Publication 3701

The Economic Effects of Significant U.S. Import Restraints

Fourth Update 2004

Investigation No. 332-325

United States
International Trade
Commission

June 2004

U.S. International Trade Commission

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PREFACE

On June 5, 1992, the United States International Trade Commission (USITC) instituted investigation No. 332-325, The Economic Effects of Significant U.S. Import Restraints. The investigation, conducted under section 332(g) of the Tariff Act of 1930, is in response to a request from the United States Trade Representative (USTR). A copy of the request letter is in appendix A. The USTR also requested that the report be updated by the Commission at intervals of approximately 2 years. The original report was completed in November 1993. The first update report was submitted in December 1995, the second update in May 1999, and the third update in June 2002.

The purpose of this investigation is to assess the impact of significant U.S. import restraints on U.S. firms, workers, and consumers and on the net economic welfare of the United States. In particular, the USTR requested an economywide assessment of the effects of simultaneously liberalizing all of the sectors covered by significant import restraints. The USTR also requested an assessment of liberalizing each of the covered sectors individually.

The notice of institution of this fourth update was published in the Federal Register of August 21, 2003 (68 F.R. 50553; see appendix B). No hearing was held for the investigation; however, submissions from interested parties were received and are listed in appendix C.

LIST OF FREQUENTLY USED ABBREVIATIONS AND ACRONYMS

AMTA	Agricultural Market Transition Act
ATC	Uruguay Round Agreement on Textiles and Clothing
ATPA	Andean Trade Preference Act
BEA	Bureau of Economic Analysis
c.i.f.	Cost, insurance, and freight
CBERA	Caribbean Basin Economic Recovery Act
CBTPA	United States-Caribbean Basin Trade Partnership Act
CCC	Commodity Credit Corporation
CGE	Computable general equilibrium
Commission	United States International Trade Commission
COMPAS	Commercial Policy Analysis System
ERS	Economic Research Services
ETE	Export tax equivalent
EU	European Union
FAIR	Federal Agriculture Improvement and Reform
FAS	Foreign Agricultural Service
FMD	Foot-and-Mouth and Rinderpest diseases
f.o.b	Free-on-board
FTE	Full-time equivalent
GAO	United States General Accounting Office
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GSP	Generalized System of Preferences
H-O	Heckscher-Ohlin
HTS	Harmonized Tariff Schedule of the United States
IMO	International Maritime Organization
IR	Import restraint
Jones Act	Merchant Marine Act of 1920
MARAD	The Maritime Administration
MFA	Multifiber Arrangement
MOU	Memorandum of Understanding
MPC	Milk protein concentrate
MT	Metric ton

LIST OF FREQUENTLY USED ABBREVIATIONS AND ACRONYMS—*Continued*

MY	Marketing year
NAFTA	North American Free Trade Agreement
NTM	Nontariff measures
NTR	Normal Trade Relations
OPA-90	Oil Pollution Act of 1990
QR	Quantitative restriction
QY	Quota year
SCP	Sugar and sugar-containing product
SEC	Securities and Exchange Commission
SIC	Standard Industrial Classification
SITC	Standard International Trade Classification
SME	Square meter equivalent
SSA	Sub-Saharan Africa
SSG	Special safeguard
TAA	Trade Adjustment Assistance
TCAA	Transatlantic Common Aviation Area
TEU	Twenty-foot equivalent units
TMB	Textile Monitoring Body
TPL	Tariff preference level
TRQ	Tariff-rate quota
URA	Uruguay Round Agreement
URAA	Uruguay Round Agreement on Agriculture
USAGE-ITC	United States Applied General Equilibrium-International Trade Commission
USC	United States Code
USDA	United States Department of Agriculture
USDOC	United States Department of Commerce
USDOL	United States Department of Labor
USDOT	United States Department of Transportation
USITC	United States International Trade Commission
USTR	United States Trade Representative
VER	Voluntary export restraints
WTO	World Trade Organization

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EXECUTIVE SUMMARY

This report updates previous U.S. International Trade Commission (Commission) investigations of the economic effects of significant U.S. import restraints. The Commission instituted the investigation in 1992 after receiving a letter from the United States Trade Representative (USTR) requesting an investigation under section 332(g) of the Tariff Act of 1930. The original report was completed in November 1993. The first update report was submitted in December 1995, the second update in May 1999, and the third update in June 2002. The USTR request underlying this series of reports seeks to have the Commission analyze the economic effects of removing certain tariffs, tariff-rate quotas, or other measures affecting U.S. imports. Neither the request nor this report addresses non-economic considerations. Nothing in the report should therefore be construed as commentary on the legality of any measure covered in the text or modeling or on the policies underlying such measures.

In order to analyze the economic effects of significant import restraints, two approaches are used in this report: a quantitative, model-based approach for those portions of the economy and those economic restraints that are suitable for such analysis; and a qualitative, analytical approach for those cases that do not lend themselves to such quantitative methodologies. The Commission's quantitative analysis finds that removal of significant quantifiable restraints to trade in the form of high tariffs and significantly binding nontariff barriers would lead to a net increase in economic welfare of about $14 billion for the U.S. economy. Economic theory and analysis suggest that removal of the other non-quantifiable barriers identified in the report could well lead to additional economic benefits; but while such potential gains might be identified and characterized, their exact values remain speculative until data and modeling needs necessary for reliable quantitative analysis are developed.

Significant Import Restraints

In 2002 (the base year for this report), the average goods tariff rate for the United States was 1.65 percent.[1] However, a number of goods and services were still affected by significant trade restraints. In this report, the Commission analyzes the economic effects of remaining restraints on U.S. consumers, firm activities, imports, exports, employment, and net economic welfare.

[1] The average goods tariff rates are calculated by dividing the calculated duties by the customs value for all goods imports. Source: U.S. Department of Commerce and Commission calculations.

The restrictiveness of the restraints examined are summarized in table ES-1, which shows the extent to which a given trade policy instrument distorts the market by creating a wedge between the world price and the U.S. price in the restrained sector. The sectors registering the most restrictive trade barriers are agriculture and textiles and apparel. In particular, the following import restraints are discussed and examined using an analytical framework developed by the Commission:

- Significant tariffs and tariff-rate quotas (TRQs) on food and agricultural products including beef, canned tuna, cotton, dairy products, peanuts, sugar and sugar-containing products (SCPs), tobacco and tobacco products;

- Significant tariffs as well as quotas on certain textiles and apparel pursuant to the Uruguay Round Agreement on Textiles and Clothing (ATC) and bilateral textile agreements with non-WTO member countries;[2]

- Significant tariffs for a number of merchandise goods, including footwear and leather products; glass and glass products; watches, clocks, watch cases and parts; ball and roller bearings; ceramic wall and floor tile; table and kitchenware; costume jewelry; pens, mechanical pencils, and parts; and cutlery and handtools.

In addition, the effects of the Section 201 import relief (safeguard) action on steel are reviewed.[3] The economic implications of the restrictions affecting services are also investigated. In particular, three significant import restraints affecting services imports are identified and discussed: (i) the Jones Act, which imposes restrictions on maritime cabotage; (ii) the restrictions on Mexican suppliers of trucking services to the U.S. market that were negotiated in the NAFTA; and (iii) the domestic regulation of the air services markets that inhibits foreign supply of air transportation. Data and modeling limitations precluded formal quantitative analysis of the impact of these trade restraints.

The study also discusses selected government procurement regulations that serve as import restraints. Buy America provisions restrict the ability of States receiving Federal grants to purchase imported materials in transportation and food assistance programs. Buy American restrictions on direct Federal purchases also serve as import restraints, particularly for defense spending. Finally, preference programs for small and disadvantaged businesses seem to favor U.S. suppliers over foreign suppliers. These restrictions are highly

[2] In accordance with the ATC, all quotas on textile and apparel imports will be removed on January 1, 2005. This study, however, estimates the effects of removing quotas as they existed in 2002.

[3] As requested by USTR, the report does not include import restraints resulting from final antidumping or countervailing duty investigations, section 337, and section 406 investigations, or section 301 actions.

Table ES-1
Quantifiable significant U.S. import restraints, by sector, percent, 2002

Sectors	Ad valorem equivalents		
	U.S. import tariff	Rest-of-world export tax equivalents	Total price wedge
Textile and apparel sectors:			
Textile mill goods	6.6	2.3	8.9
Textile products	5.4	8.2	13.6
Apparel	11.3	9.5	20.8
Agricultural sectors:			
Sugar	1.0	107.1	109.3
Tobacco and tobacco products	7.1	13.2	20.2
Dairy	10.0	27.8	37.7
Canned tuna	3.6	2.6	6.3
Peanuts	1.8	10.0	11.9
Beef	0.7	1.1	1.8
Other manufacturing sectors:			
Footwear and leather products	10.8	0.0	10.8
Glass and glass products	4.7	0.0	4.7
Watches, clocks, watch cases and parts	5.4	0.0	5.4
Ball and roller bearings	5.8	0.0	5.8
Ceramic wall and floor tile	8.4	0.0	8.4
Table and kitchenware	7.6	0.0	7.6
Costume jewelry	6.1	0.0	6.1
Pens, mechanical pencils, and parts	4.9	0.0	4.9
Cutlery and handtools	4.4	0.0	4.4

Source: Ad valorem tariff equivalents (calculated by dividing calculated duties by customs value for all imports in a given sector) are compiled from USDOC official statistics. USITC estimates and calculations include export tax equivalents of U.S. quotas and TRQs.

complex and in some cases overlap. This situation, in turn, creates significant difficulties in specifying the product coverage and value of government purchases that are covered by these policies, in estimating the value of imports which would occur in the absence of such policies, or indeed even in documenting the total value of government-purchased imports under the status quo.

Economywide Effects of Significant Import Restraints

A single analytical tool – the USAGE-ITC model – is used throughout the report to quantify the economic impact of the identified trade restraints.[4] If all

[4] The USAGE-ITC model is based on a system of equations that are consistent with the U.S. Department of Commerce's (USDOC) Bureau of Economic Analysis (BEA) input-output table for the U.S. economy. In addition to specifying changes in each sector analyzed, the model can estimate economywide changes–such as economic welfare–that occur from liberalization.

of the quantifiable trade barriers considered in this report had been simultaneously eliminated (from their 2002 levels), the result would have been equivalent to an approximate welfare gain of $14 billion to the U.S. economy (see table ES-2).[5] The welfare gain represents less than 0.1 percent of GDP.

Table ES-2
Economic welfare changes from liberalization of significant import restraints, by sector, million dollars, 2002

Sector	Change in economic welfare
Simultaneous liberalization of all significant restraints	14,133
Individual liberalization:	
Textiles and apparel	11,759
Sugar	1,089
Footwear and leather products	720
Tobacco and tobacco products	145
Canned tuna	71
Beef	66
Watches, clocks, watch cases and parts	65
Ball and roller bearings	58
Ceramic wall and floor tile	50
Dairy	30
Table and kitchenware	22
Costume jewelry	22
Glass and glass products	8
Peanuts	6
Pens, mechanical pencils, and parts	3
Cutlery and handtools	1

Source: USITC estimates.

Consistent with previous updates of this report, the largest effect is in the individual liberalization of textiles and apparel, which is estimated to result in an economywide welfare gain of almost $12 billion, assuming that both identified tariffs and quotas are removed simultaneously.[6] [7] Liberalization of

[5] In this study, the welfare effect measures the net value of all gains and loses from trade liberalization to the U.S. economy as a whole, i.e., gains or losses in labor or capital income, tax increases or decreases, as well as the consumption effects from changes in real prices.

[6] Note that results from an experiment in which restraints for many sectors are removed are *not* equivalent to adding up the results from experiments eliminating the restraints individually.

[7] The model presented in this study assumes 2002 levels of quotas and tariffs on textile and apparel imports.

the sugar sector is expected to lead to a $1.1 billion economywide welfare gain, while the removal of the high tariffs on footwear and a number of leather products would generate a $720 million economywide gain. Trade liberalization in other sectors would also lead to positive, albeit much smaller, welfare gains.

Sectoral and State-level Effects of Significant Import Restraints

Both sector-specific and economywide analyses were conducted for each industry or sector identified as having a significant import restraint. In general, if these sectors are liberalized, imports are expected to increase significantly, and output and employment are expected to fall in the liberalized sectors. The sector-specific effects of trade liberalization are influenced by the restrictiveness of the barriers themselves and the estimates of various behavioral parameters, particularly the substitution elasticities between imports and domestically produced goods. Also influencing the sector-specific effects are the upstream and downstream linkages among sectors, which determine the demand for output of a given sector as well as the cost of its inputs.

Sectoral effects

The results of the simulation exercises for individual sectoral liberalization show that the largest increases in imports tend to occur in sectors with the largest barriers—namely, textiles and apparel and food and agricultural products. Within the simulation, import quantities expand by about 17 percent for apparel and textile mill products, and by more than 160 percent for sugar (see table ES-3). Imports of dairy products are estimated to increase by 127 percent following the removal of a 38 percent price wedge. The simulation results show that apparel and sugar also register the largest declines in real prices: 5 percent for apparel and 8 percent for sugar.[8]

[8] Consistent with the standard general equilibrium approach, the model used in these analyses only indicate real (relative) prices. One should not infer from these real price changes a particular impact on posted nominal prices of retail products. In general, nominal prices are influenced by monetary phenomena beyond the scope of these analyses.

Table ES-3
Economic effects of liberalization of significant import restraints on liberalized sector, changes in employment, output, trade, and prices, percent, 2002

Sector	Employment	Output	Imports	Exports	Composite price[1]
Textile and apparel sectors:					
Textile mill goods	-9.5	-8.2	17.6	2.6	-0.7
Textile products	-1.8	-2.3	13.6	2.6	-1.2
Apparel	-8.9	-10.0	17.3	6.1	-5.2
Agricultural sectors:					
Sugar	-25.2	-24.0	161.3	113.3	-7.9
Tobacco and tobacco products	-0.5	-0.6	48.2	3.4	-0.5
Dairy	-3.1	-3.8	127.0	4.9	-1.0
Canned tuna	-10.0	-7.1	7.9	1.7	-2.3
Peanuts	([2])	([2])	56.3	0.1	([2])
Beef	-0.1	([2])	2.0	0.3	-0.1
Other manufacturing sectors:					
Footwear and leather products	-4.3	-3.6	4.4	1.2	-4.0
Glass and glass products	-1.0	-0.9	7.5	0.8	-0.7
Watches, clocks, watch cases and parts	1.0	0.5	1.9	3.2	-2.0
Ball and roller bearings	-4.0	-3.9	12.1	0.6	0.1
Ceramic wall and floor tile	-6.8	-6.4	4.8	0.9	-0.5
Table and kitchenware	-6.6	-6.5	3.8	0.4	-2.4
Costume jewelry	-2.4	-2.1	6.9	0.8	-1.2
Pens, mechanical pencils, and parts	-2.2	-1.9	3.8	1.3	-1.0
Cutlery and handtools	-0.9	-1.0	4.4	0.6	-0.8

[1] Share-weighted price of imports, domestic production, and marketing costs. See section "overview of the USAGE-ITC Framework" in appendix D.
[2] Less than .05 percent.

Source: USITC estimates.

The simulation exercise also shows that, as a result of trade liberalization and the resulting decline in real prices, the U.S. textiles and apparel and food and agriculture sectors experience significant declines in output and employment. A decline in domestic output of as much as 24 percent occurs in the sugar sector and 10 percent in apparel; the effects of liberalization on employment are of similar magnitude as those on output. In some sectors, declines in employment also impact the upstream industries. For instance, the liberalization of textiles and apparel has negative effects on output and employment in sectors producing organic manmade fibers, cotton, and textile machinery. On the other hand, the same liberalization leads to increased output and employment in the retail trade sector.

State-level effects

The analytical simulation exercises are extended to examine the State-level effects of removing significant U.S. import restraints. These effects are calculated by applying a state-level extension to the USAGE-ITC results

generated in the national simulation. The state-level extension disaggregates simulation results from the USAGE-ITC model into State-level results, but it does not affect those aggregated results. For most variables, State-level effects are based on the corresponding national effect plus a State deviation term that is determined by State-specific characteristics.

Although the impact varies by State, the most striking feature of these effects is the narrowness of the range of impact. The States facing the most adverse impacts are North Carolina, Alabama and Idaho, where real gross State product is anticipated to decline by 0.7 percent, 0.4 percent and 0.4 percent, respectively. On the other end of the spectrum, simulation results suggest that the State of Washington would see a 0.5 per cent increase in its real gross State product as a result of liberalization.

CHAPTER 1
Introduction

This study updates the U.S. International Trade Commission (USITC or Commission) reports that were transmitted to the United States Trade Representative (USTR) in November 1993, December 1995, June 1999, and June 2002.[1] The study provides a quantitative assessment of the effect of significant U.S. import restraints on U.S. consumers and on the net economic welfare of the United States for 2002. These import restraints include high tariffs, tariff-rate quotas (TRQs), remedies for section 201 investigations and nontariff measures (NTMs), such as quotas, restrictions affecting services, and government procurement.[2]

The analysis includes an economywide assessment of the effects of (i) individually liberalizing each sector covered by significant import restraints and (ii) simultaneously liberalizing all of the sectors. The report estimates the effects on output (domestic production), employment, exports and imports, and economywide welfare of the following significant import restraints:

- Significant tariffs and TRQs on food and agricultural products including beef, canned tuna, cotton, ethyl alcohol, dairy products, peanuts, sugar and sugar-containing products (SCPs), tobacco and tobacco products;

- Significant tariffs as well as quotas on certain textiles and apparel pursuant to the Uruguay Round Agreement on Textiles and Clothing (ATC) and bilateral textile agreements with non-WTO member countries;[3]

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[1] See USITC, *The Economic Effects of Significant U.S. Import Restraints: Third Update*, USITC publication 3519, June 2002, USITC, *The Economic Effects of Significant U.S. Import Restraints: Second Update*, USITC publication 3201, May 1999; USITC, *The Economic Effects of Significant U.S. Import Restraints: First Biennial Update*, publication 2935, December 1995; and USITC, *The Economic Effects of Significant U.S. Import Restraints*, publication 2699, November 1993.

[2] This report excludes, as requested by USTR, all import restraints resulting from final antidumping or countervailing duty investigations, section 337 or section 406 investigations, or section 301 actions (see appendix A).

[3] In accordance with the ATC, all quotas on textile and apparel imports will be removed on January 1, 2005. This study however estimates the effects of removing quotas as they existed in 2002.

- Significant tariffs for a number of merchandise goods, including footwear and leather products; glass and glass products; watches, clocks, watch cases and parts; ball and roller bearings; ceramic wall and floor tile; table and kitchenware; costume jewelry; pens, mechanical pencils, and parts; and cutlery and handtools.

During 2002, the following restraints were also in place and are qualitatively discussed in this report:

- Section 201 import relief (safeguard) action on steel;[4]
- Restraints facing trucking, air, and maritime transport services; and
- Certain restraints on government procurement.

Approach of the Study

A major theme of the analytical approach taken here is that there are significant linkages among sectors in the U.S. economy and between the U.S. economy and the rest of the world. For example, policies that affect agricultural imports also affect downstream users such as the processed food industries and other users of agricultural products. Agricultural policies also affect upstream suppliers such as chemical industries that supply fertilizers to farmers and other industries that compete with agriculture for resources. Applied general equilibrium (AGE) models quantify those linkages.

For this study, an AGE model is the primary tool used to estimate the economywide and sectoral effects of significant import restraints.[5] The model is based on a system of equations that are consistent with the U.S. Department

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[4] The tariffs and tariff-rate quotas were imposed on 14 steel products on March 5, 2002 and were removed by the President on Dec 5, 2003. This study, however, examines the effects of the tariffs and TRQs in place in 2002.

[5] In the original 1992 request letter from the USTR (see appendix A), the USITC was asked to examine the removal of individual import restraints in a partial equilibrium framework and examine the simultaneous removal of all import restraints in a general equilibrium framework. In the 1993 study, after consultations with the USTR outlining the benefits of a general equilibrium approach over a partial equilibrium approach and coupled with the USTR's desire to compare results from simulations of individual restraint removal with the results of simultaneous liberalization of all restraints in a consistent framework, the USITC proceeded to analyze most of the significant U.S. import restraints in a general equilibrium approach.

of Commerce (USDOC) BEA input-output table for the U.S. economy.[6] It analyzes the removal of tariffs, TRQs, and NTBs as a reduction in the cost of imports in the protected sector. The resulting decline in import price induces an increase in U.S. demand for imports and a reduction in the demand for the competing domestic product. The primary effects of removing a U.S. import restraint for a given sector, therefore, are an increase in imports and a decline in domestic production, industry employment, and final prices to consumers in that sector. Chapters 2 to 4 provide effects of removing significant import restraints on a sector-by-sector basis. The comprehensive effect of import relief is obtained by simultaneously liberalizing all sectors identified as having significant import restraints. These results are reported in chapter 7.

Estimates of the effects are derived from the USAGE-ITC (United States Applied General Equilibrium-International Trade Commission) model, an applied general equilibrium model that explicitly accounts for linkages among all sectors in the economy.[7] This model allows liberalization in one sector to affect all other sectors, including other liberalized sectors.

In the USAGE-ITC model, firm income is transferred to the household sector through labor wages and payments for the use of capital.[8] Owing to the relationship between firms and the household sector, factor price changes influence consumer income. Likewise, when the government receives smaller revenues owing to tariff cuts, the loss is offset by a tax on labor income.[9]

Several economic factors are responsible for the welfare effects associated with the removal of import restraints.[10] First, as the significant import

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[6] The BEA benchmark tables are available at *http://www.bea.gov/bea/pn/ndn0178.zip*. Documentation of the same tables is given in Ann M. Lawson, "Benchmark Input-Output Accounts for the U.S. Economy", *Survey of Current Business*, vol. 77, No. 11 (November 1997), pp. 36-82, Bureau of Economic Analysis: Washington, DC.

[7] The terms computable general equilibrium and applied general equilibrium are synonymous.

[8] The household sector is defined as the sector that owns all the factors of production (capital and labor) and purchases all final consumption.

[9] This replacement tax allows for consistent welfare analysis assuming separable private and public consumption.

[10] Economic welfare is a measure of economywide well-being that is consistent with economic theory. The experiments measure all the changes in welfare resulting from the removal of significant import restraints. Lower import prices reduce consumption costs that households pay for final products (relative to household income levels), as well as the production costs of firms that buy less costly intermediate inputs. Welfare also encompasses the costs of increased import competition in industries that

restraints are lifted, capital and labor move from the formerly protected sectors into sectors that can more effectively use these production inputs. Second, consumers and producers that use products formerly subject to import restraints benefit from lower real prices for imported goods, thereby increasing their purchasing power.[11] Third, welfare increases with the removal of the quota rents that are no longer transferred from U.S. purchasers to foreigners.[12]

Liberalization of all significant import restraints has other effects as well. These include displacement of employment as imports replace domestic production in some sectors. If previously protected sectors decline, their upstream suppliers may also experience adverse effects as a result of diminished demand. The USAGE-ITC model accounts for interactions between upstream and downstream sectors as well as cross-sectoral links in the estimated effects. One of the assumptions made is that the real wage rates adjust so that the policy change under consideration has no effect on aggregate employment; that is, total employment is held constant.

USAGE-ITC Model

The modeling framework is similar to that used in previous reports. Since the previous import restraint study, however, improvements have been made to the model that enhance the USITC analysis, including effects of significant import restraints at the State level. Moreover, the database and parameters used in the model have been updated.[13] Technical details are outlined in appendix D. The Commission uses the model to quantify the expected economic effects of removing significant import restraints such as tariffs, quotas, and TRQs.

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[10]-*Continued*
contract as a result of liberalization, and tariff revenue losses to government. Welfare also includes changes in the U.S. position in the world economy through changes in the terms of trade.

[11] The AGE model used in this analysis solves for real (relative) prices. One should not infer from these real price changes a particular impact on posted nominal prices of retail products. In general, nominal prices are influenced by monetary phenomenon beyond the scope of these analyses.

[12] For example, quota rents occur when an exporting country enjoys preferential market access, which allows that country to receive higher prices in quota-restricted import markets. The additional revenue generated in this way is a "quota rent." The extent to which quota-rent payments to foreigners are eliminated is important because this represents an expenditure for which there is no domestic income or consumption of goods or services.

[13] See Peter B. Dixon and Maureen T. Rimmer, "USAGE-ITC: Theoretical Structure," Centre of Policy Studies, Monash University, Australia, April 25, 2003.

Basic Structure

The USAGE-ITC model estimates both economywide and sector-specific results. In subsequent chapters, the Commission examines how individual sectors react to policy liberalization in employment, output, imports, and exports for the liberalized sectors and upstream and downstream sectors.

Information on net welfare reported in subsequent chapters represents the sum of welfare gains and losses accruing to U.S. households as a result of a trade policy change. Essentially, a gain or loss in net welfare represents the amount of income that would be needed to make households as well off without the trade liberalization as they would be with the trade liberalization.

The estimates obtained from the model emphasize the effect of import restraint removal *in isolation* from all other factors that affect the economy, such as U.S. monetary and fiscal policies and trade policies in foreign countries. In addition, the results do not incorporate expected future changes in the economic variables analyzed. Therefore, estimates in this analysis are *not* forecasts. Finally, the model used is a static model that assesses the impact of trade policy changes at one point in time. Consequently, dynamic effects that may result from trade liberalization–such as an increase in the rate of U.S. economic growth–are not captured within the model.

Data

The industry and commodity specification of the USAGE-ITC model is based on the definitions of the 1992 benchmark input-output accounts of the U.S. economy, which are updated to 2002 based on yearly macroeconomic data (see appendix D for complete details of benchmark data construction).[14] Results in this report, however, are presented for focus sectors and for nine aggregate sectors representing the U.S. economy.

The principal methodology of quantifying significant import restraints is the price-gap method, which measures the difference between the U.S. market price of a product and its world price. Tariffs, transportation costs, or other costs may account for differences between the two prices. Any remaining price difference is attributed to the import restraint and specified as a rest-of-the-world export tax equivalent. Because the USAGE-ITC model treats goods at a level of aggregation that is much broader than the

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[14] U.S. Department of Commerce, Bureau of Economic Analysis, *Benchmark Input-Output Accounts of the United States, 1992* (Washington, DC: U.S. Government Printing Office, Sept. 1998).

thousands of individual lines defined in the import classification system,[15] in some cases the products subject to nontariff measures make up a small portion of a model sector. Therefore, the import tariff equivalents and the export tax equivalents in this report are trade-weighted, and they understate the actual import restraint on trade in more narrowly specified sectors. More detail on the model and data is included in appendix D.

Simulated Effects of Liberalization

Import liberalization is expected to lead to several changes in the model of the U.S. economy. First, the real price of the imported good falls, in response to the tariff or NTM removal. As a result, domestic demand for the imported good increases and domestic demand for the domestic good declines. Second, domestic producers respond to increased competition from imports by lowering the price of the domestic good. As a result, domestic producers are less willing to supply the market, and domestic output and sectoral employment contracts. Third, domestic demand for the liberalized good increases because prices of the imported and domestic good have both declined. Fourth, foreign producers are willing to satisfy this increased demand because the real price they receive increases. Fifth, demand for U.S. exports increases as the price of the U.S. good falls, becoming more competitive in the world economy.[16]

Because the marginal product of labor changes little in the simulated liberalization, employment in the liberalizing sector typically falls in percentage terms by about the same amount that output falls.[17] Upstream suppliers to the contracting industry also may face contraction, although the

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[15] In 2002, imports were recorded on 16,808 separate HTS 10-digit lines, and on 10,176 HTS 8-digit lines. Source: U.S. Department of Commerce and Commission calculation.

[16] The degree to which each of these market responses is observed depends upon the behavioral parameters of the model: the price elasticity of demand for the product in question, the degree to which imports are substitutes for the domestic variety, and the responsiveness of domestic and foreign producers to changes in market prices, for example.

[17] The marginal product of labor is the incremental output produced by one extra unit of labor. If marginal productivity were constant, then we would observe a fixed relationship between changes of capital and labor and output in a given sector. Within the USAGE-ITC model, as inputs increase, marginal product declines (and vice-versa). This implies that in a shrinking sector, production will likely fall slightly less than the inputs of the factors of production. However, the specific impact on labor separate from capital depends on the relative prices of capital (the rental rate) and labor (the wage rate). The interested reader is directed to a discussion of production theory, such as is found in ch. 5 of *Microeconomic Theory*, Andreu Mas-Colell, Michael D. Whinston, and Jerry R. Green (Oxford: Oxford University Press, 1995).

percentage response can be much more muted than that of the liberalized sector. The economywide wage rate rises as factors of production are allocated to more productive purposes. The overall impact of tariff liberalization on the net welfare of the economy is expected to be positive, although the net result can be negative under certain conditions.[18]

Organization of the Report

Chapter 2 presents the economic effects of significant import restraints in food and agriculture imports. Chapter 3 presents the economic effects of significant import restraints in textiles and apparel imports. Chapter 4 presents the economic effects of other significant import restraints in merchandise imports. This chapter also reviews the Commission's findings regarding the Section 201 import relief (safeguard) action on steel.

Chapter 5 examines the significant import restraints affecting services, namely the existing restrictions on domestic maritime transport, cross-border goods transport by truck, and air transport. Chapter 6 investigates the significant import restraints relating to government procurement. In particular, it looks at the impact of the Buy America Program which restricts the use of Federal funds for purchases of foreign goods and services in selected areas.

Chapter 7 reports the comprehensive economic effects of all quantifiable significant import restraints examined in the previous chapters. Results are reported at the economywide, sectoral, and State levels.

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[18] The change in welfare from liberalization depends on the current level of protection for liberalized sectors, other distortions (such as domestic taxes), and the extent to which U.S. protection affects world markets.

CHAPTER 2
Food and Agriculture

This chapter analyzes the effects of significant U.S. border measures, such as U.S. tariff-rate quotas (TRQs) and other high tariffs, affecting food and agriculture sectors during 2002. U.S. policies for certain food and agricultural products subject to TRQs share two characteristics: (i) they influence market prices (e.g. price guarantees and production or marketing quotas), and (ii) they restrict imports through border measures.[1] Producer prices are supported by loans to producers or processors, with the commodity serving as collateral. Border measures restrict imports and generally maintain domestic market prices at sufficiently high levels to prevent producers or processors from forfeiting on their loans.

This analysis is based on the assumption that in the absence of significant border measures, U.S. prices would fall, which implies that domestic support policies do not remain in place. If domestic support programs remained unchanged, while border measures are removed the U.S. Government might be required to acquire stocks of commodities to prevent domestic price declines in the face of rising imports, a result that might be prohibitively expensive and that may run counter to U.S. commitments under the internal support provisions of the World Trade Organization (WTO) Agreement on Agriculture.

Import tariffs are usually modeled as constant percentage gaps between world and domestic prices.[2] A reduction in an import tariff would lead to an increase in imports and a decline in the domestic price. While U.S. tariffs generate revenue to the Government, TRQs may generate economic rents (i.e., revenues) for different economic agents (e.g. importers that hold licenses to import or exporters that hold export certificates). Operation of the TRQ is such that the economic agent that owns the right to ship within the TRQ can sell at the higher domestic price as opposed to the lower import price, thereby gaining

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[1] The beef industry, one of the sectors examined, and the cattle industry do not have any direct support programs. Beef is eligible and it is purchased for the school lunch programs. Also, there are the various ad hoc drought assistance programs. None of theses programs, however, have a substantial impact on the industry.

[2] Unless otherwise noted, the wedges and the tariffs reported in this chapter are on an ad valorem basis.

the "economic rents" associated with the imposition of the TRQ. If the over-quota tariff is low enough to encourage imports beyond the TRQ, rents are dissipated and tariff revenues are gained. Removal of the TRQ transfers rents from those agents to the users of the commodity in the form of lower prices. Market conditions, such as the degree of competition and market power as well as the ownership of rights to trade at the in-quota tariff rate, determine who earns economic rents.[3]

Based on research findings and earlier USITC work, it is assumed that (i) rents due to the butter and cheese TRQs are shared equally between U.S. and foreign traders because of the administration of import licenses and export quota allocations[4] and that (ii) foreign traders capture TRQ rents for all other TRQs. The assumption that foreign traders capture some or all TRQ rents is implemented in the USAGE-ITC model as a tax levied by foreign governments on exports to the United States.[5] It is also assumed that U.S. import tariff rates are equal to those observed in 2002 trade statistics. The combined direct price impact of TRQ rents and the U.S. tariff rate is a price gap based on U.S. and world prices for 2002.

Analysis of TRQs requires explicit modeling of the in-quota tariff, the over-quota tariff, and the quota level. A change in any of the TRQ policy instruments or in market conditions (e.g., increased demand owing to income growth) would lead to a change in the price gap. This report, however, analyzes the complete removal of TRQs. Hence, it is only necessary to model the direct price impacts of TRQs by means of price gaps. Those price gaps inevitably reflect world product prices that encompass domestic and border economic policies and other trade restrictions implemented by many foreign governments. The results reported here are interpreted as impacts of significant U.S. import restraints given no change in trade policies by foreign governments.

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[3] See Devry S. Boughner, Harry de Gorter, and Ian M. Sheldon, "The Economics of Two-Tier Tariff-Rate Import Quotas in Agriculture," *Agricultural and Resource Economics Review* 29/1, pp. 58-69, April 2000.

[4] USITC, *The Economic Effects of Significant U.S. Import Restraints, Second Update 1999*, Inv. No. 332-325, May 1999, pp. 52-53; USITC, *The Economic Effects of Significant U.S. Import Restraints, First Biannual Update*, Inv. No. 332-325, Dec. 1995, p. 4-9; E. Horning, R. N. Boisvert, and D. Blandford, "Explaining the Distribution of Quota Rents for U.S. Cheese Imports," *Australian Journal of Agricultural Economics*, Apr. 1990, pp.1-20; and E. Horning, R. N. Boisvert, and D. Blandford, "Quota Rents and Subsidies: The Case of U.S. Cheese Import Quotas," *European Review of Agricultural Economics*, 1990, pp. 421-34.

[5] See ch. 1 and appendix D for a discussion of the USAGE-ITC model.

Fill rates do not always provide conclusive information about the restrictiveness of a TRQ. Ultimately, a TRQ is restrictive if domestic prices are higher than world prices by more than the in-quota tariff rate. A TRQ might be restrictive even though fill rates are low. Conversely, a TRQ might not be restrictive even though fill rates are high. Thus, to determine the restrictiveness of a TRQ it is necessary to examine the price data.

The following sections provide an overview of each sector, the border measures in that sector, an evaluation of the level of import restraints in 2002, and an assessment of the impacts of border measures. The sectors that are discussed are sugar and sugar-containing products (SCPs), dairy products, tobacco and tobacco products, canned tuna, peanuts, ethyl alcohol, and beef.

The cotton TRQs did not fill in 2002. In addition, the other two cotton quotas, the special import quota (step 3 program)[6] and the limited global import quota,[7] actually provide additional market access for cotton imports when U.S. cotton prices increase. They are designed to aid U.S. textile mills by providing them with cotton at competitive prices.[8]

Sugar and Sugar-Containing Products

The sugar sector consists of three 4-digit SIC categories: raw cane sugar (2061), refined cane sugar (2062), and refined beet sugar (2063).[9] Sugar is used

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[6] Whenever, for a consecutive 4-week period, the U.S. Northeast (NE) price, adjusted by the value of any step 2 payment rate in effect in the previous week, exceeds the NE price, a special import quota equal to 1 week's consumption of upland cotton by domestic mills must be established. However, during any month for which the Secretary of Agriculture estimates an upland cotton stocks-to-use ratio of less than 16 percent, the U.S. NE price shall not be adjusted for the value of any step 2 payment in effect. To enter under the quota, cotton must be purchased not later than 90 days, and entered into the U.S. not later than 180 days, from the date the quota is announced. Although special import quota periods may overlap, a special import quota cannot be established if a limited global import quota is already in effect (see Farm Service Agency, "Fact Sheet on Upland Cotton," USDA, Jan. 2003).

[7] Whenever the base quality spot price for a month exceeds 130 percent of the average for the previous 36 months, a limited global import quota equal to 21 days of consumption of upland cotton by domestic mills must be opened for a 90-day period. Limited global quota periods cannot overlap, nor can a limited global quota be established if a special import quota is already in effect (see Farm Service Agency, "Fact Sheet on Upland Cotton," USDA, Jan. 2003).

[8] See also "Cotton Summary," USITC publication No. 3391, Jan. 2001.

[9] Sugarcane and sugar beet production (SIC category 0133) are not formally included in the sugar sector, as the import restraint is applied to the manufactured product.

as a primary product as well as an input in the manufacture of a multitude of food items. These food items, which compose the SCPs sector, span several 4-digit SIC categories.[10] In the current study, the sugar sector serves as the primary focus, with a secondary discussion on the SCPs sector covered by the applicable import restraints, because of the quantity of sugar contained within the products.

The United States was the fourth-largest global consumer of sugar in 2002.[11] U.S. per capita consumption of sugar totaled 63.2 pounds (refined basis) in 2002, down 3.5 percent from the level in 2000.[12] U.S. per capita sugar consumption has been in a long-term decline, having peaked at 102.3 pounds in 1972, which mainly reflects a shift to lower cost alternatives, principally high-fructose corn syrup (HFCS), by primary users, mainly soft-drink manufacturers. In 2002, refined sugar accounted for approximately 43 percent of the total U.S. consumption of sweeteners, down from 86 percent in 1967.[13]

Of the sugar consumed in the United States, approximately 85 percent is produced domestically.[14] In 2002, U.S. raw cane sugar production totaled $1.6 billion; U.S. refined sugar production totaled $4 billion, split about equally between cane and beet sugar (table 2-1). Employment in these sectors totaled about 16,000 in 2001. Estimated employment in the upstream sectors, the growing of sugarcane and sugar beets (SIC 0133), was about 38,000 workers in 2002 (table 2-1).

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[10] SIC categories for SCPs include candy and other confectionery products (2064), chocolate and cocoa products (2066), chewing gum (2067), bread and other bakery products (2051), cookies and crackers (2052), and frozen bakery products (2053).

[11] Data in this section are on a fiscal year basis (Oct.-Sept.), except as noted.

[12] USDA, ERS, *Sugar and Sweetener Yearbook Tables*, available at Internet address *http://www.ers.usda.gov/Briefing/Sugar/Data/data.htm*.

[13] USDA, ERS, *Sugar and Sweetener Yearbook Tables*, available at Internet address *http://www.ers.usda.gov/Briefing/Sugar/Data/data.htm*.

[14] USDA, ERS, *Sugar and Sweetener Yearbook Tables*, available at Internet address *http://www.ers.usda.gov/Briefing/Sugar/Data/data.htm*.

Table 2-1
Sugar: Summary data, 2000-02[1]

Item	2000	2001	2002
Production *(million dollars)*:			
Raw cane sugar[2]	1,500	1,723	1,649
Refined sugar:[3]			
Refined cane sugar	1,785	1,808	2,035
Refined beet sugar	2,171	2,069	1,995
Total, refined sugar	3,956	3,877	4,034
Employment *(FTEs)*:			
Sugar growing[4]:			
Sugarcane production	18,604	17,823	18,322
Sugar beet production	23,358	18,500	19,906
Total, sugar growing	41,962	36,323	38,228
Sugar processing[5]:			
Raw cane sugar	4,928	4,644	([9])
Cane sugar refining	4,051	4,007	([9])
Refined beet sugar	7,557	7,015	([9])
Total, sugar processing	16,436	15,666	
Imports *(million dollars)*:			
Raw cane sugar[6]	388	475	415
Refined sugar[7]	24	63	64
Total, sugar	412	538	480
Exports *(million dollars)*[8]	52	58	59

[1] Values are reported for fiscal years beginning Oct. 1 of the previous year and ending Sept. 31 of the reported year.
[2] Valued at the U.S. domestic price for raw sugar.
[3] Valued at the U.S. domestic wholesale price for refined beet sugar.
[4] Sugarcane and sugar beet production (SIC 0133) are not formally included in the sugar sector, as the import restraint is applied to the manufactured product. Data estimated by the staff of the U.S. International Trade Commission.
[5] The three subsectors of the sugar processing sector correspond to 4-digit SIC categories: raw cane sugar (SIC 2061), cane sugar refining (SIC 2062), beet sugar (SIC 2063).
[6] Valued at the world price of raw sugar.
[7] Includes both refined cane and beet sugar and is valued at the world price for raw sugar (raw sugar basis).
[8] The value includes exports of cane and beet sugar, including those refined sugar exports under the sugar re-export program. Valued at the world price for raw sugar (raw sugar basis).
[9] Data not available.

Source: USDA, ERS, Sugar and Sweetener Yearbook Tables, available at Internet address *http://www.ers.usda.gov/Briefing/Sugar/Data/data.htm*; U.S. Department of Commerce, U.S. Census Bureau, *Annual Survey of Manufactures*, various issues; LMC International, "The Importance of the Sugar and Corn Sweetener Industry to the U.S. Economy," Aug. 2001.

U.S. production of sugar (raw basis, by quantity) declined by 12 percent during 2000-02, from 9.03 million short tons in 2000 to 7.91 million short tons in 2002.[15] The United States is a net importer of sugar and exports very little sugar onto the world market.[16]

The United States imports mostly raw cane sugar. In 2002, U.S. raw cane sugar imports totaled $415 million. U.S. imports of refined sugar totaled $64 million in 2002 (table 2-1). The share of the U.S. sugar market supplied by imports declined, in terms of quantity (raw basis), from 16.4 percent in 2000 to 15.0 percent in 2002.[17]

Recent domestic policy for sugar was designed to maintain a guaranteed price floor for U.S. producers through the administration of a price support loan program.[18] U.S. sugar processors may choose to pledge their sugar as collateral for loans obtained from the U.S. Department of Agriculture (USDA). The processors subsequently may repay their loans with interest and reclaim their sugar. However, if the domestic price of raw cane and refined sugar falls below the loan rate, sugar processors may choose to forfeit their sugar in full payment of their loans. In order to avoid forfeitures, the USDA imposes marketing allotments (i.e., supply restrictions) on domestic sugar processors. Marketing allotments are suspended if imports are forecast to exceed 1.532 million short tons (1.36 million metric tons).[19] In that circumstance, substantial forfeitures of sugar would be expected.

