

Publication 4094

THE ECONOMIC EFFECTS OF SIGNIFICANT U.S. IMPORT RESTRAINTS

Sixth Update 2009

Investigation No. 332-325

United States
International Trade
Commission

August 2009

U.S. INTERNATIONAL TRADE COMMISSION

COMMISSIONERS

Shara L. Aranoff, Chairman
Daniel R. Pearson, Vice Chairman
Deanna Tanner Okun
Charlotte R. Lane
Irving A. Williamson
Dean A. Pinkert

Robert A. Rogowsky
Director of Operations

Robert B. Koopman
Director of Economics

**Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436**

THE ECONOMIC EFFECTS OF SIGNIFICANT U.S. IMPORT RESTRAINTS

Sixth Update 2009

Investigation No. 332-325

August 2009

Publication 4094

United States International Trade Commission

This report was prepared principally by

Office of Economics

William Deese, *Project Leader*

Alan K. Fox and Kyle Johnson,
Deputy Project Leaders

Robert Feinberg, Tani Fukui,
Jesse Mora, Chuma Onwuka, William M. Powers,
Alison Weingarden, and Edward Wilson

Office of Industries

Joanna Bonarriva, Andrea Boron, Jeffrey Clark,
John Fry, Erland Herfindahl,
Douglas Newman, and George Serletis

General Counsel

William Gearhart

Primary Reviewers

Marinos Tsigas and Heidi Colby-Oizumi

Office of Publishing

With Special Assistance from

Ashley Winston
Monash University

Under the direction of

Hugh M. Arce
Chief, Research Division, Office of Economics

Contents

Executive Summary	ix
Effects of Significant Import Restraints	x
Removal of All Significant Restraints	x
Effects of Sector-by-Sector Liberalization	xii
History of U.S. Trade Policy since 1934	xv
History of Trade Policy	xv
Economic Effects of Trade Liberalization	xvii
1 Introduction	1
Scope and Organization of the Report	2
Approach	5
Significant Import Restraints	5
History of U.S. Trade Policy since 1934	6
Bibliography	7
2 Significant Import Restraints	9
Removal of All Significant Restraints	11
Recent Performance of the U.S. Economy	11
Effects of Liberalization of All Significant Import Restraints	12
Sugar and Sugar-Containing Products	16
Nature of Trade Restraints	18
WTO Agreement on Agriculture TRQs	19
FTA TRQs	20
Restrictiveness of Trade Restraints	20
Effects of Liberalization	21
Ethyl Alcohol	24
Nature of Trade Restraints	24
Restrictiveness of Trade Restraints	27
Effects of Liberalization	28
Dairy Products	28
Nature and Restrictiveness of Trade Restraints	30

Effects of Liberalization	32
Tobacco and Tobacco Products	33
Nature and Restrictiveness of Trade Restraints	34
Effects of Liberalization	37
Canned Tuna	39
Nature and Restrictiveness of Trade Restraints	40
Effects of Liberalization	40
Textiles and Apparel	41
Nature of Trade Restraints	44
Tariffs	45
Preference Programs and Rules of Origin	45
Effects of Liberalization	47
Projected Industry Trends	47
Deviations from Projected Trends	47
Other Sectors with Significant Import Restraints	50
Bibliography	55
3 U.S. Trade Policy since 1934	59
Introduction	59
History of U.S. Trade Policy since 1934	62
The Reopening of Trade (1934–1941)	63
World War II and Postwar Liberalization (1941–1967)	67
Restructuring U.S. Trade Policy (1967–1989)	70
Voluntary Export Restraints	71
Trade Act of 1974	73
Generalized System of Preferences	75
Addressing Nontariff Measures	78
The WTO and the Proliferation of FTAs (since 1989)	80
Trade Agreements in North America	82
The Uruguay Round	83
The Doha Development Agenda	87
The Economic Effects of Trade Liberalization	89
Approaches in the Literature	91
Survey of Economic Literature	93
Early Literature	93
Tokyo Round and Computational Models	97
Recent Literature	102
Conclusion and Timeline	108
Timeline of Important U.S. Legislation and Related Events	109
Bibliography	115

A Request Letters	125
B Federal Register Notice	131
C Positions of Interested Parties	137
Introduction	139
American Sugar Alliance	139
Meat Importers Council of America	140
National Milk Producers Federation	141
Sweetener Users Association	142
U.S. Industrial Users Coalition	143
U.S. Association of Importers of Textiles and Apparel	144
Bibliography	146
D Calendar of Public Hearing	149
E The USITC Modeling Framework	153
Introduction	155
Overview of the USAGE-ITC Framework	155
Dynamic Mechanisms in the USAGE-ITC Model	157
Specification of the USAGE-ITC Model	158
Final Demand Behavior	158
Production Technology	159
Factor Supplies	160
Trade Equilibrium	160
Capital	162
Net Foreign Liabilities	163
Public Sector Debt	163
Wage Determination in Policy Runs	163
Significant Import Restraint Analysis with USAGE-ITC	164
USAGE-ITC Data and Parameters	165
Setting the Exogenous Variables in the Forecast Simulation	166
Macro Variables	167
Technology and Consumer Preferences, Exports and Imports	167
Import Prices	168
The Balance of Payments, and Foreign Assets and Liabilities	168
Detailed Baseline Projections and Simulation Results	170
Bibliography	191
F Trade Negotiation Tables	195

