Minerals	1.1	-0.2	0.0	-0.3	-0.4	-0.6	-0.2	2.3	-0.1	0.1	0.1	-0.1
Metals	2.0	-0.2	0.0	-0.5	-0.6	-0.8	-0.3	3.9	-0.2	0.2	0.2	0.0
Other Manufactures	2.1	0.2	0.4	-0.3	-0.4	-2.6	0.0	4.2	0.2	0.3	0.6	0.2
Wood and Paper	1.5	-0.1	0.1	-0.3	-0.6	-0.8	-0.1	3.4	-0.2	0.1	0.2	0.0
Energy	0.5	-0.5	-0.2	-0.5	-0.5	-1.1	-0.2	1.7	-0.2	0.1	-0.2	-0.1
Total NAMA	2.6	0.0	0.1	-0.4	-0.5	-0.8	-0.1	3.5	0.0	0.2	0.4	-0.1
					AGRICULTURE							
Cereal and Feed	8.2	-37.3	8.5	1.4	8.8	-30.3	9.4	-7.1	6.0	-1.3	-2.5	9.7
Fibers	0.1	0.1	-0.3	-0.8	-0.9	-9.2	-0.8	4.6	-1.7	-0.9	1.1	-0.1
Live Stock and Dairy	6.9	13.0	-14.4	5.3	-0.1	-6.2	6.8	-82.8	-8.1	-5.6	-22.8	2.9
Other Ag	1.8	10.0	9.6	8.1	3.1	-17.9	-3.6	2.4	4.1	-24.8	14.4	5.6
Processed Food and Beverage	2.9	1.1	1.9	-1.3	0.8	-8.1	1.4	2.7	0.9	-1.3	-0.4	1.9
Paddie Rice	23.7	-38.8	-5.8	35.8	-3.5	-48.0	9.5	9.7	9.9	-12.3	-81.3	8.1
Processd Rice	-6.3	-839.9	39.6	50.8	-33.7	54.0	31.5	17.0	-13.5	-29.5	-95.7	4.8
Veg, Fruit, Nuts	-19.5	-16.5	-1.3	4.3	-0.6	-11.3	-0.7	4.2	-1.4	-5.2	2.7	2.6
Veg. Oil and Fats	3.3	-58.2	3.6	2.0	-8.8	-0.7	4.7	2.1	2.2	0.6	-11.9	6.1
Wheat	11.7	9.0	7.7	-9.6	2.7	-56.3	-0.7	5.5	-144.1	-2.1	1.4	0.4
Total Ag	-4.1	-4.6	0.4	1.9	-0.5	7.2	-0.2	-8.3	-2.1	-5.9	-6.9	2.9

(cont.)

Table 2-5 (Cont.)

Impacts on Imports, by Sector and Country\Region

WTO Market Access Proposals for Agriculture and Non-Agriculture Products – With 2% Sensitive Agricultural Products (Change in Output from Baseline Percent)

SERVICES

Sector	Central America	China	Egypt	EU	India	Japan	LDCs	MERCOSUR	MEXICO	ROW	USA	Rest of Mid. East
Electric Distribution	0.6	-0.1	-0.2	-0.5	-0.7	-1.0	-0.6	2.2	0.0	0.2	-0.2	-0.3
Construction	1.6	0.2	0.3	-0.1	-0.4	-0.3	0.0	2.7	0.3	0.3	0.4	0.2
Other Services	1.8	-0.1	0.0	-0.4	-0.4	-0.5	-0.2	2.6	0.0	0.2	0.1	-0.1
Trade and Finanace	1.9	0.0	0.1	-0.3	-0.3	-0.7	-0.2	2.8	0.1	0.2	0.3	0.0
Transport and Communication	1.3	-0.2	-0.1	-0.4	-0.5	-0.6	-0.3	1.5	-0.1	-0.1	0.0	-0.2
Total Services	1.5	-0.1	0.0	-0.4	-0.3	-0.6	-0.3	2.2	0.0	0.0	0.1	-0.1

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