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[15] USDA, Economic Research Service, *Sugar and Sweetener Yearbook Tables*, available at Internet address *http://www.ers.usda.gov/Briefing/Sugar/Data/data.htm*.

[16] Almost all exports of U.S. sugar fall under the refined sugar re-export program that allows cane sugar refiners and manufacturers using refined sugar as an input to import raw cane sugar at or slightly above world prices. However, the equivalent quantity of imported sugar is re-exported within a given time period. The refined sugar re-export program is designed to ensure the competitiveness of U.S. sugarcane product exports on the world market while offering U.S. cane sugar refiners access to the raw material to maintain capacity utilization of their refineries.

[17] USDA, ERS, *Sugar and Sweetener Yearbook Tables*, available at Internet address *http://www.ers.usda.gov/Briefing/Sugar/Data/data.htm*.

[18] The loan rate is fixed at 18 cents per pound for raw cane sugar and 22.9 cents per pound for refined sugar.

[19] Raw value, excluding imports under a sugar re-export program.

The Farm Security and Rural Investment Act of 2002[20] (Farm Act) amended preceding U.S. domestic sugar policy with the following major changes.[21] The Farm Act required that the USDA administer the loan program at no net cost to the Federal Government to the extent practicable.[22] The loan rates continued at previous levels; however, the rates may be reduced if foreign sugar producers lower domestic and export subsidies below their commitments under the WTO. The Farm Act also gave the USDA authority to continue a payment-in-kind program, whereby domestic sugar processors can bid for excess raw cane or refined beet sugar in CCC (Commodity Credit Corporation) stocks in exchange for reduced production levels. The responsibility for paying storage costs for excess production was shifted from the Federal Government to the industry. The Farm Act also restored marketing allotments, which had been eliminated in the 1996 Farm Act.

Nature of Trade Barriers

The U.S. trade policy for sugar is determined by elements of the domestic policy[23] as well as by U.S. market access commitments made under both the North American Free Trade Agreement (NAFTA) and the WTO Agreement on Agriculture. To maintain the U.S. domestic price sufficiently above the fixed loan rates, the United States administers a system of TRQs for raw cane and refined sugar, blended sugar syrups, and SCPs for Mexico under NAFTA and for WTO member countries in accordance with the WTO Agreement on Agriculture.[24]

NAFTA TRQs.–The NAFTA granted Mexico its own preferential TRQs for raw cane and refined sugar, blended sugar syrups, and SCPs. In addition to the preferential TRQ access, Mexico is granted preferential in-quota and over-quota tariff rates. Other countries are granted preferential in-quota rates,

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[20] Public Law 107-17.

[21] See Economic Research Service, "Farm Policy: Title I - Commodity Programs, Side-by-side comparison of the new Farm Bill with 1996-2001 farm legislation," USDA, available at Internet address:
http://www.ers.usda.gov/Features/farmbill/titles/titleIcommodities.htm#f.

[22] Effectively, this means trying to avoid forfeitures of sugar to the Commodity Credit Corporation (CCC).

[23] Namely, the domestic loan rates as well as the import trigger level for the suspension of domestic marketing allotments.

[24] Sugar imports from Chile, Jordan, and Singapore are subject to tariff-rate quota limitations that will be phased out in 12 years, 10 years, and 10 years, respectively. Such imports from Chile will continue to be subject to a net trade surplus condition after the phase-out period.

but Mexico is the only major supplying country that is granted preferential over-quota tariff rates.[25] The preferential over-quota tariff rates have tended to be restrictive, but not prohibitive, in recent years.[26]

WTO Agreement on Agriculture TRQs.—The United States scheduled separate TRQs for raw cane sugar, refined sugar, SCPs, and blended sugar syrups[27] and an absolute quota for cocoa powder containing sugar[28] under the WTO Agreement on Agriculture.[29] Imports within the quota are dutiable at a low in-quota tariff rate, while imports beyond the quota are dutiable at a higher over-quota tariff rate. Also, over-quota imports are subject to automatic price based safeguards, which effectively raises the over-quota tariff by the level of the safeguard.[30] Mexico, Canada, Jordan, Singapore, and Chile are exempt from these special safeguard duties.[31]

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[25] Jordan is also granted preferential over-quota tariff treatment for various sugar TRQ items, but it is a minor supplier of sugar.

[26] For example, in 2002, U.S. in-quota imports of raw cane sugar (HTS subheading 1701.11.10) from Mexico totaled about 84,000 metric tons, valued at $34 million, while over-quota imports (HTS subheading 1701.11.50) totaled 27,000 metric tons, valued at $11 million. U.S. in-quota imports of refined sugar (HTS subheading 1701.99.10) from Mexico totaled 47,000 metric tons, valued at $23 million, in 2002 while over-quota imports (HTS subheading 1701.99.50) totaled 9,000 metric tons, valued at $4 million.

[27] These TRQs are all provided for in the additional U.S. notes 5, 7, 8, and 9 to ch. 17 of the HTS and pertinent subheadings.

[28] This TRQ is provided for in additional U.S. note 1 of ch. 18 of the HTS.

[29] 15 CFR 2011.

[30] Under article 5 of the WTO Agreement on Agriculture, countries may apply special safeguards (SSGs) to products whose nontariff measures have been converted into duties and that are designated for SSG treatment in their schedules. Special safeguards take the form of temporary additional duties and are typically applied to products particularly sensitive to trade. The Agreement on Agriculture permits SSGs to prevent low prices or import surges from injuring a domestic industry, although no determination of injury is required. There are two types of SSGs—price-based and volume-based. Price-based SSGs allow additional duties to be imposed on imported products when prices fall below a fixed trigger price (based on average prices during 1986-88), and are imposed on a shipment-by-shipment basis. Because of the value of imports, price-based SSGs are applied automatically. Volume-based SSGs allow additional duties to be imposed if actual imports exceed a certain trigger level of imports, based on average consumption and import levels over the previous 3 years. Quantity-based SSGs are triggered by an announcement by the USDA. In either case, SSGs are applied on a tariff line basis and may be applied only to over-quota tariff rates. Price- and quantity-based SSGs cannot be both applied at the same time. SSGs are published in chapter 9904 of the Harmonized Tariff Schedule of the United States.

[31] See U.S. note 1 to ch 99, subch. IV of the U.S. HTS.

The raw cane sugar TRQ is allocated on a country-specific basis among sugar exporting nations in proportion to their average market share of U.S. imports during a base period of 1975-81. Under Uruguay Round commitments, the United States is required to allocate at least 1,117,195 metric tons annually. During FY2000-FY2002, the TRQ allocations for raw cane sugar continued a long-term decline and equaled the minimum requirement the past 2 years, as domestic production remained at relatively high levels. For 2002 the difference between the U.S. price (20.87 cents/lb.) and the world price (7.88 cents/lb.) for raw cane sugar was 164.8 percent.[32]

The minimum level of the refined sugar TRQ is 22,000 metric tons annually. However, during FY2000-FY2002, annual allocations ranged between 38,000 metric tons in FY2001 and 171,788 metric tons in FY2002. A certain amount, 13,656 metric tons in FY 2002, is reserved for specialty sugars. In addition, Mexico and Canada receive reserved annual allocations, totaling 2,954 metric tons and 10,300 metric tons, respectively. The remaining amount is allocated on a first-come, first-served (FCFS) basis. Practically all in-quota imports entered free of duty in 2002. For 2002, the difference between the U.S. price (25.79 cents/lb.) and the world price (10.35 cents/lb.) for refined sugar was 149.2 percent.[33]

The TRQs for SCPs and blended sugar syrups are filled annually.[34] The annual TRQ allocation for SCPs containing over 10 percent by dry weight of refined sugar, but less than 65 percent, totals 64,709 metric tons, of which Canada receives 59,250 metric tons.[35] The remaining amount of the TRQ is allocated on a FCFS basis. The SCP TRQ for articles containing more than 65 percent by dry weight of refined sugar is zero, meaning that all imports are dutiable at the over-quota tariff rate. The TRQ for cocoa powder containing

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[32] World raw cane sugar price represented by Contract No. 11-f.o.b. stowed Caribbean port, including Brazil, bulk spot price; U.S. raw cane sugar price represented by Contract No. 14, duty fee paid New York, reported by the New York Board of Trade. Prices obtained from USDA, ERS, *Sugar and Sweetener Yearbook Tables*, available at Internet address *http://www.ers.usda.gov/Briefing/Sugar/Data/data.htm*.

[33] World refined sugar price represented by Contract No. 5, London Daily Price, for refined sugar, f.o.b. Europe, spot price; U.S. refined sugar price represented by U.S. wholesale refined beet sugar price, reported by the *Milling & Baking News*. Prices obtained from USDA, ERS, *Sugar and Sweetener Yearbook Tables*, available at Internet address *http://www.ers.usda.gov/Briefing/Sugar/Data/data.htm*.

[34] The impact of these TRQs is not considered in this report because price gaps for model sectors which include those commodities are less than 0.1 percent (see table D-2, Appendix D in USITC, *The Economic Effects of Significant U.S. Import Restraints, Third Update 2002*, Inv. No. 332-325, June 2002).

[35] Canada allocates export licenses for their portion of the TRQ, and only a few exporters own the right to export from Canada to the United States within the TRQ.

over 10 percent, by weight, of sugar is 2,313 metric tons, which represents less than 0.1 percent of domestic consumption in 2002 and is allocated on a FCFS basis. In 2002, over-quota tariff rates for SCPs ranged between 14 percent and 108 percent.[36]

The blended sugar syrup TRQ quantity is zero, thus subjecting all imports of such products to the over-quota duty rates, which include a specific component and are based on the total sugar content in each shipment of syrup.

Restrictiveness of Trade Barriers

The application of TRQs in this sector effectively limits U.S. imports to a fraction of U.S. sugar consumption (about 15 percent on a raw-value basis) and contributes to maintaining domestic sugar prices above USDA loan rates for raw cane and refined sugar. In addition, the TRQs contributed to a large gap between U.S. prices and world prices for raw cane and refined sugar. The TRQs essentially are filled each year. TRQs are restricting and distorting the flow of trade to the United States, since foreign suppliers cannot compete in the U.S. market at the generally prohibitive over-quota duty rates.

U.S. sugar policy, including restrictive TRQs, mainly benefits U.S. growers and processors of sugarcane and sugar beets, and produced indirect benefits for U.S. corn growers and the corn sweetener industry.[37] Negative effects of the program are concentrated among industrial sugar users. These users contend that the TRQs, as well as other aspects of the U.S. sugar program, lead to artificially high U.S. sugar prices and contribute to the relocation of food and beverage manufacturers to countries with lower cost sugar. In addition, sugar users point to a decline in U.S. sugar-refining capacity and employment and they contend that U.S. employment growth in sugar-using industries is lower than in industries that are not substantial sugar users.[38]

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[36] Calculated using U.S. import unit values under HTS subheadings that showed trade and applying over-quota tariff rates.

[37] See C. M. Rendleman and T. W. Hertel, "A Policy Model for the Sweetener Industry," Staff Paper #90-19, Department of Agricultural Economic, Purdue University, West Lafayette, Indiana, Jan. 1991.

[38] Promar International, *Food & Beverage Jobs Disappearing Due To Sugar Program*, report prepared for the Sweetener Users Association, Dec. 2003, p. 1.

Proponents of U.S. sugar policy counter that sugar accounts for a relatively low share of production costs for SCPs and that other factors, such as lower wages and lower tax burdens, are the primary reasons for SCPs producers relocating plants outside the United States.[39]

Some research indicates that corn growers and the corn sweetener industry have been indirect beneficiaries of the U.S. sugar policy. The maintenance of relatively high domestic sugar prices, in concert with advances in technology and production efficiencies for corn sweeteners, has contributed to the aforementioned growth in high-fructose corn syrup as a sugar alternative, particularly in the soft drink market.[40] Some recent research, however, indicates that currently, HFCS producers may receive little benefit from U.S. sugar policy.[41]

Effects of Liberalization

The effects of liberalizing raw cane sugar imports are simulated with the USAGE-ITC model [42] by removing two border measures on the sugar manufacturing sector:[43] a U.S. import tariff on sugar manufacturing, estimated at 1.02 percent for 2002; and a rest-of-the-world (ROW) tax on exports of sugar manufacturing to the United States, estimated at 107.14 percent for 2002. The two border measures give a price gap of 109.25 percent, i.e., the price of that commodity in the United States was 109.25 percent higher than its world price in 2002.[44] The price gap for raw cane sugar was 164.8 percent in 2002

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[39] See Peter Buzzanell, "U.S. Confectionery Companies: The Move to Mexico–Encouraged by What Cost?" Paper prepared for the American Sugar Alliance, Aug. 31, 2001.

[40] See, for example, Donald Mitchell, "Sugar Policies: Opportunity for Change," World Bank Policy Research Working Paper 3222, Feb. 2004, p. 9.

[41] The United States General Accounting Office Report to Congressional Requesters, *Sugar Program: Supporting Sugar Prices Has Increased Users' Costs While Benefiting Producers*, June 2000, notes (page 6) that "(a)s a result, even if the sugar program were removed and the price of domestic sugar fell substantial, the impact on the price of HFCS would be limited–HFCS producers might no longer need to lower their prices to remain competitive."

[42] See ch. 1 and appendix D for a discussion of the USAGE-ITC model.

[43] The sector "sugar manufacturing" is an aggregate of three SIC sectors: cane sugar, except refining (SIC 2061); cane sugar refining (SIC 2062); and beet sugar (SIC 2063).

[44] It is assumed that foreign exporters earn rents generated by the sugar TRQs and that U.S. import tariff rates are equal to those observed in 2002 trade statistics. The former assumption is implemented in the model as a tax levied by foreign governments on exports to the United States. The combined price impact of the ROW export tax and

(see earlier discussion on the raw cane sugar TRQ in section WTO Agreement on Agriculture TRQs) and it reflects the existence of foreign government policies on world prices; that is, the price gap is based on a depressed world price.[45] This analysis assumes that foreign government policies are not changed. The price gap is only 109.25 for the purposes of this analysis percent because imports of "sugar manufacturing" consist of many goods (e.g., molasses) as well as raw cane sugar. Price gaps for model sectors that include SCPs are not considered in this report because they are less than 0.1 percent.[46] Thus, this analysis accounts for the expansion in the SCP sectors owing to lower raw sugar prices in the United States, but it does not account for increased import competition that likely would follow a removal of the TRQs on SCPs.

The anticipated net welfare impact of removing these border measures is estimated at $1,089 million. Detailed results are shown in table 2-2. The simulation suggests an increase of U.S. sugar-manufacturing imports of 161.3 percent. As a result of increased imports, the price of sugar manufacturing paid by U.S. consumers, a weighted average of U.S. and imported prices, would decline by 7.9 percent. The relative price of the imports (i.e., the price received in the U.S. market by exporters for their sales of raw cane sugar) would decline by 44.2 percent, the U.S. price of U.S. produced raw cane sugar would decline approximately 44.2 percent, and the U.S. price for the sugar manufacturing sector as a whole (i.e., cane, refined, etc.) would decline by 11.5 percent.

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[44]—*Continued*
the U.S. tariff rate is the price gap estimated from U.S. and world prices. The relationship between price gap, import tariff and export tax is that (1+price gap/100) = (1+import tariff/100) x (1+export tax/100). If TRQ rents, however, were captured by U.S. economic agents, this analysis would overestimate welfare effects. Other estimated impacts, such as percentage changes in prices, production and trade, however, are not changed by the assumption about who earns the economic rents. For the case of the sugar TRQ, however, it is reasonable to assume that TRQ rents are captured by foreign governments.

[45] Policies in a number of countries affect world sugar trade and depress the world price of sugar. A 1999 study suggests that global liberalization of the sugar market would result in a 41 percent increase in the world price for raw sugar (see T. Sheales, S. Gordon, A. Hafi, and C. Toyne, *Sugar: International Policies Affecting Market Expansion*, Research Report 99.14, Australian Bureau of Agricultural and Resource Economics, Canberra, 1999). The study also found that reducing the European Union intervention price for white sugar to world levels would increase global prices by 19 percent; and that reform of the U.S. market would increase world prices by 17 percent.

[46] See table D-2, Appendix D in USITC, *The Economic Effects of Significant U.S. Import Restraints, Third Update 2002*, Inv. No. 332-325, June 2002.

Table 2-2
Sugar: Selected economic effects of tariff and TRQ removal, 2002

Sector	Employ-ment	Output	Imports	Exports	Composite price[1]
	Percent				
Liberalized Sector:					
Sugar manufacturing, i.e. cane sugar milling; cane sugar refining; and beet processing[2]	-25.2	-24	161.3[3]	113.3	-7.9
Related Sectors:					
Sugar crops	-34.1	-23.9	([4])	([4])	-0.6
Chocolate and cocoa products	7.6	5.4	-0.8	18.3	-0.3
Prepared flour mixes and dough	1.7	1.1	-2.1	49.1	-0.5
Cereal breakfast foods	1.0	0.8	-1.3	26.1	-0.3
Candy and other confectionary products	0.2	0.9	-2.7	18.0	-0.6
Whole Economy:					
Farming, fishing, forestry	([4])	-0.1	0.2	0.1	([4])
Mining	([4])	([4])	([4])	([4])	([4])
Construction	([4])	([4])	([4])	-0.3	([4])
Durable manufacturing	([4])	([4])	([4])	-0.1	([4])
Nondurable manufacturing	([4])	-1	0.5	0.5	([4])
Transportation and utilities	([4])	([4])	([4])	-0.1	([4])
Trade	([4])	([4])	([4])	-0.2	([4])
Finance, insurance, and real estate	([4])	([4])	([4])	-0.5	([4])
Other services	([4])	([4])	([4])	0.1	([4])

[1] Share-weighted price of imports, domestic production, and marketing costs. See section "Overview of the USAGE-ITC Framework" in appendix D.
[2] The sector "sugar manufacturing" is an aggregate of three SIC sectors: cane sugar, except refining (SIC 2061); cane sugar refining (SIC 2062); and beet sugar (SIC 2063).
[3] The United States imports mostly raw cane sugar, an output of cane sugar milling.
[4] Less than .05 percent.

Source: USITC estimates.

The decline in the composite price is substantially smaller than 44.2 percent because the market share of imports in the overall sugar manufacturing sector is small. However, one would expect the composite price to decline by at least as much as the U.S. price, i.e., 11.5 percent. The reason that the composite price declines by only 7.9 percent is that the costs of retail and wholesale trade increase in this simulation and thus they prevent the composite price from declining further. The sugar-manufacturing industry would contract by 24 percent. The decline in the price of U.S. sugar manufacturing would make the aggregate commodity more competitive in world markets and exports would increase (although from a small base of $59 million in 2002).[47]

[47] The simulated increase in U.S. exports of the aggregate commodity "sugar manufacturing" is not interpreted as an increase in exports of raw cane sugar but rather as an increase of other commodities included in the aggregate sector "sugar manufacturing".

The effects in table 2-2 are dependent on the definition of the "sugar manufacturing" sector, which is an aggregate of three industries: sugarcane milling, cane sugar refining, and sugarbeet processing. Increased imports of raw cane sugar would directly affect the sugarcane milling sector which is producing raw cane sugar. The other two sectors, refined cane and refined beet, would be affected indirectly and in different ways. It is expected that sugarcane milling would contract by more than 24 percent owing to increased competition from raw cane sugar imports. Cane sugar refining, which produces refined sugar, could expand due to less costly raw cane sugar and the price of refined sugar would decline. Sugarbeet processing, which also produces refined sugar, would be expected to contract due to a reduction in refined sugar prices.[48] The U.S. price of raw cane sugar would fall by roughly the same amount as the price for imported raw cane sugar, which implies that the price would fall below the 2002 loan rate level. Finally, imports of raw cane sugar would surpass the trigger level of 1.532 million short tons.

Downstream sectors, such as chocolate, prepared dough, cereal, and candy, all expand because sugar prices decline.[49] Employment expands to a varying degree across the four sectors, with chocolate expanding by 8.1 percent while candy only increases by 0.2 percent. Output and exports likewise increase across the downstream sectors, while imports contract modestly.[50]

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[48] The work of Stephen Haley supports this interpretation of the model results. Haley simulated removal of the U.S. sugar program (under the Federal Agriculture and Improvement Reform Act of 1996) and border measures within a model of the U.S. sweeteners industry (see S. L. Haley, "Modeling the U.S. Sweetener Sector: An Application to the Analysis of Policy Reform," working paper no. 98-5, International Agricultural Trade Research Consortium, Aug. 1998). The 1995 gap between the U.S. and world prices of raw sugar was estimated at 152 percent and raw sugar imports were modeled as a perfect substitute for U.S. production. Haley found that 10 years after the removal of U.S. sugar policies, the United States would become much more dependent on imports of raw cane sugar, but would still produce a sizeable portion of its consumption: cane production would decline by 38 percent; beet production would decline by 18.8 percent and refined sugar demand would increase by 17 percent. The U.S. price of raw sugar would decline by 23.4 percent and the price of refined sugar would decline by 13.3 percent.

[49] It is noted earlier that the impact of TRQs for sugar containing product (SCP) imports is not considered in this report because price gaps for model sectors which include those commodities are less than 0.1 percent (see table D-2, Appendix D in USITC, *The Economic Effects of Significant U.S. Import Restraints, Third Update 2002*, Inv. No. 332-325, June 2002). Thus the output effects for SCPs reported in table 2-2 are an upper bound.

[50] The American Sugar Alliance argues in a written statement submitted to the Commission November 17, 2003, that the potential gains from unilateral liberalization in sugar trade would be far outweighed by the costs of market adjustment to such changes. The submission envisions massive unemployment in sugar, no significant drop in prices

Dairy Products

Import restraints are applied to several milk products, including fluid milk and cream, butter, cheese, powdered milk products, ice cream, infant formula, and animal feeds containing milk.[51] Table 2-3 presents the value of shipments, employment, and trade for certain dairy products during 2000-02. U.S. shipments averaged $65 billion per year during 2000-02, with fluid milk and cream accounting for about 37 percent of such shipments; cheese for 35 percent; dry/concentrated milk products, 15 percent; ice cream, 10 percent; and butter, 3 percent.

U.S. trade in dairy products is relatively small in comparison to the domestic market. In 2002, for example, the total value of dairy imports was $1.6 billion, representing about 2 percent of the total value of dairy shipments, while dairy exports, valued at $965 million, represented about 1.5 percent of such shipments. More than 95 percent of dairy imports consisted of cheese, casein/caseinates, and milk protein concentrates (MPC) in 2002, while major dairy exports were cheese and whey.[52]

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[50]—*Continued*
paid by U.S. consumers, and substantial increases in government farm subsidies caused by farmers switching from sugar crops to other crops. The Commission's analysis differs from that of the American Sugar Alliance's submission in three key areas. First, the Commission's analysis is conducted within a long-run, economywide model where expanding sectors absorb labor released from sugar manufacturing. Second, the same weights are attached to welfare changes experienced by consumers, producers, wage earners, and owners of capital within the U.S. economy. Finally, the Commission's model does not account for domestic U.S. Government programs, that is the underlying assumption is that unilateral liberalization of U.S. sugar imports would be coupled with domestic reform.

[51] Some food preparations and chocolate products covered in ch. 18, 19, and 21 of the HTS contain both dairy and sugar products.

[52] Casein, caseinates, and MPC have not been produced in the United States since the early 1950s. After USDA established a price-support program for milk, U.S. butter and powder producers realized greater returns from drying their skim milk into nonfat dry milk (NDM) and selling it at a floor price set by the government intervention agency, the CCC, than from processing it into casein and MPC. Therefore, domestic supplies of casein have since been furnished from imports.

Table 2-3
Dairy: Summary data, 2000-02

Item	2000	2001	2002
Shipments *(million dollars)*:			
Butter	1,500	2,100	1,500
Cheese	20,600	25,800	22,000
Dry/condensed milk products	10,400	9,900	9,900
Fluid milk and cream	22,500	26,900	22,300
Ice cream	6,600	6,900	6,900
Employment *(FTEs)*:			
Butter	1,800	1,900	1,800
Cheese	38,000	39,000	38,500
Dry/condensed milk products	15,700	15,500	15,500
Fluid milk and cream	56,500	58,000	56,000
Ice cream	19,500	20,000	20,000
Imports *(million dollars):*			
Butter	20.9	54.5	25.3
Cheese	685.6	746.0	825.0
Dry/condensed milk products	732.5	751.3	661.1
Fluid milk and cream	17.6	16.8	20.8
Ice cream	18.3	24.2	20.8
Exports *(million dollars)*:			
Butter	7.4	5.3	7.1
Cheese	139.4	163.8	167.3
Dry/condensed milk products	816.5	841.6	632.8
Fluid milk and cream	91.3	86.4	75.8
Ice cream	48.9	72.1	81.5

Source: Shipments and employment: USITC estimates based on USDOC, Bureau of Census, *2000 Census of Manufacturers*; Milk Industry Foundation, *Milk Facts: 2002 Edition*, Washington, DC, Nov. 2002; National Cheese Institute, *Cheese Facts*: *2002 Edition,* Washington, DC, Aug. 2002; and International Ice Cream Association, *The Latest Scoop: 2002 Edition*, Washington, DC, Sept. 2002. Imports and exports: USDA, FAS, *Dairy, Livestock, and Poultry: U.S. Trade and Prospects*, Mar. 2002.

Nature of Trade Barriers[53]

In the United States, milk is marketed under a complex system of Federal, State, and local laws and regulations. Programs at the Federal level include domestic price supports,[54] milk marketing orders,[55] import controls, export subsidies and supports, as well as domestic and international food aid

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[53] Much of this discussion draws from Jonathan R. Coleman and Devry S. Boughner, "Tariff Rate Quotas in the U.S. Dairy Industry," *Bringing Agriculture into the GATT: Issues in Reforming Tariff-Rate Import Quotas in the Agreement on Agriculture in the WTO*, International Agricultural Trade Research Consortium, Commissioned Paper No. 13, University of Minnesota, 2000.

[54] Under the system, market prices for butter, cheddar cheese, and nonfat dried milk are supported through purchases of domestic surpluses by CCC.

[55] Federal milk marketing orders regulate handlers that sell milk or milk products within an order region by requiring them to pay not less than an established minimum price for the Grade A milk they purchase from dairy producers, depending on how the

programs.[56] These programs are used to influence the use and availability of milk in the domestic market in order to affect the level and volatility of producer prices and incomes. A consequence of government intervention has been to raise U.S. domestic prices substantially above world market prices.[57] Owing to the incentives created by the price gap between domestic and world markets, border controls have been necessary to prevent imports from undermining government support programs by lowering domestic dairy prices.

Since 1995, TRQs have been used to control imports of dairy products.[58] TRQs are applied to several dairy products, including fluid milk and cream (fresh, condensed, and evaporated), butter, cheese, milk powders, whey products, chocolate containing butterfat, infant formula, ice cream, and animal feeds containing milk. Imports subject to TRQs – mainly cheese – amounted to $790 million annually during 2000-02, while the ratios of imports to domestic consumption for all major categories were 5 percent or less.

Slightly under half of the dairy products, by value, imported into the United States between 2000 and 2002 were not subject to TRQs, including certain varieties of cheese (mainly cheese made of sheep's milk), milk protein concentrates, and whey protein concentrates.[59] [60]These products faced fairly low specific and/or ad valorem tariffs. For example, the average ad valorem equivalent across all nonquota imports was 1 percent during 2000-02, with cheese at 4 percent, and whey protein concentrate at 5 percent. Casein, accounting for almost 30 percent of all dairy imports, is imported free of duty. In general, dairy imports not subject to TRQs represent more than 95 percent

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[55]—*Continued*
milk is used. This classified pricing system requires handlers to pay a higher price for milk used for fluid consumption (Class I) than for milk used in manufactured dairy products such as yogurt, ice cream (Class II), cheese, (Class III), and butter and nonfat dry milk (Class IV)).

[56] For a detailed discussion of U.S. dairy policy, see USDA, ERS, *Dairy. Briefing Room*, found at *http://www.ers.usda.gov/Briefing/Dairy/*, retrieved Dec. 31, 2003.

[57] For example, between 2000 and 2002, the average U.S. price of butter was more than double the world price, while U.S. cheese prices were 37 percent higher and nonfat dry milk prices were 23 percent higher.

[58] The TRQs, introduced in 1995 under the WTO Agreement on Agriculture, replaced the existing dairy quotas that had been imposed under section 22 of the Agricultural Adjustment Act of 1933.

[59] Dairy trade volumes may also be estimated in terms of milk equivalents, which provide a common denominator for aggregating different types of dairy products.

[60] For more information on milk protein concentrates see U.S. ITC report entitled *Conditions of Competition for Milk Protein Products in the U.S. Market*, Inv. No. 332-453, Publication 3692, May 2004.

of domestic consumption, indicating that U.S. production of these products is negligible or nonexistent.

Most tariff lines in the U.S. dairy sector are subject to price-based special safeguards (SSGs).[61] The additional duties applied under the SSG provisions increase as the unit value of imports declines.[62] This import value is determined by the U.S. Customs and Border Protection, and defined as the price actually paid or payable for merchandise, excluding U.S. import duties, freight, insurance, and other charges. Price-based SSGs are applied automatically and do not have to be formally announced when in effect, as in the case of volume-based SSGs.

In addition to tariff measures, importers argue that there are significant nontariff border measures to trade in dairy products. For example, several industry representatives indicate that TRQ administration — the method by which in-quota TRQ quantities are allocated among importers via import licenses — is costly and cumbersome, and serves as a significant barrier to

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[61] Under article 5 of the WTO Agreement on Agriculture, countries may apply SSGs to products whose nontariff measures have been converted into duties and that are designated for SSG treatment in their schedules. Special safeguards take the form of temporary additional duties and are typically applied to products particularly sensitive to trade. The Agreement on Agriculture permits SSGs to prevent low prices or import surges from injuring a domestic industry, although no determination of injury is required. There are two types of SSGs—price-based and volume-based. Price-based SSGs allow additional duties to be imposed on imported products when prices fall below a fixed trigger price (based on average prices during 1986-88), and are imposed on a shipment-by-shipment basis. Because of the value of imports, price-based SSGs are applied automatically. Volume-based SSGs allow additional duties to be imposed if actual imports exceed a certain trigger level of imports, based on average consumption and import levels over the previous 3 years. Quantity-based SSGs are triggered by an announcement by the USDA. In either case, SSGs are applied on a tariff line basis and may be applied only to over-quota tariff rates. Price- and quantity-based SSGs cannot be both applied at the same time. SSGs are published in chapter 9904 of the Harmonized Tariff Schedule of the United States.

[62] For example, U.S. SSG provisions for cheddar cheese require that for imports with an import value of less than 29.5 cents per pound, an SSG of 57.2 cents per pound is added to the over-quota tariff of 57.3 cents per pound. Thus, the overall tariff is 114.5 cents per pound. As the value increases, the SSG declines and reaches zero when the value reaches 83.9 cents per pound. Note that the SSG allows the overall value of imports (import value plus over-quota tariff and SSGs) to remain in a fairly small range (134.5 cents per pound to 142.5 cents per pound).

entry for firms wishing to operate in the United States. About three-quarters of the dairy products subject to TRQs require licenses for import into the United States.[63]

For certain products subject to TRQs, importers must obtain an import licence issued by the USDA to receive the in-quota tariff rate. A typical license identifies the product, the country from which the product may be imported, and the maximum quantity that may be imported. Many licenses are country specific.

However, an "other country" license allows the importer to source the product up to a certain quantity from any country other than those under country-specific TRQs.[64] An "any country" license allows an importer to source imports up to a certain quantity of a particular product from any country in the world, including those with country-specific licenses. There are also two types of licenses — historical and nonhistorical. Historical licenses are renewable annually and are valid for the same product from the same country. A license will be renewed as long as the importer has met the requirements of the regulation. Nonhistorical licenses are not renewable. Importers may reapply for an identical nonhistorical license for the next year, but the licenses are issued through a lottery-type system.[65] Certain dairy products for which there are TRQs may be imported without a license under a FCFS system administered by the U.S. Customs and Border Protection.[66] No licenses are required to import at the much higher over-quota duty rates.

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[63] The licensing authority is the Foreign Agricultural Service, USDA which allocates licenses annually to importing firms that conduct business in the United States and have an office and an agent in the United States.

[64] For example, in 2002 the TRQ for butter was 6,977 metric tons (HTS chapter 4, additional U.S. note 6). Country-specific licenses were issued to importers sourcing 151 metric tons of product from New Zealand and 96 tons of production from the EU. Other country licenses for countries other than New Zealand or the EU totaled 74 metric tons. Any country licenses accounted for the remaining tonnage (6,656 metric tons), and could be sourced from all eligible countries, including New Zealand and the EU.

[65] There are also "designated" licenses for cheese imports issued to importers who have met the regulation qualification standards and have been designated by the government of the exporting country to receive a license. Not all countries participate in the designation process.

[66] These products may be imported at the in-quota rate until a specified TRQ is filled, and once the TRQ is filled, importers must pay the over-quota rate. The items covered under the first-come, first-served system include dairy products from Mexico; certain dairy products from Israel; cheddar cheese from Canada (made from unpasteurized milk and aged 9 months or more); fluid milk or cream (fresh or sour); milk or cream (condensed or evaporated and in airtight containers); dried buttermilk or whey; infant formula; ice cream; and animal feed containing milk.

In addition to licensing, U.S. imports of dairy products are also subject to various health and sanitary regulations. For example, U.S. imports of fluid milk products are prohibited unless accompanied by a valid permit issued by the U.S. Secretary of Health and Human Services under the provisions of the Import Milk Act of 1927.[67]

Restrictiveness of Trade Barriers

Overall, the TRQ system has been highly effective in rendering over-quota imports uncompetitive in the U.S. market. For example, in 2002, the U.S. price of cheese ($1.18 per pound) was significantly higher than the price of imports at the in-quota tariff ($0.92 per pound), but lower than the price of imports at the over-quota tariff ($1.34 per pound).[68] Similarly, for butter and nonfat dry milk (NDM), the over-quota tariff for the most part was sufficient to deter imports above the TRQ level during 2000-02.

Evidence of the restrictiveness of border measures is provided by TRQ fill rates—the ratio between actual imports under the quota and the quota level. In 2002, fill rates for butter, nonfat dry milk, and whole milk powder were over 95 percent, while the fill rate for cheese was over 90 percent. In a few product categories, fill rates indicate that TRQs were not constraining in 2002. For instance, the quotas do not appear to be binding for fluid milk and cream (65 percent fill), and ice cream (59 percent fill). However, because the licensing system involves allocation of country-specific limits, it is difficult to gauge the extent to which quotas are binding. TRQ administration may have led to imports falling short of TRQ trigger quantities. Reasons for this include the assignment of country-specific licenses to countries that may not produce or export the product, or are high-cost producers (e.g., the ice cream TRQ allocated to Jamaica); the allocation of TRQs in insufficient volume to make transporting economically viable (e.g., 100 metric tons of infant formulas and 100 tons of cream powder); the difficulty in forming long-term business relationships among importers, exporters, and end-users for products administered by "first-come, first-served" systems; the reallocation methods for country-specific quotas, which are complicated; and the failure of importing firms to surrender unused amounts to be used for reallocation.[69]

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[67] 44 Stat. 1101.

[68] The average world price of cheddar cheese in 2002 was $0.79 per pound. The in-quota tariff was 16 percent, and the over-quota tariff was $1.227 per kilogram.

[69] For additional reasons, see D.S. Boughner, and H. de Gorter, "The Economics of 2-tier Tariff-Rate Import Quotas: The Agreement on Agriculture in the WTO and U.S. Dairy Policy," paper presented at the International Agricultural Trade Research Consortium Annual Meeting, St. Petersburg, FL, Dec. 13-15, 1998 (revised April 1999).

Effects of Liberalization

To estimate the impacts of liberalization in dairy products, a removal of the border measures listed in table 2-4 is simulated with the USAGE-ITC model.[70] For each sector, the border measures result in price gaps which reflect differences between U.S. and world prices.[71] [72]

Table 2-4
Dairy: Border measures removed in simulation, 2002

Sector[1]	U.S. import tariff	Rate of economic rents earned by U.S. economic agents[2]	Rest-of-the world tax on exports to the United States[2]	Price gap[3]
	Percent			
Creamery butter	19.46	15.71	15.71	60.00
Natural, processed, and imitation cheeses	11.42	12.10	12.10	40.00
Dry, condensed and evaporated milk products	4.48	0	29.21	35.00
Fluid milk	13.65	0	([4])	13.65
Ice cream and frozen desserts	10.37	0	8.73	20.00

[1] Sectors are specified as in the BEA input-output table and they include goods other than those subject to import restraints.
[2] Based on research findings and earlier USITC work, it is assumed that (i) rents due to the butter and cheese TRQs are shared by foreign and U.S. economic agents, and that (ii) foreign exporters capture TRQ rents for all other sectors. The assumption about foreign rents is implemented in the model as a tax levied by foreign governments on exports to the United States.
[3] Price gaps are the percent difference between U.S. prices for imports and world prices. The relationship between price gap, import tariff, TRQ rents is given by *(1+price gap/100) = (1+import tariff/100) x (1+U.S. rents rate/100) x (1+export tax/100)*.
[4] No measured export tax equivalent.

Source: USITC estimates of ad valorem tariff equivalents compiled from U.S. Department of Commerce official statistics. USITC estimates and calculations include tariff equivalents or export tax equivalents of U.S. quotas.

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[70] See ch. 1 and appendix D for a discussion of the USAGE-ITC model.

[71] The price gaps for 2002 are based on differences between U.S. and world prices for dairy products contained in the 5 input-output sectors, in-quota and over-quota tariff rates, as well as the proportion of dairy products that enter the United States duty free.

[72] Based on research findings and earlier USITC work, rents due to the butter and cheese TRQs are assumed to be shared by foreign and U.S. economic agents, while foreign exporters capture TRQ rents on the other sectors. The assumption about foreign rents is implemented in the model as a tax levied by foreign governments on exports to the United States. The combined price impact of TRQ rents and the U.S. tariff rate is the price gap estimated from U.S. and world prices. The relationship between the price gap, import tariff, TRQ rents is that (1+price gap/100) = (1+import tariff/100) x (1+U.S. rents rate/100) x (1+export tax/100).

The welfare effects of liberalization are anticipated to be $30 million.[73] Butter has the largest price gap (60 percent) and it is the sector that is affected the most; fluid milk has the smallest price gap (13.6 percent) and it is the sector that is affected the least. Composite prices are anticipated to fall in all five liberalized sectors, with the largest decline, 10.0 percent, seen in butter. The cheese sector experiences a relatively modest fall in price of 1.3 percent, while the price of dry/condensed milk products declines slightly more, by 2.2 percent. Employment and output are estimated to fall in four of the liberalized sectors, with the severity of impact correlated with the fall in the composite price. Exports in all of the affected sectors increase modestly in response to the decline in domestic prices, while imports more than double for butter, cheese, and dry/condensed milk products. The impact on the upstream sectors of dairy farm products, feed grains, and prepared feeds is anticipated to be relatively small and negative. Dairy farm output declines by only 2.9 percent because dairy farms are mainly affected by changes in the fluid milk and cheese industries, which absorb about 50 percent and 35 percent, respectively, of the dairy farm output.

Tobacco and Tobacco Products

Import restraints in the form of a TRQ are applied to certain categories of tobacco used in the production of cigarettes consumed domestically, mainly semiprocessed flue-cured and burley leaf tobacco, the principal cigarette tobaccos produced in the United States.[74] Until 2002, the TRQ had not been a

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[73] The TRQs for creamery butter and cheese require USDA licenses which are allocated to domestic importers, suggesting that TRQ rents likely would accrue to these firms. However, research on U.S. cheese quotas indicates that the export side of the cheese market is highly concentrated, resulting in market power for both importers and exporters (see E. Horning, R. N. Boisvert, and D. Blandford, "Explaining the Distribution of Quota Rents for U.S. Cheese Imports," *Australian Journal of Agricultural Economics*, Apr. 1990, pp.1-20; and E. Horning, R. N. Boisvert, and D. Blandford, "Quota Rents and Subsidies: The Case of U.S. Cheese Import Quotas," *European Review of Agricultural Economics*, 1990, pp. 421-34). Thus, TRQ rents for cheese and butter are assumed to be equally shared between U.S. importers and foreign exporters. The TRQ rents for dry/condensed milk products and ice cream are administered by U.S. Customs and Border Protection on a FCFS basis. The import side, however, is unconcentrated while foreign exporters benefit from higher prices for their products. Consequently, it is assumed that foreign exporters earn all the TRQ rents.