Tables

ES.1	Quantifiable significant U.S. import restraints, by sector, 2013	xi
ES.2	Projected welfare from liberalizing significant import restraints	xii
ES.3	All significant import restraints: simulation results, 2013	xiii
1.1	Quantifiable significant U.S. import restraints by sector, 2013	4
2.1	U.S. national economy, summary data, 2005–07	12
2.2	All significant import restraints: simulation results, 2013	15
2.3	Sugar: summary data and simulation results	22
2.4	Ethyl alcohol: summary data and simulation results	25
2.5	Dairy products: summary data and simulation results	29
2.6	Tobacco: summary data and simulation results	35
2.7	Tobacco: TRQ fill rates, allocation and imports	36
2.8	Canned tuna: summary data and simulation results	39
2.9	Textiles and apparel: summary data and simulation results	43
2.10	U.S. textiles and apparel imports by source, by value, percentage change, and share, 2005–07	44
2.11	Sectors with significant tariffs: summary data and simulation results	51
3.1	Trade-weighted average tariffs by selected regions and negotiating round	79
3.2	Free trade agreements, proposed and implemented	88
3.3	A sample of modeling assumptions and approaches	92
3.4	Pre-Tokyo Round studies	97
3.5	Tokyo Round studies	98
3.6	Imports affected by NTMs, 1966 and 1986	101
3.7	Uruguay Round studies	103
3.8	Doha Round studies	107

E.1	Shocked technology and preference variables in the 2005–13 forecast simulation	168
E.2	Employment in sugar: baseline and liberalization	171
E.3	Output of sugar: baseline and liberalization	171
E.4	Imports of sugar: baseline and liberalization	172
E.5	Exports of sugar: baseline and liberalization	172
E.6	Employment in ethyl alcohol: baseline and liberalization	173
E.7	Output of ethyl alcohol: baseline and liberalization	173
E.8	Imports of ethyl alcohol: baseline and liberalization	174
E.9	Exports of ethyl alcohol: baseline and liberalization	174
E.10	Employment in tuna: baseline and liberalization	175
E.11	Output of tuna: projected baseline and liberalization	175
E.12	Imports of tuna: baseline and liberalization	176
E.13	Exports of tuna: baseline and liberalization	176
E.14	Employment in dairy: baseline and liberalization	177
E.15	Output of dairy: baseline and liberalization	177
E.16	Imports of dairy: baseline and liberalization	178
E.17	Exports of dairy: baseline and liberalization	178
E.18	Employment in tobacco: baseline and liberalization	179
E.19	Output of tobacco: baseline and liberalization	179
E.20	Imports of tobacco: baseline and liberalization	180
E.21	Exports of tobacco: baseline and liberalization	180
E.22	Employment in textiles and apparel: baseline and liberalization	181
E.23	Output of textiles and apparel: baseline and liberalization	182
E.24	Imports of textiles and apparel: baseline and liberalization	183
E.25	Exports of textiles and apparel: baseline and liberalization	184
E.26	Employment in high tariff sectors: baseline and liberalization	185
E.27	Output of high tariff sectors: baseline and liberalization	186
E.28	Imports of high tariff sectors: baseline and liberalization	187
E.29	Exports of high tariff sectors: baseline and liberalization	188
E.30	Projected effect of liberalization of all significant import restraints	189
F.1	Selected U.S. free trade agreements	197
F.2	Summary of GATT rounds	198

Figures

2.1	Imports of sugar and ethyl alcohol, baseline and liberalization	23
2.2	Output of sugar and ethyl alcohol, baseline and liberalization	23
2.3	Renewable fuel standard, 2006–22	26
2.4	Imports of dairy, baseline and liberalization	32
2.5	Output of dairy, baseline and liberalization	33
2.6	Imports of tobacco and canned tuna, baseline and liberalization	38
2.7	Output of tobacco and canned tuna, baseline and liberalization	38
2.8	Output of textiles and apparel, baseline and liberalization	49
2.9	Imports of textiles and apparel, baseline and liberalization	50
2.10	Output of sectors with significant tariff restraints, baseline and liberalization	52
2.11	Imports of sectors with significant tariff restraints, baseline and liberalization	52
2.12	Output of footwear and leather products, baseline and liberalization	53
2.13	Imports of footwear and leather products, baseline and liberalization	53
3.1	U.S. real GDP and U.S. exports and imports as a share of GDP, 1930–2008	60
3.2	U.S. trade-weighted tariffs on dutiable imports and historical periods, 1930–2008	64
3.3	GATT round summary: number of signatories and weighted average tariff reductions	69
E.1	Production in the USAGE-ITC Model	161
E.2	Commodity differentiation and sourcing of imports . . .	162

Boxes

2.1	Estimated welfare gains in the <i>Import Restraints</i> series	10
2.2	U.S. services trade and import restrictions	13
3.1	Trade remedies	76
3.2	Channels of the effects of trade liberalization	94
3.3	Summary statistics for tariffs	96
3.4	Computable general equilibrium models	99

Executive Summary

This is the sixth update of *The Economic Effects of Significant U.S. Import Restraints*. During the almost 20 years since these studies began, tariffs and nontariff measures on imports have fallen, and trade has expanded markedly. Through the efforts of policymakers and trade negotiators that have pursued principles of openness over a number of years, the United States has become one of the world's most open economies. Most of the United States' top trading partners have also reduced tariffs. In addition to the analysis of significant import restraints, this report contains a concise summary of the history of U.S. trade policy since 1934.

The Commission estimates that U.S. economic welfare, as defined by total public and private consumption, would increase by about \$4.6 billion annually by 2013 if all significant restraints quantified in this report were unilaterally removed. Exports would expand by \$5.5 billion and imports by \$13.1 billion. These changes would result from removing tariffs and tariff-rate quotas (TRQs) in the following sectors: sugar, ethyl alcohol, canned tuna, dairy products, tobacco, textiles and apparel, and other manufacturing sectors.¹

A common although not universal aspect of liberalization is that specific groups, such as workers losing their jobs or communities where plants close, are more likely to bear the costs of adjustment, whereas the benefits of liberalization, such as lower prices and greater varieties of goods, accrue to the public at large. This report does not analyze the extent to which policy measures could facilitate the adjustment process or,

¹These include footwear and leather products; glass and glass products; watches, clocks, watch cases, and parts; ball and roller bearings; ceramic and floor tile; table and kitchenware; costume jewelry; pens, mechanical pencils, and parts; dehydrated fruits and vegetables; and cutlery and hand tools.

more generally, assist the economy to become more broadly competitive in a liberalization context. This report also does not address the effects, especially the employment effects, that would occur if other countries liberalized trade at the same time.