[74] Generally, more than 90 percent of the value of tobacco imported under the TRQ is classified in HTS subheading 2401.20.85, threshed or similarly processed tobacco. Other categories of tobacco and tobacco products subject to the TRQ include: 2401.10.63, unmanufactured tobacco (whether or not threshed or similarly processed),

Table 2-5
Dairy: Selected economic effects of tariff and TRQ removal, 2002

Sector	Employ-ment	Output	Imports	Exports	Composite price[1]
	Percent				
Liberalized Sectors:					
Creamery butter	-33.9	-20.4	164.7	97.4	-10.0
Natural, processed, and imitation cheeses	-3.9	-3.5	118.4	95.5	-1.3
Dry, condensed and evaporated milk products	-8.7	-7.6	127.9	6.7	-2.2
Fluid milk	-1.0	-1.1	53.1	8.5	-0.1
Ice cream and frozen desserts	0.2	(2)	97.3	0.8	-0.2
Related Sectors:					
Dairy farm products	-2.6	-2.4	-2.5	(2)	-0.1
Feed grains	-0.6	-0.4	-0.9	0.3	-0.1
Prepared feeds	-0.3	-0.3	-0.5	0.2	(2)
Chocolate and cocoa products	0.5	0.3	-0.1	1.0	(2)
Edible fats and oils, n.e.c.	0.2	-0.1	0.1	-0.8	(2)
Whole Economy:					
Farming, fishing, forestry	-0.2	-0.2	(2)	0.2	(2)
Mining	(2)	(2)	(2)	(2)	(2)
Construction	(2)	(2)	(2)	0.4	(2)
Durable manufacturing	(2)	(2)	(2)	0.1	(2)
Nondurable manufacturing	-0.1	(2)	0.6	0.4	(2)
Transportation and utilities	(2)	(2)	(2)	0.1	(2)
Trade	(2)	(2)	(2)	0.5	(2)
Finance, insurance, and real estate	(2)	(2)	(2)	0.3	(2)
Other Services	(2)	(2)	(2)	0.1	(2)

[1] Share-weighted price of imports, domestic production, and marketing costs. See section "Overview of the USAGE-ITC Framework" in appendix D
[2] Less than .05 percent.

Source: USITC estimates.

significant barrier to imports because the in-quota quantity allocations were set at high levels. Although certain country allocations have had high fill rates in certain years, the TRQ allotments never filled. In quota years 2002 and 2003, however, imports from the leading U.S. and world supplier Brazil, which holds over one-half of the U.S. TRQ allocation, posted fill rates of 92 percent and 98 percent respectively.

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[74]—*Continued*
tobacco refuse, not stemmed or stripped; 2401.20.33, not stemmed or threshed partly or wholly stemmed/stripped; 2401.30.33, tobacco stems not cut ground or pulverized; 2401.30.35, stems cut, ground or pulverized; 2401.30.37, other includes cut ground and pulverized; 2403.10.60, manufactured tobacco and manufactured tobacco substitutes, reconstituted tobacco, tobacco extracts and essences; 2403.91.45, homogenized and reconstituted tobacco; and 2403.99.60, extracts and essences.

Table 2-6 provides production and trade data for unmanufactured tobacco[75] and cigarettes during 2000-2002. Unmanufactured tobacco output fell 10 percent to $2.1 billion during the period owing to continued falling rates of domestic cigarette consumption and the eroding competitiveness of U.S. leaf in world markets. Exports, historically accounting for as much as one-half of output, declined 11 percent to $869 million, as shipments to leading markets Japan and the EU fell substantially.[76] Imports of lower cost unmanufactured cigarette tobacco increased steadily, rising from $220 million in 2000 to $294 million in 2002. Imports from Brazil rose to $184 million in 2002, a growth rate of 66 percent during the 3-year period. Advances in tobacco blending and flavoring technology, allowing cigarette manufacturers to use less tobacco and higher proportions of less expensive imported tobacco while still maintaining quality, contributed to the marked increase in imports.

The volume of U.S. cigarette production also contracted, falling 11 percent to 532 billion pieces during 2000-2002, even as the value of shipments rose as cigarette manufacturers increased wholesale unit prices to cover the costs of the multibillion-dollar settlement with State Governments.[77] U.S. exports of cigarettes, $1.5 billion in 2002, also fell as the value of exports to Japan, the largest export market, plummeted 50 percent during 2000-2002.

Since the 1930s, U.S. tobacco has been produced under a supply management program which restricts output in order to maintain high prices and returns for tobacco farmers. The annual marketing (production) quota set by the USDA is based on a formula of domestic cigarette manufacturers' purchasing intentions, expected export demand, and stock levels. Under this program, approved by grower (quota-holder) referendum, a no-net-cost fee is assessed for each pound of tobacco marketed that funds a stabilization or price support program managed by the USDA Commodity Credit Corporation (CCC) and grower cooperatives. Tobacco lots that do not receive bids above the support price are guaranteed by a system of non-recourse loans.[78] The tobacco program elevates the price of U.S. tobacco leaf substantially higher than world

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[75] Unmanufactured tobacco is an intermediate product that has undergone processing including curing, destemming, and redrying.

[76] The EU and Japan account for approximately two-thirds of U.S. exports of unmanufactured tobacco mainly flue-cured and burley tobacco. Calculated by USITC staff using data from official statistics of the U.S. Department of Commerce.

[77] For additional information on the 1998 Master Settlement agreement between States and cigarette manufacturers See National Association of Attorneys General at: *http://www.naag.org/issues/issue-tobacco.php*.

[78] For details on the tobacco program, see Jasper Womach, *Tobacco Price Support: An Overview of the Program*, Congressional Research Service, Report to Congress, May 7, 2001.

Table 2-6
Tobacco: Summary data, 2000-02

Item	2000	2001	2002
Shipments *(million dollars)*:			
Unmanufactured tobacco	2,313	2,338	2,078[1]
Cigarettes	42,875	47,190	48,000[1]
Employment *(thousand)*:			
Unmanufactured tobacco	2.7	3.1	([2])
Cigarettes	17.7	15.2	([2])
Imports *(million dollars)*:			
Unmanufactured tobacco[3]	220	251	294
Cigarettes	212	189	230
Exports *(million dollars)*:			
Unmanufactured tobacco[3]	976	1,028	869
Cigarettes	3,308	2,118	1,463

[1] USITC estimate.
[2] Not available.
[3] Flue-cured and burley tobacco types subject to the TRQ.

Source: USDOC, Annual Survey of Manufactures, 2001: Value of Product Shipments, Mar. 2001, p. 18; Official statistics of the U.S. Department of Commerce.

price levels, making U.S. tobacco less competitive in export markets and imported tobacco more competitive in the U.S. market.[79]

The Federal price support system worked well as long as U.S. leaf tobacco could command a quality premium in the United States and world markets. However, declining smoking rates in the United States and very strong competition from international suppliers have caused U.S. output to fall significantly. During the last 7 years, the national marketing quotas for flue-cured and burly tobacco declined 50 percent and 62 percent, respectively. Facing dwindling demand, tobacco farmers and other industry participants, including owners of tobacco quota, view the price support program as unsustainable and have lobbied strongly for a multi-billion dollar buyout of the Federal program. A buyout would compensate less efficient farmers and non-productive holders of quota to exit the industry. Further, a buyout would likely cause the price of U.S. tobacco to fall to near the marginal cost of production, making U.S. tobacco more competitive in world markets, which would cause an increase in U.S. exports and a decline in U.S. imports of tobacco.

[79] Prices for U.S.-produced flue-cured and burley average more than $1/kg higher than the highest quality leaf produced in other countries.

Nature of Trade Barriers

The TRQ was established by presidential proclamation effective September 13, 1995, and applies to imports of unmanufactured leaf tobacco and manufactured tobacco used in the production of cigarettes destined for domestic consumption, mainly flue-cured and burley.[80] TRQ allotments were negotiated with supplier countries based on production levels and market share and specify the maximum quantity that may be imported at the in-quota tariff rate during a quota year, beginning on September 13. Country allocations for quota year 2002 are provided in table 2-7. The U.S. Customs and Border Protection tracks the quantity of imports from the countries of origin on a FCFS basis. Other than the country-by-country allotments, no quota import rights or licenses are issued to exporters or importers of tobacco.

The total TRQ quantity for quota year 2002 was 150,700 metric tons (mt), which was divided into 10 separate allocations including nine country/trading group allotments, and a residual allocation of 3,000 mt (2 percent) for all other countries. Brazil accounts for over 80,000 mt, or 53 percent of the in-quota allocation, while other important producers, Zimbabwe and Malawi, are each provided 12,000 mt. In-quota quantity allocations were negotiated and set at high levels, based on a period of unusually high imports from 1992 though 1993, when U.S. imports of tobacco totaled more than $1 billion. The rise of imported tobacco during that period was fueled by strong U.S. demand for discount cigarettes which contained a higher proportion of lower-cost imported leaf. In 1993, discount cigarettes accounted for 37 percent of the U.S. cigarette market; since then, consumption of discount cigarettes has stabilized at under 30 percent.

In-quota duties for unmanufactured tobacco (HTS heading 2401), the bulk of tobacco subject to the TRQ, ranged from “Free” to 40.9 cents per kg in 2002, with most in-quota tobacco (HTS subheading 2401.20.85) entering the United States subject to a duty of 37.5 cents per kg (roughly 10 percent ad valorem equivalent).[81] All over-quota imports are subject to a 350-percent ad valorem duty, though a drawback program exists for all imports (in-quota and over-quota) that are re-exported either as unmanufactured tobacco or in cigarettes.[82] Canada, Mexico, and Israel are not subject to the quantitative

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[80] The proclamation also abolished duties on oriental and cigar binder and filler tobacco.

[81] USITC calculations using statistics from official statistics of the U.S. Department of Commerce.

[82] Under the previous domestic content regime, domestic producers were assessed penalties for imported leaf content in excess of 25 percent, whether the cigarettes were consumed domestically or exported.

Table 2-7
Tobacco TRQ in-quota quantities allocated and imports, 2002

Country	Allocation	Actual imports
	Metric tons	
Argentina	10,750	6,190
Brazil	80,200	78,571
Chile	2,750	0
EU	10,000	4,479
Guatemala	10,000	3,142
Malawi	12,000	9,331
Philippines	3,000	560
Thailand	7,000	3,274
Zimbabwe	12,000	5,311
Other countries or areas	3,000	3,000
Total	150,700	113,858

Source: U.S. Customs and Border Protection.

restrictions set forth in the TRQ, pursuant to trade agreements. Tobacco imports from Jordan are subject to quantitative restrictions; quantitative restrictions on Singapore and Chile will be phased out in 2013 and 2015, respectively.

Restrictiveness of Trade Barriers

During the quota year 2002, the TRQ on tobacco was restrictive for certain supplier countries, notably, the dominant supplier of leaf to the U.S. market, Brazil, which registered a fill rate of 98 percent (table 2-8), which is a possible indication that that the TRQ on imports from Brazil was binding. However, declining rates of consumption in the United States and a steady decline in U.S. exports of cigarettes suggest that it is unlikely that large amounts of additional tobacco would be imported from Brazil if the country were provided additional in-quota allocations in the future. Moreover, a buyout of the Federal tobacco program would substantially lower the price of U.S. tobacco making imported tobacco less attractive to U.S. cigarette producers.

Quota levels were not binding for the other seven country allocation holders and the EU in 2002. The TRQ regime is restrictive for countries that were not provided quantity allocations and must ship their tobacco under the “other countries” allocation. Exporters from “other countries” compete among themselves for a small allocation and thus this residual allotment fills soon after the beginning of the quota year. However, the relatively low quality of filler-type tobacco that these countries currently produce is not directly competitive with suppliers that have allocations, so little excess demand is restrained by the TRQ.

Table 2-8
Tobacco: TRQ fill rates, quota years, 2001-03[1]

Country/quota-year	2001	2002	2003
		Percent	
Argentina	92	58	70
Brazil	60	98	92
Chile	0	0	0
EU	46	45	33
Guatemala	24	31	48
Malawi	77	78	54
Philippines	20	19	17
Thailand	83	47	89
Zimbabwe	34	44	34
Other countries	100.0	100.0	100.0

[1] The quota year runs from Sept. 13 through Sept. 12 of the following year (e.g., 2002 refers to Sept. 13, 2001 through Sept. 12, 2002). Fill rates provided in USITC publication 3201, p. 74, are provided on base years different from those in this table.

Source: U.S. Customs and Border Protection.

Effects of Liberalization

To estimate the economic impact of liberalizing U.S. tobacco and cigarette imports, three border measures are removed in the USAGE-ITC model:[83] a U.S. import tariff on cigarette imports, estimated at 8.97 percent; a U.S. import tariff on tobacco stemming and redrying, estimated at 6.67 percent for 2002; and a rest-of-the-world (ROW) tax on tobacco stemming and redrying exports to the United States, estimated at 15.64 percent for 2002.[84] The two border measures for tobacco stemming and redrying generate a price gap of 23.3 percent, i.e., the price of tobacco stemming and redrying in the United States was 23.3 percent higher than its world price.[85] The anticipated welfare impact of removing the three border measures is $145 million. Table 2-9 lists the

[83] See ch. 1 and appendix D for a discussion of the USAGE-ITC model.

[84] It is assumed that foreign exporters earn rents generated by the tobacco TRQs and that U.S. import tariff rates are equal to those observed in 2002 trade statistics. The former assumption is implemented in the model as a tax levied by foreign governments on exports to the United States. The combined price impact of the ROW export tax and the U.S. tariff rate is the price gap estimated from U.S. and world prices. The relationship between price gap, import tariff and export tax is that (1+price gap/100) = (1+import tariff/100) x (1+export tax/100). If TRQ rents, however, were captured by U.S. economic agents, this analysis would overestimate welfare effects. Other estimated impacts, such as percentage changes in prices, production and trade, however, are not changed by the assumption about who earns the economic rents. For the case of the tobacco TRQ, however, it is reasonable to assume that TRQ rents are captured by foreign governments.

[85] The price gaps for 2002 are based on the difference between the average price of U.S. tobacco and the average price of imported tobacco from Brazil as well as the proportion of imports that entered the United States under the in-quota tariff rate.

Table 2-9
Tobacco: Selected economic effects of tariff and TRQ removal, 2002

Sector	Employ-ment	Output	Imports	Exports	Composite price[1]
	Percent				
Liberalized Sectors:					
Tobacco stemming and redrying	-6.2	-5.0	54.3	5.7	-1.2
Cigarettes	0.6	0.5	15.4	2.5	-0.5
Related Sectors:					
Tobacco	-3.6	-2.8	(2)	34.4	(2)
Whole Economy:					
Farming, fishing, forestry	(2)	(2)	(2)	(2)	(2)
Mining	(2)	(2)	(2)	(2)	(2)
Construction	(2)	(2)	(2)	(2)	(2)
Durable manufacturing	(2)	(2)	(2)	(2)	(2)
Nondurable manufacturing	(2)	(2)	0.1	0.1	(2)
Transportation and utilities	(2)	(2)	(2)	(2)	(2)
Trade	(2)	(2)	(2)	(2)	(2)
Finance, insurance, and real estate	(2)	(2)	(2)	-0.1	(2)
Other Services	(2)	(2)	(2)	0.1	(2)

[1] Share-weighted price of imports, domestic production, and marketing costs. See section "Overview of the USAGE-ITC Framework" in appendix D.
[2] Less than .05 percent.

Source: USITC estimates.

anticipated impact of liberalization. The composite price for cigarettes and for tobacco stemming and redrying both fall, although modestly. The upstream sector, tobacco, shrinks modestly, though the price remains essentially unaffected.

Canned Tuna

Canned tuna is one of the most valuable seafoods in the U.S. market, with U.S. production in 2002 reaching $675 million and imports totaling $399 million (table 2-10). Most U.S. production takes place in American Samoa, where two large canneries account for about 70 percent of the value of U.S.shipments. Puerto Rico accounted for about 17 percent of U.S. shipments and California made up the remaining 13 percent. Three companies produce U.S. canned tuna: U.S.-owned StarKist and Bumble Bee and foreign-owned Chicken of the Sea.[86] The United States is the world's largest canned tuna

[86] StarKist is a subsidiary of Del Monte Foods of San Francisco. In May 2003 Bumble Bee was acquired by Centre Partners Management LLC in partnership with members of Bumble Bee's senior management team. Chicken of the Sea International,

Table 2-10
Tuna in airtight containers: Summary data, 2000-02

Item	2000	2001	2002
Production *(million dollars)*:			
Oil-pack	102.1	74.6	71.6
Water-pack	753.5	583.4	603.8
Total	855.5	658.0	675.3
Employment[1] *(1,000 FTEs)*	9.5	7.3	7.5
Imports *(million dollars)*:			
Oil-pack	2.8	9.2	7.9
Water-pack:			
In-quota	77.8	45.9	68.8
Over-quota	178.0	259.1	322.0
Total, water-pack	255.7	304.9	390.8
Total, tuna in airtight containers	258.5	314.1	398.7
Exports *(million dollars)*	5.8	3.7	1.4

[1] Commission estimate.

Note.–Figures may not add to the totals shown due to rounding.

Source: USDOC official statistics, except as noted.

producer and the largest importer. Imports, which come mainly from low-cost sources, such as Thailand, accounted for about 42 percent of U.S. apparent consumption in 2002. Exports accounted for about 1 percent of domestic production.

This sector has two principal products: canned tuna packed in oil and canned tuna packed in water.[87] Production costs are nearly identical; producers can switch production within a cannery from one product to the other at small cost. Wholesale and retail prices of the two products also are identical. About 11 percent of U.S. production is tuna packed in oil and 89 percent is packed in water. About 99 percent of imported tuna is packed in water.

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[86]—*Continued*

headquartered in San Diego, is owned by Bangkok-based Thai Union Frozen Foods (Thai Union also is Thailand's largest tuna canner and exporter). StarKist and Chicken of the Sea each operate a cannery in American Samoa; Bumble Bee operates two tuna canneries, one in California and one in Puerto Rico. StarKist and Bumble Bee are affiliated with canneries in Ecuador.

[87] Tuna has traditionally been marketed in metal cans; however, tuna in flexible pouches, a relatively new product, is currently imported and domestically produced in small amounts.

Nature of Trade Barriers

The U.S. duty for canned tuna packed in oil is 35 percent. A TRQ exists for U.S. imports of canned tuna packed "not in oil" (e.g., in brine or spring water).[88] Imports within the quota are dutiable at 6 percent and imports in excess of the quota are dutiable at 12.5 percent. The in-quota quantity entered in any calendar year cannot exceed 4.8 percent of apparent U.S. consumption of tuna in airtight containers during the immediately preceding year. The quota of 4.8 percent of the preceding year's domestic apparent consumption is allocated on a global FCFS basis. The resulting quota is filled quickly, usually within the first month.[89]

The TRQ reportedly creates significant costs to importers and to U.S. Customs and Border Protection beyond the added duty.[90] Because the TRQ is generally filled within 1 month and the tariff gap is 6.5 percent, importers stockpile large quantities of canned tuna in U.S. Customs and Border Protection bonded warehouses in late December, to be released once the new calendar year begins. An additional burden for both the industry and U.S. Customs and Border Protection is that reported U.S. consumption, on which the quota is based, is not available for several months into the new year. Thus, U.S. Customs and Border Protection typically estimates the quota it begins to administer each January, which may result in either over- or under-charged duties (or at least deposits or bonds) if the estimate is under or over the actual production reported later in the year. Industry sources report delays of as much as a year in receiving refunds for overcharged duties on canned tuna.

Restrictiveness of Trade Barriers

As noted, the tuna TRQ is allocated globally and has generally filled quite rapidly each year for several years. In 2002, of total imports subject to the TRQ, 18 percent entered under quota and 82 percent entered over quota.

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[88] Eligible pouched tuna products of a designated Andean Trade Promotion and Drug Eradication Act (ATPDEA) beneficiary country shall enter the United States free of duty and free of quantitative limitations. See Title XXXI of the Trade and Development Act of 2002; (Public Law 107-210), Aug. 6, 2002.

[89] Steve Koplin, National Marine Fisheries Service, U.S. Department of Commerce, Jan. 27, 2004.

[90] This analysis does not account for these extra storage costs. Thus, the simulated effects likely would under-estimate the impacts of the tuna border measures.

Effects of Liberalization

The effects of liberalizing canned tuna are modeled by removing border measures on the canned and cured fish and seafoods sector. The border measures that are removed in the USAGE-ITC model[91] are a U.S. import tariff on canned and cured fish and seafoods, estimated at 3.59 percent; and a rest-of-the-world (ROW) tax on exports of canned and cured fish and seafoods to the United States, estimated at 2.58 percent for 2002.[92] [93] The two border measures for canned and cured fish and seafoods result in a price gap of 6.3 percent, i.e., the price of canned and cured fish and seafoods in the United States was 6.3 percent higher than its world price. Removing these two border measures is estimated to increase welfare by $71 million. Table 2-11 shows the detailed impact of removing these border measures. The estimated impact is almost exclusively confined to the canned fish sector, with employment and output anticipated to decline, while imports and exports both expected to increase. The composite price of canned fish is estimated to fall by about 2.3 percent as a result of removal of import restraints, while domestic output falls 7.1 percent and employment contracts 10.0 percent.

Peanuts

The United States peanut program, which was designed to stabilize domestic peanut prices, was changed significantly in 2002.[94] The old program provided for a national poundage quota system which guaranteed quota-holders

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[91] See ch. 1 and appendix D for a discussion of the USAGE-ITC model.

[92] It is assumed that foreign exporters earn rents generated by the tuna TRQs and that U.S. import tariff rates are equal to those observed in 2002 trade statistics. The former assumption is implemented in the model as a tax levied by foreign governments on exports to the United States. The combined price impact of the ROW export tax and the U.S. tariff rate is the price gap estimated from U.S. and world prices. The relationship between price gap, import tariff and export tax is that (1+price gap/100) = (1+import tariff/100) x (1+export tax/100). If TRQ rents, however, were captured by U.S. economic agents, this analysis would overestimate welfare effects. Other estimated impacts, such as percentage changes in prices and quantities, however, are not changed by the assumption about who earns the economic rents. For the case of the canned tuna TRQ, however, it is reasonable to assume that TRQ rents are captured by foreign governments.

[93] These wedges are trade weighted to adjust for the more broadly defined sector. For canned tuna, the price gap for 2002 was estimated at 12.95 percent and it was based on the U.S. import tariff for oil-packed tuna (35 percent), the over-quota tariff for water-packed tuna (12.5 percent) as well as the shares of these two imports.

[94] The program changed with the passage of the 2002 Farm Security and Rural Investment Act and will apply for the years 2002 to 2007.

Table 2-11
Canned tuna: Selected economic effects of tariff and TRQ removal, 2002

Sector	Employment	Output	Imports	Exports	Composite price[1]
	Percent				
Liberalized Sectors:					
Canned and cured fish and seafoods	-10.0	-7.1	7.9	1.7	-2.3
Whole Economy:					
Farming, fishing, forestry	(2)	(2)	-0.1	(2)	(2)
Mining	(2)	(2)	(2)	(2)	(2)
Construction	(2)	(2)	(2)	(2)	(2)
Durable manufacturing	(2)	(2)	(2)	(2)	(2)
Nondurable manufacturing	(2)	(2)	(2)	(2)	(2)
Transportation and utilities	(2)	(2)	(2)	(2)	(2)
Trade	(2)	(2)	(2)	(2)	(2)
Finance, insurance, and real estate	(2)	(2)	(2)	(2)	(2)
Other Services	(2)	(2)	(2)	(2)	(2)

[1] Share-weighted price of imports, domestic production, and marketing costs. See section "Overview of the USAGE-ITC Framework" in appendix D.
[2] Less than .05 percent.

Source: USITC estimates.

a minimum price for their peanuts; peanuts grown in excess of the quota had to be sold for export at the lower world price or for crushing into oil and meal at or around the world price.

The 2002 Farm Bill[95] replaced the quota system with direct payments to peanut growers, a countercyclical payment, and marketing loans with a loan deficiency payment. U.S. TRQs on peanuts have increased incrementally since their implementation in 1995; however, the high over-quota duty rates have limited imports above the quota level.

Table 2-12 presents data on U.S. production, imports, and exports of peanuts during marketing years (MY) 2000-02. The United States produces approximately $850 million of peanuts annually, representing about 5 percent of global production.[96] During 2000-02, roughly 30 percent ($190 million annually) of U.S. production was exported. In contrast, only about $84 million in imports entered the country each year, including shipments of peanut butter and peanut paste.

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[95] Public Law 107-17.

[96] China and India are by far the largest world producers of peanuts, together producing approximately 65 percent of global output.

Table 2-12
Peanuts (farmers' stock basis)[1]: Summary data, 2000-02[2]

Item	2000	2001	2002
Production *(million dollars)*	896	1,000	594
Employment *(FTEs)*	([3])	([3])	([3])
Imports *(million dollars)*	50	57	53
Exports *(million dollars)*	223	143	206

[1] The term "farmers' stock peanuts" refers to picked and threshed peanuts that have not been shelled, crushed, cleaned, or otherwise changed (except for the removal of foreign material, loose shelled kernels, and excess moisture) from the form in which they are customarily marketed by producers.
[2] The marketing year for peanuts is Aug. 1 through July 31.
[3] Not available.

Source: Production and employment compiled from Crop Values Summary, NASS, USDA, Feb. 2003; Imports and exports compiled from USDOC official statistics.

Nature of Trade Barriers

The United States has imposed relatively high restrictions on peanut imports since 1953.[97] Starting in 1995, quotas were replaced by a TRQ, as required by the WTO Agreement on Agriculture. Under that agreement, in 1995, imports of peanuts and certain peanut products (except peanut butter and paste) became subject to an annual TRQ quantity of 30,393 metric tons (mt) (shelled basis), with the quota year beginning on April 1.[98] The WTO TRQ trigger level increased incrementally until 2000, reaching a level of 52,906 mt, with no further change scheduled (WTO TRQ quantities for Argentina and Other in table 2-13).[99] The rates of duty on imports within the TRQ are substantially lower than the duties on over-quota imports (table 2-14). TRQ

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[97] For additional background on both the U.S. domestic peanut program and the import quotas in effect before 1995, see *Peanuts: Report to the President on Investigation No. 22-52 Under Section 22 of the Agricultural Adjustment Act, as Amended*, USITC publication 2369, Mar. 1991, pp. A-2 through A-16.

[98] Imports of peanuts and certain peanut products from Mexico are not subject to the overall TRQ. However, such imports from Mexico are subject to a TRQ under NAFTA. Imports under the NAFTA TRQ trigger quantity enter duty-free, but quantities above the limitation are subject to a higher rate of duty. The TRQ level for 1995 was 3,478 mt and will increase annually through 2007. Beginning in 2008, imports from Mexico will not be subject to TRQ limitations and will be free of duty if of Mexican origin. For more information on over-quota duty rates and TRQ quantities for imports from Mexico see Robert Skinner, "Issues Facing the U.S. Peanut Industry During the Seattle Round of the World Trade Organization," *Oil Crops Situation and Outlook*, USDA, ERS, Oct. 1999, p. 41.

[99] The quota allocation was based on historical trade with Argentina receiving a specific allocation and all other countries, except Mexico, sharing the remaining allocation.

Table 2-13
WTO and NAFTA tariff-rate quota (TRQ) quantities for peanuts, except peanut butter and peanut paste, 2000-02

Year[1]	Mexico[2] (NAFTA TRQ)	Argentina (WTO TRQ)	Other (WTO TRQ)	Total NAFTA and WTO TRQs
	Metric tons			
2000	4,032	43,901	9,005	56,938
2001	4,153	43,901	9,005	57,059
2002	4,278	43,901	9,005	57,184

[1] For Mexico, the quota year is a calendar year; for all other countries, it is an Apr. 1 through Mar. 31 marketing year.
[2] NAFTA provides for expanding TRQs on "peanuts (ground nuts), shelled or not shelled, blanched or otherwise prepared or preserved (except peanut butter), that are qualifying goods entered under HTS subheadings 9906.12.01, 9906.12.04, and 9906.20.03 in any calendar year." Peanuts in the shell are charged against the TRQ on the basis of 75 kilograms of peanuts for each 100 kilograms of peanuts in the shell.

Source: 2002 Harmonized Tariff Schedule of the United States and U.S.-Mexico NAFTA Schedule.

Table 2-14
U.S. import tariff rates for peanuts, except peanut butter and peanut paste, 2000-02

Year	In-shell peanuts, in-quota[1]		In-shell peanuts, over-quota rate, NTR	Shelled peanuts, in-quota[2]		Shelled peanuts, over-quota rate, NTR
	Cents/kg	*Ad valorem percent*		*Cents/kg*	*Ad valorem percent*	
2000	9.35	([3])	163.8	6.6	7.4	131.8
2001	9.35	([3])	163.8	6.6	7.2	131.8
2002	9.35	([3])	163.8	6.6	8.3	131.8

[1] HTS subheading 1202.10.40.
[2] HTS subheading 1202.20.40. Certain peanut products under HTS subheadings 2008.11.25 and 2008.11.45 also have an in-quota duty of 6.6 cents per kilogram.
[3] There were no reported imports under HTS subheading 1202.10.40.

Source: Harmonized Tariff Schedule of the United States.

levels for Mexico, negotiated under NAFTA, will continue to increase until 2008 when quantitative limitations will cease to apply to peanut imports from Mexico. Imports of peanut butter and peanut paste also became subject to a TRQ, starting January 1, 1995. The original TRQ quantity of 19,150 mt gradually increased to 20,000 mt in 2000 and has remained at that level.[100] More than 70 percent of the TRQ for peanut butter and peanut paste is allocated to Canada, and nearly 20 percent is allocated to Argentina.

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[100] During 2000-02, in-quota imports of peanut butter and peanut paste entered free of duty. Over-quota imports from NTR countries are dutiable at 131.8 percent; over-quota imports from non-NTR countries are dutiable at 155.0 percent. Imports of peanut butter and peanut paste from Mexico are not subject to the TRQ established under the Uruguay Round Agreement, but they are subject to NAFTA provisions. Under NAFTA, imports of peanut butter and paste from Mexico must be made with peanuts of Mexican origin to enter the United States free of duty. See D. Skully, "U.S. Tariff-Rate Quotas for Peanuts," Oil Crops Situation and Outlook, USDA, ERS, Oct. 1999, p. 50.

Restrictiveness of Trade Barriers

The TRQs on peanuts (table 2-13) and certain peanut products were completely or essentially filled during each quota year during the MY 2000-02 period.[101] In the past, these fill rates have indicated that foreign producers would ship additional quantities to the United States under the in-quota tariffs, if given the opportunity. However, the 2002 Farm Bill, which was passed in May 2002, caused the U.S. price for peanuts to gradually decline and approach the world price by the end of the year. As a result of the decline in the U.S. price during 2002, the U.S. market was less attractive to peanut exporters in 2003 relative to previous years.[102] The U.S. Government granted GSP treatment to the in-quota portion of imports of peanuts and certain peanut products in 2003 which may encourage imports from less developed countries, despite the lowering of U.S. prices.

Imports of peanut butter from Canada filled or essentially filled Canada's country-specific TRQ for peanut butter and peanut paste during 2000-02.[103] Argentina's allocation fill rate was just under 50 percent in 2000 and 2001, but dropped to 12 percent in 2002. This drop in 2002 can likely be attributed to lower U.S. market prices and increased availability of U.S. peanuts to U.S. processors as well as the economic situation in Argentina that year. The remainder of the peanut butter and peanut paste TRQ, totaling 1,850 mt and allocated to a large group of developing countries on a FCFS basis, was filled at a rate far below 50 percent of the available in-quota quantity. This fill rate indicates either a lack of capacity among developing countries to fill the demand or an in-quota quantity that is not sufficiently large enough for economical shipment by foreign suppliers.

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[101] Table 2-13 reports the raw peanut TRQ. Mexico's NAFTA TRQ allocation, Argentina's WTO TRQ allocation, and the other countries WTO allocation were all filled 100 percent in all years during 2000-02.

[102] In 2003, the 'other countries' portion of the quota filled completely. However, for the first time in recent history, by December 31, 2003, Argentina's portion of the peanut quota remained unfilled, with only 37 percent of the allocation entered. The lowering of the U.S. price - from near $0.60 per pound prior to Jan. 2002 to $0.40 per pound after Dec. 2002 - may have been a contributing factor. In addition, Argentina experienced significant economic instability throughout 2002 due to the devaluation of the Argentine peso, making inputs for peanut production relatively costly and in turn reduced planting area and output. Poor crop conditions during 2002-03 resulted in reduced yields in Argentina as well. See, *Argentina Oilseeds and Products Annual, 2003*, FAS, USDA, GAIN Report #AR3025.

[103] The quota year for the TRQ on peanut butter and peanut paste is a calendar year.

Canada's country-specific TRQ for peanut butter and peanut paste essentially fills every year; however, increased production depends on access to the raw material, peanuts, and Canada's production of peanuts is negligible. Canada has traditionally imported peanuts to process into peanut butter. As the price between U.S. peanuts and foreign peanuts narrows owing to the changes in the U.S. peanut program, Canadian peanut butter processors gain less of an advantage over U.S. processors in terms of raw material costs by buying peanuts on the world market.

Effects of Liberalization

To measure the effects of liberalizing trade in peanuts, border measures are removed from a more aggregate sector, oil-bearing crops.[104] The border measures that are removed in the USAGE-ITC model[105] are a U.S. import tariff on oil-bearing crops, estimated at 1.78 percent; and a rest-of-the-world (ROW) tax on exports of oil-bearing crops to the United States, estimated at 9.95 percent for 2002.[106] The two border measures for oil-bearing crops generate a price gap of 11.9 percent, i.e., the price of oil-bearing crops in the United States was 11.9 percent higher than its world price.[107] Removing these two border measures is estimated to result in an increase in welfare of $6 million. No substantial impact is anticipated in either employment or output of the oil bearing crops sector. Imports of oil-bearing crops are anticipated to expand, while the composite price is anticipated to decline slightly, by 0.02 percent (table 2-15).[108]

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[104] The oil-bearing crops sector represents soybeans, peanuts, safflower, sunflower and other oil-bearing crops.

[105] See ch. 1 and appendix D for a discussion of the USAGE-ITC model.

[106] It is assumed that foreign exporters earn the rents generated by the peanuts TRQs and that U.S. import tariff rates are equal to those observed in 2002 trade statistics. The former assumption is implemented in the model as a tax levied by foreign governments on exports to the United States. The combined price impact of the ROW export tax and the U.S. tariff rate is the price gap estimated from U.S. and world prices. The relationship between price gap, import tariff and export tax is that (1+price gap/100) = (1+import tariff/100) x (1+export tax/100). If TRQ rents, however, were captured by U.S. economic agents, this analysis would overestimate welfare effects. Other estimated impacts, such as percentage changes in prices and quantities, however, are not changed by the assumption about who earns the economic rents.

[107] These wedges are trade weighted averages to adjust for the more broadly defined model sector. For peanuts, a percentage price gap was calculated between the U.S. price and an average price in the European Union (for peanuts imported from the four main suppliers - Argentina, India, China, and the U.S.) for January, May, and December, 2002. Those three price gaps were then averaged to calculate a 35 percent price gap for 2002.

[108] While imports of peanuts are anticipated to grow, that growth would be from a very small base. In 2002, import quantities (limited by the two peanut TRQs) accounted for less than 10 per cent of U.S. apparent consumption of peanuts.

Table 2-15
Peanuts: Selected economic effects of tariff and TRQ removal, 2002

Sector	Employ-ment	Output	Imports	Exports	Composite price[1]
	Percent				
Liberalized Sectors:					
Oil-bearing crops	(2)	(2)	56.3	0.1	(2)
Whole Economy:					
Farming, fishing, forestry	(2)	(2)	0.4	(2)	(2)
Mining	(2)	(2)	(2)	(2)	(2)
Construction	(2)	(2)	(2)	-0.1	(2)
Durable manufacturing	(2)	(2)	(2)	(2)	(2)
Nondurable manufacturing	(2)	(2)	(2)	0.1	(2)
Transportation and utilities	(2)	(2)	(2)	(2)	(2)
Trade	(2)	(2)	(2)	-0.1	(2)
Finance, insurance, and real estate	(2)	(2)	(2)	-0.1	(2)
Other Services	(2)	(2)	(2)	(2)	(2)

[1] Share-weighted price of imports, domestic production, and marketing costs. See section "Overview of the USAGE-ITC Framework" in appendix D.
[2] Less than .05 percent.

Source: USITC estimates.

Ethyl Alcohol

Ethyl alcohol for fuel use, commonly known as ethanol, is a clear, colorless, liquid fuel produced from a variety of potential feedstocks, including sugarcane, corn, sorghum, and others.[109] In the United States, the majority of the ethanol produced is derived from corn.[110] Ethanol has a higher octane rating than gasoline and can be mixed with gasoline to reduce the level of emissions created by fuel combustion in gasoline engines.

Production capacity in the United States in 2003 totaled approximately 3.7 billion gallons, and production reached a record 2.8 billion gallons.[111] The U.S.

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[109] For the purposes of this study, ethyl alcohol and ethanol will be used interchangeably.

[110] There are two different processes used in the United States to produce ethanol from corn: dry corn milling and wet corn milling. Corresponding North American Industry Classification System codes for the dry and wet milling production of fuel-grade ethanol are 32519303 and 32519301, respectively.

[111] *Ethanol Industry Outlook 2004: Synergy in Energy*, Renewable Fuels Association, Washington, DC, available at Internet address *http://www.ethanolrfa.org/outlook2004.html*.

ethanol industry employed 1,198 production workers in 2001 (table 2-16). The United States is a net importer of ethanol and typically does not export ethanol.[112] In terms of 2002 world production, the United States ranked second, behind Brazil, capturing 26 percent of world production. In that same year, Brazil accounted for 39 percent of world production.[113] In the United States, a Federal excise tax of 18.4 cents per gallon is assessed on motor fuels. A partial exemption from the Federal excise tax on motor fuels is provided for ethanol that is derived from renewable resources and used as fuel. Ethyl alcohol that is derived from petroleum, natural gas, or coal is not eligible for the tax exemption. The value of the tax exemption depends on the quantity and type of ethanol blended in a gallon of fuel. In 2002, the tax exemption was 54 cents per gallon of ethanol. Thus, gasoline blended with 10 percent ethanol would receive a tax exemption equal to 5.4 cents per gallon. The tax exemption has been deemed an implicit subsidy for ethanol production in the United States,[114] although some domestic producers of ethanol have stated that it is just a differential tax, meaning that ethanol is simply assessed a lower tax rate.[115] Fuel distributors that blend ethanol with gasoline can earn an income tax credit as well. A distributor cannot file for both the partial tax exemption and the income tax credit, however, generally, the blenders tend to select the partial tax exemption.[116] U.S. distributors of gasoline blended with ethanol receive the partial tax exemption whether or not the ethanol is produced domestically or imported, so a trade barrier exists to ensure that the United States is not subsidizing foreign production of ethanol.

Nature of Trade Barriers

The United States administers three trade policy tools for imports of ethyl alcohol for fuel use: tariffs, a TRQ, and an additional tax for imports outside of the TRQ that essentially operates as a prohibitive over-quota tariff rate.

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[112] U.S. ethanol exports of $3 million were recorded in 2000, the only year showing exports during the period under review.

[113] Calculated based on data from the research firm F.O. Licht, received by email, Feb. 18, 2004.

[114] U.S. General Accounting Office, "Tax Incentives for Petroleum and Ethanol Fuels," Sept. 25, 2000.

[115] Ethanol industry representative, USITC staff interview, Sioux Falls, SD, Oct. 18, 2001.

[116] U.S. General Accounting Office, "Tax Incentives for Petroleum and Ethanol Fuels," Sept. 25, 2000.

Table 2-16
Ethyl alcohol for fuel use: Summary data, 2000-02

Item	2000	2001	2002
Shipments *(million dollars)*:			
Ethyl alcohol, fuel use, dry milling[1]	350	378	([2])
Ethyl alcohol, fuel use, wet milling[3]	1,316	1,424	([2])
Employment *(FTEs)*:[4]			
Ethyl alcohol manufacturing	1,178	1,198	([2])
Imports *(million dollars)*:			
Ethyl alcohol, fuel use (nonsynthetic)[5]	77	51	52
Exports *(million dollars)*	3	0	0

[1] Corresponds to NAICS classification code 32519303.
[2] Not available.
[3] Corresponds to NAICS classification code 32519301.
[4] Includes employment of production workers in all denatured ethyl alcohol production facilities.
[5] HTS subheadings for ethyl alcohol for fuel use are 2207.10.60 and 2207.20.00. The imports in the table do not reflect imports of synthetic ethyl alcohol, which also enters under those two subheadings.

Sources: USDOC, U.S. Census Bureau, *Annual Survey of Manufactures*,,available at Internet address *http://www.census.gov/econ/www/ma0300.html*; U.S. Customs and Border Protection, Quota Branch, email, received Jan. 15, 2004; LMC International, Ltd., *LMC Commodity Bulletin, Sugar*, Apr. 2003; PIERS export data.

Tariffs.—U.S. imports of fuel ethanol enter under HTS subheadings 2207.10.60 and 2207.20.00. A general rate of duty is applied to countries with NTR status.[117] A special rate of duty applies to those eligible countries with NTR status that receive preference under a free-trade agreement or under a preferential trading arrangement. Preferential duty-free access is offered to eligible goods of least developed beneficiary countries with Generalized System of Preferences (GSP) status; NAFTA countries; African Growth and Opportunity Act countries; CBERA countries; Israel; ATPA countries; Jordan; and Singapore. Originating goods of Chile receive a preferential duty rate of 1.8 percent ad valorem for HTS subheading 2207.10.60 and free for HTS subheading 2207.20.00.

Tariff-rate quota.—CBERA countries receive duty-free access to the U.S. fuel ethanol market for a fixed quantity under certain conditions. These conditions, which pertain to local feedstock content, are effectively a TRQ. In-quota imports from CBERA countries enter free of duty; the over-quota imports are assessed the general duty rate. The CBERA TRQ does not apply to non-CBERA countries.

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[117] The general duty rate for HTS subheading 2207.10.60 is 2.5 percent ad valorem, while that for HTS subheading 2207.20.00 is 1.9 percent ad valorem. See general note 3 to the HTS.

The Commission determines the TRQ amount for CBERA countries annually under section 7 of the Steel Trade Liberalization Program Implementation Act of 1989 (Steel Act)[118] concerning local feedstock requirements for fuel-ethyl alcohol imported into the United States from CBERA countries.[119] The TRQ quantity is the maximum amount of ethyl alcohol allowed with a zero-percent local feedstock ratio from CBERA countries at the in-quota, duty-free tariff rate. Beyond the TRQ level, more stringent feedstock requirements are placed on imports from CBERA countries. For imports beyond the TRQ, the feedstock requirements are 30 percent for the first 35 million gallons that enter after the TRQ, and 50 percent for volumes higher than the TRQ plus 35 million gallons. The Act requires the USITC to make an annual determination of U.S. domestic consumption of ethyl alcohol and then to determine the TRQ or the "base quantity of imports" for CBERA countries. The annual TRQ is the greater of 60 million gallons or 7 percent of domestic consumption during the 12-month period ending on the preceding September 30. The USITC determined U.S. domestic consumption for the 12-month period ending Sept. 31, 2001, to be 1.72 billion gallons; thus, the TRQ quantity was set at 120.3 million gallons for calendar year 2002.[120]

Additional tax on imports.—An additional tax of 14.27 cents per liter (54 cents per gallon) is assessed on ethyl alcohol imports from sources other than least-developed developing GSP countries, CBERA countries,[121] ATPA countries, Canada, Israel, and Mexico.[122] The additional tax on imports equals the level of the partial Federal tax exemption offered for ethanol that is derived from renewable resources and used as fuel. The level of the additional tax on imports exactly offsets the domestic Federal tax exemption to foreign production.

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[118] 19 U.S.C. 2703 note.

[119] Local feedstock means hydrous ethyl alcohol which is wholly produced or manufactured in any U.S. insular possession or designated beneficiary country.

[120] The TRQ was set at 92.3 million gallons for 2000 and 112.7 million gallons for 2001.

[121] Including imports of ethanol produced from local feedstock as well as imports under the TRQ allowing the use of imported feedstock. Imports of over-quota ethanol from CBERA countries are subject to the additional duty.

[122] This additional duty is found in ch. 99, subch. 1 of the HTS. The applicable tariff subheading for the extra duty is 9901.00.50.

Restrictiveness of Trade Barriers

The general rates of duty on ethanol are relatively low and therefore not significantly restrictive. However, the application of the CBERA TRQ, coupled with the assessment of the additional 14.27-cent-per-liter tax on the imports discussed above, usually prohibits U.S. imports from non-CBERA sources.[123] The U.S. ethanol trade policy effectively is a country-specific TRQ regime whereby the additional tax on imports operates as a prohibitive over-quota tariff that discourages imports of ethanol beyond the TRQ. The TRQ has not been restrictive for CBERA countries; the annual base quantity has never been exceeded and the fill rate has declined substantially in recent years. After reaching 63 percent in 2000, the TRQ fill rate dropped to 39.6 percent in 2002 and fell further to 27.8 percent in 2003.

Effects of Liberalization

Ethyl alcohol for fuel use is imported from CBERA countries in the United States free of duty under a TRQ. Such imports are substantially below the quota level, which implies that it is not economical for CBERA producers to export more to the U.S. market. Thus, removal of the quota on CBERA imports likely would not have an impact on U.S. imports and domestic prices.[124]

The border measure for ethyl alcohol imports in the United States from the above mentioned countries is 14.27 cents per liter and there are no imports.[125] Removal of that border measure likely would result in increased imports to the United States, likely from Brazil, and some of those imports could displace CBERA imports or U.S. production. A complete assessment of these impacts, however, should also consider the fuel excise tax exception given to U.S. producers of ethyl alcohol. If removal of all border measures on U.S. imports of ethyl alcohol implied removal of the fuel excise tax exception for U.S.

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[123] The import sources exempt from the additional duty generally are not competitive producers of ethanol for fuel use.

[124] The Commission annually reports the impact of CBERA preferences. In its 1997 report, the Commission found that CBERA preferences cause U.S. production of ethyl alcohol to decline from 0.03 to 1.29 percent. See table 3-5 in USITC, *Report on the Impact on the United States of the Caribbean Basin Economic Recovery Act, Thirteenth Report 1997*, publication 3132, Sept. 1998.

[125] Undenatured ethyl alcohol has an import tariff of 2.5 percent and denatured ethyl alcohol has an import tariff of 1.9 percent. In addition to import tariffs, an additional tax of 14.27 cents per liter is levied on imports of both undenatured and denatured ethyl alcohol.

producers of ethyl alcohol, then U.S. production and imports of ethyl alcohol likely would decline.

Beef

The analysis in this section applies to fresh, chilled, or frozen beef that is processed under North American Industry Classification (NAICS) code 311611.[126] The United States is the world's leading beef producer, with Federally inspected beef production that exceeded 27.2 billion pounds in 2002.[127] Based on 2002 trade volumes, the United States is the largest beef importer (3.219 billion pounds) ahead of Japan, and the second-largest beef exporter (2.447 billion pounds), following Australia (table 2-17).[128] U.S. beef imports equaled 10.5 percent of total U.S. supply and 11.5 percent of U.S. consumption. Eight percent of total U.S. supply was exported, while 91.7 percent was consumed domestically.

Of total beef and veal production, 84.8 percent was derived from steers and heifers, 14.4 percent from cows and bulls, and less than 1 percent from calves. Steers and heifers are the primary source of graded grain-fed beef; in 2002, 2.8 percent graded Prime, 49.0 percent graded Choice, and 37.5 percent graded Select.[129] Prime and high-Choice beef typically enter high-end foodservice

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[126] NAICS code 311611 includes animal slaughtering products, except poultry. This analysis is limited to product code 3116111: fresh and frozen beef, not canned or made into sausage, made from animals slaughtered in this plant; and 3116114: fresh and frozen veal, not canned or made into sausage, made from animals slaughtered in this plant. In excess of 90 percent of cattle are fabricated into primal and sub-primal cuts at the plant where they were slaughtered. However, retail case-ready production facilities are not typically co-located with slaughter and/or fabrication facilities; therefore, data for this growing industry segment are not generally included in this data.

[127] Federally inspected production represented 98.6 percent of all commercial beef production in 2002; total beef production was nearly 27.4 billion pounds; beef produced under other than federally inspected conditions may not enter interstate commerce. Beef production volume includes beef derived from live cattle and calves imported from Canada and Mexico.

[128] USDA, FAS, *Livestock, and Poultry: World Markets and Trade*, Beef and Veal Summary Tables, found at *http://www.fas.usda.gov/dlp/circular/2003/03-10LP/bf_sum.pdf*, retrieved Jan. 16, 2004.

[129] The USDA carcass grading system consists of two components – a quality grade and a yield grade. USDA quality grades include Prime, Choice, Select, Standard, Commercial, Utility, Cutter, and Canner, and are determined primarily by maturity and degree of marbling (intra-muscular fat). Carcass grading is voluntary and ungraded beef is referred to as "no-roll". USDA, Agricultural Marketing Service, *United States Standards for Grades of Carcass Beef*, Washington, DC, Jan. 31, 1997. USDA, AMS, *National Carlot Meat Trade Review*, Des Moines, Iowa, 2000, 2001, and 2002.

Table 2-17
Beef: Summary data, 2000-02

Item	2000	2001	2002
Shipments (million dollars)[1]	30,355	30,746	29,126
Employment (1,000 production employees)	72.8	72.2	71.8
Imports (million dollars) [2]	2,184	2,505	2,504
Australia	667	848	878
New Zealand	427	479	466
All other countries with quota allocations[3]	1,217	1,413	1,398
Exports (million dollars)	3,036	2,550	2,488

[1] Includes live cattle imported from Canada and Mexico that are slaughtered in the United States.
[2] U.S. imports include those tariff lines subject to tariff-rate quotas, including imports from Canada and Mexico under these tariff lines that are not subject to tariff-rate quotas. See Chapter 2, Additional Note 3, *Harmonized Tariff Schedule of the United States.*
[3] Includes all imports under tariff lines subject to tariff-rate quotas excluding imports from Canada and Mexico.

Sources: The value of U.S. beef shipments were estimated by the USITC using Federally inspected slaughter numbers, average dressed weight, and carcass cut-out values as reported by the U.S. Department of Agriculture (USDA). See USDA, Agricultural Market Service, Livestock and Grain Market News Service, *National Carlot Meat Trade Review 2000, 2001, and 2002.* Employment data for the beef processing industry was estimated by USITC based on the share of total meat production (beef, veal, pork, and lamb) accounted for by beef and veal times the total number of meat packing production workers as reported by the U.S. Department of Labor. See U.S. Department of Labor, Bureau of Labor Statistics, *Bureau of Labor Statistics, Data,* available at *http://data.bls.gov*.

market channels. Average-Choice, low-Choice, and Select beef typically enter retail market channels. Beef derived from cows and bulls typically enters channels for further processing. Meat from calves generally enters the veal market. About 52 percent of U.S. beef enters retail market channels for home consumption; of which 50 percent is consumed as ground beef, 24 percent as steaks, and 15 percent as roasts.[130] Imported beef is generally grass-fed, leaner than U.S. grain-fed beef, and consists primarily of frozen, boneless, manufacturing beef that enters channels for further processing.[131] Lean manufacturing beef (80-90 percent chemical lean), which is often imported, is commonly mixed with high-fat trimmings (50 percent chemical lean) from U.S. grain-fed production to achieve the desired fat content for further processing, such as the pre-formed beef patties used in the fast-service food sector. As a result, Meat & Livestock Australia contends that Australian manufacturing beef exported to the United States complements U.S. grain-fed

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[130] Cattlemen's Beef Board, *Retail Programs*, found at: *http://www.beefboard.org/dsp/dsp_locationContent.cfm?locationId=1107*, retrieved on Jan. 21, 2004.

[131] About 74 percent of Australian beef exports to the United States consisted of manufacturing beef in 2002 (Meat and Livestock Australia, *Australian Cattle and Sheep Industry Projections 2003)*; Canadian beef imports are an exception, primarily consisting of grain-fed beef.

beef production.[132] The premise for this assertion is that high-fat trimmings from U.S. grain-fed beef would enter lower value by-product markets if not mixed with imported manufacturing beef for further processing into the consumption market.

Nature of Trade Barriers

Implementation of the WTO Agreement on Agriculture in 1995 imposed TRQs on most U.S. imports of fresh, chilled, or frozen beef. The United States agreed to an annual TRQ of 696,621 metric tons; 85 percent of which was allocated to Australia and New Zealand based on historic supply patterns (table 2-18). Argentina and Uruguay were allocated 20,000 metric tons each, effective when the U.S. Secretary of Agriculture declared these countries free of Foot-and-Mouth (FMD) and Rinderpest diseases.[133] Imports from Canada and Mexico were not limited by the TRQs.[134]

During 2002, nearly all imported beef, excluding imports from Canada and Mexico, that was subject to TRQs was classified in tariff lines with in-quota duty rates of 4.4 cents per kilogram. Some negligible amounts were imported in other in-quota tariff lines that included 4 percent ad valorem duty rates on high-quality beef cuts (bone-in and boneless) or 10 percent duty rates on processed beef (bone-in and boneless); and a small amount was imported at over-quota duty rates of 26.4 percent. Total duties paid in 2002 equaled 1.9 percent of the dutiable value.[135]

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[132] Prehearing brief submitted by Meat & Livestock Australia, *U.S. ITC Investigation Nos. TA-131-24, TA-2104-04, U.S. Australia Free Trade Agreement: Advice Concerning the Probable Economic Impacts*, Feb. 13, 2003.

[133] Uruguay and Argentina were found to be free from FMD and Rinderpest in 1995 and 1997, respectively; [60 FR 55440 (Nov. 1. 1995) and 62 FR 34385 (June 26, 1997)]. Both, however, experienced outbreaks of FMD, during 2000-2002, at which time imports of fresh, chilled, and frozen beef from Uruguay and Argentina were suspended. See USDA, FAS, G*ain Report AR1049, Aug. 3, 2001; USDA, APHIS, Foot and Mouth Disease, Uruguay, Short Report*, Apr. 26, 2001; and USDA, APHIS, press release, USDA *prohibits Beef from Argentina*, June 1, 2001. As of this report, Uruguay and Argentina have not been cleared to ship fresh, chilled, or frozen beef to the United States.

[134] U.S. meat imports are also subject to nontariff sanitary and disease restrictions. The Federal Meat Inspection Act generally prohibits meat imports from countries that do not enforce meat inspection and processing standards that are at least equal to those applied at U.S. Federally inspected processing establishments. Furthermore, USDA restricts cattle and cattle product imports from countries that do not meet minimum disease requirements, those that apply less restrictive import measures than are applied by the United States or those that have inadequate animal disease surveillance programs.

[135] See Additional U.S. Note (#3), ch. 2, HTS. The aggregate quantity of beef entering under HTS subheadings 0201.10.10, 0201.20.10, 0201.20.30, 0201.20.50,

Table 2-18
Beef: Tariff-rate quota quantities, imports, and fill rates, by country of origin, 2000-02

Country	TRQ quantity	Imports			Fill rates		
		2000	2001	2002	2000	2001	2002
	Metric tons		*Metric tons*			*Percent*	
Canada	(1)	326,913	349,285	380,159	(2)	(2)	(2)
Mexico	(1)	1,945	3,413	3,702	(2)	(2)	(2)
Australia	378,214	341,463	383,600	376,120	90.3	101.4	99.4
New Zealand	213,402	212,257	211,819	200,086	99.5	99.3	93.8
Japan	200	2	0	0	1.0	0.0	0.0
Argentina	20,000	12,425	3,892	0	62.1	19.5	0.0
Uruguay	20,000	16,442	9,132	0	82.2	45.7	0.0
Other	64,805	23,472	23,440	22,881	36.2	36.2	35.3
Total imports subject to quantitative restrictions [3]	696,621	606,061	631,883	599,087	87.0	90.7	86.0
Total imports		934,919	984,581	982,948			

[1] Imports from Canada and Mexico under tariff lines subject to TRQs are not subject to quantitative restrictions.

[2] Not applicable

[3] Does not include imports from Canada and Mexico

Sources: Harmonized Tariff Schedule of the United States; U.S. Department of Commerce

Restrictiveness of Trade Barriers

Some industry sources contend that U.S. TRQs have constrained U.S. import demand.[136] During 2002, the overall fill rate was 86 percent; the fill-rate for beef imports from Australia was 99.4 percent; and the fill rate for beef imports from New Zealand was 93.8 percent. During 1997-1999, the average fill rates for Australia and New Zealand were 69 percent and 90 percent, respectively.[137] Furthermore, in 2002, 1,974 metric tons of beef from Australia entered at the over-quota duty rate of 26.4 percent ad valorem.[138] Though increased fill rates suggest that the TRQs have become more restrictive over time, other factors that affected U.S. beef imports during this period suggest that TRQs may not be the primary factor limiting U.S. beef imports.

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[135]—*Continued*
0201.30.10, 0201.30.30, 0201.30.50, 0202.10.10, 0202.20.10, 0202.20.30, 0202.20.50, 0202.30.10, 0202.30.30, and 0202.30.50 in any calendar year shall not exceed the TRQ quantities.

[136] Meat & Livestock *Australia, Australian Cattle and Sheep Industry Projections 2003.*

[137] USITC, *The Economic Effects of Significant U.S. Import Restraints, Third Update, 2002*, Investigation No. 332-325, Publication 3519, June 2002, p. 102.

[138] Official statistics of the U.S. Department of Commerce.

In 2001, Australian beef exports to the U.S. exceeded the quota amount. Rather than import beef at over-quota rates, Australian exporters placed about 19,000 metric tons of beef in bonded warehouses, releasing it into the U.S. market after Jan. 1, 2002.[139] Believing this event to be disruptive to Australian cattle and beef markets, the Australian Government instituted a quota management scheme that allocated tradable export certificates based on exporters' historic shipments,[140] and the United States agreed to honor these certificates.[141] In 2002, the Japanese discovered Bovine Spongiform Encephalopathy (BSE) in several dairy cows, which depressed Japanese beef consumption, prices, and imports.[142] The U.S. market proved to be the best alternative market for in-transit beef and some Australian exporters, that did not hold export licences, chose to pay the over-quota duty. Consequently, over-quota imports during 2002 can be attributed to factors other than the restrictiveness of the TRQs.[143]

Furthermore, NAFTA has resulted in a highly integrated North American beef market.[144] Consequently, Canadian beef trade, and the restrictiveness of Canadian beef import restraints is also revealing, because increased Canadian beef imports free up Canadian beef to be exported to the U.S. market. Canada's TRQ of 76,409 metric tons was regularly exceeded though the issue of supplementary quotas averaging 57,065 metric tons during 2000-2002; more than 58 percent of the permits were issued for manufacturing beef. Canadian import permits issued to Australian exporters jumped from about 38,012 metric

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[139] Meat & Livestock Australia, *Australian Cattle and Sheep Industry Projections 2003*.

[140] Meat & Livestock Australia, *Australian Cattle and Sheep Industry Projections 2003*.

[141] Federal Register, Vol. 67, No. 137 p. 47028.

[142] Japanese beef consumption fell by more than a third after the discovery of BSE.

[143] After the end of the quota year (calendar year), unused licenses were returned to the Australian government; these licenses were reissued to exporters that had previously paid over-quota duties to U.S. Customs. U.S. Customs then reimbursed over-quota duties to any exporters who had paid over-quota duties and submitted these reissued licenses (see J.C. McColl, D.Z. Baffsky, and R.S. Donald, *Quota Management Panel, Quota Allocation Arrangement for Beef Exports to the US - Year 2002 and Beyond*, Report to the Minister for Agriculture, Fisheries and Forestry, October 2002).

[144] USDA, ERS, North American Free Trade Agreement: Impact on U.S. Agriculture, found at *http://www.ers.usda.gov/Briefing/NAFTA/impact.htm*, retrieved on Jan. 22, 2004.

tons in 2000 to 85,767 metric tons in 2002. At the same time, U.S. beef imports from Canada increased from 326,913 metric tons to 380,159 metric tons.[145] [146]

As stated above, the bulk of U.S. beef imports subject to TRQ restrictions are derived from grass-fed cattle and supplied principally by Australia and New Zealand. These imports are not close substitutes for the majority of U.S. beef production, which is derived from grain-fed steers and heifers. These imports, however, do substitute for U.S. manufacturing beef derived primarily from cows and bulls. The price gap resulting from the TRQs, therefore, can be measured by comparing processing beef prices as reported by the USDA. Furthermore, in 2002, Canada supplied 38.6 percent of all U.S. beef imports and supplied live cattle that accounted for about 2.5 percent of U.S. beef production. In 2002, Canada imported 131,000 metric tons of beef from Australia and New Zealand. Because the factors described above are either more restrictive than the TRQ, or mitigate effects of the TRQ, one method to measure the price gap resulting from the TRQ is to compare the price of similar U.S. processing beef as reported by USDA to the average unit value of Australian and New Zealand beef. This method resulted in a price gap of 6 percent.[147]

Effects of Liberalization

The effects of liberalizing beef imports are simulated with the USAGE-ITC model[148] by removing two border measures on the meat packing sector: a U.S. import tariff, estimated at 0.70 percent for 2002; and a rest-of-the-world (ROW) tax on exports of to the United States, estimated at 1.09 percent for

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[145] Canadian Department of Foreign Affairs and International Trade, Beef and veal import quota reports, found at *http://www.dfait-maeci.gc.ca/trade/eicb/agric/beef-en.asp*, retrieved on Jan. 22, 2004.

[146] Though Canadian beef exports to the United States are mostly grain-fed beef, a greater proportion of live animals for slaughter are cows and bulls than the proportion of total animals slaughtered in the United States; of all cattle slaughtered in the United States an average of 14.3 percent were cows and bulls; of all live cattle imported for immediate slaughter from Canada an average of 29.2 percent were cows and bulls.

[147] The estimated price gap ranges from 5 to 10 percent depending on the specific domestic price used for comparison. The price of 85 percent lean coarse ground beef blends was used as the price for this analysis.

[148] See ch. 1 and appendix D for a discussion of the USAGE-ITC model.

2002. The two border measures give a price gap of 1.8 percent,[149] i.e., the price of that commodity in the United States was 1.8 percent higher than its world price.[150]

The anticipated net welfare impact of removing these border measures is $66 million. Detailed results are shown in table 2-19. The simulation suggests an increase of U.S. imports for the sector meat packing plants of 2.0 percent. As a result of increased imports, the U.S. price paid by U.S. consumers, a weighted average of U.S. and imported prices, would decline by 0.1 percent. The meat packing plant industry would contract by less than 0.05 percent.[151]

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[149] This analysis assumes that foreign exporters earn rents generated by the beef TRQs and that U.S. import tariff rates are equal to those observed in 2002 trade statistics. The former assumption is implemented in the model as a tax levied by foreign governments on exports to the United States. The combined price impact of the ROW export tax and the U.S. tariff rate is the price gap estimated from U.S. and world prices. The relationship between price gap, import tariff and export tax is that (1+price gap/100) = (1+import tariff/100) x (1+export tax/100). If TRQ rents, however, were captured by U.S. economic agents, this analysis would overestimate welfare effects. Other estimated impacts, such as percentage changes in prices, production and trade, however, are not changed by the assumption about who earns the economic rents. For the case of the beef TRQ, however, it is reasonable to assume that TRQ rents are captured by foreign governments.

[150] These wedges are trade weighted averages which refer to the whole "meat packing sector." For beef, a price gap of 6 percent was applied on beef imports from Australia and New Zealand; other beef imports were not assigned a price gap. Regarding the price gap for beef imports from Australia and New Zealand, it is assumed that the alternative market for beef not imported to the United States, because of the TRQ, was Canada. This is appropriate for 2002 because a significant amount of Australian beef diverted from the Japanese market, that could not be imported to the United States because of the TRQ, was imported into Canada. Because the United States and Canadian markets are highly integrated, comparing the U.S. c.i.f import unit value with the price of a substitutable domestic product was appropriate. And while the price gap on higher value cuts and chilled products was much greater, the impact of these imports on the total price gap is very small because more than 90 percent of the imported beef was frozen product destined for the manufacturing beef segment of the U.S. market.

[151] Note that this simulation was applied to the entire U.S. meat packing industry, which includes pork and lamb, as well as beef.

Table 2-19
Beef: Selected economic effects of tariff and TRQ removal, 2002

Sector	Employ-ment	Output	Imports	Exports	Composite price[1]
	Percent				
Liberalized Sectors:					
Meat packing plants	-0.1	([2])	2.0	0.3	-0.1
Whole Economy:					
Farming, fishing, forestry	([2])	([2])	([2])	([2])	([2])
Mining	([2])	([2])	([2])	([2])	([2])
Construction	([2])	([2])	([2])	([2])	([2])
Durable manufacturing	([2])	([2])	([2])	([2])	([2])
Nondurable manufacturing . . .	([2])	([2])	([2])	([2])	([2])
Transportation and utilities . . .	([2])	([2])	([2])	([2])	([2])
Trade	([2])	([2])	([2])	([2])	([2])
Finance, insurance, and real estate	([2])	([2])	([2])	([2])	([2])
Other Services	([2])	([2])	([2])	([2])	([2])

[1] Share-weighted price of imports, domestic production, and marketing costs. See section "Overview of the USAGE-ITC Framework" in appendix D.
[2] Less than .05 percent.

Source: USITC estimates.

CHAPTER 3
Textiles and Apparel

The United States is the world's largest importer of textiles and apparel, accounting for an estimated 24 percent of world imports by value in 2002. U.S. textile and apparel imports are subject to quota restrictions and to tariff rates that are among the highest of any product sector. Based on 2002 data, the Commission estimates that the average export tax equivalents (ETEs) of the quotas are as high as 2.3 percent for textile mill articles, 8.2 percent for textile products, and 12.5 percent for apparel;[1] the average tariffs based on dutiable imports are 6.6 percent for textile mill articles, 5.4 percent for textile products, and 11.3 percent ad valorem for apparel.[2] Notwithstanding quota and tariff restrictions, U.S. imports of textiles and apparel rose 21 percent during 1998-2002 to $78 billion, while U.S. producers' shipments of such goods fell 15 percent to $131 billion.

The framework for world trade in textiles and apparel will be liberalized on January 1, 2005, when the United States, the EU, and Canada will eliminate all their remaining quotas on imports from WTO countries, as required by the Uruguay Round Agreement on Textiles and Clothing (discussed later in this chapter).[3]As such, competition will intensify in the U.S. market, particularly for apparel, which represented 80 percent of U.S. sector imports by value in 2002 (table 3-1). The large number of suppliers in the market, rising import penetration, changing consumer tastes, and the growing buying power of large retailers have contributed to the downward pressure on prices that has reverberated throughout the textile and apparel supply chain. Retailers are increasingly sourcing apparel directly from low-cost foreign producers, as are

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[1] The degree of restrictiveness of import quotas is measured in terms of their ETEs because costs are imposed that are similar to export taxes on exporters in foreign countries. Procedures used to derive these estimates are discussed later in this chapter and in detail in Appendix E.

[2] Data on ETEs and tariffs are based on the NAICS nomenclature (see table 3-1 for information on the NAICS). Under NAICS, textile mill articles comprise intermediate inputs (e.g., yarn and fabric) and textile products consist mainly of made-up textile articles, including towels, bedding, and other housefurnishings.

[3] For more on this, see U.S. International Trade Commission, *Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market* (inv. No. 332-448), USITC Publication 3671, Jan. 2004.

Table 3-1
Textiles and apparel: Selected industry and trade data, 2002

Sector	Employment	Shipments	Imports	Exports
	1,000 workers	*Million dollars*		
Textile mills (NAICS code 313)[1] . . .	258.9	43,170	6,778	7,397
Textile products (NAICS code 314)[2]	189.6	34,232	8,643	1,875
Apparel (NAICS code 315)[3]	420.0	53,621	62,313	5,462
Total	868.5	131,023	77,734	14,734

[1] NAICS code 313 primarily includes yarn, thread, and fabric mills.
[2] NAICS code 314 includes carpets and rugs, bed and bath linens, canvas products, rope and twine, tire cord, and other miscellaneous textile products.
[3] The North American Industry Classification System (NAICS) code 315 includes knit-to-shape apparel as well as apparel assembled from cut fabrics. The data differ from those in the previous Commission report, which were based on the Standard Industrial Classification (SIC) system and which did not include knit-to-shape apparel in the definition of apparel.

Source: Data estimated by the USITC based on official statistics of the U.S. Department of Commerce.

many U.S. apparel companies that have reduced or eliminated domestic manufacturing altogether so as to focus on product design and marketing. As a result, the U.S. textile industry faces shrinking domestic markets for its yarn and fabric output. Faced with difficult market conditions and the prospect of increased import competition following quota elimination in 2005, the textile industry, along with the apparel industry, has undergone extensive restructuring and consolidation. According to official statistics of the U.S. Bureau of Labor Statistics, employment in the U.S. textile and apparel industries fell by 38 percent during 1998-2002 to 868,500 workers, representing a loss of 542,000 jobs.

Agreement on Textiles and Clothing

The Agreement on Textiles and Clothing (ATC) entered into force with the WTO agreements in 1995. It calls for the gradual elimination of quotas established by the United States, Canada, and the European Union under the Multifiber Arrangement (MFA), an arrangement negotiated under the General Agreement on Tariffs and Trade (GATT) that had governed world textile and apparel trade since 1974. The ATC requires countries both to increase the rate at which all quotas grow and to “integrate” textile and apparel articles into the GATT regime over a 10- year transition period ending on January 1, 2005; that is, the articles are to be brought under GATT discipline and subject to the same rules as products of other sectors. As countries integrate textile and apparel articles into the GATT, they are required to eliminate any quotas on such goods and may not establish new quotas on the integrated articles, except as provided under normal GATT rules.

The ATC requires WTO member countries to integrate groups of articles representing specified minimum percentages of their respective 1990 textile and apparel import volumes in four stages over the 10-year transition period. As shown in table 3-2, the United States and the other major importing countries integrated articles totaling 16 percent of their trade on January 1, 1995, another 17 percent on January 1, 1998; and an additional 18 percent on January 1, 2002, for a total of 51 percent. The remaining 49 percent of the trade is to be integrated at the end of the transition period on January 1, 2005. For quotas that were not eliminated in one of the first three stages of integration, the ATC required the importing countries to increase the base annual growth rates applicable to each such quota, which were specified in the bilateral MFA agreements in place in 1994, by 16 percent in 1995, another 25 percent in 1998, and still another 27 percent in 2002 (the so-called growth-on-growth provision).[4]

The ATC required importing countries to integrate articles from each of four groups of products (tops and yarns, fabrics, made-up textile articles, and apparel); however, it provided flexibility in the share that each group represented in each stage of integration. According to the U.S. Statement of Administrative Action accompanying the Uruguay Round implementing legislation, the United States was to defer integration of the most sensitive items until the end of the 10-year transition period.[5] Under the U.S. integration schedule, none of the articles integrated in the first stage was under quota, and most of the articles integrated in the second and third stages either were not under quota or had low quota usage. As a result, 89 percent of the apparel imports and 47 percent of the textile imports (e.g., yarns, fabrics, and made-up textile articles) will not be integrated until 2005.[6] However, as a result of the increase in the growth of all individual quota rates, the quota levels on all

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[4] The quota growth rates vary by country and article but ranged from less than 1 percent to as high as 6 percent or 7 percent. Assuming a 6-percent base rate for a major supplier, the annual quota growth rate would be 6.96 percent (6 multiplied by 1.16) during 1995-97, 8.7 percent during 1998-2001, and 11.05 percent during 2002-04.

[5] U.S. House of Representatives, "Statement of Administrative Action," *The Uruguay Round Trade Agreements, Texts of Agreements Implementing Bill, Supporting Statements, Message from the President of the United States*, Sept. 27, 1994, House Doc. 103-316, vol. 1, p. 115.

[6] United States General Accounting Office, *Report to Congressional Requesters: Textile Trade - Operations of the Committee for the Implementation of Textile Agreements* (GAO/NSIAD-96-186), Sept. 1996, p. 3.

Table 3-2
Agreement on Textiles and Clothing: Stages, share of integrated trade, and increase in quota growth rates

Stage	Share of integrated trade	Increase in quota growth rate[1]
1 (January 1, 1995 – December 31,1997)	16	16
2 (January 1, 1998 – December 31, 2001)	17	25
3 (January 1, 2002 – December 31, 2004)	18	27
4 (January 1, 2005 – full integration)	49	([2])

[1] The acceleration of quota growth was advanced by one stage for "small suppliers" (supplying countries accounting for 1.2 percent or less of an importing country's total quotas as of December 31, 1991).
[2] Not applicable.

Source: Agreement on Textiles and Clothing, Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations.

of these apparel and textile imports have increased substantially over the course of the quota phase out; imports of apparel increasing from $34 billion in 1995 to $57 billion in 2002, while imports of textiles increased from $9 billion in 1995 to $15 billion in 2002.

In 2002, the United States had quotas on textiles and apparel from 45 countries, which accounted for 78 percent of the total value of U.S. imports of such goods (table 3-3). Of these countries, 39 were WTO members and, thus, eligible for ATC quota liberalization.[7] The six non-WTO countries are not eligible for ATC benefits until they join the WTO.[8] Two of these non-WTO quota countries (Cambodia and Nepal) were approved for WTO membership in 2003, subject to each country ratifying its WTO agreement.[9] Also seeking WTO membership is Vietnam, whose textile and apparel shipments to the

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[7] The United States imposed a ban on imports from Burma (a WTO country) effective August 28, 2003. See U.S. Customs Service, "U.S. Trade Embargo Against Burma," public notice, Sept. 10, 2003, found at *www.cbp.gov*, retrieved Dec. 15, 2003.

[8] The non–WTO countries are subject to quotas imposed by the President under section 204 of the Agricultural Act of 1956 (7 U.S.C. 1854), which authorizes the President to enter into agreements with foreign governments to limit the export of textiles and apparel to the United States, and the importation of such goods into the United States, and to issue regulations to carry out such agreements.

[9] Nepal became the 147th member of the WTO on April 23, 2004. On February 11, 2004, the WTO General Council agreed to give Cambodia another 6 months to ratify its membership agreement and join the WTO; the decision extends the deadline from March 31 to September 30, 2004. Information of these developments is from the WTO website at *www.wto.org*, retrieved Apr. 21, 2004.

Table 3-3
Trading partners subject to U.S. import quotas on textiles and apparel in 2002: U.S. imports of textiles and apparel and share of total U.S. textile and apparel imports, by specified trading partners, 2002

Country	Imports	Import share
	Million dollars	*Percent*
WTO members subject to the ATC		
Bahrain	202.2	(1)
Bangladesh	1,989.7	2.8
Brazil	331.7	0.5
Bulgaria	146.1	(1)
Burma (Myanmar)[2]	309.8	(1)
China	8,744.0	12.1
Colombia	369.5	0.5
Costa Rica	729.8	1.0
Czech Republic	26.7	(1)
Dominican Republic	2,173.3	3.0
Egypt	473.6	0.7
El Salvador	1,709.4	2.4
Fiji	74.5	(1)
Guatemala	1,668.9	2.3
Hong Kong	4,032.3	5.6
Hungary	41.2	(1)
India	2,992.6	4.1
Indonesia	2,328.7	3.2
Jamaica	124.6	(1)
Korea, Republic of	2,881.2	4.0
Kuwait	28.7	(1)
Macau	1,148.1	1.6
Macedonia	44.1	(1)
Malaysia	774.9	1.1
Oman	125.2	(1)
Pakistan	1,982.7	2.7
Philippines	2,041.6	2.8
Poland	61.1	(1)
Qatar	101.6	(1)
Romania	119.0	(1)
Singapore[3]	288.6	(1)
Slovak Republic	9.8	(1)
Sri Lanka	1,526.9	2.1
Taiwan	2,207.5	3.1
Thailand	2,203.5	3.1
Turkey	1,678.0	2.3
United Arab Emirates	281.3	(1)
Uruguay	10.2	(1)

See footnotes at end of table.

Table 3-3—*Continued*
Trading partners subject to U.S. import quotas on textiles and apparel in 2002: U.S. imports of textiles and apparel and share of total U.S. textile and apparel imports, by specified trading partners, 2002

Country	Imports	Import share
	Million dollars	*Percent*
Non-WTO members subject to section 204 of the Agricultural Act of 1956[4]		
Belarus	42.6	([1])
Cambodia	1,061.3	1.5
Laos	2.4	([1])
Nepal	135.6	([1])
Russia	370.2	0.5
Ukraine	77.7	([1])
WTO member subject to the North American Free Trade Agreement		
Mexico [5]	8,619.1	11.9
World	72,183.1	100.0

[1] Less than 0.5 percent.
[2] The United States banned imports of all products from Burma in 2003.
[3] The United States eliminated quota restrictions on textile and apparel imports from Singapore on Janurary 1, 2004, as required under the U.S.-Singapore Free Trade Agreement.
[4] The United States established quotas on textiles and apparel from Vietnam (a non-WTO member) for the first time effective May 1, 2003. In 2002, U.S. textile and apparel imports from Vietnam totaled $951.7 million, or 1.3 percent of total U.S. textile and apparel imports.
[5] The United States eliminated quota restrictions on textile and apparel imports from Mexico on Janurary 1, 2004, as required under NAFTA.

Source: Based on official statistics of the U.S. Department of Commerce.

United States came under quota for the first time effective May 1, 2003.[10] Imports of textiles and apparel from Vietnam have greatly expanded since the United States granted the country normal trade relations (NTR) tariff status in December 2001, rising from $49 million in 2001 to $952 million in 2002.

China became eligible for ATC benefits upon its WTO accession on December 11, 2001. The WTO Accession Agreement of China enabled the country to "catch up" immediately with the ATC integration schedule of other WTO members. However, the United States and other WTO countries retained the right to impose safeguard measures, or quotas, on imports of GATT-integrated textile and apparel articles from China through the end of

[10] The United States and Vietnam initialed a bilateral textile agreement on April 25, 2003, and signed it on July 17, 2003. See *Federal Register* notices of the Committee for the Implementation of Textile Agreements, "Establishment of Import Limits for Certain . . . Textile Products Produced or Manufactured in the Socialist Republic of Vietnam," May 16, 2003 (68 F.R. 26575), p. 26575, and "Establishment of an Export Visa Arrangement for Certain . . . Textile Products Produced or Manufactured in Vietnam," July 30, 2003 (68 F.R. 44748), p. 44748.

2008. The textile safeguard provision in China's WTO Accession Agreement concerns articles that have been integrated into the GATT. It allows WTO members that believe imports of Chinese textiles and apparel are, due to market disruption, threatening to impede the orderly development of trade in these goods to request consultations with China with a view to easing or avoiding such market disruption. Upon receipt of such a request, China agreed to hold its shipments to a level no greater than 7.5 percent (6 percent for wool goods) above the amount entered during the first 12 months of the most recent 14 months preceding the request for consultations. On December 24, 2003, the United States requested consultations with China on cotton and manmade-fiber knit fabrics (category 222), brassieres and other body-supporting garments (349/649), and dressing gowns and robes (350/650).[11] U.S. imports from China of the three products grew rapidly following quota elimination on January 1, 2002 (see box 3-1 for a discussion of the quota liberalization on five groups of products, including those for which the United States requested consultations with China). Because no agreement was reached on new quota levels within 90 days of the request for consultations, the quotas imposed on December 24, 2003 will remain in effect for the 12-month period ending on December 23, 2004.

Restrictiveness of U.S. Import Restraints

Tariffs

Table 3-4 shows that the trade-weighted average ad valorem tariff on U.S. textile and apparel imports in 2002 was 10.2 percent.[12] In general, tariffs on textiles and apparel increase with each stage of manufacturing – that is, the duty rates usually are higher on apparel than on their yarn or fabric inputs. The trade-weighted average tariff on apparel was 11.3 percent, compared with 6.6 percent for textile mill articles (mainly yarns and fabrics) and 5.4 percent for textile products.[13] Tariffs for many heavily traded apparel articles are much

[11] See the three notices of the Committee for the Implementation of Textile Agreements published in the *Federal Register* of December 29, 2003 (68 F.R. 74944–74949), on establishment of import limits for the three products.

[12] The equivalent number based on the dutiable value of imports was 15.5 percent. Unless otherwise specified the tariffs and the ETEs reported in this chapter are on an ad valorem basis.

[13] These numbers are based on the c.i.f. value of imports which includes both the dutiable and duty-free imports. The equivalent tariffs based only on the dutiable value of imports were 15.8 percent for apparel, 9.8 percent for textile mill articles, and 13 percent for textile products.

Box 3-1
Selected textile and apparel articles integrated into the GATT as of January 1, 2002

U.S. imports of selected textile and apparel articles integrated into the GATT (thus becoming free of quota) as of January 1, 2002, rose sharply in 2002–03, largely reflecting a substantial increase in imports of such goods from China, as shown in the table below. The growth in China's shipments began to accelerate after China joined the WTO and became eligible for quota liberalization under the ATC on December 11, 2001. The growth in imports of the Chinese goods was accompanied by a substantial decline in their average unit cost. In contrast, imports from all other (quota and non–quota) countries as a group fell in all the GATT–integrated product categories except knit fabrics; the average unit cost of their goods fell in all categories except luggage, but the decline was much less than China's.

In December 2003, the United States imposed safeguards, or quotas, on imports from China in three of the GATT–integrated product categories: knit fabrics, brassieres, and robes (see earlier discussion for information on the textile safeguard provisions under China's WTO accession agreement).

Continued

higher than the overall average tariff for sector goods. For example, the 2004 NTR duty rates on certain women's and girls' manmade-fiber pants and blouses are 28.6 percent and 26.9 percent, respectively. In addition, tariffs generally are higher on manmade-fiber apparel than on similar cotton or wool goods (e.g., the 2004 duty rate on manmade-fiber sweaters is 32 percent, compared with 16 percent for wool sweaters and 16.5 percent for cotton sweaters).

The average textile and apparel tariff is lower in terms of the customs value than the dutiable value, because a significant portion of the imports either enter duty free under free-trade agreements (mainly the NAFTA) and trade-preference programs (mainly the United States-Caribbean Basin Trade Partnership Act (CBTPA)) or are eligible for a partial duty exemption under the production-sharing provisions of HTS chapter 98.[14] The duty-free value of U.S. textile and apparel imports in 2002 totaled $22 billion, or 28 percent of total imports of such goods. Three-fourths of the duty-free import value was

[14] The production–sharing provision ("9802", formerly "807") provides a duty exemption for U.S. components returned to the United States in the form of finished articles. In general, the duty is assessed only on the value–added abroad. For apparel, the fabric for making the garment parts can be of either U.S. or foreign origin as long as the fabric is cut to shape in the United States and exported ready for assembly.

Box 3-1—*Continued*
Selected GATT-integrated textile and apparel articles: Quantity and average unit value of U.S. imports from the world, China, and other countries, 2003, and changes in the quantity and average unit value of the imports from 2001 to 2003

Brief category description and source	U.S. imports, 2003	Average unit value, 2003	Change in imports, 2001 to 2003	Change in average unit value, 2001 to 2003
	1,000 units	*In dollars*	*Percent*	
Babies' garments (cat. 239 in kilograms):				
World	125,323	15.64	26	-18
China	61,311	14.15	1,796	-62
Other (quota and non-quota)	64,012	17.06	-34	-7
Brassieres (cats. 349/649 in dozens):				
World	44,254	34.57	20	-8
China	16,056	26.14	404	-31
Other (quota and non-quota)	28,198	39.36	-16	-5
Robes (cats. 350/650 in dozens):				
World	10,538	51.45	59	-32
China	4,269	46.69	1,159	-53
Other (quota and non-quota)	6,269	54.70	-1	-27
Luggage (cat. 670 in kilograms):				
World	341,796	5.32	72	-34
China	282,417	4.63	888	-66
Other (quota and non-quota)	59,379	8.60	-65	20
Knit fabrics (cat. 222 in kilograms):				
World	138,881	5.65	31	-20
China	9,493	4.52	29,787	-58
Other (quota and non-quota)	129,388	5.73	22	-19

[1] Babies' garments (cat. 239) and cotton brassieres (349) were integrated into the GATT on January 1, 1998 (second stage). Manmade-fiber brassieres (649), cotton and manmade-fiber robes (350/650), and manmade-fiber luggage (670) were integrated on January 1, 2002 (third stage).