Effects of Significant Import Restraints

Although the weighted-average U.S. tariff on all goods fell to an historic low of about 1.3 percent in 2007, many restraints on trade remain. Table ES.1 shows the sectors that were identified as having significant restraints, their tariff levels, and their export tax equivalents (measures that summarize the restrictiveness of TRQs).² The sectors with the highest combined tariff levels and export tax equivalents (defined as the total price wedge) were butter, sugar, dry dairy products, and condensed and evaporated dairy products.

Removal of All Significant Restraints

As mentioned, simultaneous liberalization of all significant import restraints identified in this report is estimated to increase annual domestic welfare by \$4.6 billion by 2013 (table ES.2). The largest effect is in the textiles and apparel sector, in which consumers would benefit from lower-priced imports while previous industry contractions limit the effects felt by competing domestic producers.

For most liberalized sectors, prices faced by households and domestic producers would both fall. In response, imported quantities rise and domestic output falls (table ES.3). Exports in most liberalized sectors are expected to increase, although by a smaller proportion than the estimated increase in sectoral imports. Also, employment in the liberalized sectors typically declines. Total imports of all goods are estimated to expand by 0.4 percent, and total exports are estimated to expand by 0.3 percent (table ES.3).

²Similar to previous reports in the *Import Restraints* series, significant import restraints are considered to be tariffs that are at least one standard deviation greater than the mean duty on U.S. merchandise imports, binding TRQs, and requirements related to rules of origin in the textile sector.

TABLE ES.1 Quantifiable significant U.S. import restraints, by sector, 2013

Sector	Ad valorem equivalents (%)		
	U.S. import tariff	Export tax equivalent ^a	Rest-of-world total price wedge ^b
<i>Textile and apparel sectors</i>			
Yarn, thread, and fabric	3.8	0.0	3.8
Textile products	6.1	0.0	6.1
Apparel	9.8	0.0	9.8
<i>Agricultural sectors</i>			
Dairy	11.2	12.3	24.8
Butter	11.0	41.6	57.1
Cheese	8.8	0.9	9.7
Condensed and evaporated dairy products (except CMPP) ^c	19.9	17.3	40.6
Dry dairy products	10.9	33.7	48.4
Ice cream	5.2	3.6	9.0
Fluid milk	8.2	3.0	11.5
Sugar	0.6	47.5	48.4
Ethyl alcohol	4.7	0.0	4.7
Canned tuna	11.2	0.0	11.2
Tobacco	4.3	28.8	34.4
<i>Other manufacturing sectors</i>			
Ball and roller bearings	5.6	0.0	5.6
Ceramic wall and floor tile	5.9	0.0	5.9
Costume jewelry	5.9	0.0	5.9
Cutlery and hand tools	4.3	0.0	4.3
Footwear and leather products	10.0	0.0	10.0
Glass and glass products	4.0	0.0	4.0
Pens, mechanical pencils, and parts	4.8	0.0	4.8
Dehydrated fruits and vegetables	3.9	0.0	3.9
Table and kitchenware	4.6	0.0	4.6
Watches, clocks, watch cases, and parts	4.8	0.0	4.8

Source: Trade-weighted ad valorem tariff equivalents (calculated by dividing calculated duties by c.i.f. value for all imports in a given sector) are calculated from the USAGE model baseline for 2013, from U.S. Department of Commerce official statistics, and from U.S. trade agreements. Export tax equivalents are also calculated based on the USAGE model baseline and U.S. tariff-rate quota commitments.

^aThe export tax equivalent measures the degree to which tariff-rate quotas increase the export price of the commodity (i.e., the price before entry into the U.S. market). More restrictive tariff-rate quotas produce higher export tax equivalents.

^bThe total price wedge represents the combined effect of the U.S. import tariff and the rest-of-world export tax equivalent.

^c Concentrated milk protein products.

TABLE ES.2 Projected economic welfare changes from baseline projections resulting from the liberalization of significant import restraints, by sector, 2013

Sector	Change in economic welfare (millions of \$)
Simultaneous liberalization of all significant restraints	4,622
<i>Individual liberalization</i>	
Textiles and apparel	2,254
Dairy	733
Sugar	514
Ethyl alcohol	356
Footwear and leather products	325
Tobacco	99
Tuna	23
Costume jewelry	21
Ball and roller bearings	14
Pens, mechanical pencils, and parts	13
Cutlery and hand tools	13
Table and kitchenware	10
Watches, clocks, watch cases, and parts	7
Dehydrated fruit	4
Ceramic wall and floor tile	1
Glass and glass products	-1

Source: USITC estimates.

Table ES.3 also shows the effects of liberalization on nine broad sectors that constitute the entire U.S. economy. The two broad sectors characterized by the most significant tariffs, agriculture and nondurable manufacturing, are estimated to contract overall. Durable goods manufacturing; transportation, communications, and utilities; and wholesale trade are estimated to expand in response to liberalization.

Effects of Sector-by-Sector Liberalization

Liberalization was considered in each sector with significant restraints to identify the economic effects, including the welfare effects, and to estimate the upstream and downstream effects. A summary of the key results for each sector is provided below.