Source: Data based on official statistics of the U.S. Department of Commerce.

Table 3-4
Export tax equivalents (ETEs) and trade-weighted average tariffs on U.S. imports of textiles and apparel, by selected product sectors, 2002, percent

Sector	ETEs[1] Low	ETEs[1] High	Average tariff rates[2]
Textile mills	2.2	2.3	6.6
Broadwoven fabric mills and fabric finishing plants	4.8	4.8	7.9
Narrow fabric mills	0.0	0.0	4.2
Yarn mills and finishing of textiles, n.e.c.	0.3	0.5	4.8
Thread mills	2.0	2.0	7.1
Coated fabrics, not rubberized	0.1	0.1	2.2
Cordage and twine	0.3	0.3	3.1
Textile goods, n.e.c.	0.0	0.0	2.3
Knit fabric mills	0.0	0.0	12.7
Textile products	8.1	8.2	5.4
Curtains and draperies	6.0	6.0	9.0
Housefurnishings, n.e.c.	12.3	12.6	6.3
Canvas and related products	0.0	0.0	5.4
Pleating and stitching	0.0	0.0	4.8
Fabricated textile products, n.e.c.	1.0	1.0	2.4
Apparel	6.5	12.5	11.3
Women's hosiery, except socks	0.5	0.5	6.6
Hosiery, n.e.c.	0.8	0.8	9.4
Apparel made from purchased materials	7.0	12.9	10.9
Average	6.3	11.1	10.2

[1] See Appendix E for the methodology used to estimate the ranges of ETEs.
[2] Based on c.i.f values of imports (including both dutiable and duty-free imports).

Source: USITC estimates.

accounted for by goods from NAFTA countries (46 percent of the total) and eligible CBTPA countries (28 percent).[15] Goods entered under the production-sharing provisions of HTS chapter 98 accounted for 13 percent of the duty-free value. The remainder of the duty-free imports consisted mainly of goods entered under the free-trade agreements with Israel and Jordan (4 percent of the total) and from beneficiary sub-Saharan African countries under the African Growth and Opportunity Act (AGOA, 4 percent).[16]

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[15] The CBTPA provides duty-free and quota-free treatment for imports of qualifying textile and apparel articles from eligible Caribbean Basin countries during a transition period that began on October 1, 2000, and ends on the earlier of September 30, 2008, or on the date on which the Free Trade Area of the Americas or a comparable free-trade agreement between the United States and eligible Caribbean Basin countries enters into force.

[16] AGOA authorizes preferential treatment for qualifying textiles and apparel from eligible sub-Saharan African (SSA) countries for 8 years beginning on October 1, 2000. It extends duty-free and quota-free treatment to apparel assembled in SSA countries

Quantitative Restraints

The quotas on textiles and apparel are administered in the form of quantitative restraints that are negotiated bilaterally and are administered by the exporting countries.[17] Both the product coverage and the degree of restrictiveness vary by supplier. A binding quota effectively limits the supply to the U.S. market of a given product, making its price higher in the United States than in the world market. Given the resulting wedge between the U.S. and world prices, the limited and scarce supply of quotas becomes valuable and benefits accrue to firms (or individuals) that have access to them. In other words, exporters who have licenses to export the products to the United States are able to capture economic rents by increasing the export prices of their products.[18]

These quota rents can also be viewed as an implicit tax on exports of textiles and apparel from restrained countries to the United States: in order to export, a firm in a quota-constrained country has to obtain or buy the right to use the quota (or an export license).[19] Given that the quotas impose a cost on

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[16]—*Continued*
from U.S.-origin fabrics, as well as specified quantities of apparel made from "regional fabrics" that are produced in SSA countries from U.S. or SSA yarns. Imports of apparel made in SSA countries from regional fabrics are subject to an annual "cap;" a special rule allows apparel entered under the cap from "lesser developed" SSA countries to be made of third-country fabrics for the first 4 years, through September 30, 2004.

[17] Such policies are also referred to as "voluntary export restraints" (VERs). The economic implications of the discriminatory nature of VERs are numerous and complex. For detailed discussions, see Kala Krishna, "Trade Restrictions as Facilitating Practices," *Journal of International Economics*, vol. 26, 1989, pp. 251-270 and Judith Dean and Shubhashis Gangopadhyay, "Market Equilibrium under the 'Threat' of a VER," *Journal of International Economics*, vol. 20, 1991, pp. 137-152. For a general review of the literature regarding the economic effects of the Multifiber Arrangement, see USITC, *The Economic Effects of Significant U.S. Import Restraints: Third Update*, USITC publication 3519, June 2002 and USITC, *The Economic Effects of Significant U.S. Import Restraints: Second Update*, USITC publication 3201, May 1999.

[18] It is possible that, in some cases, a portion of the rents generated by the quotas accrue to U.S. importers. This concept is known as rent-sharing. For a discussion of rent-sharing, see, for example, Kala Krishna and Ling Hui Tan, *Rags and Riches* (Ann Arbor: University of Michigan Press, 1998). They formally test for rent-sharing in U.S. textile and apparel trade with Hong Kong, South Korea, and Mexico, and find some evidence that rents are shared between exporters and importers. However, lack of information on allocation of rents across many products and sellers, prevents the inclusion of rent-sharing in any reliable way in the present simulation. If rent-sharing were included, the total price gap would be higher.

[19] Note that even in countries where quotas are distributed without charge, the system is still costly to exporters who must forgo the opportunity to sell the valuable quotas to other suppliers.

exporting firms that is analogous to an export tax, one common way to measure the restrictiveness of the quotas is to compute their ETEs, which measure the degree to which the quota increases the export price (i.e., the price before entry into the U.S. market).[20]

In this study, the Commission estimated ETEs for the year 2002 across all countries and for all products that could be subject to binding quota.[21] Because the quotas are bilaterally negotiated, the United States does not apply quotas to each country that ships textiles and apparel to the U.S. market nor does it apply quotas to every product from countries whose shipments are covered by quotas. Hence, the ETEs averaged across all countries for all textiles and apparel are significantly lower in some instances than those for specific countries, particularly those countries that are highly constrained by the quotas, such as China. For example, the average 2002 ETEs for U.S. apparel imports from all countries was 7-12 percent, compared with 20 percent, 22 percent, and 19 percent ad valorem, respectively for the three largest U.S. apparel suppliers restrained by quotas, China, Bangladesh, and Hong Kong.[22]

Similarly, the estimated ETEs for a more narrowly defined range of goods can be much higher (or lower) than those for a broader group of products. For example, the ETE estimated for women's and girls' cotton knit shirts was 12-28 percent, compared with 7-12 percent for apparel overall, and 44-47 percent for cotton bed sheets, compared with about 8 percent for textile products.[23] Because the degree of restrictiveness of quotas (as well as tariffs) greatly differs across countries and products, it is likely that the effect of liberalizing a quota will vary across suppliers and that some countries may experience significant growth in shipments, while other countries may experience no growth or will reduce their shipment levels.[24]

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[20] See, for example, Joseph Francois and Spinanger, D. (2002), "ATC Export-tax Equivalents" in Betina V. Dimaranan and Robert A. McDougall, Global Trade, Assistance, and Production: The GTAP 5 Data Base, Center for Global Trade Analysis, Purdue University.

[21] The methods used here follow those used in the 2002 study and are described in appendix E.

[22] See appendix E, table E-1, for a list of weighted-average ETEs for textiles and apparel for suppliers with available license prices.

[23] Women's and girls' cotton knit shirts are included in U.S. quota category 339 and cotton bed sheets are in category 361.

[24] For a discussion on the competitiveness of foreign textile and apparel suppliers to the U.S. market, see U.S. International Trade Commission, *Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market* (inv. No. 332-448), USITC Publication 3671, Jan. 2004.

For the purpose of the modeling exercise, the ETE estimates are averaged across suppliers and across quota categories. Given the imprecise nature of the data used for quota costs for certain countries, the Commission constructed ranges of estimates of the average ETEs (as opposed to point estimates).[25] As shown in table 3-4, the estimated ETEs are relatively high for apparel and finished textile products (e.g., housefurnishings and other made-up textile articles) but are relatively low for textile mill articles, which consist mostly of intermediate inputs such as yarns and fabrics. The combined effect of tariffs and quotas results in an estimated 18-24 percent increase in the price of apparel, a 13-14 percent increase in the price of finished textile products, and a 9 percent increase in the price of textile mill articles.

Effects of Liberalization

The Commission considered two scenarios regarding the effects of quota and tariff liberalization for textiles and apparel, based on data for 2002. In the first case, the elimination of the quotas would result in an estimated overall welfare gain of between 0.10 percent ($7 billion) and 0.17 percent ($12 billion). In the second case, the elimination of both quotas and significant tariff barriers would result in an estimated overall economywide gain of between 0.13 percent ($9 billion) and 0.20 percent ($14 billion). These results show that the elimination of quotas generate the largest gains to the U.S. economy. Because the quotas are administered by the exporting countries in the form of export restraints, exporters benefit from relatively large rents in apparel and in several textile segments. Quota removal then results in a transfer of the rent from the exporting country to the United States, as well as efficiency gains that normally occur from removal of tariffs.

The sector-specific effects of quota and tariff removal are influenced by the level of the ETEs and tariffs and the estimates of various behavioral parameters, particularly the substitution elasticities between imports and domestically produced goods.[26] Upstream and downstream linkages among the liberalized sectors also affect the sector-specific effects of trade liberalization. For instance, the output of several textile sectors (e.g., yarns and fabrics) is used as inputs by the apparel sector. Thus, the impact on overall real price, output, and employment of the textile sectors is determined by the level of ETEs and tariffs for their primary products as well as any indirect effects from

[25] The ETE ranges also provide a convenient basis for sensitivity analyses that illustrate the robustness of the main results relative to the size of the modeled policy shock.

[26] See appendix D.

expansion or contraction of sectors that purchase these primary products. Similarly, changes in an upstream sector (e.g., fabric mills) may alter the cost of inputs and, thus, the output of downstream sectors (e.g., apparel).

Case 1: Removal of Textile and Apparel Quotas

As expected, the simulation exercise for quota removal shows that the largest increases in imports occur in sectors with the largest initial ETEs—namely, apparel made from purchased fabrics and housefurnishings. As shown in table 3-5, imports expand by as much as 11 percent for such apparel and 19 percent for housefurnishings. These sectors also register the largest declines in real price as a result of quota removal: 3 percent for apparel made from purchased fabrics and 2 percent for housefurnishings. As a result of such price declines, it is estimated that real U.S. consumption increases 0.10-0.17 percent ($7-12 billion).[27]

The simulation exercise also shows that, as a result of quota elimination and the resulting decline in real prices, the U.S. apparel and housefurnishings sectors experience significant declines in output and employment. Output declines by as much as 7.9 percent in apparel and 4.7 percent in housefurnishings; the effects of liberalization on employment in these sectors are of similar magnitude as those on output.

Declines in output and employment are also estimated to be significant for several other sectors, despite these sectors having smaller ETEs. For example, in the broadwoven fabric mill sector, although the decline in its real prices is only 0.34 percent, simulated results suggest declines of as much as 5 percent in output and 7 percent in employment. These results likely reflect the fact that the broadwoven fabric mill sector would experience not only an increase in competition from broadwoven fabric imports, but also a decline in demand for its output from the domestic apparel and housefurnishing sectors, whose output would also decline as a result of quota liberalization. Aside from broadwoven fabric mills, other upstream sectors would experience declines in output and employment as a result of quota liberalization, including knit fabric mills, manmade fibers, and cotton.[28] In contrast, some of the largest gains in output as a result of quota removal would be found in retail trade. A number of liberalized textile and apparel sectors with very low ETEs (e.g., coated fabrics

[27] Domestic consumption is equal to domestic production less exports plus imports.

[28] The large decline in output and employment in knit fabric mills reflects the fact that this is a vertically integrated sector. It produces both knit fabrics and apparel made from its own knit fabrics.

or women's hoisery) might experience slight increases in price and output as the direct negative impact of the quota removal is more than offset by the indirect, but much bigger, positive impact of the liberalization in other textile and apparel sectors.

Case 2: Removal of Textile and Apparel Tariffs and Quotas

With the removal of both quotas and tariffs on textiles and apparel, imports would rise in all but one of the liberalized sector. As shown in table 3-6, import increases of about 20 percent or more would occur in apparel, broadwoven fabric mills, curtains and draperies, housefurnishings, and knit fabric mills.[29] The removal of quotas and tariffs would also lead to a decline in real prices for almost all textile and apparel sectors. As in case 1 above, significant declines occurred in real prices for apparel made from purchased fabrics (-6.2 percent) and housefurnishings (-2.7 percent), both of which have high ETEs and tariffs. Significant declines in real prices also occurred in other textile sectors such as thread mills, hosiery, and curtains and draperies, which had low ETEs but relatively high tariffs. At the economywide level, removal of both tariffs and quotas on textiles and apparel is estimated to increase real consumption by between 0.13 percent ($9 billion) and 0.20 percent ($14 billion).

The simulations of quota and tariff removal show estimated declines in output of 14 percent for knit fabric mills, 13 percent for apparel made from purchased fabrics, and 10 percent for broadwoven fabric mills. The effects of the trade liberalization on employment are of similar magnitude as those on output. The negative effects of quota and tariff removal on output and employment of upstream sectors (e.g., organic manmade fibers, cotton, and textile machinery) are more pronounced than in case 1, largely because of the relatively high tariffs affecting the textile sectors.

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[29] The decline in imports as well as in domestic output in the narrow fabric mill sector suggests a drop in demand for these products, regardless of source, due to a decline in the downstream industries, such as apparel.

Table 3-5
Case 1: Economic effects of textile and apparel quota elimination, percent, 2002

Sector	Employment		Output		Import		Export		Composite Price[1]	
	Low ETEs	High ETEs	Low ETEs	High ETEs	Low ETEs	High ETEs	Low ETEs	High ETEs	Low ETEs	High ETEs
Liberalized Sectors										
Broadwoven fabric mills and fabric finishing plants	-5.19	-6.78	-3.82	-5.01	9.26	7.53	1.15	1.45	-0.36	-0.34
Narrow fabric mills	-1.06	-2.02	-1.04	-1.96	-2.81	-5.15	0.40	0.71	0.06	0.11
Yarn mills and finishing of textiles, n.e.c.	-2.47	-3.71	-2.38	-3.56	-2.28	-3.29	0.57	0.85	-0.03	-0.03
Thread mills	-2.03	-3.34	-1.78	-2.92	2.39	1.19	0.61	0.97	-0.37	-0.34
Coated fabrics, not rubberized	0.47	0.55	0.30	0.34	-0.18	-0.19	0.79	0.86	0.09	0.15
Cordage and twine	-0.09	-0.07	-0.07	-0.05	0.34	0.31	0.21	0.28	0.04	0.09
Textile goods, n.e.c.	0.32	0.38	-0.05	-0.11	-0.22	-0.30	0.08	0.07	0.07	0.13
Women's hosiery, except socks	0.01	0.05	-0.02	0.04	0.83	0.82	0.30	0.44	0.01	0.06
Hosiery, n.e.c.	-0.09	0.03	-0.15	-0.07	1.17	1.13	0.50	0.73	-0.07	-0.03
Apparel made from purchased materials	-4.20	-7.94	-4.37	-7.89	6.08	10.96	1.73	2.53	-1.92	-3.40
Curtains and draperies	-0.91	-0.90	-1.16	-1.11	10.48	10.46	1.57	1.71	-0.54	-0.50
Housefurnishings, n.e.c.	-4.71	-4.21	-4.64	-4.70	19.05	19.45	2.65	2.72	-1.71	-1.69
Fabricated textile products, n.e.c.	-0.03	0.06	-0.09	-0.04	0.77	0.79	0.75	0.82	-0.07	-0.02
Aggregated Sectors										
Textile mill goods	-3.27	-4.73	-2.85	-4.09	4.32	2.72	0.71	0.96	-0.23	-0.20
Textile products	-1.23	-1.13	-1.40	-1.43	8.07	8.20	0.86	0.95	-0.74	-0.71
Apparel	-3.23	-6.10	-3.66	-6.61	6.00	10.80	1.65	2.41	-1.81	-3.20

See footnote at end of table

Table 3-5—*Continued*
Case 1: Economic effects of textile and apparel quota elimination, percent, 2002

Sector	Employment		Output		Import		Export		Composite Price[1]	
	Low ETEs	High ETEs	Low ETEs	High ETEs	Low ETEs	High ETEs	Low ETEs	High ETEs	Low ETEs	High ETEs
Related Sectors										
Knit fabric mills	-3.40	-6.19	-3.35	-5.99	-4.22	-7.50	0.67	1.11	0.03	0.05
Canvas and related products	0.23	0.27	0.18	0.22	-0.35	-0.36	1.02	1.11	-0.01	0.04
Pleating and stitching	-1.29	-2.41	-1.22	-2.31	-1.98	-3.68	1.19	2.16	-0.05	-0.10
Cellulosic manmade fibers	-1.51	-2.08	-1.47	-2.02	-2.22	-3.02	-0.01	-0.04	0.10	0.17
Cotton	-1.85	-2.56	-1.58	-2.18	-4.34	-5.94	0.61	0.84	0.08	0.15
Manmade organic fibers, except cellulosic	-0.94	-1.33	-1.15	-1.65	-1.67	-2.38	3.64	5.05	0.10	0.16
Textile machinery	-0.57	-0.80	-0.57	-0.81	-1.27	-1.81	0.54	0.79	0.10	0.17
Fasteners, buttons, needles, and pins	-1.36	-2.88	-1.28	-2.70	-2.68	-5.02	3.44	5.10	0.05	0.09
Textile bags	0.32	0.42	0.17	0.18	-0.50	-0.55	1.02	1.12	-0.03	0.02
Rubber and plastics hose and belting	0.35	0.38	0.28	0.31	-0.15	-0.15	0.74	0.81	0.04	0.10
Luggage	0.44	0.53	0.32	0.38	0.02	0.05	0.52	0.56	0.07	0.12
Retail Trade	0.25	0.44	0.24	0.42	0.00	0.00	-1.71	-3.15	0.09	0.16

[1] Share-weighted price of imports, domestic production, and marketing costs. See section "overview of the USAGE-ITC Framework" in appendix D.

Source: USITC estimates.

Table 3-6
Case 2: Economic effects of textile and apparel quota and tariff elimination, percent, 2002

Sector	Employment		Output		Import		Export		Composite Price[1]	
	Low ETEs	High ETEs	Low ETEs	High ETEs	Low ETEs	High ETEs	Low ETEs	High ETEs	Low ETEs	High ETEs
Liberalized Sectors										
Broadwoven fabric mills and fabric finishing plants	-12.22	-13.60	-9.11	-10.15	26.60	24.76	3.30	3.57	-0.96	-0.94
Narrow fabric mills	-3.99	-4.81	-3.81	-4.60	-0.69	-2.94	1.79	2.06	-0.78	-0.73
Yarn mills and finishing of textiles, n.e.c.	-7.50	-8.61	-7.16	-8.21	5.68	4.69	1.91	2.16	-0.39	-0.39
Thread mills	-5.04	-6.21	-4.46	-5.49	14.36	13.05	2.01	2.34	-1.73	-1.70
Coated fabrics, not rubberized	0.64	0.71	0.25	0.28	3.68	3.66	2.55	2.61	0.14	0.21
Cordage and twine	-1.27	-1.25	-1.15	-1.13	4.75	4.75	1.41	1.47	-0.12	-0.07
Textile goods, n.e.c.	-0.01	0.04	-0.78	-0.83	2.68	2.61	0.62	0.60	-0.09	-0.03
Women's hosiery, except socks	-0.60	-0.57	-1.32	-1.26	11.38	11.38	1.61	1.74	-0.49	-0.44
Hosiery, n.e.c.	-2.85	-2.73	-3.00	-2.93	14.90	14.87	3.15	3.36	-1.35	-1.31
Apparel made from purchased materials	-9.72	-13.11	-10.20	-13.41	14.96	19.76	5.93	6.78	-4.82	-6.24
Curtains and draperies	-2.83	-2.82	-2.90	-2.86	26.37	26.36	5.09	5.21	-1.43	-1.39
Housefurnishings, n.e.c.	-4.89	-4.47	-6.73	-6.79	28.78	29.20	6.13	6.19	-2.69	-2.67
Fabricated textile products, n.e.c.	-0.29	-0.22	-0.42	-0.38	2.66	2.67	2.57	2.62	-0.29	-0.24
Knit fabric mills	-12.30	-14.70	-11.84	-14.12	23.96	23.96	4.29	4.70	-0.52	-0.49
Canvas and related products	-1.77	-1.74	-1.66	-1.62	9.09	9.09	3.74	3.81	-0.89	-0.84
Pleating and stitching	-4.34	-5.31	-3.86	-4.83	5.76	4.03	4.22	5.17	-0.53	-0.57
Cellulosic manmade fibers[2]	-5.03	-5.52	-4.86	-5.33	8.03	7.25	0.14	0.11	-0.04	0.03
Aggregated Sectors										
Textile mill goods	-3.27	-10.17	-7.69	-4.09	18.48	16.74	2.52	2.74	-0.76	-0.73
Textile products	-1.23	-1.13	-2.27	-1.43	13.54	13.68	2.58	2.66	-1.25	-1.21
Apparel	-3.23	-10.21	-3.66	-6.61	14.92	10.80	5.69	6.50	-4.57	-5.90

See footnote at end of table.

Table 3-6—*Continued*
Case 2: Economic effects of textile and apparel quota and tariff elimination, percent, 2002

Sector	Employment		Output		Import		Export		Composite Price[1]	
	Low ETEs	High ETEs	Low ETEs	High ETEs	Low ETEs	High ETEs	Low ETEs	High ETEs	Low ETEs	High ETEs
Related Sectors										
Cotton	-4.74	-5.36	-4.05	-4.58	-11.16	-12.54	1.67	1.88	0.24	0.30
Manmade organic fibers, except cellulosic	-2.15	-2.49	-2.95	-3.40	-4.58	-4.58	12.02	13.20	0.27	0.34
Textile machinery	-1.14	-1.36	-1.14	-1.37	-3.44	-3.91	2.51	2.68	0.28	0.34
Fasteners, buttons, needles, and pins	-2.48	-3.86	-2.33	-3.62	-6.32	-6.32	11.33	12.88	0.12	0.16
Textile bags	1.03	1.12	0.59	0.60	-1.76	-1.80	3.67	3.75	-0.15	-0.10
Rubber and plastics hose and belting	1.11	1.13	0.91	0.93	-0.37	-0.37	2.30	2.35	0.12	0.17
Luggage	1.17	1.26	0.89	0.94	-0.13	-0.13	1.73	1.76	0.18	0.24
Retail Trade	0.54	0.74	0.52	0.71	0.00	0.00	-0.12	-1.90	0.24	0.30

[1] Share-weighted price of imports, domestic production, and marketing costs. See section "overview of the USAGE-ITC Framework" in appendix D.

[2] The peak tariff of 6 percent affecting cellulosic manmade fibers is also removed in this scenario.

Source: USITC estimates.

CHAPTER 4
Other Sectors With Significant Import Restraints

This chapter identifies sectors subject to relatively high tariffs and examines the economic impact of removing these tariffs. This chapter also reviews the Commission's findings regarding the Section 201 import relief (safeguard) actions on steel.

Significant Tariff Restraints

Although this analysis focuses on the prevailing tariffs in 2002, it is worth noting that U.S. tariffs generally have been falling over time. The trade-weighted average tariff rate for all imports fell by almost half between the years 1992 and 2002, from 3.15 percent to 1.59 percent *ad valorem*. These numbers are substantially low compared to the world average of MFN applied tariffs of 17 percent for agricultural products and 9 percent for industrial products.[1] However, a number of tariff peaks remain in a few U.S. sectors. The economic implications of those peak tariffs are examined in this section.

To identify the sectors with significant tariffs, the first step is to calculate the trade-weighted average tariff by BEA sector.[2] The peak tariff sectors are then defined as those with a tariff more than one standard deviation (2.63 percent) above the simple average of the BEA aggregate tariffs (1.59 percent), that is, 4.21 percent or above. Those sectors that are discussed elsewhere in this study—such as textiles and apparel or food and agriculture—are then excluded, leaving the list of nine sectoral groupings found in table 4-1. This table shows tariffs, employment, shipment and trade flows for the groups of sectors analyzed.

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[1] World Trade Organization, World Trade Report 2003, p. 127.

[2] The average tariff is constructed by dividing the calculated duties for the model sector by the cost, insurance and freight (c.i.f.) value of imports for consumption in that sector. The c.i.f. value is used because the USAGE-ITC model treats tariffs as applied to the c.i.f. value of imports.

Table 4-1
Summary data for sectors with significant tariffs, 2002

Sector	U.S. import tariff	Employment[1]	Shipment[1]	Imports, cif	Exports
	Percent	*1,000 workers*	*Million dollars*		
Footwear and leather products	10.8	62	8,834	23,281	2,593
Glass and glass products	4.7	123	22,914	4,589	3,451
Watches, clocks, watch cases and parts	5.4	6	1,018	3,022	368
Ball and roller bearings	5.8	32	5,186	1,392	1,186
Ceramic wall and floor tile	8.4	8	1,051	1,568	33
Table and kitchenware	7.6	17	1,461	2,107	506
Costume jewelry	6.1	14	1,136	977	155
Pens, mechanical pencils, and parts	4.9	7	1,367	884	262
Cutlery and handtools	4.4	70	11,916	3,650	1,682

[1] Employment and shipment data were available for 2001.

Note.—In an aggregation provided by the North American Industry Classification System (NAICS): Footwear and leather products (NAIC316), Glass and glass products (NAIC3272), Watches, clocks, watch cases and parts (NAIC334518), Ball and roller bearings (NAIC332991), Ceramic wall and floor tile (NAIC327122), Costume jewelry (NAIC339914), Cutlery and handtool (NAIC3322), Table and kitchenware (NAIC327112), Pens, mechanical pencils, and parts (NAIC339941).

Source: Compiled from USDOC statistics.

In order to assess the impact of tariff liberalization, the USAGE-ITC model is employed to simulate the full removal of each individual peak tariff. To maintain comparability between the various liberalization scenarios, the same model specification, sectoral aggregation, and database are employed for each simulation; only the liberalization experiment varies. The simulation results for each of the sectoral groupings are summarized in table 4-2. Except when noted, liberalization of individual tariffs seems to have little or no effects on other sectors or aggregated sectors of the U.S. economy.

Footwear and leather products

The footwear and leather products category includes seven sectors from the BEA aggregation: rubber and plastic footwear; shoes, except rubber; house slippers; leather gloves; women's handbags and purses; luggage; and personal leather goods. The tariff rate on rubber and plastic footwear imports is about 11.8 percent *ad valorem*, and the rates are slightly lower for other shoes (9.8 percent) and for house slippers (11.3 percent). Luggage and leather gloves face rates of about 13 percent. The tariffs for women's handbags and purses and other personal leather goods are 11.2 and 8.7 percent, respectively.

Table 4-2
Sectors with significant tariffs: Economic effects of individual tariff removal, percent, 2002

Sector	Employment	Output	Imports	Exports	Composite price[1]
Footwear and leather products:					
Rubber and plastic footwear	-1.7	-1.7	3.9	0.1	-4.4
Shoes, except rubber	-0.9	-0.9	3.1	0.2	-3.5
Slippers	-0.8	-0.7	4.8	0.5	-2.0
Leather gloves	-3.5	-3.2	5.9	0.4	-5.0
Women's handbags and purses	-7.5	-6.8	6.5	4.0	-4.4
Luggage	-11.4	-10.2	8.1	4.0	-5.6
Personal leather goods	-7.0	-5.7	8.4	3.6	-2.8
Glass and glass products	-0.6	-0.6	6.5	5.9	-0.7
Watches, clocks, watchcases, and parts	1.0	0.5	1.9	3.2	-2.0
Ball and roller bearings	-4.2	-4.1	12.0	0.5	-0.3
Ceramic wall and floor tile	-6.8	-6.4	4.8	0.9	-0.5
Table and Kitchenware:					
Vitreous china table and kitchenware	-7.1	-7.0	7.2	0.5	-2.3
Earthenware table and kitchenware	-3.3	-3.1	1.4	0.3	-2.5
Costume jewelry	-2.4	-2.1	6.9	0.8	-1.2
Pens, mechanical pencils, and parts	-2.2	-1.9	3.8	1.3	-1.0
Cutlery and handtools:					
Handtools	-0.3	-0.3	2.0	0.1	-0.7
Cutlery	-3.3	-2.8	9.1	1.5	-0.9

[1] Share-weighted price of imports, domestic production, and marketing costs. See section "overview of the USAGE-ITC Framework" in appendix D.

Source: USITC estimates.

Removal of the tariffs on footwear and leather products is estimated to increase net welfare by 0.01 percent, or about $720 million. The analysis also suggests that such a liberalization would lead to some significant price changes—with declines of more than 2 percent in all the liberalized sectors. In particular, composite prices of leather gloves and luggage both drop by more than 5 percent. Imports of luggage and personal leather goods jump by more than 8 percent, and their domestic production decline by 10 percent and 6 percent, respectively. Increased imports in these sectors contribute to an overall increase of 0.3 percent in imports of nondurable manufactures. The removal of tariffs on footwear and leather products decreases the demand for the upstream leather tanning and finishing sector whose imports and output decline by 0.5 percent and by 0.8 percent, respectively.

Glass and Glass Products, Except Containers

This category includes flat glass, glass products made from purchased glass such as ornaments, aquariums, mirrors, lenses, insulators, and a variety of other glass products principally found in SIC categories 322 and 323, except for containers. Imports are subject to an average tariff of 4.6 percent and would increase by 6 percent following tariff liberalization. Removal of tariffs would lead to a $7.7 million welfare improvement as the composite price for glass drops by 0.7 percent. Both employment and output in the sector will be reduced by an estimated 0.6 percent. As the composite price of glass declines, downstream sectors such as audio and video equipments and television and radio cabinets register an output increase of almost 1 percent.

Watches, Clocks, Watchcases, and Parts

This sector consists of clocks (including electric), watches, watchcases, mechanisms for clockwork operated devices, and clock and watch parts, with the exception of crystals (either plastic or glass) and jewels. Products in this aggregate sector include both finished products and parts, while most U.S. production consists of packaging of finished watches or the production of parts. The average *ad valorem* tariff rate is 5.4 percent. Removal of tariffs on watches, clocks, watchcases and parts is estimated to lead to an increase in net welfare of about $64.8 million. Tariff reduction actually leads to an increase in employment and production for the category because domestic producers realize significant efficiency gains owing to cheaper inputs.

Ball and Roller Bearings

Ball and roller bearings are used to reduce friction between moving and fixed parts in machinery, such as motor vehicles, farm implements, material-handling equipment, motors, pumps, compressors, home appliances, and aircraft engines. In a written submission, the Timken Company made several suggestions with respect to the modeling of this industry.[3] In particular, Timken argues that the bearings industry is import-sensitive, and bearings manufactured by the major worldwide bearings producers are highly

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[3] Submission of Scott A. Scherff, corporate secretary and assistant general counsel, Timken Co., re Inv. 332-325, received by the Office of the Secretary, USITC, January 12, 2004.

substitutable.[4] The parameter describing this substitutability (the Armington substitution elasticity) has recently been increased in USITC models from a value of 1.8 (in the last update) to 4.0, as part of a comprehensive review and revision of Armington elasticities. The value of 4.0 is relatively high compared to other commodities in the model.[5]

After removal of tariffs of 5.8 percent on ball and roller bearings, the Commission estimates that net welfare increases by about $57.6 million. Following the removal of the tariff, imports would experience a 12 percent increase, which would lead to a 0.3 drop in price, which in turn would cause an output decline in the ball and roller bearing sector of 4.1 percent. As ball and roller bearings become cheaper, downstream sectors stand to increase their output following the tariff liberalization with motorcycle and mining machinery sectors expanding by 0.5 percent and 0.3 percent, respectively. On the other hand, the output of iron and steel foundries declines slightly by 0.1 percent because of lower demand.

Ceramic Wall and Floor Tile

Products in this sector include ceramic wall and floor tiles, glazed and unglazed mosaic and nonmosaic tiles. Domestic shipments were $1 billion and imports were $1.5 billion. Removal of an 8.4 percent tariff on the sector is expected to increase net welfare by about $54 million. Sectoral output is estimated to decline by 6.4 percent while imports increase by almost 5 percent. The simulation results indicate that these changes would have no significant effects on the overall U.S. economy.

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[4] The Timken submission cites USITC, *Certain Bearings From China, France, Germany, Hungary, Italy, Japan, Romania, Singapore, Sweden, and the United Kingdom*, Publication 3309 (June 2000), vol. 1, pp. 39–40, in support of its contention on substitutability.

[5] See Donnelly, W.A., K. Johnson, M. Tsigas and D. Ingersoll, January 2004, "Revised Armington Elasticities of Substitution for the USITC Model and the Concordance for Constructing a Consistent Set for the GTAP Model," Office of Economics Research Note, No. 2004-01-A, U.S. International Trade Commission. As the Timken written submission notes, there are many different types of ball bearings (tapered, ball, needle, cylindrical roller, spherical roller, and spherical plain), different countries do not produce an identical mix of bearings, and thus the option of a perfect-substitutes model seems less appropriate than that of assuming a high, but not infinite, elasticity of substitution.

Table and Kitchenware

Table and kitchenware is a composite sector consisting of products manufactured from either vitreous china or fine (semivitreous) earthenware for use in households, hotels, restaurants and other commercial institutions for preparing, serving, or storing food or drink. Products in this category correspond to NAICS category 327112 (Vitreous china, fine earthenware, and other pottery products).

Tariff liberalization is expected to lead to a 2.4-percent drop in the composite price of both vitreous china and earthenware table and kitchenware. Imports of vitreous china would increase 7 percent, while the declines in output are anticipated to range from 3 percent for earthenware to 7 percent for vitreous china. The adverse impact of reduced demand on the upstream clay, ceramic, and refractory mineral mining sector is minimal (declining by 0.01 percent). Welfare as measured by real consumption grows by about $21.6 million.

Costume Jewelry

Costume jewelry includes costume novelties and ornaments made of all materials, except precious metal, precious or semiprecious stones, or rolled goldplate or gold-filled materials. These items include compacts, cuff-links, artificial pearls, watchbands made of base metal, and rosaries and other small religious articles. The average tariff on costume jewelry was 6.1 percent in 2002. Total imports were $977 million. Removal of tariffs on costume jewelry is estimated to lead to an increase in net welfare of about $21.6 million. Production will be reduced by an estimated 2.1 percent while imports rise by almost 7 percent. Trade liberalization decreases the demand for jewelers' materials and lapidary work (the main upstream sector for costume jewelry), the output of which declines by 0.2 percent.

Pens, Mechanical Pencils, and Parts

This category includes pens, felt-tip markers, ink cartridges, mechanical pencils, and parts, found in NAICS category 339941. In 2002, total imports were $884 million and the average tariff was 4.9 percent on a c.i.f. basis. Removal of tariffs on pens and mechanical pencils is estimated to lead to a 4 percent increase in imports. Output will be reduced an estimated 2 percent in this sector. No discernible change in net welfare would result from liberalization.

Cutlery and Handtools

This category includes cutlery, as well as hand and edge tools, except machine tools and handsaws. Among the many kinds of products included in hand and edge tools are adzes, caulking tools, hand drills and bits, hammers and pliers, pulleys, soldering tools, pry bars, pruning tools, shovels, spades, and trowels. Products are classified in NAICS category 3322. Imports are subject to an average tariff of 4.3 percent and would increase 2 percent and 9 percent for handtools and cutlery, respectively, following trade liberalization. Composite prices for the liberalized products would decline by around 0.8 percent, and welfare is estimated to increase by about $1.4 million. Domestic production of cutlery is expected to decline almost 3 percent and that of handtools by 0.3 percent.

Section 201 Border Measures on Steel Products

This section covers the section 201 import relief (safeguard) actions on steel that were in place in 2002–the base year of this study. Rather than presenting new analysis, it reviews the results of previous Commission studies.[6]

Steel products manufactured by steel mills include both semi-finished (unwrought) and finished forms from processing (i.e., rolling, drawing, etc.) of either internally produced or purchased steel. Steel products are shipped either directly to end-users or to downstream facilities for conversion into fabricated steel products. Between 1999 to 2002, U.S. steel industry net shipments fell by 5.8 percent to 100.0 million short tons and employment was reduced by 19.5 percent to 124,000 workers (table 4-3). Imports of finished steel products declined by 12.2 percent to 23.8 million short tons. Imports in 2002 accounted for one-fifth of apparent domestic consumption of finished steel, estimated at 117.0 million short tons.[7]

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[6] USITC, *Steel: Monitoring Developments in the Domestic Industry, Vol. I: Executive Summaries and Investigation No. TA-204-9*; *Vol. II: Investigation No. TA-204-9*, publication No. 3632, Sept. 2003; and USITC, *Steel-Consuming Industries, Competitive Conditions with Respect to Steel Safeguard Measures, Vol. III: Executive Summaries and Investigation No. 332-452 (Report and Appendices)*, publication No. 3632, Sept. 2003. Analysis in this section does not consider the impact of the safeguard actions imposed by the President on March 1, 2000 on steel wire rod and circular welded carbon line pipe. These safeguard actions were terminated on March 1, 2003.

[7] American Iron and Steel Institute, *Annual Statistical Report-2002*.

Table 4-3
Steel products: Summary data, 1999-2002

Item	1999	2000	2001	2002
Shipments[1] (*million short tons*)	106.2	109.1	98.9	100.0
Employment[2] (*1,000s*)	154	151	140	124
Imports[3] (*million short tons*)	27.2	29.4	23.6	23.8
Exports[1] (*million short tons*)	5.4	6.5	6.1	6.0

[1] Total net shipments, i.e., excludes steel purchased from other reporting firms for subsequent processing into finished forms.

[2] NAICS 3312, Steel works, blast furnaces (including coke ovens), and rolling mills. This classification includes products manufactured at steel works and blast furnaces (includes electric-arc furnaces), at coke ovens including those not integrated with steel mills, and by hot-rolling of purchased steel.

[3] Excludes semi-finished steel.

Source: American Iron and Steel Institute, *Annual Statistical Report-2002*; U.S. Bureau of Labor Statistics, *Current Employment Survey*; and compiled from official statistics of the U.S. Department of Commerce.

The scope of the Commission's 201 steel investigation covered a broad range of finished and semi-finished products, but not all steel products.[8] At the outset of the investigation, the Commission delineated the subject merchandise into 33 categories for the purpose of data collection. The Commission made affirmative determinations with regard to 12 categories of steel products, was equally divided in its determinations with regard to 4 other categories, and made negative determinations with regard to the remaining 17 categories.[9] Following receipt of the Commission's report, the President in March 2002 imposed increased tariffs or tariff-rate quotas on 14 categories of steel products, including on 2 of the 4 products on which the Commission was equally divided.[10] The duration of these measures was initially determined to be a period of 3 years and 1 day, with reductions to occur in March 2003 and March 2004 (table 4-4).[11] Imports from free-trade agreement (FTA) partners (i.e., Canada, Israel, Jordan, and Mexico) and most WTO-member developing

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[8] Acting on requests of the USTR (received June 22, 2001) and the Senate Finance Committee (received July 26, 2001), the Commission initiated an investigation, under section 202 of the Trade Act of 1974 (19 U.S.C. 2252), into whether imports of certain steel products increased in such quantity as to be a substantial cause of serious injury or threat of serious injury to the U.S. industry producing these products.

[9] USITC, *Steel, Vol. I, Determinations and View of Commissioners*, Inv. No. TA-201-73, publication No. 3479, Dec. 2001.

[10] The White House, "Presidential Action," news release, Mar. 5, 2002, found at *http://www.ustr.gov/sectors/industry/steel201/2002-03-05-background.PDF.*

[11] Office of the President, "Steel Products Proclamation, to Facilitate Positive Adjustment to Competition from Imports of Certain Steel Products, by the President of the United States of America, a Proclamation," Proclamation No. 7529, Mar. 5, 2002 (67 FR 10553, Mar. 7, 2002), found at *www.whitehouse.gov/news/releases/2002/03*.