Textiles and apparel Liberalization of the textile and apparel subsectors increases welfare by approximately \$2.3 billion. Liberalization causes declines from 10–11 percent in domestic shipments and

TABLE ES.3 Elimination of all significant import restraints: effect on liberalized sectors and broad sectors of the economy, percent, 2013

Sector	Employment	Output	Imports	Exports
Entire economy	0.0	(+)	0.4	0.3
<i>Liberalized sectors</i>				
<i>Food and agriculture</i>				
Sugar	-7.5	0.6	93.2	66.7
Dairy	-1.9	-2.2	77.6	30.2
Ethyl alcohol	-2.2	-2.3	198.0	—
Tuna	-4.5	-9.7	6.3	19.7
Tobacco	-0.5	-0.4	28.8	4.9
<i>All textiles and apparel</i>				
Yarn, thread, and fabric	-11.0	-10.0	0.1	-43.6
Textile products	-1.6	-1.3	2.1	-4.2
Apparel	-11.1	-11.1	2.4	-69.1
<i>Other manufacturing sectors</i>				
Ball and roller bearings	-4.3	-4.3	9.5	0.8
Ceramic wall and floor tile	-4.5	-4.5	2.0	0.6
Costume jewelry	-2.5	-2.4	4.6	1.2
Cutlery and hand tools	-0.8	-1.0	3.7	0.7
Dehydrated fruits, vegetables, soups	0.7	0.7	13.3	10.2
Footwear and leather products	-1.2	-1.2	3.8	0.9
Glass and glass products	-0.1	(-)	5.4	4.8
Pens, mechanical pencils, and parts	-1.9	-1.8	3.7	1.6
Table and kitchenware	-1.9	-1.8	2.3	0.7
Watches, clocks, watch cases, and parts	0.8	0.9	2.0	3.3
<i>Broad sectors</i>				
Agriculture, forestry, and fisheries	-0.1	-0.2	-0.1	1.5
Mining	(+)	(+)	(-)	0.5
Construction	(+)	(+)	—	1.6
Nondurable manufacturing	-0.4	-0.4	1.7	-1.4
Durable manufacturing	0.1	0.1	0.1	0.7
Transportation, communications, and utilities	0.1	0.1	0.4	0.9
Wholesale trade	0.2	0.2	—	-1.1
Finance, insurance, and real estate	(-)	(-)	(-)	0.5
Government and other services	(-)	(+)	(-)	0.6

Source: USITC estimates.

Note: The symbols (+) and (-) denote small positive and negative changes with magnitudes below 0.05 percent. The symbol — denotes that the value is not applicable.

employment in yarn, thread, and fabric and apparel. Exports, production, and employment in apparel (cut pieces), yarn, thread, knit fabric, and broadwoven fabric decline considerably as a result of liberalization, which includes elimination of rule-of-origin-based requirements for U.S. inputs. Domestic prices of these goods also decrease, leading to increased U.S. competitiveness in the global economy and a slight mitigation of the decline in U.S. exports caused by the elimination of rule-of-origin requirements. Effects on the textile products category are smaller.

Dairy Removing tariffs and TRQs on imports of dairy products is estimated to increase U.S. welfare by approximately \$733 million. Shipments of butter and dry and condensed dairy products are estimated to decline by 10–11 percent. Shipments of cheese, fluid milk and cream, and ice cream decline by less than 1 percent. The value of imports of butter and dry and condensed dairy products more than doubles, with the other dairy subsectors experiencing smaller increases in imports.

Sugar Removing tariffs and TRQs on imports of raw and refined sugar is estimated to increase welfare by about \$514 million. Employment and production changes in the liberalized sugar subsectors are mixed. The removal of U.S. TRQs on raw and refined sugar results in price declines throughout the industry. Shipments of raw cane sugar and refined beet sugar decline 32 and 10 percent, respectively. Cane refiners benefit from the drop in raw cane sugar prices and increase shipments by 14 percent. Confectioners benefit from the decline in refined sugar prices and increase production and exports.

Ethyl alcohol Liberalization of ethyl alcohol would increase welfare by \$356 million. The effects on industry output and employment are minimal, with each declining by 2 percent. The value of imports increases by 183 percent.

Tobacco Elimination of tariffs and TRQs on cigarettes and tobacco is estimated to increase welfare by about \$99 million. Shipments and employment in tobacco are estimated to decline by 4–5 percent. Because tobacco is a major input into the

production of cigarettes, shipments and employment in the cigarette industry increase, but by less than 1 percent.

Canned tuna Tuna liberalization would increase welfare in the United States by about \$23 million. Shipments of canned tuna output are expected to decline by about 10 percent as a result of liberalization. Employment in the broader canned fish industry falls by 5 percent.

Other high-tariff sectors Ten other sector groupings are identified as subject to relatively high tariffs. The welfare effects of liberalization are estimated to range from a potential gain of about \$325 million for footwear and leather products to a potential loss of approximately \$1 million for glass. Most sectors are expected to experience increased imports, increased exports, and lower consumer prices.

History of U.S. Trade Policy since 1934

In the early 1930s, the United States was a relatively closed economy, with exports and imports each accounting for less than 5 percent of gross domestic product. Chapter 3 describes how the United States transformed itself into one of the most open economies in the world. It then concludes with an overview of the quantitative and related literature on the economic effects of trade liberalization. Virtually all quantitative assessments suggest that the United States has benefited from trade liberalization, but estimates vary in magnitude.

History of Trade Policy

U.S. trade policy has evolved significantly during the 75 years covered in this chapter. The weighted average tariff on all imports fell from about 18.4 percent in 1934 to approximately 1.3 percent in 2007, and many nontariff measures, particularly in textiles and apparel, have been eliminated. As GDP steadily increased over these years, exports and imports as a share of GDP also grew. The General Agreement on Tariffs and Trade (GATT), an international framework for mutually agreed trade rules and multilateral trade negotiation, was established and maintained for

many years. Through this process, the World Trade Organization (WTO) was formed, and several landmark agreements were reached.

The discussion of the 75-year history of U.S. trade policy is organized into four distinct periods based on the types of policy actions that were dominant during each timeframe. The first period, characterized by reopening trade (1934–41), begins with the passage of the Reciprocal Trade Agreements Act of 1934. This act is noteworthy because it overturned many highly restrictive policies of the Tariff Act of 1930 (often called the Smoot-Hawley Act) and laid the groundwork for a number of bilateral agreements.

The second period is World War II and post-war liberalization (1941–67). As the limits of the bilateral approach became apparent, a series of multilateral negotiations, or “rounds,” began under the GATT. The GATT negotiations, the first of which was held in Geneva (April–October 1947), set the stage for multilateral trade negotiations for the next 50 years. The Trade Expansion Act of 1962 authorized the President to negotiate across-the-board tariff cuts and established the Trade Adjustment Assistance Program, although this program was ineffective in its initial form.

During the third period of restructuring trade policy (1967–89), countries continued to recover from World War II, and European and Japanese firms became better able to compete with U.S. firms. As a result, domestic opposition to opening trade grew, although some continued to support liberalization. Out of the mix of views, several agreements involving voluntary export restraints emerged. The Long-Term Arrangement on Cotton Textiles was established in 1962 and was succeeded by the Multifiber Arrangement in 1974; both agreements restricted trade in textiles and apparel. The Trade Act of 1974 was in a similar spirit; it addressed the need to negotiate nontariff restraints on trade and also made the trade remedy laws more effective.

The fourth period (since 1989) was characterized by the U.S. role in the establishment of the WTO and by the proliferation of free trade agreements. The scope of trade negotiations expanded to include sensitive and technically difficult areas, including trade in services and nontariff measures. The United States signed the North American Free Trade Agreement (NAFTA) with Canada and Mexico. The Uruguay Round negotiations under the GATT concluded with the establishment of the WTO. An outcome of these negotiations was the Agreement on Textiles and Clothing (ATC), which phased out quotas on textiles and clothing

by 2005. Other landmark agreements included the General Agreement on Trade in Services (GATS), the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), and the Agreement on Trade-Related Investment Measures (TRIMs). The United States also signed a number of bilateral free trade agreements during this time. Multilateral negotiations under the current Doha Round of negotiations are presently at a standstill. Developing countries are playing a more prominent role, and disagreements remain over various issues, including agricultural tariffs and domestic support programs, nonagricultural market access, and barriers to trade in services.

Economic Effects of Trade Liberalization

Estimates of the welfare effects of liberalization vary greatly, from a fraction of a percent of GDP to as much as 13 percent. The broad range reflects the variety of modeling assumptions and approaches, and most estimates have been at the low end of this range. Approaches also vary by time period. Large computer models were first used in the 1970s, for example, and the welfare gains estimated by these models were relatively small—typically less than 1 percent of GDP. Recent modeling efforts have expanded into new areas, such as trade in services and nontariff measures, and some show larger effects from trade liberalization. However, the removal of nontariff measures in a model is not as straightforward as the removal of tariffs, and concerns exist over availability of reliable data and modeling approaches. Different types of models have been developed; some assume that firms have increasing returns to scale or that consumers are motivated to purchase an increasing variety of similar goods. Some of these studies show larger gains to trade liberalization than the earlier models, but most projected gains remain below 1 percent of GDP.

Chapter 1

Introduction

This is the sixth update in the series of reports entitled *The Economic Effects of Significant U.S. Import Restraints*.¹ During the nearly 20 years since the USITC began these studies, the weighted-average tariff on total U.S. imports fell from 3.4 percent in 1989 to approximately 1.3 percent in 2007; many nontariff measures have been eliminated, particularly in textiles and apparel; and trade (imports plus exports) as a share of GDP increased from 15 percent to 23 percent. These changes largely resulted from trade liberalization over this period and over the past 75 years. In addition to updating the analysis of significant import restraints, this report includes a review of this recent history of U.S. trade policy and its effects on the U.S. economy. The principal conclusion of this update is that annual welfare in the United States, defined as total private and public consumption, would increase by \$4.6 billion in 2013 if the significant restraints on U.S. imports were removed, according to estimates in this report.

¹The United States Trade Representative (USTR) originally requested this series of reports in May 1992. In August 2008, the USTR, in addition to requesting a sixth update of this report, requested a review of U.S. trade policy since 1934. See app. A for facsimiles of both the 1992 and 2008 request letters. Prior to this series of investigations, the USITC conducted a similar study in three phases for the U.S. Senate Committee on Finance during 1989–91.

Scope and Organization of the Report

Chapter 2 provides an updated quantitative assessment of the economic effects of significant U.S. import restraints on U.S. consumption, production, income, employment, trade, and welfare using the Commission's computable general equilibrium model USAGE.² An initial step in the quantitative analysis is defining which import restraints are significant. As requested in the original letter, all import restraints are initially considered except those originating from antidumping or countervailing duty investigations, section 337 or 406 investigations, or section 301 actions. The focus in this report is on measures that are applied at the border, such as tariffs and tariff-rate quotas. Liberalization of the service sectors is not addressed.³ Although the trade-weighted average tariff on total U.S. imports was just under 1.35 percent in 2007 (down from 1.40 percent in 2005), some products still have significant tariffs. Similar to prior reports in the import restraints series, tariffs are considered to be a significant import restraint if they exceed the mean duty on U.S. imports by at least one standard deviation.⁴ Additionally, the following sectors were considered to have significant restraints because of tariff-rate quotas (TRQs): dairy, ethyl alcohol (ethanol), sugar, tobacco, and canned tuna.⁵ Some commodities with TRQs have associated domestic-support

²The U.S. applied general equilibrium (USAGE) model is discussed in more detail in the next section.

³Some previous studies in the *Import Restraints* series have qualitatively addressed limitations to trade in services (e.g., restrictions on transport services) but have not quantitatively analyzed these limitations in a computable general equilibrium (CGE) model. Restrictions to trade in services tend to be nontariff measures, which are conceptually more difficult to quantify. Researchers have begun to model trade in services and broader "behind-the-border" issues in CGE models, as reported in chapter 3 of this report. As discussed there, some studies show large gains from liberalization of services and nontariff measures, but the results are highly variable, as these measures are inherently more difficult to specify. Many researchers have the view that addressing services and the broader effects of trade in CGE models remains problematical or speculative. See, e.g., Ackerman, "The Shrinking Gains from Trade," October 2005, 1. Box 2.1 provides an overview of issues involving trade in services.