Table 4-4
Section 203 safeguard measures effective March 20, 2002, by steel product

Type of relief and item	2002 column-1 general tariff range	Safeguard measures imposed		
		First year	Second year	Third year
Tariff-rate quotas:				
Carbon and alloy flat steel products:				
Slabs	0.8-1.0	30 percent ad valorem duty, imports above 4.90 million metric tons	24 percent ad valorem duty, imports above 5.35 million metric tons	18 percent ad valorem duty, imports above 5.81 million metric tons
Increased duties:	*Percent*			
Carbon and alloy flat steel products:				
Plate, including cut-to-length and clad	0.8-1.3	30	24	18
Hot-rolled sheet and strip	0.7-1.9	30	24	18
Cold-rolled sheet and strip, other than grain-oriented electrical steel	0.5-1.4	30	24	18
Coated sheet and strip, including corrosion-resistant steel	0.5-1.3	30	24	18
Tin-mill products	0.7-1.1	30	24	18
Carbon and alloy long steel products:				
Hot-rolled bar and light shapes	0.2-1.5	30	24	18
Cold-finished bar	1.5	30	24	18
Rebar	1.0	15	12	9
Carbon and alloy tubular steel products:				
Welded tubular products, other than oil country tubular goods	0.1-1.6	15	12	9
Fittings and flanges	1.2-6.2	13	10	7
Stainless steel products:				
Hot-rolled bars and light shapes	0.4-2.1	15	12	9
Rod	0.9	15	12	9
Wire	0.7-1.8	8	7	6

Source: Harmonized Tariff Schedule of the United States 2002; and 67 FR 10553, Mar. 7, 2002.

countries were excluded from these safeguard measures. The proclamation also excluded certain specific products from relief and granted USTR the authority to consider, on a case-by-case basis, requests for additional exclusions of products not available in adequate quantities from U.S. producers.[12] These safeguard measures were terminated by the President on December 5, 2003.[13]

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[12] See: clause (5) of Proclamation No. 7529.

[13] Office of the President, "To Provide for the Termination of Action Taken With Regard to Imports of Certain Steel Products, by the President of the United States of America, a Proclamation," Proclamation No. 7741, Dec. 4, 2003 (68 FR 68483, Dec. 8, 2003), found at *http://edocket.access.gpo.gov/2003/pdf/03-30578.pdf*.

Shifts in Import Quantities and Sources

In its monitoring report of developments within the domestic steel industry,[14] the Commission examined shifts in import quantities and sourcing patterns of the subject steel products (summarized in table 4-5). Between the 12-month periods before and after imposition of relief, total imports of carbon and alloy flat steel products rose moderately (5.5 percent or 912,919 short tons). The decline of imports (by 3.0 million short tons) from countries subject to the additional tariffs (covered sources) was exceeded by the rise of imports (by 3.9 million short tons) from countries excluded from the safeguards (noncovered sources). Domestic producers expanded their shipments sufficiently to maintain their share (0.1 percentage-point increase to 91.5 percent) of the higher apparent domestic consumption in the period after the imposition of relief.

Total imports for other steel product groups declined after imposition of relief as the reduction of imports from covered sources far exceeded the rise of imports from noncovered sources. For carbon and alloy long steel products, total imports declined by 956,906 short tons (23.3 percent). Imports from covered sources fell (by 1.4 million short tons, or 60.6 percent), but imports from noncovered sources rose by only one-third as much (by 417,545 short tons, or 22.7 percent). Carbon and alloy tubular steel products imports from covered sources fell (by 814,147 short tons, or 47.2 percent) more than six times the rise of imports from noncovered sources (by 122,604 short tons, or 7.8 percent) for a net import decline of 701,538 short tons (22.2 percent) from all sources. For imports of stainless steel products, the fall of imports from covered sources (by 44,743 short tons, or 25.6 percent) exceeded the rise from noncovered sources (by 16,708 short tons, or 52.2 percent) for a net import decline (28,038 short tons, or 13.6 percent) after imposition of the relief.

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[14] The Commission initiated this investigation under section 204(a) of the Trade Act of 1974 (19 U.S.C. 2254(a)). See: USITC, *Steel: Monitoring Developments in the Domestic Industry, Vol. I: Executive Summaries and Investigation No. TA-204-9 (Part I) (Overview, Flat and Long Products)*; and *Vol. II: Investigation No. TA-204-9 (Part II) (Tubular and Stainless Products, and Appendices)*, publication No. 3632, Sept. 2003.

Table 4-5
U.S. imports of steel products subject to safeguard measures, by source, April 2000-March 2003

Item[1] and source	April 2000-March 2001	April 2001-March 2002	April 2002-March 2003	Changes from April 2001-March 2002 to April 2002-March 2003	
				Absolute	*Percent*
	Short tons				
Carbon and alloy flat steel products:[2]					
covered[3]	12,676,015	11,511,421	8,531,801	(2,979,620)	-25.9
noncovered	6,672,689	5,068,781	8,961,312	3,892,531	76.8
total (all imports)	19,348,705	16,580,200	17,493,119	912,919	5.5
Carbon and alloy long steel products:[4]					
covered[3]	2,195,800	2,267,450	893,003	(1,374,447)	-60.6
noncovered	1,962,340	1,840,716	2,258,261	417,545	22.7
total (all imports)	4,158,140	4,108,168	3,151,262	(956,906)	-23.3
Carbon and alloy tubular steel products:[5]					
covered[3]	1,289,116	1,723,413	909,266	(814,147)	-47.2
noncovered	1,357,316	1,436,742	1,549,346	112,604	7.8
total (all imports)	2,646,437	3,160,154	2,458,616	(701,538)	-22.2
Stainless steel products:[6]					
covered	214,499	174,584	129,841	(44,743)	-25.6
noncovered	39,714	32,024	48,732	16,708	52.2
total (all imports)	254,214	206,613	178,575	(28,038)	-13.6

[1] Items excluded from the section 203 remedy that cover partial, rather than full HTS categories (detailed only in HTS chapter 99) are not excluded from the import statistics.

[2] Includes slabs; plate, including cut-to-length and clad; hot-rolled sheet and strip; cold-rolled sheet and strip, other than grain-oriented electrical steel; coated sheet and strip, including corrosion-resistant steel; and tin-mill products.

[3] Includes partially exempted developing countries having products covered by the safeguard relief.

[4] Includes hot-rolled bar and light shapes, cold-finished bar, and rebar.

[5] Includes welded tubular products, other than oil-country tubular goods; and fittings and flanges.

[6] Includes hot-rolled bar and light shapes, rod, and wire.

Note.—Because of rounding, figures may not add to totals shown.

Source: Compiled from official statistics of the U.S. Department Commerce. For more information, see: USITC, *Steel: Monitoring Developments in the Domestic Industry, Vol. I: Executive Summaries and Investigation No. TA-204-9 (Part I) (Overview, Flat and Long Products)*; and *Vol. II: Investigation No. TA-204-9 (Part II) (Tubular and Stainless Products, and Appendices)*, publication No. 3632, Sept. 2003.

Effects of Safeguard Remedies

In a companion investigation, the Commission also examined the impacts of the safeguard remedies on various steel-consuming industries in the United States.[15] To quantify economywide effects of relative price changes on downstream steel-consuming industries, the Commission simulated the imposition of the relief measures in an updated version of its Computable General Equilibrium (CGE) model for the United States.[16] Model results indicated a $41.6-million welfare loss to the U.S. economy,[17] as the relative price of domestic iron and steel rose 0.43 percent, and the average price of domestic and imported iron and steel rose 0.94 percent.

Returns to capital (industry-wide) and labor (economywide) both fell, by $294.3 million and $386.0 million, respectively, as tariff revenues rose by $649.9 million. These offsetting impacts resulted in a $30.4-million annual net loss to the gross domestic product of the U.S. economy. For industries experiencing reduced returns to capital (including steel-consuming industries), earnings losses were estimated at $601.2 million (0.01 percent);[18] in comparison, for other industries experiencing increased returns to capital, earnings gains were estimated at $67.4 million (0.04 percent).[19]

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[15] The Commission initiated this investigation, under section 332(g) of the Trade Act (19 U.S.C. 1332(g)), at the request of the U.S. House of Representatives, Committee on Ways and Means (received Mar. 18, 2003), into the effects of the safeguard measures on differing segments of U.S. steel-consuming industries, and on ports and related service providers. See: USITC, *Steel-Consuming Industries, Competitive Conditions with Respect to Steel Safeguard Measures, Vol. III: Executive Summaries and Investigation No. 332-452 (Report and Appendices)*, publication No. 3632, Sept. 2003.

[16] For more information about the CGE model results and technical details about the model, Ibid., pp. 4-1 to 4-9; and app. G, respectively.

[17] According to the model results, this figure is the central estimate of the effects attributed to the safeguards on U.S. welfare, with end-points ranging from a $65.6-million gain to an $110.0-million loss. Ibid., pp. 4-2 to 4-4.

[18] Further, impacts of the safeguard measures vary among steel-consuming industries, with the steel-intensive motor vehicle parts and certain steel-fabrication industries (i.e., manufacturers of metal tanks, railway rolling stock, and power boilers and heat exchangers) being the most significantly affected.

[19] For more information, Ibid., pp. 4-5 to 4-9.

CHAPTER 5
Services

Most service activities are relatively unconstrained by significant import restraints. Services are subject to a variety of regulatory requirements at the Federal, State, and local levels, but these regulations typically apply the same standards to domestic and foreign suppliers of services. In a limited number of service sectors, particularly transportation services, Federal regulations impose restrictions on foreign service suppliers. This chapter documents significant import restraints in certain transportation services.[1]

Previous investigations of the services sector have identified the maritime transportation sector as a U.S. industry protected by import restraints. Air and truck transport also have restrictions limiting the access of foreign operators in the U.S. market. Restrictions on foreign supply of internal freight movements apply to all three sectors. Within the trucking sector, delayed implementation of negotiated U.S. commitments to allow Mexican trucks and drivers access to the U.S. market under NAFTA remains a significant issue.

Maritime Transport

The United States protects U.S. flag vessels and shipbuilders from import competition in U.S. domestic oceanborne trade, primarily through section 27 of the Merchant Marine Act of 1920, also known as the Jones Act.[2] The Act requires that the transport of cargo between U.S. ports[3] be provided on vessels that are U.S.-built and -registered, and that are owned and crewed

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[1] Previous versions of this study have documented import restraints in financial services imposed by State governments. State-imposed import restraints have changed very little since the last update. This update focuses on import restraints on service industries that are imposed at the Federal level. Readers are referred to USITC, *The Economic Effect of Significant U.S. Import Restraints: Third Update 2002*, Publication 3519, June 2002, Chapter 5, for more information on State-imposed restraints on financial services.

[2] 46 U.S.C. 883, 19 CFR 4.80, and 4.80 (b).

[3] The transportation of merchandise between U.S. ports, either directly or via a foreign port, is known as cabotage.

by U.S. citizens.[4] The United States also maintains several other cabotage laws that further restrict the participation of foreign vessels in U.S. domestic trade. These laws are designed to ensure the existence of a U.S. merchant fleet that can participate in domestic ocean-borne commerce and can assist in national defense during times of war and national emergency.

Previous versions of the Import Restraints study have provided quantitative estimates of the economic effects of Jones Act restrictions. The current report does not provide a model-based evaluation of the economic effects of the Jones Act. Modeling of outright import prohibitions is demanding, and the current version of the USAGE-ITC model does not include this capability. The analysis in this chapter is instead based on earlier Import Restraints reports and available data.

Current Operation of the Jones Act and Other U.S. Cabotage Laws

Aside from the Jones Act, the United States maintains cargo preference laws, which reserve the transport of certain types of U.S. cargo to vessels operating under the U.S. flag. For example, U.S.-flag vessels must transport at least 50 percent of government-owned cargo and all U.S. military cargo.[5] Additionally, freight that is transported in connection with loans provided by the Export-Import Bank also must be carried by U.S.-flagged vessels, unless a waiver is granted by the U.S. Maritime Administration permitting the recipient country of such cargo to transport it on vessels under its own flag.[6] Separately,

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[4] Although many nations have a variety of cabotage restrictions, very few require the use of domestically built vessels. Most nations maintain cabotage restrictions on inland waterways, rivers, and lakes, for reasons of sovereignty and national security; however, the United States and several other countries also maintain coastal and noncontiguous cabotage restrictions. In a survey conducted by the U.S. Maritime Administration of 56 selected countries, it was reported that 40 countries maintain cabotage provisions with respect to their domestic waterways, and seven other countries restrict, but do not prohibit, the operation of foreign vessels in their domestic markets. U.S. Department of Transportation, Maritime Administration, *By the Capes Around the World: A Summary of World Cabotage Practices*, found at Internet address *http://www.marad.dot.gov/publications/pubs.html*, retrieved Nov. 5, 2001.

[5] This restriction is maintained under the Cargo Preference Act of 1954 (Public Law 83-664). In addition, the Food Security Act of 1985 (Public Law 99-198) requires that U.S.-flag vessels transport at least 75 percent of agricultural cargoes that are a part of foreign assistance programs administered by USDA and the U.S. Agency for International Development.

[6] Public Resolution No. 17. U.S. Department of Transportation, Maritime Administration, *Maritime Subsidies*, Sept. 1993, pp. 162-163.

the 1995 Alaska Power Administration Asset Sale and Termination Act requires that exports of Alaskan crude oil be transported solely by U.S.-flagged and U.S.-owned vessels, though such vessels may be constructed outside of the United States.[7]

The United States maintains several exemptions to the Jones Act and other cabotage laws.[8] These exemptions permit the transport of cargo between specific U.S. ports by certain vessels that do not comply with Jones Act restrictions.[9] For example, ships that are constructed outside the United States,[10] but are registered under the U.S. flag, are permitted to operate between American Samoa, Guam, Midway, Wake, or Kingman Reef and other U.S. ports.[11] In addition, a foreign-built, foreign-flagged vessel that is salvaged in U.S. waters and subsequently rebuilt in the United States may operate in the U.S. domestic market, provided that the cost of rebuilding it is at least three times its assessed value at the point of salvage.[12] Moreover, a foreign-built, foreign-flagged vessel seized during war by U.S. citizens may subsequently be permitted to operate under the U.S. flag in the domestic maritime market.[13]

Characteristics of the Jones Act Fleet

Three types of vessels are deployed in U.S. domestic (Jones Act) deep-sea trade: dry-cargo carriers, liners, and tankers. Dry-cargo carriers transport bulk freight. Liners, which include container, breakbulk, and roll-on/roll-off vessels,

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[7] Public Law 104–58.

[8] Laws similar to the Jones Act limit the ability of foreign vessels to transport passengers and conduct other kinds of marine activity, such as fishing, towing, salvaging, and dredging in U.S. waters. For a more detailed description of these laws, see USITC, *The Economic Effects of Significant Import Restraints, Second Update 1999*, publication 3201, May 1999.

[9] American Samoa is exempt from the Jones Act, as are the U.S. Virgin Islands (46 App. U.S.C. 877). The Commonwealth of the Northern Mariana Islands is also exempt, with the exception of activities reserved for the U.S. Government (48 U.S.C. 1664; Pub. L. 94–241, Article V). USDOT, MARAD, *By the capes: A Primer on U.S. Coastwise Laws*, found at *http://marad.dot.gov/Publications/primer_laws.html*, retrieved March 24, 2004.

[10] A U.S.-built vessel is one that is assembled entirely in the United States and whose hull and superstructure are made of components manufactured in the United States. With few exceptions, a U.S.-built vessel that has operated under a foreign flag loses its right to provide service in U.S.-domestic trades (46 U.S.C. 883). In addition, a U.S. vessel of at least 500 tons that has been reconstructed in a foreign shipyard is no longer permitted to operate in the U.S. domestic market (46 U.S.C. 883).

[11] Ibid.

[12] 46 U.S.C. 14.

[13] 46 U.S.C. 12106–08 (1904 Act).

transport manufactured and nonmanufactured goods. Tankers carry petroleum and other liquid cargo.[14] As of July 2002, the Jones Act fleet operating in the U.S. deep-sea trade comprised 105 self-propelled vessels. Of this number, 2 vessels were dry-cargo carriers, 68 were tankers, and 24 were containerships.[15] In 2002, Jones Act vessels carried 216 million short tons of cargo in U.S. coastal waters.[16] According to the U.S. Army Corps of Engineers, the largest share of Jones Act cargo consisted of petroleum and petroleum-based products (73.7 percent), followed by manufactured goods and manufacturing equipment (7.4 percent), coal (5.8 percent), chemicals and related products (5.7 percent), crude materials (4.8 percent), and food and farm products (2.6 percent).[17]

Despite an increase in the size of the U.S.-flag cargo carrying fleet, the total volume of freight carried by that fleet has declined in recent years. During the period 1999-2002, the capacity of the commercial U.S.-flag cargo-carrying fleet rose from 58.0 million to 60.9 million metric tons.[18] During the same period, commercial freight traffic declined from 1,061 million to 1,021 million short tons.[19]

Compliance with U.S. Liability and Other Laws and Regulations

Several U.S. laws that exist apart from the Jones Act, including environmental, labor, and tax laws, may significantly increase costs of vessels operating in U.S. waters. For example, regulations enacted in 1994 under the

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[14] The McGraw-Hill Companies and USDOC, ITA, *U.S. Industry & Trade Outlook $99*, "Water Transportation," pp. 43-17.

[15] USDOT, MARAD, "U.S.-Flag Cargo Carrying Fleet by Area of Operation as of July 1, 2002," found at Internet address *http://www.marad.dot.gov/*, retrieved Jan. 7, 2004.

[16] U.S. Army Corps of Engineers, *Preliminary Waterborne Commerce Statistics for Calendar Year 2002*, found at Internet address *http://www.iwr.usace.army.mil/ndc/wcsc/wcsc.htm/*, retrieved Jan. 20, 2004.

[17] These estimates are for 2001, as data for 2002 were unavailable. U.S. Army Corps of Engineers, *Waterborne Commerce of the United States* (Part 5, National Summaries), Calendar Year 2001, table 2-1.

[18] U.S. Census Bureau, Statistical Abstract of the United States: 2000, p. 660. and U.S. Census Bureau, Statistical Abstract of the United States: 2003, p. 689. The increase masks a compositional change. Most of the capacity growth has occurred in the non-self-propelled domestic fleet (e.g. barges), which operate on inland waterways and may be less exposed to foreign competition in the absence of Jones Act restrictions.

[19] U.S. Army Corps of Engineers, *Waterborne Commerce of the United States* (Part 5, National Summaries), Calendar Year 2002, table 1-3.

Oil Pollution Act of 1990 (OPA-90) require that all tankers trading in U.S. waters comply with double-hull requirements by 2010,[20] with the result that U.S.- and foreign-flagged tankers engaged in U.S. waters will likely be newer, more costly vessels. In addition, "open-ended" liability for shipowners/operators may further increase costs to those participating in the U.S. market.[21] Although the tanker markets of most developed countries have liability standards that are broadly comparable to those of the United States, and International Maritime Organization (IMO) rules have regularized these standards internationally, only the United States has an open-ended liability structure that may cause some operators to avoid the U.S. market.

Some industry analysts maintain that, in addition to environmental laws, foreign vessels operating in U.S. domestic waters would be required to comply with certain other U.S. regulations, including Federal and State tax, immigration, and labor laws.[22] According to industry representatives, foreign vessel compliance with these laws likely would increase the costs of such vessels operating in the Jones Act trade, thereby substantially decreasing the cost differential between U.S.- and foreign-flag carriers.[23] However, other industry observers maintain that only some of these laws would apply to foreign vessels if they were allowed to participate in Jones Act trade. Even

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[20] By 2010, tankers weighing more than 5,000 tons will not be permitted to operate in U.S. waters unless such vessels have a double bottom or double sides. American Geological Institute, review of National Research Council Report "Double-Hull Tanker Legislation: An Assessment of the Oil Pollution Act of 1990," found at Internet address *http://www.agiweb.org/hearings/nrcopa90.html*, retrieved March 24, 2004.

[21] Under open-ended liability, there is no limit to the amount of damages for which a party can sue a vessel owner. Such damages may be incurred by cargo while in transport or by crew members, or damage can be inflicted on another vessel. These damages are covered under Protection and Indemnity insurance. Other types of insurance that a vessel owner operating in U.S. waters likely would purchase include hull insurance, which covers the costs of damages to one's own vessel, and pollution liability insurance, which covers damages resulting from oil spills or leakage of other pollutants. USITC, *The Economic Effects of Significant U.S. Import Restraints: Third Update 2002*, publication 3519.

[22] In particular, according to one industry representative, unless granted an exemption, U.S. vessels operating in the Jones Act trade would be required to comply with certain sections of the Immigration and Nationality Act (8 U.S.C. §§ 1101-1503); the Fair Labor Standards Act (29 U.S.C. §§ 201-205); the Occupational Health and Safety Act (29 U.S.C. §§ 651-678); the National Labor Relations Act (29 U.S.C. §§ 151-166); and U.S. Federal and State tax laws, minimum wage laws, and vessel safety and environmental regulations. See USITC, *The Economic Effects of Significant U.S. Import Restraints: Third Update 2002*, Publication 3519.

[23] Warren L. Dean, Jr., "Jones Act Reflects Fundamentals of U.S. Legal System," *The Journal of Commerce*, Dec. 1, 1998, p. 5A.

then, it is not clear to what extent these laws would affect the costs and operation of foreign vessels in the U.S. market.[24]

Cost Differentials: U.S. Coastwise vs. Foreign Trade

Vessel costs primarily comprise capital and operating costs. Capital costs are those associated with value added by the operating firms.[25] Operating costs include wages paid to crews, direct fuel charges, insurance, maintenance and repair, and other administrative expenses. Of these, labor, insurance, and maintenance costs are typically higher in absolute terms for U.S. vessels than for foreign-flag vessels (table 5-1). U.S. crew costs generally account for most of the differences in operating costs between U.S.- and foreign-flag vessels. For example, manning costs[26] account for over 90 percent of the operating cost differential for a typical oil tanker and over 80 percent of the cost differential for a typical containership.[27]

Effects of liberalization

A few studies have examined the economic cost of the Jones Act as a trade restriction. In 2002 the USITC found that the economic cost of the Jones Act was as much as $656 million for 1999.[28] The cost of the maritime restriction is sensitive to the estimated cost components presented in the previous section.

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[24] For example, in a 1998 report by the U.S. General Accounting Office, analysts concluded that certain U.S. Federal tax laws likely would apply to foreign vessels operating under the Jones Act, but it was unclear to what degree U.S. minimum wage, immigration, and employee protection laws would apply. GAO, "Maritime Issues: Assessment of the International Trade Commission's 1995 Analysis of the Economic Impact of the Jones Act," presented to The Honorable John McCain, Chairman, Committee on Commerce, Science, and Transportation, United States Senate, Mar. 6, 1998.

[25] The Commission was unable to secure direct information on the capital costs of U.S.-flag vs. foreign-flag vessels.

[26] Manning costs include wages and benefits paid to shipboard employees.

[27] Information provided by the U.S. Maritime Administration to USITC staff, Mar. 2, 2004. Wages and benefits in this calculation account for a larger share of the cost differential than in earlier estimates because turnover in the U.S. fleet has reduced the proportion of the fleet using steam turbine engines. These figures assume both the U.S. and foreign fleet are using diesel engines, so differences in fuel costs are not figured into the estimated cost differential.

[28] USITC, *The Economic Effects of Significant U.S. Import Restraints*, 1999.

Table 5-1
Comparison of daily operating expenses for U.S.-flag vs. foreign-flag vessels, 2002

Type of Vessel	Tanker[1]		Containership[2]	
	U.S.-flag	Foreign-flag	U.S.-flag	Foreign-flag
	U.S. dollars			
Crew	9,400	2,100	12,100	2,800
Fuel	6,000	6,000	12,700	12,700
Maintenance and repair costs[3]	2,000	1,000	4,200	2,900
Insurance	900	600	2,200	1,400
Port call, cargo, and vessel expenses[4]	3,790	3,690	96,646	96,546
Total	22,090	13,390	127,846	116,346

[1] These costs are estimated for 40-50,000 DWT tankers that are less than 10 years old.
[2] These costs are estimated for a containership with a volume of 4,000 twenty-foot equivalent units (TEUs) that are less than 10 years old.
[3] These costs include costs pertaining to stores, supplies, and equipment.
[4] Port Call and Cargo expenses data unavailable. These costs were estimated under the assumption that they accounted for the same share of total expenses in 2002 as in 1999. U.S. International Trade Commission calculations. For containerships, cargo expenses include the costs associated with the loading and unloading of cargo from ships, and inland transportation services.

Source: Information provided by the U.S. Maritime Administration to the Commission, Mar. 2, 2004.

Sensitivity analysis that considered a smaller cost differential, or partial liberalization, found somewhat smaller estimates. Other authors found somewhat larger estimated impacts using different techniques.[29] Hufbauer and Elliott, for example, estimated a net cost of $1.1 billion.[30]

In a written submission to the Commission, the Maritime Cabotage Task Force (MCTF) cited U.S. Navy estimates that Jones Act removal would increase Naval expenditures on activities such as construction and repair by "hundreds of millions" of dollars.[31] These estimates are not welfare measures

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[29] Other studies include the Congressional Budget Office, "U.S. Shipping and Shipbuilding Trends and Policy Choices,"Aug. 1994. The Budget Office reported a cost of $1.3 billion;. Lawrence J. White estimated costs to be $2 billion in 1984, *International Trade in Ocean Shipping Services: The United States and the World* (Cambridge, MA: American Enterprise Institute, Ballinger Publication, 1988).

[30] Gary C. Hufbauer and Kimberly A. Elliott, *Measuring the Costs of Protection in the United States* (Washington DC: Institute for International Economics, 1993).

[31] Written submission to the Commission by the Maritime Cabotage Task Force, January 10, 2004

like those in the other studies, but estimates of budgetary costs to the U.S. Government. The Naval memorandum cited by MCTF indicates that it is possible to meet military objectives without imposing explicit trade restraints; doing so would simply require a larger Naval subsidy. A widely accepted tenet of economic theory is that non-economic objectives like national defense are achieved most efficiently through targeted, direct interventions like a Naval subsidy, rather than through indirect interventions like the Jones Act import restraints.[32]

Truck Transport

Since NAFTA became effective on January 1, 1994, trade between the United States and Mexico has grown significantly, increasing the importance of truck transport services.[33] Eighty-one percent of total U.S. merchandise trade with Mexico is transported by truck.[34] The number of border crossings grew by 18 percent during 1997-99, declining by 2 percent during 2000-02 (table 5-2). Approximately 80,000 truck tractors, of which 79 percent are of Mexican origin, reportedly cross the U.S.-Mexico border annually.[35]

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[32] See Jagdish N. Baghwati, 1971, "The Generalized Theory of Distortions and Welfare" in *Trade, Balance of Payments, and Growth: Papers in International Economics in Honor of Charles P. Kindleberger*, Jagdish N Bhagwati, Ronald W. Jones, Robert A Mundell and Jaroslav Vanek, eds., North-Holland Publishers.

[33] Foreign trucks generally cannot deliver goods from one U.S. location to another. Under U.S. law, Canadian and Mexican trucks can only engage in international cargo transport to the United States. Although NAFTA provisions would permit Mexican trucks to operate inside the United States, the trade agreement also requires that Mexican trucks and truck drivers meet U.S. standards for commercial truck operations, such as safety requirements, hours of service, licensing, and insurance. Mexican carriers would apply for U.S. operating authority, which would be granted only if U.S. standards were met. Duane W. Acklie, Chairman, American Trucking Associations, statement prepared for the Hearing on the NAFTA Arbitration Panel Decision and Safety Issues Related to Implementing the NAFTA Motor Carrier Provisions, Commerce, Science and Transportation Committee, U.S. Senate, July 18, 2001, p. 2

[34] Rail transport is a distant second, accounting for 16 percent of the value of U.S. land imports from Mexico. USDOT, Bureau of Transportation Statistics, table 1-53, "Value of U.S. Land Exports to and Imports from Canada and Mexico by Mode," found at Internet address *http://www.bts.gov/publications/national_transportation_statistics/2002/html/table_01_53.html*, retrieved Jan 7, 2004.

[35] A given truck tractor may cross the border multiple times. Power units do not include trailers. See The International Association of Chiefs of Police, "Estimates of Commercial Motor Vehicles Using the Southwest Border Crossings," for USDOT, Federal Motor Carriers Safety Administration, Sept. 20, 2000, p. 1.

Table 5-2
Truck transport: U.S. industry summary data, 2000-02

Item	2000	2001	2002
U.S. total revenue *(million dollars)*	171,691	167,800	156,054[1]
U.S. employment *(in 1,000s)*	1,636	1,591	1,521
Number of crossings *(actual)*	4,525,579	4,034,959	4,426,593
Value of U.S. imports from Mexico transported via truck *(million dollars)*	88,669	86,377	90,594
Value of U.S. exports to Mexico transported via truck *(million dollars)*	82,389	74,223	70,925

[1] Estimates based on declines in U.S. employment and U.S. exports to Mexico for the period.

Source: USDOC, Bureau of the Census, *2001 Service Annual Survey*, table 2.2, found at Internet address *http://www.census.gov/svsd/www/sas48-2.pdf*, retrieved Jan. 5, 2004; USDOC, Bureau of Labor Statistics, National Employment, Hours, and Earnings, SIC 421, found at Internet addresses *http://www.bls.gov/oes/2002/oes533032.htm http://www.bls.gov/oes/2001/oessrci.htm* and *http://www.bls.gov/oes/2000/oesi3_421.htm*, retrieved Jan. 5, 2004; USDOT, Bureau of Transportation Statistics, National Transportation Statistics 2002, Table 1-48, U.S. Mexican Border Land-Freight Gateways: Number of Truck or Railcar Crossings, found at Internet address *http://www.bts.gov/publications/national_transportation_statistics/2002/html/table_01_48.html,* retrieved Jan. 5, 2004; and USDOT, Bureau of Transportation Statistics, Transborder Surface Freight Data, U.S. Merchandise Trade with Mexico by Truck, April 1993-December 2002, found at Internet address *http://www.bts.gov/transborder/reports/us_mex_2002_Truck.html*, retrieved Jan. 5, 2004.

To facilitate increased trade in truck transport services, the United States worked with its NAFTA partners to reduce technical or regulatory barriers to trade in these services. Such barriers generally consisted of truck and driver safety standards and resulted from concerns about discrepancies between countries' regulations and enforcement capabilities. Regulatory harmonization between U.S. and Canadian truck transport services began in the 1980s, continued under the United States-Canada Free Trade Agreement, and is now largely achieved.

In contrast, substantial barriers to Mexican-U.S. trucking harmonization existed at the time of NAFTA signing. NAFTA established a timetable by which Mexican trucking interests would be granted full cross-border access to the United States, and U.S. interests would have comparable access to the Mexican market. In 2002, U.S. imports of truck transport services from Mexico continued to encounter restraints because of safety concerns.

Barriers to cross-border trucking services have been relatively unchanged since 1999.[36] On November 27, 2002, President Bush signed a memorandum lifting the moratorium imposed on Mexico-domiciled carriers. In response to this action, organizations representing labor, industry, and environmental

[36] See USITC, *The Economic Effects of Significant U.S. Import Restraints, Third Update, 2002*, Pub. 3519, Inv. No. 332-325 for a complete discussion.

interests filed a lawsuit[37] challenging the President's action.[38] These organizations were successful in having the U.S. Federal Court of Appeals for the Ninth Circuit stay President Bush's memorandum because the U.S. Department of Transportation did not complete a full environmental impact study. On December 15, 2003, the Supreme Court agreed to review the decision of the court of appeals to see whether a full environmental impact statement is necessary before Mexican trucks are allowed full access to the United States.[39]

The concerns of the U.S. trucking industry over nondomestic carriers being allowed to carry freight domestically are loss of wages and jobs, an increase in over the road traffic without the corresponding increase in tax revenues, and the likelihood of increased pollution.[40] The Owner-Operator Independent Drivers Association (OOIDA) argues that U.S. drivers are paid more than twice as much as Mexican drivers earn.[41] OOIDA indicates that neither Mexico nor any of the Mexican States are members of the International Fuel Tax Agreement; therefore, they will not pay U.S. State fuel taxes under the reporting system set up by this agreement. The OOIDA also believes that individual U.S. States attempting to collect such a tax will be forced to establish a bureaucracy that will not be as efficient in collecting fees and will add a fiscal burden to the States that implement such a plan. Lastly, the higher sulfur content in Mexican fuel may lead to additional airborne pollutants.[42]

The economic welfare costs of restrictions on Mexican trucking are not formally modeled in this report. Nonetheless, the substantial wage differential between U.S. and Mexican truckers and the large labor share in trucking costs indicate that the restrictions probably impose significant costs on purchasers of Mexican imports. In testimony before the Commission, The Owner-Operator Independent Drivers Association argued that wages and benefits paid to Mexican truckers are 25 to 50 percent lower than wages paid to U.S.

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[37] See Public Citizen v. Department of Transportation, 316 F. 3d 1002 (9th Cir. 2003).

[38] U.S. Department of Transportation, Federal Motor Carrier Safety Administration, *Background Information: Programmatic Environmental Impact Statement on Proposed North American Free Trade Agreement Regulations*, paper distributed Oct. 28, 2003.

[39] *Transportation: Supreme Court Grants Review to Case on Mexican Trucks' Environmental Impact* , International Trade Daily (BNA monitoring service), Dec. 16, 2003.

[40] Written submission by the Owner-Operator Independent Drivers Association, Inc., Jan. 12, 2004.

[41] Davide Dukcevich, *Union Roadblock* , (New York: Forbes, July 5, 2001), found at Internet address http://www.forbes.com/2001/07/05/0705mextruck.html.

[42] OOIDA, p. 6.

truckers.[43] Estimates from the the USAGE-ITC model indicate that labor costs account for approximately 38 percent of the costs of trucking services in the United States.[44] Freight costs of trucking account for approximately 2 percent of import value.[45] These estimates suggest that higher labor costs associated with this restriction raise prices of Mexican imports moving by truck by approximately 0.1 to 0.2 percent.[46]

Air Transport

In the international marketplace, air transport is governed by (1) a network of bilateral agreements that regulate entry or directly restrict market participation by foreign airlines; (2) domestic regulatory systems that effectively restrict entry of foreign carriers; (3) restrictions on ancillary domestic markets that impair the ability of a foreign carrier to participate; and (4) subsidization and state ownership of competing foreign airlines. Three of these factors–bilateral agreements, domestic regulatory systems, and restrictions on ancillary services–apply to the U.S. air services market and are discussed in the next section. Summary data for the U.S. air transport sector are presented in table 5-3.

Bilateral air service agreements permit signatory countries to restrict the operation of foreign carriers flying to, from, and through their domestic air markets. In recent years, most bilaterals negotiated by the United States have liberalized restrictions, resulting in open-skies agreements. As of October 2002, the United States concluded 59 open-skies agreements with foreign countries.[47] Open-skies agreements remove fare and route restrictions on service between signatory countries, permit signatory countries' airlines to fly into each other's territory and to reach third-country markets, and allow them to jointly market their services in code sharing arrangements.[48] But the accepted definition of

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[43] OOIDA, p. 5.

[44] USITC calculation.

[45] David Hummels, "Toward a Geography of Trade Costs," September 1999, table 3. Downloaded from the internet adress *http://www.mgmt.purdue.edu/faculty/hummelsd/research/toward/Toward3.pdf* on March 22, 2004.

[46] USITC calculation.

[47] U.S. Department of Transportation, Office of the Assistant Secretary for Aviation and International Affairs, "Bilateral Open Skies Agreement," found at Internet address *http://ostpxweb.dot.gov/aviation/index.html*, retrieved Jan. 7, 2004.

[48] Code sharing arrangements permit the integration of two or more airlines' flights under a single code, and permit airlines to coordinate flight schedules and payment methods. For a more detailed discussion of the elements of open-skies agreements, see USITC, *The Economic Effects of Significant Import Restraints*, 1999.

Table 5-3
Air transport: U.S. industry summary data, 2000-02

Item	2000	2001	2002
Revenues *(billion dollars)*	130.3	115.0	([2])
Employment *(1,000 FTEs)*	680	670	([2])
Exports[1] *(billion dollars)*	34.7	31.2	30.9
Imports[1] *(billion dollars)*	40.9	37.8	35.6

[1] Includes passenger fares, freight transport, and port services.
[2] Not available.

Source: USDOT, Bureau of Transportation Statistics, *National Transportation Statistics 2002*; US-DOC, BEA, *Survey of Current Business*, Oct. 2000 and Oct. 2003; and Air Transport Association, *2002 Annual Report*.

open-skies does not allow cabotage,[49] nor does it incorporate provisions on foreign ownership and control of U.S. carriers.[50] Open-skies agreements are intended to increase competition, decrease fare and freight rates, and increase trade and tourism in signatory countries. However, open-skies agreements are less likely to benefit countries whose air transport markets have significant capacity constraints, existing liberal access, or a small number of dominant carriers that control a large proportion of takeoff and landing slots.

U.S. Domestic Regulations

Three U.S. laws governing the domestic air transport industry affect the operation of foreign carriers in the U.S. market. These laws apply to foreign ownership of U.S. airlines, the leasing of aircraft and crew by U.S. airlines from foreign entities (wet leasing), and the transport by foreign airlines of U.S. Government officials, mail, and cargo. First, under the Federal Aviation Act of 1958, foreign entities are not permitted to hold more than 25-percent voting stock and 49 percent nonvoting stock in a U.S. airline.[51] Second, under U.S. law, foreign cargo carriers are prohibited from wet leasing their aircraft to U.S.

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[49] Cabotage is the transport of passengers between two points within the same country.

[50] For further discussion on ownership and control of U.S. domestic airlines by foreign entities, see the following section on "U.S. Domestic Regulations."

[51] Public Law 85-726, 72 stat. 731.

airlines.[52] Finally, regulations under the Fly America Act[53] require that Federal employees and others traveling abroad on U.S. Government business fly on U.S.-flag air carriers.[54] Similarly, the Civil Reserve Air Fleet program, administered by the U.S. Government, reserves the transport of federally generated cargo and mail to U.S. airlines. In return, participants in the program provide airlift assistance to the U.S. Government in times of national emergency.[55]

Restrictions on Ancillary Domestic Markets

The Annex on Air Transport Services, contained within the WTO's General Agreement on Trade in Services (GATS),[56] addresses three categories of ancillary services with respect to air transport: (1) aircraft maintenance and repair; (2) the selling and marketing of air transport services; and (3) computer reservation system services. Aircraft maintenance and repair apply only to those activities performed on aircraft while on the ground. The selling and marketing of air transport services includes advertising and the distribution of airline tickets. Computer reservation system services provide information about

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[52] Wet leasing allows an airline to lease aircraft, including crew, maintenance, and insurance, from a second party, and to operate such aircraft under its own name. British House of Lords Select Committee on the European Union Seventeenth Report, *'Open Skies' or Open Markets: The Effect of the European Court of Justice (ECJ) Judgements on Aviation Relations Between the European Union (EU) and the United States of America (USA)*, Chapter 5, found at internet address *http://www.parliament.the-stationery-office.co.uk/pa/ld200203/ldselect/ldeucom/92/9201.htm*, retrieved March 24, 2004.

[53] 49 U.S.C. App. 1517.

[54] A U.S. air carrier is defined as one that holds a certificate under Section 401 of the Federal Aviation Act of 1958. Under certain circumstances, a Federal employee may use a foreign carrier when a U.S.-flag carrier is unavailable. "The Fly America Act: Guidelines for International Travel Paid for by the Government," found at Internet address *http://www.egr.msu.edu/der/service/faact.html*, retrieved Mar. 24, 2004.

[55] U.S. Department of the Air Force, "Civil Reserve Air Fleet, Fact Sheet," found at Internet Address *http://www.af.mil/news/factsheets/Civil_Reserve_Air_Fleet.html*, retrieved Mar. 24, 2004.

[56] The GATS does not include provisions on traffic rights or "services directly related to traffic rights." These services are negotiated under bilateral air-service agreements. World Trade Organization, General Agreement on Trade in Services, Article XXIX, "Annex on Air Transport Services," found at Internet Address http://www.wto.org/wto/english/docs_e/legal_e/26-gats_02_e.htm#articleXXIX, retrieved March 24, 2004.

airline fares and seat availability.[57] Under the GATS, the United States made commitments on aircraft maintenance and repair only, permitting foreign firms to provide this service without restriction.[58] The United States has not made commitments on the sale and marketing of air transport services or on computer reservation system services, indicating foreign firms may be restricted in providing these services to the U.S. market.[59]

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[57] Ibid.

[58] This does not include line maintenance or other maintenance and repair activities undertaken by an airline, or its agents on aircraft it owns, leases, or operates. WTO, GATS, The United States of America: Schedule of Specific Commitments, GATS/SC/90, Apr. 1994, p. 75.

[59] Ibid.

CHAPTER 6
Government Procurement

This chapter considers the economic effects of domestic preference restrictions imposed on certain types of government procurement. Domestic preference restrictions include "Buy America"[1] provisions in transportation projects and food assistance programs, restrictions on Federal defense spending, set-aside programs for U.S. small and minority-owned businesses, and restrictions on State government purchases. Previous updates of this study have not considered domestic preference restrictions on government procurement as significant import restraints. Because procurement restrictions discriminate against imported goods and services, they are included in this update.

These restrictions are considered in a qualitative discussion and are neither formally quantified nor modeled. Existing policies are highly complex and in some cases overlap. This, in turn, creates significant difficulties in specifying the product coverage and value of government purchases which are covered by these policies, in estimating the potential increase in imports which might result from removing these policies on imports, or indeed even in documenting the total value of government-purchased imports subject to these restrictions. The following discussion may serve as an aid in understanding these complex issues for those who wish to pursue further research on this topic.

Import restraints can raise the cost of government purchases in two different ways: by mandating preferences for domestic goods and services as discussed in this chapter, and by increasing the cost of goods and services for which there are direct import restraints as discussed elsewhere in the report. The import restraints discussed elsewhere in this report may have significant effects on the cost of government procurement at both the Federal and

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[1] A somewhat confusing aspect of the government procurement programs is the similarity of two distinct bodies of law: Buy American and Buy America. In most cases, Buy American legislation regulates Federal spending on activities like defense. The main Buy American requirements are listed in 41 U.S.C. 10(a)-10(c). "Buy America" programs include a series of Federal restrictions on spending by Federal grantees (typically, State and local governments). This legislation is usually contained in overall government procurement guidelines for a specific activity like highway construction.

sub-Federal levels. For example, uniforms and other work clothing are purchased in significant quantities by the U.S. military, by police and fire departments, and by public-sector hospitals. A large share of coastal shipping services are consumed either by the military or by haulers of solid waste which are either owned by or under contract to State and local governments. Categories of food subject to direct import restraints are served in school, the military, hospitals, and elsewhere in government. Removing product-specific import restraints could significantly reduce the costs of procurement even if other procurement provisions limiting imports stayed in place, by reducing the price of competing domestic merchandise. This, in turn, could enable either tax cuts, reduced government borrowing, or increased government purchases of these or other goods. This study does not attempt to model the effects on government budgets of product-specific import restraints mentioned in other chapters.