⁴The standard deviation is 2.79 percent; therefore sectors with tariffs over 4.14 percent were considered significant, except that lubricating oils and grease and nonferrous forgings, which qualified on the basis of their tariffs, were eliminated because of very low trade flows and the absence of any other measures that would have restricted their trade. The USAGE model divides the U.S. economy into 535 industries that produce 539 goods and services.

⁵Although the TRQ for beef has been binding at times for a couple of countries, it has not generally been binding on most countries in recent years and is not considered in this report. Fill rates for the cotton and peanut TRQs are low and are not binding. As in the

programs, and the liberalization scenario assumes that these programs are eliminated and that domestic prices for these commodities become equal to world prices.⁶ Requirements related to rules of origin for the textiles and apparel sector also were considered to be a significant constraint.

Table 1.1 presents the commodities that were identified as having significant restraints and summarizes the restrictiveness of the restraints. Apparel, dairy, canned tuna, and footwear have the highest tariffs. The textile products and apparel sectors and most sectors with TRQs also have significantly high tariffs. A TRQ imposes a cost on exporters to the United States that is analogous to an export tax, and a common way to measure the restrictiveness of a TRQ is to compute its export tax equivalent (ETE), which measures the degree to which the TRQ raises the export price of the commodity to the U.S. market.⁷ TRQs in the sugar and tobacco sectors are particularly restrictive as shown in table 1.1.

Chapter 3 provides a concise summary of the history of U.S. trade policy since 1934 and a review of the literature on the economic effects of these policies. The year 1934 was chosen as a starting point because Congress passed the original Reciprocal Trade Agreements Act (RTAA) that year. This act marked a turning point in trade, following a series of highly restrictive measures such as the Tariff Act of 1930 (so-called Smoot-Hawley Tariff Act). The literature review begins by laying out the trade landscape as formed by events prior to 1934 and follows the ups and downs in the evolution of trade policy to the present day. In a separate section, the report provides a summary of economic theory that explores the links between trade and its effects on economic well-being; a summary of the quantitative literature on U.S. trade policies is also presented.

fifth update, these restraints were not considered to be significant. USITC, *The Economic Effects of Significant U.S. Import Restraints: Fifth Update*, 2007.

⁶Otherwise, domestic price supports would become very expensive for the government.

⁷Before the USAGE model was able to handle TRQs explicitly, ETEs were computed and added to the tariff to create the total price wedge (last column of table 1.1) that was removed in the policy simulation. TRQs are now modeled based on their within-quota and over-quota tariffs and fill rates, and the ETEs are not used. They are shown here, however, because they are a convenient summary indicator of the restrictiveness of a sector.

TABLE 1.1 Quantifiable significant U.S. import restraints by sector, 2013

Sector	Ad valorem equivalents (%)		
	U.S. import tariff	Export tax equivalent ^a	Rest-of-world total price wedge ^b
<i>Textile and apparel sectors</i>			
Textile mill goods	3.8	0.0	3.8
Textile products	6.1	0.0	6.1
Apparel	9.8	0.0	9.8
<i>Agricultural sectors</i>			
Dairy	11.2	12.3	24.8
Sugar	0.6	47.5	48.4
Ethyl alcohol	4.7	0.0	4.7
Canned tuna	11.2	0.0	11.2
Tobacco	4.3	28.8	34.4
<i>Other manufacturing sectors</i>			
Ball and roller bearings	5.6	0.0	5.6
Ceramic wall and floor tile	5.9	0.0	5.9
Costume jewelry	5.9	0.0	5.9
Cutlery and hand tools	4.3	0.0	4.3
Footwear and leather products	10.0	0.0	10.0
Glass and glass products	4.0	0.0	4.0
Pens, mechanical pencils, and parts	4.8	0.0	4.8
Dehydrated fruits and vegetables	3.9	0.0	3.9
Table and kitchenware	4.6	0.0	4.6
Watches, clocks, watch cases, and parts	4.8	0.0	4.8

Sources: Trade-weighted ad valorem tariff equivalents (calculated by dividing calculated duties by c.i.f. value for all imports in a given sector) are calculated from the USAGE model baseline for 2013, from U.S. Department of Commerce official statistics, and from U.S. trade agreements. Export tax equivalents are also calculated based on the USAGE model baseline and U.S. tariff-rate quota commitments.

^aThe export tax equivalent measures the degree to which tariff-rate quotas increase the export price of the commodity (i.e., the price before entry into the U.S. market). More restrictive tariff-rate quotas produce higher export tax equivalents.

^bThe total price wedge represents the combined effect of the U.S. import tariff and the rest-of-world export tax equivalent.

Approach

Significant Import Restraints

Chapter 2 provides background on the sectors identified as having significant limits on trade and discusses the nature and restrictiveness of the restraints. The information includes data on production, employment, and trade and identifies any important policy changes. These data originate primarily from other government agencies such as the U.S. Department of Agriculture and the U.S. Department of Commerce. Additional information was obtained at a Commission hearing and through written submissions of interested parties.⁸

The USAGE model provides a depiction of the U.S. economy projected to 2013. This is based on the assumption that current U.S. trade policies continue in place (including any phase-outs of import restrictions previously agreed to); this projection is called the baseline. Known factors that affect the U.S. economy, such as the current financial downturn, are incorporated into the baseline. Then the economy depicted by the baseline is modified to remove only the significant U.S. import restraints. Both an economy-wide simulation that simultaneously removes all significant import restraints and simulations that remove the restraints sector by sector are run. The results of this study are then presented in the form of comparisons between the baseline and the policy simulations.

The USAGE model is a dynamic computable general equilibrium model of the U.S. economy.⁹ Production is divided into 535 industries that produce goods and services. The model shows the linkages among these producing sectors, consumers, the government, and foreign sectors. The detailed linkages among different sectors of the economy enable the USITC to analyze how changes in trade policy have different interrelated effects on various parts of the economy. Policy measures, such as the tariffs to be removed, are based on 2007 data. The USAGE model is dynamic, and capital stocks are allowed to adjust in response to changes in trade policy.