The United States has made significant commitments to apply the non-discrimination principle to many areas of Federal Government procurement. Chapter 10 of the North American Free Trade Agreement (NAFTA) commits signatories to accord goods and suppliers of other NAFTA countries "treatment no less favorable than the most favorable treatment that the Party accords to its own goods and suppliers."[2] Annex 4(b) of the Uruguay Round Agreements contains very similar language.[3] The restrictions discussed below are generally consistent with negotiated exceptions to the principle of non-discriminatory treatment of foreign suppliers.[4]

Government procurement restrictions in the United States fall into three main categories: Federal restrictions on procurement by the Federal Government, State restrictions on State and local government procurement, and Federal restrictions on the use of Federal grant money by State and local governments. Many of the Federal restrictions on Federal Government procurement have been removed as a result of commitments under the Uruguay Round Agreements and NAFTA. Remaining Federal restrictions on Federal spending include defense spending and preferences for small and minority-owned businesses. States impose a variety of restrictions on State and

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[2] North American Free Trade Agreement, Chapter 10, Article 1003.

[3] Uruguay Round Agreements, Annex 4(b), Article III. The WTO provides a non-technical summary of the government procurement provisions at *http://www.wto.org/english/tratop_e/gproc_e/over_e.htm*, retrieved on January 16, 2004.

[4] Both agreements include language that outlines general exceptions to the principle, as well as specific exceptions included in each country's annex.

local government spending.[5] The most significant Federal restrictions on State and local government procurement are "Buy America" restrictions imposed on the use of Federal grant money in transportation projects and food assistance programs.

The Buy American Act of 1933, which governs Federal procurement, applies in general to procurements between $2,500 and approximately $175,000 in value, and in some cases to larger procurements. It generally provides cost preferences for products grown or mined in the United States and products manufactured in the United States with at least 50 percent U.S. content by value.[6] These are administered by having the contracting officer add a 50-percent penalty to the bid of a foreign firm in the case of defense contracts, a 6-percent penalty for civilian contracts, and a 12-percent penalty for civilian contracts when the competing domestic vendor is a small business or operates in a labor surplus area. For large procurements, the Trade Agreements Act of 1979 supersedes the Buy American Act. This Act implements the GATT Government Procurement Code negotiated under the Tokyo Round and provides for national treatment for procurements from countries which are signatories to that code.[7] Procurements below $2,500 are designated as "micro procurements" under the Federal Acquisitions Streamlining Act of 1994 and are exempted from the Buy American Act. Additional Buy American provisions may apply to specific goods, particularly in defense.[8]

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[5] The Canadian Department of Foreign Affairs and International Trade maintains a web site that documents restrictions imposed on procurement by State governments in the United States. See *http://www.dfait-maeci.gc.ca/sell2USgov/procurement-en.asp*, retrieved on January 15, 2004.

[6] As characterized by the Canadian Department of Foreign Affairs and International Trade on its website at http://www.dfait-maeci.gc.ca/sell2usgov/buyact-en.asp, retrieved on February 27, 2004.

[7] The Office of the United States Trade Representative issues an annual *Federal Register* notice specifying the minimum thresholds for which the procurement obligations of the WTO Government Procurement Agreement and Chapter 10 of the NAFTA apply. For the calendar years 2004-2005, the WTO Government Procuremnt Agreement applies to central government procurements of goods and services equal to or exceeding $175,000, and to procurements of construction services equal to or exceeding $6,725,000. The threshold for goods and services procurements for listed sub-central government entities is higher, and the NAFTA thresholds differ from those under the WTO Procurement Agreement. *Federal Register*, Vol. 68, No. 244, Dec. 19, 2003, p. 70861.

[8] "Federal Acquisition of Foreign Products," retrieved at *http://www.sellingtothefeds.com/t62.html* from the website of GovernmentVideo (United Entertainment Media) on Mar. 25, 2004.

Government procurement restrictions typically include a waiver process that allows the procuring authority to purchase imports if doing so "serves the public interest" or if an appropriate domestic product is not available. For example, imported bananas may be purchased under the National School Lunch Program because there are usually no domestically grown bananas available.[9] Although some aspects of the waiver process are discussed in the report, the lack of data on the value of waivered imports makes it difficult to quantify the significance of waiver programs on the trade restrictiveness of procurement programs.

Public Transportation

The Federal Transit Administration (FTA) of the U.S. Department of Transportation (DOT) oversees the Buy America program as it applies to public transit agencies in the United States.[10] Buy America restrictions regulate FTA grantee purchases of steel, iron, and manufactured goods.[11] Although such restrictions may affect transit agencies' operating expenses, they are most likely to increase the cost of capital expenditures for transit. U.S. public transit agencies' capital expenditures in 2000 totaled $9.06 billion.[12] Of these expenditures, $4.28 billion, or approximately 47 percent,[13] were financed by the Federal Government.

FTA regulations put somewhat lower domestic content restrictions on purchases of transit vehicles[14] (e.g. buses, locomotives, ferries) than on purchases of iron and steel products and other manufactured goods (e.g. facilities, rail track). Absent a waiver from the FTA, Buy America restrictions require that transit agencies using Federal funds purchase vehicles that have

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[9] Telephone conversation with USDA Food and Nutrition Service staff, Feb. 11, 2004.

[10] For a history of Buy America provisions in public transit, a comprehensive discussion of the Buy America restrictions, and a guide to waiver and compliance issues see "Guide to Federal Buy America Requirements," Legal Research Digest, Transit Cooperative Research Program, Federal Transit Administration, Number 17, Sept. 2001.

[11] Ibid. p.10

[12] *2000 National Transit Database*, Table 6. Transit Capital Funds Applied: Details By Transit Agency, p. 2-79, *http://www.ntdprogram.com/ntd/NTDData.nsf/2000+TOC/Table-6/$File/t06_32.pdf*, retrieved on January 17, 2004.

[13] ITC calculation based on data from 2000 National Transit Database, table 6.

[14] FTA regulations refer to "rolling stock," which is defined as "transit vehicles such as buses, vans, cars, railcars, locomotives, trolley cars, ferry boats, and vehicles used for supportive services." Rolling stock regulation also applies to train control, communications, and traction power equipment. TRCP 2001, p.13.

been assembled in the United States, and that at least 60 percent of the cost of the vehicles' components be made in the United States. For purchases of iron, steel and other manufactured goods, assembly must be done in the United States and 100 percent of the components must be U.S. made. Pre-award and post-delivery audits are conducted to ensure compliance. Both transit agencies and their supplying firms are responsible for demonstrating Buy America compliance.

Under certain circumstances, the FTA can waive Buy America restrictions on transit agencies. General waivers apply to purchases of Chrysler 15-passenger vans, microcomputer equipment, and small purchases of under $100,000.[15] Specific waivers, which require an application to the FTA, may be given if domestically produced goods are not available, if imposing the requirements are judged to be against the public interest, or if the price of the imported product is more than 25 percent lower than the price of the domestic good. Specific waivers are most often granted for non-availability, although occasionally price differential and public interest waivers are also given.[16]

Highway Construction

Buy America restrictions for highway construction require the use of domestically produced iron and steel products in Federal-aid highway construction. Total capital outlays on Federal-aid highway projects totaled $45.9 billion in 2002.[17] Federal Highway Administration (FHWA) grants to States and local government for these projects totaled $25.9 billion, or 56.4 percent of the total.[18]

The Buy America program for highway construction requires that "all steel and iron materials used in the project be manufactured in the United States."[19] Products made of iron and steel may be assembled outside the United States, as long as iron and steel used in the project was produced in the United States. In

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[15] TCRP 2001, p. 19.

[16] Communication with FTA staff, July 17, 2003.

[17] Table SF-21, "State Funding for Highways - Summary 2002," *Highway Statistics 2002*, FHWA, available at *http://www.fhwa.dot.gov/policy/ohim/hs02/sf21.htm*, retrieved Jan. 18, 2004.

[18] Table FA-4D, "Allocation of Federal Funds Administered by the Federal Highway Administration for Fiscal Year 2002," *Highway Statistics 2002*, FHWA, available at *http://www.fhwa.dot.gov/policy/ohim/hs02/fa4d.htm*, retrieved Jan. 18, 2004.

[19] See "Buy America: Application to Federal-aid Highway Construction Projects, July 9, 2002" FHWA, available at *http://www.fhwa.dot.gov/programadmin/contracts/buyamgen.htm*, retrieved on January 18, 2004.

highway construction as well as in transit, a waiver program exists, but waivers are rarely given.[20] Imported iron and steel products may be used if their price is at least 25 percent lower than the price of similar products using domestically produced iron and steel. Steel accounts for approximately 4.4 percent of the cost of Federal-aid highway construction.[21]

Airport Construction

Buy American[22] restrictions on State and local government procurement for airport construction are administered by the Federal Aviation Administration (FAA). FAA restrictions apply most notably to the Airport Improvement Program (AIP), a Federal grant program that aids State and local governments in construction and maintenance of airports, including runways, facilities, lighting, and signage systems.[23] Federal expenditures on the AIP were $3.223 billion in 2002.[24] Data on expenditures by the grantees are not available, but FAA staff estimate that 80 to 90 percent of spending on AIP projects comes from Federal AIP grants.[25]

Buy American restrictions on airport improvements are similar to Buy America rules for highways and transit.[26] Steel and manufactured products used in construction must be made in the United States, unless purchase of domestic products is against the public interest, domestic products are unavailable, or using domestic products would increase the cost of the contract by 25 percent. Furthermore, 60 percent of the cost of components used in assembly of manufactured products used in airport construction must consist of goods made in the United States.

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[20] Communication with FHWA staff, July 30, 2003.

[21] FHWA data available at *http://www.fhwa.dot.gov/ohim/hs01/pdf/ptcht.pdf*, retrieved January 18, 2004.

[22] The legislation associated with airport improvement grants (49 U.S.C. Chapter 501, Section 50101) does not follow the convention that uses the "Buy America" terminology when the restrictions are on non-Federal purchases. This appears to be a legislative quirk, though the existence of non-governmental grantees such as privately operated airports in airport construction may also justify the difference.

[23] For a description of the AIP, see *http://www1.faa.gov/arp/financial/aip/overview.cfm?ARPnav=aip*, retrieved Jan. 18, 2004.

[24] Phone conversation with AIP staff, Mar. 9, 2004.

[25] Ibid.

[26] See Federal Aviation Administration, *Airport Improvement Program Handbook*, Chapter 9, Paragraph 922(h) for the FAA's non-technical guidance to grantees.

Food Assistance

A wide variety of U.S. government programs provide food assistance to various parts of the U.S. population. These programs are administered by the U.S. Department of Agriculture, through its Food and Nutrition Service, as well as other Federal agencies.[27] Much of this assistance comes through the food stamp program, which gives individual recipients substantial latitude as to their purchases and imposes no restrictions as to whether foods purchased are domestic or foreign in origin. Other forms of Federal nutrition aid take the form of Federal grants to State and tribal governments, which then redistribute a mix of foodstuffs and funds to local providers of food. These programs include the National School Lunch Program (NLSP) and School Breakfast Program (SBP) in the public schools; the Child and Adult Care Food Program (CACFP), which includes both adult and child day care centers; the Summer Food Service Program (SFSP), which involves summer youth activities outside of school; the Nutrition Services Incentive Program (NSIP), with a target population of elderly citizens; the Food Distribution Program for Indian Reservations (FDIR); the Commodity Supplemental Food Program (CSFP), which targets the same populations as NSIP and WIC (Women, Infants, and Children); and The Emergency Food Assistance Program (TEFAP), which provides food to food banks and soup kitchens. In cases of natural disaster, food stockpiles from these programs can be diverted in the short run.

In these programs, preferences for U.S.-produced foods are implemented in several different ways. One is the direct provision of U.S. commodities acquired in agricultural price-support programs. Donated commodities, which form a significant part of the commodities available for distribution, also must be of domestic origin.[28] In addition, the law governing the National School Lunch Program and National School Breakfast Program require that school food authorities purchase, to the maximum extent possible, domestic commodities.[29] The United States reserves the right under both NAFTA[30] and the Uruguay Round[31] to exempt the "procurement of agricultural goods made

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[27] For example, the Department of Health and Human Services, Agency on Aging, administers the Nutrition Services Incentive Program.

[28] USDA Food and Nutrition Service, Food Distribution Fact Sheet, "Schools/Child Nutrition Commodity Programs," Mar. 2003, p.1.

[29] 42 U.S.C. § 1760(n). Found at *http://www.caselaw.lp.findlaw.com/scripts/ts_search.pl?title=42&sec=1760* (website of Findlaw.com), and retrieved on February 3, 2003.

[30] NAFTA, Chapter 10, Annex 1001.1a-1.

[31] WTO Agreement on Government Procurement, Schedule of the United States, Annex I.

in furtherance of agricultural support programs or human feeding programs" from the government procurement provisions of those agreements.

In FY 2002 the Federal costs of the National School Lunch Program and School Breakfast Program amounted to $8.437 billion, of which approximately $803 million represented direct distribution of Federally acquired commodities and the rest were cash payments.[32] In addition, Federal costs of various other food distribution programs including NSIP, FDIR, CSFP and TEFAP amounted to $785 million in FY 2002.[33] By comparison, the food stamp program, in which purchases are largely directed by individual recipients, cost $18.275 billion in FY 2002.[34]

In the area of international food assistance, Title I of the Agricultural Trade Development and Assistance Act of 1954, as amended (commonly known as Public Law 480, or "Food for Peace") provides for U.S. government financing of sales of U.S. agricultural commodities to developing countries and private entities (hereafter called "participants") on concessional credit terms, including extended credit periods and low rates of interest. Sales are made by private business firms on a bid basis in response to Invitations for Bids or "IFB's" issued in the United States by the participant.[35] PL 480 Title I is administered by the U.S. Department of Agriculture. Titles II and III of PL 480, which involve food donations and government-to-government economic development grants, are administered by the U.S. Agency for International Development.[36]

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[32] USDA Food and Nutrition Service data, found at *http://www.fns.usda.gov/pd/cncosts.htm* and retrieved on Feb. 12, 2004. These totals do not include Federal contributions to State administrative costs or costs paid by State and local governments.

[33] USDA Food and Nutrition Service data, found at *http://www.fns.usda.gov/pd/fd$sum.htm* and retrieved on Jan. 14, 2004.

[34] USDA Food and Nutrition Service data, found at *http://www.fns.usda.gov/pd/fssummar.htm* and retrieved on Mar. 10, 2004. The total reported includes program benefits and excludes the Federal share of State administrative and program costs and miscellaneous Federal costs such as printing and processing of stamps, anti-fraud funding, and program evaluation.

[35] "Public Law 480 Sales Program: A Brief Explanation of Title I," USDA Foreign Agricultural Service, found at *http://www.fas.usda.gov/excredits/FoodAid/pl480/pl480brief.html* and retrieved on June 7, 2003.

[36] National Agricultural and Fishery Council, found at http://www.nafc.com.ph/pl-480.php and retrieved on June 7, 2003.

Small Business Set-Asides

The Small Business Act, as amended,[37] sets specific numerical goals for the percentage of Federal prime and subcontracts for goods and services awarded to small businesses, both in general and by specific categories of small business. These goals are administered by the U.S. Small Business Administration (SBA) and include:[38]

- 23 percent of prime contracts for small businesses;
- 5 percent of prime and subcontracts for small disadvantaged businesses (primarily minority-owned businesses);
- 5 percent of prime and subcontracts for women-owned small businesses;
- Prime contracts for HUBZone (Historically Underutilized Business Zone) small businesses phased in from 1.0 percent in fiscal year 1999 to 2.5 percent in FY 2002 and 3 percent in FY 2003 and each year thereafter;
- 3 percent of prime and subcontracts for service-disabled veteran-owned small businesses.

SBA negotiates annual procurement preference goals with each Federal agency and reviews each agency's results. Monitoring of achievement of the overall goals is the responsibility of SBA.

The Small Business Act directly specifies that small business owners must be U.S. citizens only for certain specific categories of programs (e.g. HUBZone small businesses). The Canadian Department of Foreign Affairs and Trade reports that Canadian firms are generally not eligible for U.S. small business set-asides, except in occasional cases.[39] The SBA regulations for size determination count the receipts and employees of all domestic and foreign

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[37] Retrieved from the U.S. Small Business Administration site at *http://www.sba.gov/regulations/sbaact/sbaact.html* on Feb. 27, 2004. The original Small Business Act (PL 85-536) was enacted in 1958, and established the Small Business Administration as the successor to the Depression-era Reconstruction Finance Corporation.

[38] Retrieved from the SBA website at *http://www.sba.gov/GC/goals* on Feb. 27, 2004.

[39] Retrieved from the Canadian Department of Foreign Affairs and International Trade website at *http://www.dfait-maeci.gc.sa/sell2usgov/smallbusasides-en.asp* on Feb. 27, 2004.

affiliates of the business applying for a determination of small size.[40] This requirement probably precludes most U.S. affiliates of foreign-owned multinationals from being certified as "small" regardless of how small the U.S. affiliate is, because the larger firm including the foreign parent is more likely to be found to be "non-small." Federal purchases made under the Small Business Act are generally also subject to the Buy American Act of 1933, unless they are covered by a specific waiver. As stated above, Federal purchases under $2,500 in value are granted a general waiver from the Buy American Act, but this applies to the size of the purchase, not of the selling firm.[41]

The Federal Procurement Data Center reports[42] that approximately $250.2 billion of Federal prime contracts were awarded in FY 2002. Data on the procurement preference goaling achievements are reported with respect to $235.4 billion of these contracts. Of the value of these, approximately $53.3 billion (22.6 percent) were awarded to small businesses. Within that total, $15.9 billion (6.8 percent) were awarded to small disadvantaged businesses, $1.7 billion (0.7 percent) to HUBZone small businesses, $6.8 billion (2.9 percent) to women-owned small businesses, and $300 million (0.1 percent) to service-disabled-veteran-owned small businesses. Thus, the SBA goals are approximately met in the aggregate, though not for every category of small business for which SBA is required to administer the goals.

The degree to which the various departments and agencies of government contribute to the meeting of the SBA goals varies substantially across the government. In FY 2002, most Federal departments and agencies equaled or significantly exceeded the SBA goals. The Department of Defense (DOD) accounted for $155.2 billion (65.9 percent) of the procurements for which data on the SBA goals are available and purchased $32.8 billion (21.2 percent of DOD procurements for which data are available) from small-business sources, just short of the 23 percent statutory goal. Thus, the degree to which DOD procurements are able to be sourced from small business is a major factor in overall achievement of the SBA goals.

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[40] Retrieved from the SBA website at *http://www.sba.gov/size/2003regns/121.103.html* on Feb. 27, 2004.

[41] "How the Government Buys," *http://www.sba.gov/gopher/Government-Contracting/buy.txt* , retrieved from the SBA website on Mar. 25, 2004.

[42] Retrieved from the SBA website at *http://www.fpdc.gov/fpdc/FPR2002a.pdf* on Feb. 27, 2004.

Defense Procurement

Domestic sourcing requirements for defense procurement are governed by the Buy American Act of 1933 (49 USC 10 (a)-(d)) as well as by the rules of the Defense Federal Acquisition Regulations System, known as DFARS (48 CFR Ch. 2)[43] and other Federal legislation. The DFARS regulations are intricate and have been modified frequently by legislation imposing additional domestic-sourcing requirements on particular products, such as food, clothing, and fibers; vessel acquisition and refit, and anchor chain. A substantial portion of the DFARS regulations is devoted toward complying with the Memorandum of Understanding (MOU) between DOD and SBA with respect to the small-business goals referred to above.

In practice, there are numerous circumstances under which DOD's domestic preferences can be waived, and most NATO countries and major non-NATO allies of the United States have signed MOUs to benefit from such waivers. Product-specific requirements for U.S. domestic sourcing may take precedence in some cases over the waivers granted in MOUs to U.S. allies.[44]

State and Local Government Procurement

State government procurement procedures impose a variety of import-restraining procurement restrictions over and above the restrictions imposed by Federal guidelines. Negotiated trade agreements have not required State action, but have called on Federal parties to seek commitments from State and Provincial governments.[45] Most U.S. States retain explicit preferences for in-state contractors.[46] However, some States have mitigated the restrictiveness of their programs as a result of bilateral international negotia-

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[43] The DFARS regulations are available at the Defense Acquisition Regulations Directorate website at *http://www.acq.osd.mil/dp/dars/dfars/html/r20040113/tochtml.htm*, retrieved on Feb. 27, 2004. See, in particular, part 225, "Foreign Acquisition."

[44] As characterized in the EU Market Access Database, "DoD Defence Acquisitions" at *http://mkaccdb.eu.int/cgi-bin/stb/barrierdesint.pl?bnumber=960056*, retrieved on Feb. 27, 2004.

[45] See NAFTA, Article 1024, Section 3.

[46] See *http://www.dfait.gc.ca/sell2usgov/statelawsreg-en.asp* for a sample of State-level restrictions.

tions.[47] The large number of State programs, their heterogeneity, and their propensity to overlap with Federal programs, increases the complexity of procurement, and so may increase the efficiency costs of such restrictions.

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[47] For example, 39 of 50 States are covered by a bilateral agreement on government procurement between the United States and the European Union (European Commission, *Report on U.S. Barriers to Trade and Investment*, December 2003). The results of these provisions were largely extended on a plurilateral basis in Annex 2 of the United States schedule of the Uruguay Round Agreement on Government Procurement (Office of the United States Trade Representative, *Uruguay Round of Multilateral Trade Negotiations: General Agreement on Tariffs and Trade* (1994), Washington, DC: Government Printing Office, pp. 330-36). Annex 2 does not cover 13 States (Alabama, Alaska, Georgia, Indiana, Nevada, New Jersey, New Mexico, North Carolina, North Dakota, Ohio, South Carolina, Virginia, and West Virginia) or the District of Columbia. For the other States, Annex 2 provides a positive list of State agencies which purchase in conformance with the agreement, and specifically exempts certain purchases of some or all of the States from the agreement, including those covered under the various Buy America provisions related to Federal grants discussed above.

CHAPTER 7
Simultaneous Effects of Significant U.S. Import Restraints

This chapter analyzes the comprehensive effects of significant U.S. import restraints affecting 45 sectors:[1] sugar, dairy products, tobacco and tobacco products, canned tuna, peanuts, beef, textiles and apparel and certain sectors subject to relatively high tariffs. The effects reported in this chapter are not comparable to those reported in chapters 2 (food and agriculture), 3 (textiles and apparel) and 4 (relatively high tariffs), which examined those effects on a sector-by-sector basis.[2] This chapter does not analyze the import restraints discussed in chapters 5 and 6.

The analysis proceeds in three stages. First, the chapter examines the effects of significant U.S. import restraints relative to the effects of all the import restraints that can be quantified in the model used here. Second, the chapter examines the sectoral effects of the significant U.S. import restraints. Third, the chapter examines the effects of the significant U.S. import restraints at the State level.

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[1] Sectors are defined in terms of the benchmark input-output tables of the Bureau of Economic Analysis. These sectors correspond to one or more SIC 87 codes at the 4-digit level. See: U.S. Department of Commerce, Bureau of Economic Analysis, *Benchmark Input-Output Accounts of the United States, 1992* (Washington, DC: U.S. Government Printing Office, Sept. 1998).

[2] For example, the output effect reported for sugar manufacturing in this chapter is an estimate of how sugar manufacturing may be affected when all import restraints are eliminated, including the restraints on imports of textiles and apparel. In contrast, the effects reported in ch. 2 suggest what would happen to sugar manufacturing if only that product's tariffs and quotas were removed.

Significant U.S. Import Restraints

For each of the 45 sectors, table 7-1 shows the average U.S. import tariff, export tax equivalent of quotas and tariff rate quotas (TRQs), and a price wedge.[3] The first group of sectors in table 7-1 contains textile and apparel sectors subject to protection under the WTO Agreement on Textiles and Clothing (ATC) and various bilateral agreements. The second group contains food and agricultural sectors subject to TRQs and other import restraints. The third group contains sectors that are protected by relatively high tariffs.

Economywide Effects of Removing Significant U.S. Import Restraints

This section assesses the relative effects of the significant U.S. import restraints by comparing the effects of their elimination with the effects of the elimination of all (measured) U.S. import restraints.[4] The USAGE-ITC model is applied to simulate the import restraints removal.[5] Effects found in this simulation, in which restraints for many sectors are removed, are not equivalent to adding up the results from simulations eliminating the restraints individually.[6]

Table 7-2 compares the values of certain aggregate variables under removal of all measured U.S. import restraints (case 1) and removal of the significant U.S. import restraints (case 2). Under removal of all measured U.S. import restraints, U.S. real GDP increases by $10.9 billion; the significant U.S. import restraints scenario results in a GDP increase of $6.6 billion. Elimination of the significant U.S. import restraints causes imports to increase by $18.3 billion compared to $28.5 billion under total trade liberalization. Removing all import restraints causes exports to rise by more than twice as much as removal of the significant U.S. import restraints ($21.1 billion compared to $10.1 billion).

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[3] The price wedge is an estimate of the percent difference between U.S. prices for imports and world prices.

[4] The difference between "significant" and "all" U.S. import restraints is that "all" includes all the significant import tariffs plus all other NTR tariffs. This comparison does not account for the effects of any quantitative restrictions applied to the other sectors. Further, this comparison does not consider any measures that fall outside the terms of reference of this study. Examples include remedies in antidumping and countervailing duty cases, section 337 or 406 investigations, or section 301 actions.

[5] See ch. 1 and appendix D for a discussion of the USAGE-ITC model.

[6] The individual simulations in chapters 2 through 4 show results of eliminating import restraints only in the specific commodities under consideration there, leaving all other restraints in place.

Table 7-1
Price gaps due to significant U.S. import restraints, by USAGE-ITC model sector, 2002, percent

USAGE-ITC sector[1]	Ad valorem equivalents		
	U.S. import tariff[2]	Rest-of-world export tax equivalent[3]	Price wedge[4]
Textile and apparel sectors:			
Broadwoven fabric mills and fabric finishing plants	7.9	4.8	13.0
Narrow fabric mills	4.2	0.0	4.2
Yarn mills and finishing of textiles, n.e.c.	4.8	0.4	5.3
Thread mills	7.1	2.0	9.2
Coated fabrics, not rubberized	2.2	0.1	2.3
Cordage and twine	3.1	0.3	3.4
Textile goods, n.e.c.	2.3	0.0	2.3
Women's hosiery, except socks	6.5	0.5	7.1
Hosiery, n.e.c.	9.4	0.8	10.3
Apparel made from purchased materials	10.9	9.9	21.9
Curtains and draperies	8.9	6.0	15.5
Knit fabric mills	12.7	0.0	12.7
Canvas and related products	5.4	0.0	5.4
Pleating and stitching	4.8	0.0	4.8
Cellulosic manmade fibers	6.0	0.0	6.0
Housefurnishings, n.e.c.	6.3	12.4	19.5
Fabricated textile products, n.e.c.	2.4	1.0	3.4
Food and agriculture sectors:			
Oil bearing crops	1.8	10.0	11.9
Meat packing plants	0.7	1.1	1.8
Creamery butter	19.5	33.9	60.0
Natural, processed, and imitation cheese	11.4	25.7	40.0
Dry, condensed, and evaporated dairy products	4.5	29.2	35.0
Ice cream and frozen desserts	10.4	8.7	20.0
Fluid milk	13.6	0.0	13.6
Canned and cured fish and seafoods	3.6	2.6	6.3
Sugar manufacturing[5]	1.0	107.1	109.3
Cigarettes	9.0	0.0	9.0
Tobacco stemming and redrying	6.7	15.6	23.3
Other sectors with significant import:			
Rubber and plastic footwear	11.8	0.0	11.8
Shoes, except rubber	9.8	0.0	9.8
House slippers	11.3	0.0	11.3
Leather gloves and mittens	13.0	0.0	13.0
Luggage	13.2	0.0	13.2
Women's handbags and purses	11.2	0.0	11.2
Personal leather goods, n.e.c.	8.7	0.0	8.7
Glass and glass products, except containers	4.7	0.0	4.7
Ceramic wall and floor tile	8.4	0.0	8.4
Vitreous china table and kitchenware	8.6	0.0	8.6
Fine earthenware table and kitchenware	5.3	0.0	5.3

See footnotes at end of table.

Table 7-1—*Continued*
Price gaps due to significant U.S. import restraints, by USAGE-ITC model sector, 2002, percent

USAGE-ITC sector[1]	Ad valorem equivalents		
	U.S. import tariff[2]	Rest-of-world export tax equivalent[3]	Price wedge[4]
Other sectors with significant import restraints –*Continued*			
Cutlery	4.7	0.0	4.7
Hand and edge tools, except machine tools and handsaws	4.3	0.0	4.3
Ball and roller bearings	5.8	0.0	5.8
Watches, clocks, watchcases, and parts	5.4	0.0	5.4
Costume jewelry	6.1	0.0	6.1
Pens, mechanical pencils, and parts	4.9	0.0	4.9

[1] Sectors are specified as in the BEA input-output table and they include goods other than those subject to import restraints. Price gaps are trade-weighted averages for all goods in each sector. See ch. 1 and appendix D.

[2] Trade-weighted average ad valorem equivalent of U.S. tariff rates.

[3] See chapters 2 and 3 for discussion of rest-of-the-world export tax equivalents. Figures for the textile and apparel sectors are the mid-points of the ranges reported in table 3-4.

[4] Price wedges are gaps between U.S. prices for imports and prices received by rest-of-the-world producers and they satisfy the relationship:

(1+price gap/100) = (1+import tariff/100) x (1+export tax equivalent/100).

[5] The sector "sugar manufacturing" is an aggregate of three SIC sectors: cane sugar, except refining (SIC 2061); cane sugar refining (SIC 2062); and beet sugar (SIC 2063).

Source: Ad valorem tariff equivalents compiled from U.S. of Commerce official statistics. USITC estimates and calculations include tariff equivalents or export tax equivalents of U.S. quotas.

Table 7-2
Aggregate economic effects of simultaneous liberalization of all import restraints, and significant U.S. import restraints, 2002

Effect on	Removing all measured U.S. import restraints		Removing significant U.S. import restraints	
	Case 1		Case 2	
	Million dollars	*Percent*	*Million dollars*	*Percent*
Gross domestic product	10,984	0.1	6,638	0.1
Imports	28,581	2.0	18,308	1.3
Exports	21,107	2.0	10,170	1.0
Change in economic welfare	16,370	0.2	14,133	0.2

Source: USITC estimates. Output, exports, imports, and the welfare measure are reported in terms of prices prevailing before the elimination of import restraints.

The welfare gains generated by eliminating the significant U.S. import restraints account for most of the welfare gains possible when all U.S. import restraints are removed. The elimination of significant U.S. import restraints generates gains of $14.1 billion in economic welfare, while removing all import restraints generates gains of about $16.3 billion. The welfare effect measures the net value of all gains and losses from trade liberalization to the U.S. economy as a whole, i.e., gains or losses in labor or capital income, tax increases or decreases, as well as the consumption effects from changes in real prices. Several factors account for these gains in economic welfare. As import restraints are removed, capital and labor move to sectors where they can be more efficiently used. Consumers and producers using products formerly subject to import restraints generally would pay lower prices. The lower prices are reinforced by higher average income levels under the reallocation of capital and labor. Economywide, the cost of living falls relative to average income, resulting in a net increase in welfare.[7]

Sectoral Effects of Removing All Significant U.S. Import Restraints

Table 7-3 reports sector-level effects for the case in which the significant U.S. import restraints are removed. For most liberalized sectors, imports rise, sectoral production and employment decline and exports rise. Composite prices, a weighted average of imported and domestically produced goods, generally fall for liberalized sectors and rise for the others. All price changes are relative to an index of final consumption prices.[8]

Liberalized Sectors

The immediate effect of removing import restraints on the liberalized sectors is a reduction in the relative price of imports. As a result, demand for imported goods likely would increase and demand for domestic goods likely would decline. U.S. producers would respond to increased competition from imports by lowering the prices of the domestic goods. As a result, domestic producers would be less willing to supply the market and domestic output and sectoral employment would decline. Domestic demand for the liberalized goods

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[7] Consistent with the general equilibrium approach, the USAGE-ITC model indicates changes in real (relative) prices. One should not infer from these real price changes a particular impact on posted nominal prices of retail products. In general, nominal prices are influenced by monetary phenomena beyond the scope of this analysis.

[8] Composite prices are appropriately averaged real prices of imported and domestically produced goods which are purchased for final consumption.

Table 7-3
Economic effects of simultaneous liberalization of all significant U.S. import restraints, changes in employment, output, trade, and prices, 2002, percent

USAGE-ITC sector[1]	Employment	Output	Imports	Exports	Composite price[2]
Textile and apparel sectors:					
Broadwoven fabric mills and fabric finishing plants	-13.0	-9.7	25.5	3.5	-0.9
Narrow fabric mills	-4.4	-4.2	-1.9	2.0	-0.7
Yarn mills and finishing of textiles, n.e.c.	-8.1	-7.7	5.1	2.0	-0.3
Thread mills	-5.8	-5.1	13.6	2.2	-1.6
Coated fabrics, not rubberized	0.2	-0.1	3.2	2.7	0.3
Cordage and twine	-1.4	-1.3	4.5	1.5	([3])
Textile goods, n.e.c.	([3])	-0.8	2.7	0.6	([3])
Women's hosiery, except socks	-0.6	-1.3	11.3	1.8	-0.4
Hosiery, n.e.c.	-2.8	-3.0	14.8	3.3	-1.3
Apparel made from purchased materials	-11.5	-11.8	17.4	6.4	-5.5
Curtains and draperies	-2.8	-2.9	26.3	5.2	-1.3
Knit fabric mills	-13.5	-13.0	21.9	4.6	-0.4
Canvas and related products	-1.7	-1.6	9.1	3.8	-0.8
Pleating and stitching	-4.8	-4.4	4.8	4.8	-0.5
Cellulosic manmade fibers	-5.3	-5.1	7.6	0.1	0.1
Housefurnishings, n.e.c	-4.7	-6.8	29.0	6.2	-2.6
Fabricated textile products, n.e.c.	-0.2	-0.4	2.7	2.6	-0.2
Food and agriculture sectors:					
Oil bearing crops	0.2	0.2	57.0	0.2	0.3
Meat packing plants	0.5	0.5	1.9	6.3	0.2
Creamery butter	-33.4	-19.8	164.4	110.7	-9.8
Natural, processed, and imitation cheese	-3.7	-3.3	118.2	109.4	-1.0
Dry, condensed, and evaporated dairy products	-8.2	-7.3	126.7	7.6	-2.0
Ice cream and frozen desserts	0.6	0.1	94.2	2.2	-0.2
Fluid milk	-0.8	-0.9	52.6	23.9	0.2
Canned and cured fish and seafods	-9.9	-7.0	7.9	1.9	-2.0
Sugar manufacturing	-25.1	-24.0	161.0	114.1	-7.7
Cigarettes	0.7	0.7	15.3	2.8	-0.2
Tobacco stemming and redrying	-5.7	-4.7	54.2	6.2	-0.8
Other sectors with significant imports restraints:					
Rubber and plastic footwear	-1.2	-1.2	3.9	1.5	-4.2
Shoes, except rubber	-0.8	-0.8	3.1	0.5	-3.3
House slippers	-0.5	-0.6	4.8	1.1	-1.8
Leather gloves and mittens	-3.1	-3.1	5.9	1.0	-4.7
Luggage	-10.3	-9.4	8.0	5.9	-5.3
Women's handbags and purses	-7.4	-6.7	6.4	4.5	-4.1

See footnotes at end of table.

Table 7-3—*Continued*
Economic effects of simultaneous liberalization of all significant U.S. import restraints, changes in employment, output, trade, and prices, 2002, percent

USAGE-ITC sector[1]	Employment	Output	Imports	Exports	Composite price[2]
Other sectors with significant imports restraints-Continued:					
Personal leather goods, n.e.c.	-6.2	-5.4	8.3	4.3	-2.5
Glass and glass products, except containers	-0.5	-0.4	6.2	7.4	-0.4
Ceramic wall and floor tile	-6.7	-6.4	4.8	1.0	([3])
Vitreous china table and kitchenware	-7.0	-6.9	7.3	0.6	-2.0
Fine earthenware table and kitchenware	-3.4	-3.1	1.4	0.3	-2.1
Cutlery	-3.2	-2.7	9.1	1.8	-0.6
Hand and edge tools, except machine tools and handsaws	-0.2	-0.2	1.9	0.3	-0.4
Ball and roller bearings	-4.0	-3.9	12.1	0.6	0.1
Watches, clocks, watchcases, and parts	1.2	0.7	1.9	3.6	-1.7
Costume jewelry	-2.3	-2.0	6.9	0.9	-0.9
Pens, mechanical pencils, and parts	-2.2	-1.8	3.7	1.5	-0.7
Whole U.S. economy:					
Agriculture, forestry, and fisheries	-0.3	-0.3	0.3	1.1	0.1
Mining	0.1	0.1	-0.1	0.7	([3])
Construction	([3])	([3])	([4])	1.9	([3])
Nondurable manufacturing	-0.8	-0.9	6.0	2.5	-0.9
Durable manufacturing	-0.2	0.1	([3])	0.6	0.1
Transportation, communications, and utilities	0.1	0.1	-0.1	0.8	0.1
Wholesale trade	0.3	0.3	([4])	4.3	([3])
Finance, insurance, and real estate	-0.4	([3])	([3])	-1.9	0.2
Other services	([3])	0.1	-0.2	0.9	0.1

[1] Sectors are specified as in the BEA input-output table and they include goods other than those subject to import restraints.

[2] Share-weighted price of imports, domestic production, and marketing costs. See section "overview of the USAGE-ITC Framework" in appendix D.

[3] Change less than 0.05 percent.

[4] No imports for that sector.

Source: USITC estimates.

would increase because the prices of the imported and domestic goods have declined. Demand for U.S. exports would increase as U.S. producers become more competitive in the world economy.

When all significant U.S. import restraints are eliminated, the model results suggest that the largest percentage declines in output would occur in sugar manufacturing (25.1 percent), creamery butter (33.4 percent), knit fabric mills

(13.5 percent) and apparel made from purchased materials (11.5 percent). These effects are consistent with the relatively large price wedges in sugar manufacturing (109.3 percent), creamery butter (60 percent), knit fabric mills (12.7 percent) and apparel made from purchased materials (15.5 percent) (see table 7-1). Several factors determine the model results for output. First, the effect of liberalization for the sugar manufacturing, creamery butter and knit fabric mill industries is limited because of the significantly lower import market shares for these industries relative to other modeled sectors. Second, the import market share for apparel made from purchased materials is relatively significant, but the sector has relatively large expenditures for wholesale and retail trade, which reduces the impact of liberalization. Third, the price wedge for knit fabric mills is smaller than that for apparel made from purchased materials, such that the output effect of liberalization for knit fabric mills would be expected to be smaller than that for apparel made from purchased materials. The knit fabric mills sector, however, is an upstream sector to apparel made from purchased materials and it suffers a secondary impact as demand for its output drops. Fourth, tobacco stemming and redrying has a relatively large price gap, but the effect of liberalization on its output is relatively small because U.S. imports are less elastic than other food and agriculture commodities.

Sectors with high tariffs uniformly show the expected patterns of declining domestic production, employment, and prices, along with increases in imports and exports, when these tariffs are eliminated. The highest tariffs, aside from those in the textile, apparel, and agricultural sectors, are found in the ceramic tile and vitreous china table and kitchenware sectors.[9]

The U.S. Economy

Table 7-3 also shows summary effects for the nine aggregate reference sectors comprising the U.S. economy. The two aggregate sectors of agriculture, forestry, fisheries, and nondurable manufacturing contain most of the sectors with significant U.S. import restraints, and their output declines. The relatively small tariffs in the other sectors are not eliminated in this scenario, so the trade effects depend on their relation to the focus sectors. More importantly, however, the effects depend on movements in the exchange rate and the terms of trade (as the prices of imports and import-competing products fall relative to other goods) and on the increased availability of labor and capital. Thus, when significant U.S. import restraints are lifted, the rest of the economy tends to

[9] These sectors also have fewer preferences.

experience output gains, due to lower prices for some inputs and to increased demand from foreign and domestic customers.