⁸A *Federal Register* notice (app. B) announced that the Commission was beginning to update the report and that a public hearing was scheduled for January 8, 2009. Positions of the parties that provided testimony or written submissions are summarized in app. C. The calendar of the public hearing is shown in app. D.

⁹Box 3.4 provides a brief explanation of computable general equilibrium models while app. E contains a full account of the model. Data are from 2005 national income and product accounts and 1992 and 1997 input-output tables, all published by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce.

The 2013 projection is based on forecasts of GDP and other macro-economic and sector-specific variables from other government agencies, including the Congressional Budget Office, Department of Agriculture, Department of Energy, and Department of Commerce. The USAGE model enforces microeconomic principles in a consistent way across all sectors, so that final projections produced by the model may not match those that were input from other agencies. The foreign sector, which buys exports and sells imports, is divided into 27 distinct regions or countries.¹⁰ This grouping, which is based on countries or regions with free trade agreements, preferential trade arrangements, or some special trade characteristic, facilitates the analysis of trade policies. TRQs in a number of sectors, including dairy products, ethyl alcohol, sugar, and tobacco, are fully modeled with over-quota and within-quota tariff rates and quota fill rates.

History of U.S. Trade Policy since 1934

Chapter 3 presents a review of the professional economic literature. It describes how the United States transformed itself from a country with very high tariffs and little trade into one of the most open countries in the world with respect to trade. This story, which is known to few outside of the trade community, took place over nearly three-quarters of a century and involved the work of both Democratic and Republican administrations. First, the history of U.S. trade policy since 1934, including key changes in the international arena that affected the United States, is summarized. Next, an overview of the quantitative and related literature on the economic effects of trade liberalization is presented. Chapter 3 also includes a timeline that shows important legislation, policy changes, and related events.

¹⁰These include the ATPA countries, Australia, Bahrain, Brazil, CAFTA-DR, CBERA, CBERA plus CBTPA, Canada, Chile, China, Colombia, the EU, GSP countries, GSP countries in AGOA, least developed GSP countries, least developed GSP countries in AGOA, Israel, Japan, Jordan, Korea, Mexico, Morocco, Oman, Panama, Peru, Singapore, and the rest of the world.

Bibliography

Ackerman, Frank. "The Shrinking Gains from Trade: A Critical Assessment of Doha Round Projections." Global Development and Environment Institute Working Paper 05-01, October 2005.

U.S. International Trade Commission (USITC). *The Economic Effects of Significant U.S. Import Restraints: Fifth Update 2007*, USITC Publication 3906. Washington, D.C.: USITC, 2007.

Chapter 2

Significant Import Restraints

Removing the barriers to trade identified in this report is expected to increase domestic welfare, exports, and imports. This chapter provides details on the effects of removing significant U.S. import restraints. It is organized by industrial sectors with significant restraints and includes a section on the simultaneous removal of all significant import restraints.¹ Each section describes a sector, analyzes the restrictions, and assesses the economic impact of removing only its restrictions. As mentioned in chapter 1, the USITC has been preparing these reports for almost 20 years, and box 2.1 recalls the main results from these studies.

To understand the effects of trade liberalization on individual sectors, it is helpful to understand the typical adjustment process that results from removing an import restraint. When a measure such as a tariff or a TRQ is removed, the landed duty-paid price of the affected U.S. import declines. The decline in the import price is related to the restrictiveness of the trade measure, with the removal of more restrictive measures inducing larger declines. To compete with lower-priced imports, U.S. producers of similar commodities reduce their prices. Therefore, these U.S. producers supply less to the domestic market, and output and employment decline in these industries. U.S. consumption of the liberalized good increases because prices of both the imported and domestic goods have fallen. Consumers benefit because they can continue to purchase the same quantity of the

¹Simultaneous removal of all significant restraints, which is not synonymous with complete liberalization, refers to the removal of ROOs related to textiles and apparel, binding TRQs, and tariffs greater than 4.14 percent (or one standard deviation above the mean tariff) on U.S. merchandise imports as explained in chapter 1.

BOX 2.1 Estimated welfare gains in the *Import Restraints* series

The first USITC report under the *Import Restraints* series was published in 1993. These studies have consistently estimated that trade liberalization yields net welfare gains, although the gains from liberalization have diminished since this work began as shown in the table below. The table shows that the mean trade-weighted tariffs on total U.S. imports of commodities were fairly low in the 1990s and have since decreased further. It also shows that the estimated single-year benefits from removing significant import restraints have been less than 1 percent of GDP since these studies began and that welfare benefits as a share of GDP have decreased since the 1990s. The modest rise in estimated welfare gain from 0.018 percent of GDP in the fifth update to 0.019 percent in this update is due to a projected increase in the degree of binding of certain TRQs between 2011 and 2013, the end years of the two studies.

Estimated welfare gains from *The Economic Effects of Significant U.S. Import Restraints*

Report	Year modeled	Average tariff ^a	Estimated annual welfare gain	
		%	Billions of 2005 \$	% of GDP
Original (1993)	1991	3.4	25.4	0.424
First update (1995)	1993	3.2	19.8	0.298
Second update (1999)	1996	2.3	15.4	0.197
Third update (2002)	1999	1.7	16.6	0.179
Fourth update (2004)	2002	1.7	15.3	0.146
Fifth update ^b (2007)	2011	1.4	3.1	0.018
Sixth update ^c (2009)	2013	1.3	3.7	0.019

Sources: Previous reports of *The Economic Effects of Significant U.S. Import Restraints* and USITC estimates. Price indexes for GDP are from DOC, BEA.

^aThe tariff is the mean trade-weighted tariff on merchandise.

^bIn the fifth update, the dynamic model was used for the first time, and the economy was projected to 2011. The estimated welfare gain is for 2011.