State Effects of Removing All Significant U.S. Import Restraints

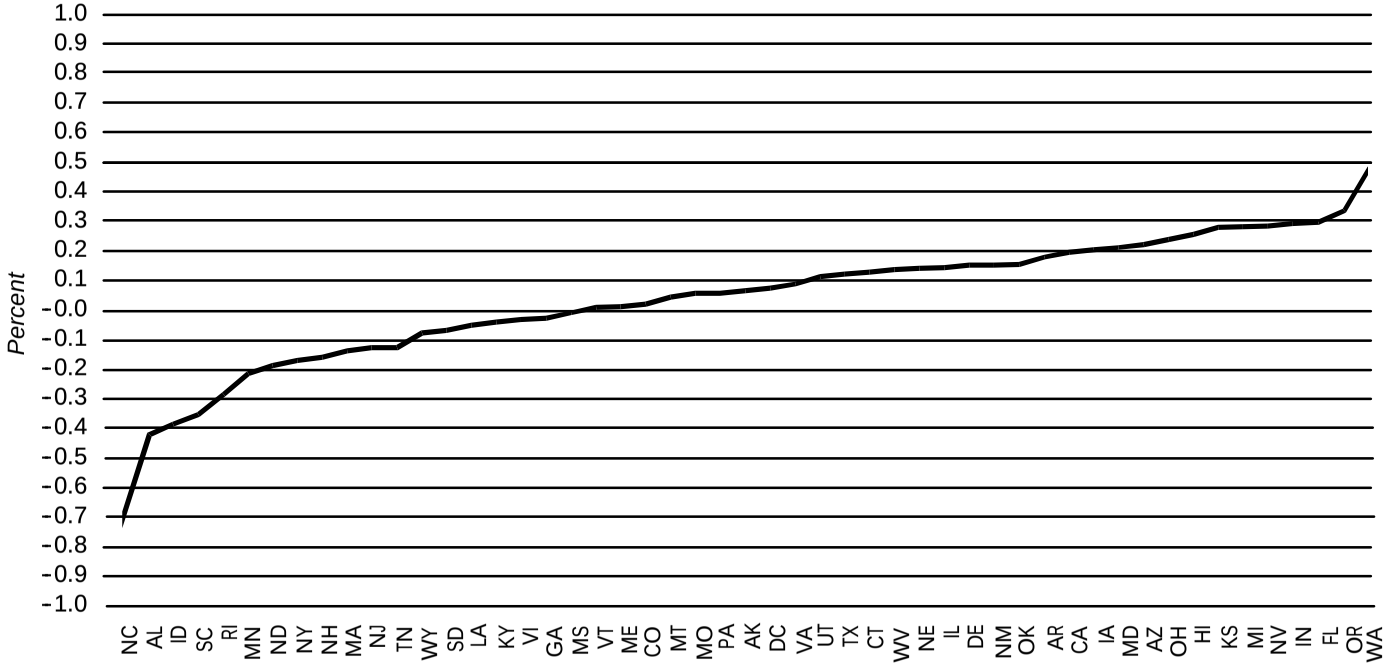
Figure 7-1 shows percentage effects on real gross State product by State. These effects are calculated by applying a State-level extension to the USAGE-ITC results generated in the significant U.S. import restraint removal simulation. The State-level extension breaks down results for the U.S. national economy from the USAGE-ITC model to the State level without changing the national results. For most variables, State effects are based on the corresponding national effect plus a State deviation term, which is determined by State-specific characteristics.

The most striking feature of the State level effects shown in figure 7-1 is the narrowness of their range. The most significantly impacted States are North Carolina, Alabama, and Idaho which suffer losses of 0.7, 0.4, and 0.4 percent, respectively, of their gross State products, while Washington gains 0.5 percent in its gross State product, if all significant U.S. import restraints are removed.

North Carolina, Alabama and Idaho are adversely affected because, relatively to the national economy, high shares of economic activity are in commodities protected by U.S. import restraints, and for which national production shrinks when the restraints are removed. Idaho suffers because a relatively high share of its economic activity is in the production of sugar crops, sugar manufacturing, and dairy products, while North Carolina suffers because a relatively high share of its economic activity is in the production of textiles.

Washington benefits because, relatively to the national economy, high shares of its economic activity are in the production of commodities for which national production expands when the significant U.S. import restraints are removed (e.g., aircraft and aircraft equipment). However, as the effects for the nine aggregate sectors in the end of table 7-2 suggest, the removal of significant U.S. import restraints generates small output expansions. Thus, even for States with relatively high shares of economic activity in the production of export-oriented commodities, the total gross State product gain would be no more than a fraction of 1 percent.

Figure 7-1
Effect on real gross State product of removing significant U.S. import restraints, percent, 2002



Source: USITC estimates.

APPENDIX A
Request Letter

THE UNITED STATES TRADE REPRESENTATIVE
Executive Office of the President
Washington, D.C. 20506

MAY 15 1992

DOCKET NUMBER 1692
Office of the Secretary
Int'l Trade Commission

RECEIVED
OFF. OF THE SECRETARY
U.S. INT'L TRADE COMM.
'92 MAY 19 A9:08

The Honorable Donald E. Newquist
Chairman
U.S. International Trade Commission
500 E Street, S.W.
Washington, D.C. 20436

Dear Mr. Chairman,

The Commission's recent series of reports on the economic effects of significant U.S. import restraints (USITC publication 2222, dated October 1989; publication 2314, dated September 1990; and publication 2422, dated September 1991), prepared pursuant to a request from the Senate Committee on Finance dated September 12, 1988, has been an excellent source of objective, balanced information for the entire trade policy community. An understanding and appreciation of the economic implications of restraints imposed on trade are critical to any informed assessment of the trade policy options that confront the President and the Congress.

We would find it useful to have periodic updates of the types of assessments that the Commission has provided in its reports for the Finance Committee. Therefore, under authority delegated by the President and pursuant to section 332(g) of the Tariff Act of 1930, as amended, I request that the Commission periodically provide an updated assessment of the economic effects of significant U.S. import restraints. Each updating report should include quantitative assessments of the restraints' effects on U.S. consumers, on the activities of U.S. firms, on the income and employment of U.S. workers, and on the net economic welfare of the United States. The reports also should continue the broad analytical frameworks used in the original reports, namely partial equilibrium frameworks for the analysis of liberalization in individual sectors and a general equilibrium framework for assessment of the economy-wide effects of the simultaneous liberalization of all sectors covered.

With the exceptions noted below, the reports should consider the effects of all significant restraints on U.S. imports of goods and services whether they result from an act of Congress, an action taken under the fair trade laws of the United States (such as section 201 investigations), an international agreement, or voluntary export restraints by foreign nations. The reports should not include import restraints resulting from final

antidumping or countervailing duty investigations, section 337 or 406 investigations, or section 301 actions.

I would appreciate receiving the first updating report 18 months after receipt of this request. Subsequent reports should be provided thereafter at intervals of approximately two years until otherwise instructed.

In view of the outstanding instruction to the Commission on the security classification of reports prepared by the Commission at the request of the U.S. Trade Representative, I request that all reports on this investigation be made available to the public at the same time they are submitted to my office.

The Commission's assistance in this matter is greatly appreciated.

Sincerely,

Carla A. Hills

APPENDIX B
Federal Register Notice

INTERNATIONAL TRADE COMMISSION

[Investigation 332–325]

The Economic Effects of Significant U.S. Import Restraints: Fourth Update

AGENCY: United States International Trade Commission.

ACTION: Notice of fourth update report and scheduling of public hearing.

EFFECTIVE DATE: August 14, 2003.

SUMMARY: The Commission has announced the schedule for its fourth update report in investigation No. 332–325, The Economic Effects of Significant U.S. Import Restraints, and has established deadlines for the submission of requests to appear at the hearing and for the filing of written submissions as set forth below. The investigation was requested by the Office of the U.S. Trade Representative (USTR) in May 1992. That request called for an initial investigation and subsequent updates, under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)).

FOR FURTHER INFORMATION CONTACT: Soamiely Andriamananjara, Project Leader (202) 205–3252 or Marinos Tsigas, Deputy Project Leader (202) 708–3654, Office of Economics, U.S. International Trade Commission, Washington, DC 20436. For information on the legal aspects of this investigation, contact William Gearhart of the Office of the General Counsel (202) 205–3091. Hearing impaired individuals are advised that information on this matter can be obtained by contacting the TDD terminal on (202) 205–1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at (202) 205–2000. General information concerning the Commission may also be obtained by accessing its Internet server (*http://www.usitc.gov*). The public record for these investigations may be viewed on the Commission's electronic docket (EDIS–ON–LINE) at *http://dockets.usitc.gov/eol/public.*

Background

The Commission instituted this investigation following receipt on May 15, 1992 of a request from the USTR. The request asked that the Commission conduct an investigation assessing the quantitative economic effects of significant U.S. import restraints on the U.S. economy, and prepare periodic update reports following the submission of the first report. The first report was delivered to the USTR in November 1993, the first update in December 1995, the second update in May 1999, and the third update in June 2002.

In this fourth update report, the Commission will assess the economic effects of significant tariff and non-tariff U.S. import restraints on U.S. consumers, on the activities of U.S. firms, on the income and employment of U.S. workers, and on the net economic welfare of the United States. The assessment will not include import restraints resulting from final antidumping or countervailing duty investigations, section 337 and 406 investigations, or section 301 actions.

The initial notice of institution of this investigation was published in the **Federal Register** of June 17, 1992 (57 FR 27063).

Public Hearing

A public hearing in connection with the investigation will be held at the U.S. International Trade Commission Building, 500 E Street SW., Washington, DC, beginning at 9:30 a.m. on December 9, 2003. All persons shall have the right to appear, by counsel or in person, to present information and to be heard. Requests to appear at the public hearing should be filed with the Secretary, United States International Trade Commission, 500 E Street SW., Washington, DC 20436, no later than 5:15 p.m., November 14, 2003. Any prehearing briefs (original and 14 copies) should be filed not later than close of business, November 17, 2003; the deadline for filing post-hearing briefs or statements is the close of business, January 10, 2004. In the event that, as of the close of business on November 14, 2003, no witnesses are scheduled to appear at the hearing, the hearing will be canceled. Any person interested in attending the hearing as an observer or non-participant may call the Secretary to the Commission (202) 205–2000 after November 20, 2003, to determine whether the hearing will be held.

Written Submissions

In lieu of or in addition to participating in the hearing, interested parties are invited to submit written statements (original and 14 copies) concerning the matters to be addressed by the Commission in its report on this investigation. Commercial or financial information that a submitter desires the Commission to treat as confidential must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of section 201.6 of the Commission's Rules of Practice and Procedure (19 CFR 201.6). All written submissions, except for confidential business information, will be made available in the Office of the Secretary for inspection by interested parties. To be assured of consideration by the Commission, written statements relating to the Commission's report should be submitted to the Commission at the earliest practical date and should be received no later than the close of business on January 10, 2004. All submissions should be addressed to the Secretary, United States International Trade Commission, 500 E St. SW., Washington, DC 20436. The Commission's rules do not authorize filing submissions with the Secretary by facsimile or electronic means, except to the extent permitted by section 201.8 of the Commission's Rules (19 CFR 201.8) (*see* Handbook for Electronic Filing Procedures, *ftp://ftp.usitc.gov/pub/reports/electronic_filing_handbook.pdf*).

Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205–1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at (202) 205–2000. General information concerning the Commission may be obtained by accessing its Internet server (*http://www.usitc.gov*). The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *http://edis.usitc.gov.*

List of Subjects: U.S. Import Restraints, Nontariff measures (NTM), Tariffs, Imports.

By order of the Commission.

Issued: August 15, 2003.

Marilyn R. Abbott,

Secretary.

[FR Doc. 03–21455 Filed 8–20–03; 8:45 am]

BILLING CODE 7020–02–P

DEPARTMENT OF JUSTICE

Notice of Lodging of Consent Decree Under the Clean Air Act

Pursuant to 28 CFR 50.7 notice is hereby given that on July 31, 2003, a proposed Consent Decree in *United States* v. *E.F.I. DuPont De Nemours and Company ("DuPont")*, Civil Action No. 5.03CV–175–R, was lodged with the United States District Court for the Western District of Kentucky.

The Consent Decree resolves the government's claims for violations of the General Duty of Care provisions of the Clean Air Act, 42 U.S.C. 7412(r),

APPENDIX C
List of Written Submissions

Written Submissions for Investigation 332-325

Receipt Date	Submitted by	On behalf of
1/12/2004	Rolf Marshall (Maritime Cabotage Task Force)	Maritime Cabotage Task Force
1/12/2004	Joseph A. Black (The Cullen Law Firm)	Owner-Operator Independent Drivers Association, Inc.
1/12/2004	Scott A. Scherff (Timken)	The Timken Company
1/12/2004	Mark A. Doruff (CORAR)	Council on Radionuclides and Radiopharmaceuticals, Icn (CORAR)
11/14/2003	Jack Roney (American Sugar Alliance)	American Sugar Alliance

Source: U.S. International Trade Commission Docket Report.

APPENDIX D
USITC Modeling Framework

APPENDIX D
The USITC Modeling Framework

This study employs the USAGE-ITC framework, an applied general equilibrium (AGE) framework of the U.S. economy, to analyze the effects of significant U.S. import restraints on the U.S. economy.[1] The distinguishing features of an AGE framework are its economywide coverage, multisectoral linkages, and consideration of all flows in the economy. Applied general equilibrium frameworks consider market interactions between producers and consumers for produced goods and services (e.g., an AGE framework explicitly accounts for upstream and downstream production linkages). An AGE framework also considers competition among industries for primary factors of production (e.g., land, labor and capital) and income transfers associated with quotas and tariffs.

The USAGE-ITC framework is similar to the framework employed in previous reports. Many of the behavioral and structural parameters of the protected sectors are updated, and some innovations in the framework structure have been incorporated.[2] The most important changes include a regional extension to the USAGE-ITC framework to generate state level effects.

Overview of the USAGE-ITC Framework

The USAGE-ITC framework has three components: (i) input-output (I-O) accounts for 513 industries and 503 commodities, (ii) behavioral parameters, and (iii) a system of equations that constitute the model specification. The I-O accounts specify the transactions among all economic agents in the U.S. economy for 2002, the base year in this study. The I-O accounts are derived from the I-O accounts for 498 industries and 40 types of final demand (i.e.,

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[1] The USAGE–ITC framework has been recently created by the International Trade Commission and the Centre of Policy Studies (CoPS), Monash University. For a complete specification of the USAGE–ITC framework see Dixon, P.B. and M.T. Rimmer (2002), "USAGE–ITC: theoretical structure," Centre of Policy Studies, Monash University, Australia, April 25.

[2] In particular, many of the import substitution elasticities, which describe the degree of substitutability between imports and domestic products, were scrutinized and adjusted, when necessary by ITC staff, based on comparisons between U.S. produced products and imports.

imports, exports, private and government consumption and investment expenditures, and inventory changes) published by the Bureau of Economic Analysis (BEA), U.S. Department of Commerce.[3]

While the I-O accounts provide information on the initial equilibrium of the U.S. economy, a set of elasticities (i.e., behavioral parameters) help the framework determine how the economy would respond to a policy change.[4] The following types of elasticities are used by USAGE-ITC:

1. Elasticities of substitution between imported and domestic goods;
2. Elasticities of import supply;
3. Elasticities of export demand;
4. Elasticities of substitution between labor and capital; and
5. Income elasticities.

USITC estimated some parameters using time series data, where possible. In other cases, USITC relied on published studies for estimates. With the exception of textiles and apparel, the elasticities of substitution between imported and domestic goods (i.e., the Armington elasticities) are documented in Donnelly *et al*.[5] The Armington elasticities for the meat packing plants sector and for the textiles and apparel sectors are based on Hertel *et al*.[6]

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[3] The 513 industries and 503 commodities in USAGE-ITC are derived from an aggregation of the 498 industries and 40 final demands found in the BEA I-O accounts (see Dixon, P.B. and M.T. Rimmer (2001), "MONASH-USA: Creating a 1992 Benchmark Input-Output database," Centre of Policy Studies, Monash University, May).

[4] An elasticity specifies the percentage change that occurs in an economic variable in response to a 1 percent change in another economic variable. For example, an income elasticity of demand for a good is the percentage change in demand for that good that occurs in response to a 1 percent change in household income.

[5] Donnelly, W.A., K. Johnson, M. Tsigas and D. Ingersoll, January 2004, "Revised Armington Elasticities of Substitution for the USITC Model and the Concordance for Constructing a Consistent Set for the GTAP Model," Office of Economics Research Note, No. 2004-01-A, U.S. International Trade Commission.

[6] The Armington elasticity for the beef packing plants sector is the lower bound found in Hertel *et al*., while the textiles and apparel elasticities are the mid-point estimates found in Hertel *et al*. See Hertel, Thomas, David Hummels, Maros Ivanic and Keeney Roman, May, 2003, "How Confident Can We Be in CGE-Based Assessments of Free Trade Agreements?" GTAP Working Paper No.26, Center for Global Trade Analysis, Purdue University, West Lafayette, Indiana.

The final component of the USAGE-ITC framework is the system of equations that model the U.S. economy. These equations characterize three general conditions that, once solved simultaneously, epresent an Arrow-Debreu competitive general equilibrium.[7] First, all constant returns activities must earn zero profits. All of the production technologies and preferences are represented in these zero-profit conditions.[8] Second, the market for each product must clear such that supply equals demand. Each market clearing condition determines the price received by producers in the corresponding industry. Producers' prices exclude transport and other margin costs involved in the delivery of goods from producers to purchasers. The third general condition is that income must balance (i.e., income is exhausted on final demand and savings).

In addition, the following nine assumptions underlie the simulations in this report:

(1) The removal of significant import restraints has no effect on real national savings; that is, household savings plus the public sector surplus divided by the price deflator for investment. Thus, it is assumed that the quantity of capital owned by U.S. residents is unaffected by the policy change.

(2) Real government expenditures are not affected by the simulation. Thus, under assumptions 1 and 2, movements in real private consumption are interpreted as movements in economic welfare.

(3) The ratio of real public consumption to real private consumption is unaffected by the policy change. Both types of consumption adjust together by an amount that is consistent with maintenance of real national savings.

(4) Real private consumption is related to real disposable income. The government adjusts the tax rate on labor income to ensure that the policy-induced movement in real private consumption is consistent with maintenance of real national savings.

(5) The ratio of investment to capital (I/K) in each industry is held constant. Because I/K in any year is a reflection of business confidence, this assumption means that the policy has no long run effect on business confidence. Nevertheless, aggregate investment can move relative to aggregate capital because of variations between industries in their I/K ratios.

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[7] G. Debreu,1959, *The Theory of Value*, (New York: Wiley, 1959).

[8] Using the analogy in duality theory between cost and expenditure functions, all preferences are captured in a zero-profit condition on the activity that which produces utility or welfare.

(6) The average rate of return on capital across industries is assumed to be unaffected by the policy. This is consistent with the idea that capital stocks adjust to bring rates of return into line with interest rates adjusted by risk premia and that interest rates and risk premia are independent of the policy. However, capital would earn higher rates of return in industries favored by the policy and lower rates of return in industries that are harmed. The rate-of-return assumptions mean that our simulation depicts long-run effects. The parameters of the model were set to give effects after about 5 years.

(7) Real wage rates adjust so that the policy has no effect on aggregate employment.

(8) The policy has no effect on technology or consumer preferences.

(9) The policy has no effect on the aggregate price index for private consumption; that is, this aggregate price index is the numeraire price.[9]

Specification of the USAGE-ITC Model

The following sections describe briefly the four key components of the USAGE-ITC model: final demand behavior, production technology, factor supplies, and the trade equilibrium.[10]

Final Demand Behavior

The USAGE-ITC model considers three separate components of domestic final demand: household consumption, government demand, and investment demand. Household consumption is derived from a linear expenditure system (LES) of commodity demands which is based on the Stone-Geary or Klein-Rubin utility function.[11] The LES is a generalization of the

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[9] The numeraire price is the price relative to which all other prices and income are measured in this analysis.

[10] For a complete specification of the USAGE-ITC framework see Dixon, P.B. and M.T. Rimmer (2002), "USAGE-ITC: theoretical structure," Centre of Policy Studies, Monash University, Australia, April 25.

[11] For an introduction to the LES, see ch. 5 of P. R. G. Layard and A. A. Walters, *Microeconomic Theory* (New York: McGraw-Hill, 1978);, ch. 3 of A. Deaton and J. Muellbauer, *Economics and Consumer Behavior* (Cambridge, England: Cambridge

Cobb-Douglas utility function in which the origin is translated such that income elasticities can differ from unity. While the income expansion paths are linear, the displaced origin allows preferences to be nonhomothetic.[12]

In the specification of government demand, real government spending is fixed exogenously. This condition is satisfied by endogenously adjusting government transfers to households. This adjustment assumes that changes in government revenues are compensated through a tax.

For investment demand, capital creators in an industry are assumed to choose their input mix to minimize the costs of producing capital subject to a constant-returns-to-scale capital-creation function. The only prices affecting the demand for domestic and imported inputs to capital creation are the prices of these inputs.[13]

Production Technology

Input-output technologies are modeled using nested substitution functions. Figure D-1 illustrates these relationships. At the lower half of the figure, primary factors and intermediate inputs are combined to produce a composite industry output (or industry activity level). In the value added nest, land, capital and labor substitution possibilities are based on the CRESH (i.e., constant ratios of elasticities of substitution, homothetic) specification. It is assumed that intermediate inputs do not substitute for one another and for value added (i.e., a Leontief specification is applied). At the upper half of figure D-1, it is assumed that domestic outputs of commodity *i* produced by industry *j* are supplied based on a CRETH (i.e., constant ratios of elasticities of transformation, homothetic) specification.

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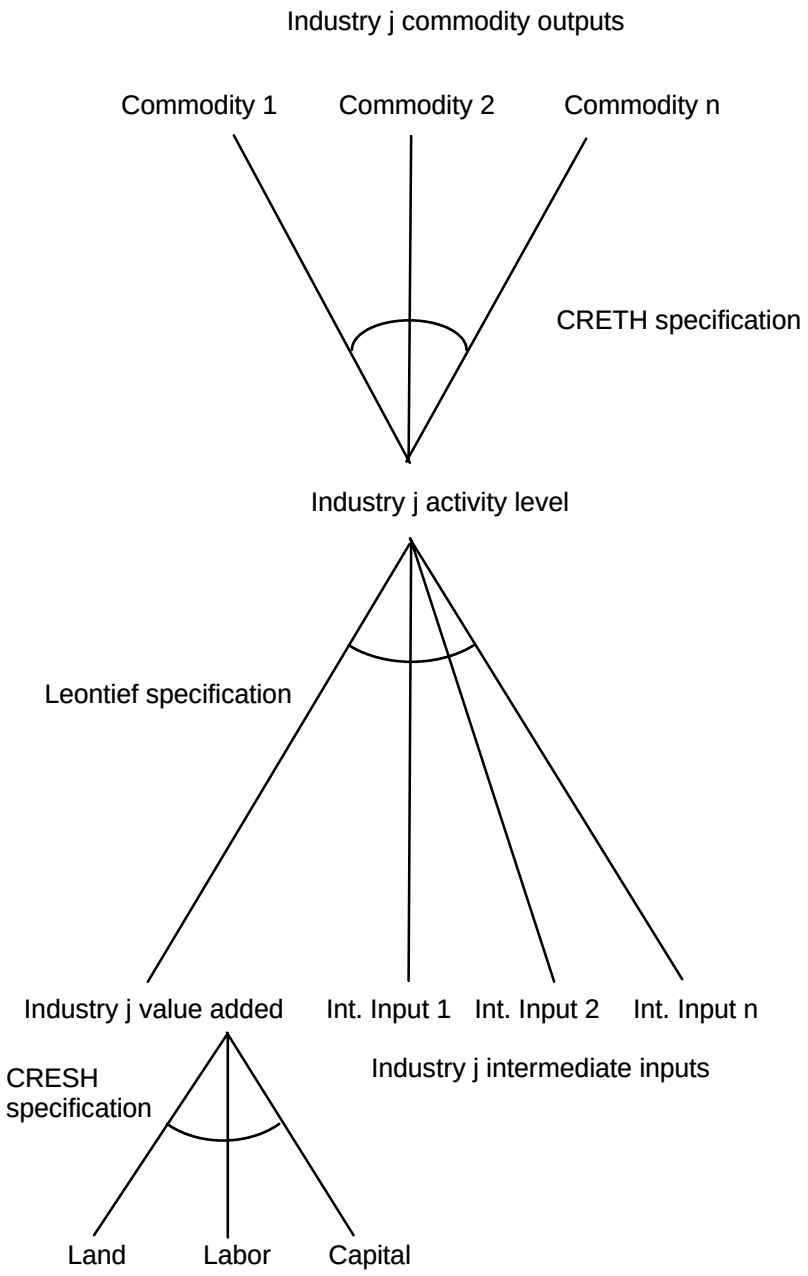
[11]—*Continued*

University Press, 1980), appendix. A.5 of K. Dervis, J. de Melo, and S. Robinson, *General Equilibrium Models for Development Policy* (Cambridge, England: Cambridge University Press, 1982); ch. 11 of E. Silberberg, *The Structure of Economics* (New York: McGraw-Hill, 1990);, and ch. 2 of J. W. Chung, *Utility and Production Functions: Theory and Applications* (Cambridge, MA: Blackwell Publishers, 1994).

[12] Homothetic preferences imply that the ratio of consumption of any two goods is the same for all income levels, i.e. the income expansion paths are linear and they pass through the origin; and the income elasticities are unitary (see Eugene Silberberg, 1978, *The Structure of Economics: A Mathematical Analysis*, McGraw-Hill, Inc.). Preferences that do not have this property are known as nonhomothetic preferences.

[13] Unlike current production, for capital creation there are no inputs of primary factors. The use of primary factors in capital creation is recognized via inputs of construction and other investment-related services.

Figure D-1
Production in the USAGE-ITC model



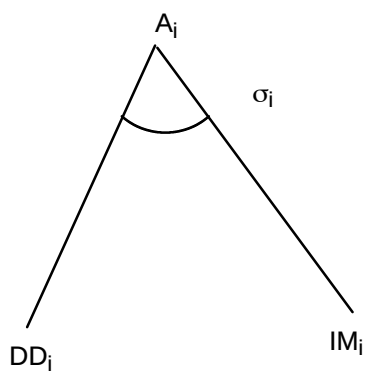
Factor Supplies

The primary factors of production–land, labor and capital–are assumed to be in fixed supply.

Trade Equilibrium

For each commodity in USAGE-ITC there is a distinction between two varieties. There is a domestic variety destined for domestic consumption (DD_i) and exports and a foreign variety (IM_i or imports) destined for domestic consumption.[14] In each case, the substitution possibilities between the two varieties (i.e., the degree of product differentiation) is specified with a CES (i.e., constant elasticity of substitution) substitution parameter, σ_i. Figure D-2 summarizes the structure of product differentiation which is popularly known as an Armington aggregation.[15] The resulting output is the composite commodity A_i, which is available for domestic absorption.[16]

Figure D-2
Commodity differentiation



[14] The treatment of traded goods follows J. de Melo and S. Robinson, "Product Differentiation and the Treatment of Foreign Trade in Computable General Equilibrium Models of Small Economies," *Journal of International Economics*, vol. 27, (Aug. 1989), pp. 489–97.

[15] This σ is often referred to as the "Armington" elasticity, see P. S. Armington, "A Theory of Demand for Products Distinguished by Place of Production," *IMF Staff Papers*, vol. 16, (Mar. 1969), pp. 159–76.

[16] Domestic absorption is the measure of both intermediate and final demand for a product.

Figure D-2 establishes the sources of import demand. The modeling of trade equilibrium is completed by defining constant elasticity export demand and import supply functions. By defining these functions, the model characterizes the rest of the world. Exports generate foreign exchange from the rest of the world and foreign exchange is used to purchase imports.

Significant Import Restraint Analysis with USAGE-ITC

The AGE analysis considers what would have happened to the U.S. economy in 2002 if significant U.S. import restraints were absent and in isolation from other factors that affect the economy. Since the analysis does not account for expected future changes in other factors, it is not a forecast. That is, the analysis does not consider what actually will happen if significant U.S. import restraints are removed. Rather, the analysis provides an assessment of the specific contributions of the removal of significant import restraints.

USAGE-ITC is calibrated to 2002 data with the significant import restraints in place.[17] Simulation of significant import restraint removal is accomplished by setting the relevant tariffs and/or the tariff-equivalents of quotas to zero and solving the model for new equilibrium prices and quantities. A comparison of the new equilibrium prices and quantities to the 2002 prices and quantities gives estimates of the economic effects of removing the significant import restraints.

The USAGE-ITC model is solved for 513 industries and 503 commodities and simulated effects are reported for certain sectors and commodities. To provide a summary of effects on the broad structure of the U.S. economy, effects are also reported for the following nine aggregates:[18]

1. Agriculture, forestry, and fishing;
2. Mining and mineral resources;
3. Construction;
4. Nondurable manufacturing;
5. Durable manufacturing;
6. Transportation, communication, and utilities;

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[17] Tariffs are taken from official statistics compiled by the U.S. Department of Commerce; the Commission estimated the tariff equivalents of quotas are estimated by USITC staff.

[18] The nine aggregates cover all 513 industries and 503 commodities in USAGE–ITC, i.e., the nine aggregates include the sectors with significant import restraints.

7. Wholesale and retail trade;
8. Finance, insurance, and real estate; and
9. Personal, business and public services.

The main outputs of the USAGE-ITC model are the equilibrium prices and quantities that it computes in solving its system of equations. The model also calculates a measure of the economic welfare change due to trade liberalization. Under the assumptions stated earlier, the change in real private consumption provides a valid measure of the welfare impact of the policy change.

USAGE-ITC Data and Parameters

The USAGE-ITC data are based on (i) 2002 national income and product accounts data provided by the Bureau of the Census, (ii) the 1992 BEA I-O accounts, and (ii) 1998 trade flows from the U.S. Department of Commerce.[19] The other major inputs into the USAGE-ITC model are the elasticity parameters discussed earlier.

A quantitative analysis of the removal of significant U.S. import restraints requires measures of the magnitudes of these restraints. Among these restraints, tariffs are readily quantifiable. For each sector, an average ad valorem rate is calculated using import data and estimated duties collected by the U.S. Treasury from official statistics of the U.S. Department of Commerce.

Although binding quotas and TRQs are difficult to model, one can estimate the tariff equivalent of a binding quota or TRQ, namely, a tariff equivalent that has the same effect on prices and quantities as the quota or TRQ.[20] The techniques used in this study to quantify the price gaps associated with a particular binding quota or TRQ are the price-gap method and an approach that makes use of license prices.[21]

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[19] For a complete discussion of the data see Dixon, P.B. and M.T. Rimmer (2001), "MONASH-USA: Creating a 1992 Benchmark Input-Output database," Centre of Policy Studies, Monash University, May; Dixon, P.B. and M.T. Rimmer (2003), "USAGE-ITC: Creating historical shocks for 1992 to 1998," Centre of Policy Studies, Monash University, June; and Dixon, P.B., M.T. Rimmer and M. Tsigas (2004), "Creating a USAGE-ITC database for 2002," Centre of Policy Studies, Monash University, February.

[20] If the over-quota import tariff rate of a TRQ is prohibitive, the over-quota rate cannot be used in the model because it would overstate the effects of the TRQ.

[21] These techniques are described in detail in USITC, *Economic Effects of Significant Import Restraints: Second Update 1999*, Investigation No. 332-325, publication 3201, May 1999, Import Restraints report Appendix F: Measures of Nontariff Barriers.

If the demand for imports is close to the trigger quantity that requires the over-quota duty rate, the economic agent who owns the right to trade at the in-quota tariff rate could earn rents by charging higher prices. Removal of the TRQ would then transfer rents from those agents to the users of the commodity in the form of lower prices. Market conditions, such as the degree of competition and market power, as well as the ownership of rights to trade at the in-quota tariff rate determine who earns economic rents.[22] Based on research findings and earlier USITC work, it is assumed that (i) rents due to the butter and cheese TRQs are shared equally between U.S. and foreign traders and that (ii) foreign traders capture TRQ rents due to all other TRQs.[23] The assumption that foreign traders capture some or all TRQ rents is implemented in the USAGE-ITC model as a tax levied by foreign governments on exports to the United States.[24] It is also assumed that U.S. import tariff rates are equal to those observed in 2002 trade statistics. The combined direct price impact of TRQ rents and the U.S. tariff rate is a price gap based on U.S. and world prices for 2002. The relationship between price gap, U.S. import tariff and TRQ rents is that (1+price gap/100) = (1+U.S. import tariff/100) x (1+rate of TRQ rents/100).

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[22] See Devry S. Boughner, Harry de Gorter, and Ian M. Sheldon, "The Economics of Two-Tier Tariff-Rate Import Quotas in Agriculture," *Agricultural and Resource Economics Review* 29/1, pp. 58-69, April 2000.

[23] USITC, *The Economic Effects of Significant U.S. Import Restraints, Second Update 1999*, Inv. No. 332-325, May 1999, pp. 52-53; USITC, *The Economic Effects of Significant U.S. Import Restraints, First Biannual Update*, Inv. No. 332-325, Dec. 1995, p. 4-9; E. Horning, R. N. Boisvert, and D. Blandford, "Explaining the Distribution of Quota Rents for U.S. Cheese Imports," *Australian Journal of Agricultural Economics*, Apr. 1990, pp.1-20; and E. Horning, R. N. Boisvert, and D. Blandford, "Quota Rents and Subsidies: The Case of U.S. Cheese Import Quotas," *European Review of Agricultural Economics*, 1990, pp. 421-34.

[24] See ch. 1 and appendix D for a discussion of the USAGE-ITC model.

The State-level Extension

The equations for the State-level extension of USAGE-ITC have the following general form:

$$var_R(r) = var + relavent_R(r) - \sum_{g \in REG} SHVAR(g) * relavent_R(g)$$

In the equation above,

var_R(r) is a regional variable;

var is the corresponding national variable, e.g. percentage change in intermediate demands;

relevant_R(r) is a regional variable that determines the gap between var_R(r) and var; and

SHVAR(g) is the share of region g in the national level of var, e.g. state shares in national output.

By using equations such as that above, it is ensured that the regional extension produces results that aggregate to those in the national model.

APPENDIX E
Quantification of Nontariff Barriers on Textile and Apparel Products

APPENDIX E
Quantification of Nontariff Barriers on Textile and Apparel Products

This appendix describes the methodology used to quantify the degree of restrictiveness of the quotas affecting textile and apparel products. In contrast to tariffs, these quotas are administered by the exporting countries and impose a cost on exporting firms that is analogous to an export tax. That is, in order to export, a firm in a quota-constrained country has to obtain or buy the right to use the quota (or an export license).[1] Accordingly, the restrictiveness of a quota is often measured in terms of its "export tax equivalent" (ETE). More restrictive quotas will lead to more valuable the export licenses, which in turn would produce higher ETEs. In what follows, the procedures used for estimating the ETEs used in the simulations exercise in Chapter 3 and Chapter 7 are presented.

ETEs for Suppliers with Available License Prices

The methodology chosen for this study relies mostly on license price data to measure the gap between actual production costs and free-on-board (f.o.b.) prices in the U.S. market. License price data were collected from various sources for nine suppliers (Bangladesh, Cambodia, China, Hong Kong, India, Indonesia, Macau, Pakistan, and Taiwan).[2] First, the 2002 quota prices for those suppliers were converted to an annual U.S. dollar by Square Meter Equivalent (SME) basis. Then, for each product (identified at the MFA quota category) and each supplier, estimated production costs, or supply price net

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[1] Even in countries where quotas are distributed without charge (e.g., through past–performance allocation), the system is still costly to exporters who must forgo the opportunity to sell the valuable quotas to other suppliers.

[2] Chinese license prices were obtained from www.chinaquota.com. Prices for Bangladesh, Hong Kong, Indonesia, and Macau were obtained from data compiled and listed on www.texwatch.com. Those for Cambodia and Taiwan were from home.kimo.com.tw/ctquota/english.htm. The quota prices for Pakistan were from *www.qsc.com.pk* and those for India were from garments.indiaexcite.com.

of rent, (C_{ij}) were approximated as the difference between the f.o.b export price to the U.S. market (P_{ij}) and the license price per unit (L_{ij}):[3]

$$C_{ij} = P_{ij} - L_{ij}$$

The ETEs for all products imported were then calculated simply as:

$$V_{ij} = L_{ij} / C_{ij}$$

Due to substantial level of product heterogeneity, the computed ETEs vary greatly across suppliers as well as across quota categories. For illustrative purpose, the weighted averages of the computed ETEs for the suppliers with available textiles and apparel license prices are reported in table E-1.

ETEs for Other Restrained Suppliers

Among the other textile and apparel suppliers to the United States that were subject to quotas in the year 2002, nineteen were identified as facing binding quota constraints (defined as having at least one quota category filled at more that 80 percent): Philippines (21 restrained categories), Sri Lanka (19), Thailand (16), Malaysia (14), Turkey (14), United Arab Emirates (4), Nepal (3), Romania (3), Burma (2), Korea (2), Oman (2), Poland (2), Qatar (2), Singapore (2), Brazil (1), Colombia (1), Guatemala (1), Mexico (1), and Ukraine (1).[4]

Given that no license prices were available for those suppliers, their ETEs were imputed from their observed f.o.b. price to the U.S. market. The approach adopted was to construct a range of possible production costs for the nineteen suppliers and use their observed f.o.b export price to the U.S. market to impute a range of possible license price. Using information from the nine suppliers with available license prices (L_{ij}) and choosing Hong Kong as the benchmark, a standard formulation in the literature is estimated:[5]

$$P_{ij} = a + b\, L_{ij} + c(P_{iHK} - L_{iHK})$$

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[3] F.O.B. unit values, measured in 2002 U.S. dollars, were used to proxy for price. They were calculated from U.S. import data provided by USDOC, Office of Textiles and Apparel (OTEXA), available on the internet at www.otexa.ita.doc.gov. The values and quantities of U.S. imports are reported on a "customs value" basis, and are equivalent to the f.o.b. designation for exports.

[4] Quota utilization rates were from Performance Report, OTEXA, USDOC, July 2003. The 2002 update of this study used 85 percent as the binding threshold. Adopting such a threshold (or even 90 percent) does not alter the composition of the other restrained suppliers.

[5] For more on the economic theory underlying this formulation, see chapter 15 of Kala Krishna and Ling Hui Tan, *Rags and Riches* (Ann Arbor: University of Michigan Press, 1998).

Table E-1
Weighted average ETEs for suppliers with available license prices, percent, 2002

Country	Apparel	Textiles
Bangladesh	21.56	0.00
Cambodia	3.87	0.00
China	19.74	9.74
Hong Kong	18.62	1.46
India	12.48	18.42
Indonesia	5.41	0.00
Macau	9.81	0.00
Pakistan	11.26	11.91
Taiwan	0.70	1.38

Source: USITC estimates.

where P_{iHK} and L_{iHK} are respectively the price and license for the Hong Kong's exports of good i to the U.S. market. The intuition behind this formulation is that for a given product, the production cost in supplier j (as approximated by P_{ij} - L_{ij}) is related to Hong Kong's cost (P_{iHK} - L_{iHK}) through the parameters a and c. In particular, a provides some general measures of the hidden costs of the quota allocation system in a given country, and c captures information about the relative productivity, (ratio of) labor share, and quality adjustment between Hong Kong and the given supplier. The parameter b is robustly estimated to be unity. Once a and c are estimated for each of the nine suppliers, a range of possible production costs can be constructed for all the relevant quota categories.[6] For illustrative purpose, table E-2 reports the median and the average of these "fitted" costs.

The next step is to estimate the license prices for the other nineteen suppliers in their respective restricted quota categories. For a given observed export price P_{ij} and an estimated range of costs, one can easily construct a range of imputed license prices for U.S. imports of product i from country j using:.

$$\hat{L}_{ij} = P_{ij} - \hat{C}_{ij}$$

[6] The estimated equation contained a quadratic expression of (P_{iHK}-L_{iHK}).

Table E-2
Median and average "fitted" costs for suppliers with license prices, Dollar per SME, 2002

Country	Median Costs	Average Costs
Bangladesh	1.04	1.92
Cambodia	1.39	2.91
China	1.63	3.22
Hong Kong	4.04	8.05
India	1.40	2.74
Indonesia	1.99	3.32
Macau	1.9	3.88
Pakistan	1.23	1.98
Taiwan	2.55	3.75

Source: USITC estimates.

Finally, the estimated ETE on U.S. imports of good *i* from country *j* was then calculated as:

$$\hat{v}_{ij} = \hat{L}_{ij} / \hat{C}_{ij}$$

Estimation of Average ETEs across All Suppliers

For each MFA category *i*, the average ETE facing all exporting countries is calculated simply as a weighted average given by:

$$\hat{V}_i = \Sigma_j \, (w_{ij} \cdot v_{ij})$$

where w_{ij} is country *j*'s share of U.S. imports of good *i*. The final step is to concord the ETEs calculated for each MFA category to the corresponding USDOC Bureau of Economic Analysis input-output category that is used in the simulation exercise. Table E-3 reports the results along with the import-weighted average tariff for the categories affected by import restraints.

Table E-3
Ranges of estimated ad valorem export tax equivalents (high and low) and import-weighted average tariffs, for textiles and apparel by sectors, percent, 2002

Sector	Export tax equivalents (ETEs) Low	High	Average tariff rates[1]
Broadwoven fabric mills and fabric finishing plants	4.75	4.78	7.86
Narrow fabric mills	0.01	0.01	4.18
Yarn mills and finishing of textiles, n.e.c.	0.33	0.54	4.81
Thread mills	1.97	1.97	7.08
Coated fabrics, not rubberized	0.05	0.05	2.22
Cordage and twine	0.28	0.28	3.10
Textile goods, n.e.c.	0.01	0.01	2.28
Women's hosiery, except socks	0.52	0.52	6.55
Hosiery, n.e.c.	0.81	0.81	9.38
Apparel made from purchased materials	6.97	12.88	10.88
Curtains and draperies	6.03	6.03	8.95
Housefurnishings, n.e.c.	12.32	12.57	6.26
Fabricated textile products, n.e.c.	0.96	0.96	2.43
Knit fabric mills	0.00	0.00	12.68
Canvas and related products	0.00	0.00	5.38
Pleating and stitching	0.00	0.00	4.79
Cellulosic manmade fibers	0.00	0.00	6.03

[1] Ad valorem equivalent.
Source: USITC estimates.