^cIn the sixth update, the dynamic model was used, and the economy was projected to 2013. The estimated welfare gain is for 2013.

good under consideration at a lower price and have funds remaining for additional uses. Producers who use the product as an input become more competitive in both domestic and foreign markets. Remaining U.S. producers of the liberalized good become more competitive in the world economy and increase sales of exports. In this adjustment process, the gains typically outweigh the costs, although there are distributional effects. For example, workers employed in import-competing industries face the prospect of job loss and depressed wages. Households broadly benefit from lower-cost consumption, but not every household gains. Those facing dislocation bear greater costs, barring any special assistance that they may receive. The same holds for capital owners in different sectors of the economy.

As previously mentioned, the dynamic USAGE model is first used to simulate a baseline that shows the likely changes to each sector in 2013 if current policies and known trends continue. Another simulation is then performed in which the restraints on imports are removed. The results of the liberalization are then presented as deviations from the baseline in 2013. Generally by 2013, the adjustment process described in the previous paragraph will have run its course, with some businesses having expanded and others having contracted.

Removal of All Significant Restraints

Recent Performance of the U.S. Economy

The U.S. economy performed solidly during 2005–07 with real GDP increasing by a total of 4.9 percent (table 2.1).² The number of employees on nonfarm payrolls, a broad indicator of employment, rose 2.9 percent during this period, and monthly unemployment figures were generally below 5 percent.³ Although export levels were only about half the level of imports, the real value of exports increased 22.8 percent during 2005–07, compared with a 9.8 percent increase for imports. Factors that contributed to U.S. export growth included rising foreign incomes, generally low transport and communication costs, and favorable exchange

²The housing market contraction worsened during the summer of 2007. Council of Economic Advisers, *Economic Report of the President* February 2008, 19. The broader downturn in financial markets began in 2008.

³USDOL, BLS, “Labor Force Statistics,” undated (accessed May 5, 2009).

TABLE 2.1 U.S. national economy, summary data, 2005–07

Item	2005	2006	2007
GDP (billions of real \$)	12,422	12,767	13,026
Employees on nonfarm payrolls (thousands)	133,703	136,086	137,598
Imports (c.i.f., billions of real \$)	1,723	1,849	1,892
Exports (f.a.s., billions of real \$)	804	900	987

Sources: GDP is from USDOC, BEA, *National Economic Accounts*; employment data are from the USDOC, BLS, *Current Employment Statistics*; and trade data are from USDOC and the USITC.

Note: The base year is 2005. Real values were calculated using the GDP chain-type deflator (USDOC, BEA).

rates. Also, the United States remained committed to open trade and investment policies during the period, and tariffs in foreign markets were somewhat lower. The growth in U.S. exports accounted for about a third of U.S. GDP growth during 2006–07.⁴ Besides being the world’s largest importer, the United States was the world’s largest exporter of goods and services in 2006.⁵ It was the largest exporter of services and the second largest exporter of goods behind Germany. Trade in services, and particularly restrictions on trade in services, are difficult to quantify. The analysis presented in this report does not address the effects of removing restrictions on trade in services, but box 2.2 provides an overview of trade in services and associated import restrictions.

Effects of Liberalization of All Significant Import Restraints

The baseline simulation of the U.S. economy projects that the economy will continue to grow. According to the simulation, output, imports, and exports will grow by 25, 40, and 54 percent, respectively, between 2005 and 2013. Relative to this baseline, simultaneous liberalization of all significant import restraints and requirements based on rules of origin (ROOs) for apparel (discussed below) is expected to yield an increase in domestic welfare of \$4.6 billion, growth in exports of \$5.5 billion, and growth in imports of \$13.1 billion. Table 2.2 reports the estimated effects of removing all significant U.S. import restraints identified in this chapter on the entire U.S. economy and nine broad sectors. Detailed

⁴Council of Economic Advisers, *Economic Report of the President*, February 2008, 80–88.

⁵*Ibid.*, 20.

BOX 2.2 U.S. services trade and import restrictions

The United States is the world's largest services market, the biggest importer and exporter of services, and maintains the greatest services trade surplus.^a In 2007, services accounted for 79 percent of both U.S. gross domestic product (GDP) and employment.^b Additionally, the United States has one of the most liberalized services trade regimes, ranking sixth out of 148 countries in the World Bank's GATS commitment index.^c Nevertheless, the United States does maintain some significant services import restraints, particularly in transportation services.

The Merchant Marine Act of 1920, also known as the Jones Act, stipulates that only ships that are built in the United States and that are owned and staffed by U.S. citizens, may engage in domestic maritime shipping, also known as cabotage.^d While it is common practice for countries to restrict foreign participation in cabotage, few countries require domestically built vessels to be used.^e The United States reserves domestic air travel for U.S. majority-owned airlines. Additionally, the United States prohibits domestic airlines from leasing foreign aircraft and crew.^f Similarly, foreign trucking fleets are prohibited from cabotage, but Canadian trucks are allowed to provide cross-border trucking services. Mexican trucks, however, are prohibited from operating in the United States, outside of a narrow border zone. A pilot program that allowed a fixed number of Mexican trucks to provide cross-border trucking services throughout the United States was suspended in March 2009.^g

Exports, imports, and trade balances in U.S. private services, 2005–07

Item	2005	2006	2007
	Millions of \$		
Exports	368,496	415,321	479,980
Travel	81,799	85,720	96,712
Passenger fares	20,970	22,036	25,586
Imports	279,486	313,865	341,126
Travel	68,970	72,104	76,167
Passenger fares	26,149	27,501	28,486
Trade balance	89,010	101,456	138,854

Source: USDOC, BEA, "U.S. International Services: Cross-Border Trade 1986–2007, and Services Supplied Through Affiliates, 1986–2006," Table 1 (accessed March 17, 2009).

^aWTO, *International Trade Statistics 2008* (accessed March 17, 2009).

^bUSDOC, BEA, *Industry Economic Accounts*, interactive tables.

^cWorld Bank, *World Trade Indicators 2008* (accessed March 12, 2009). This index reflects the extent to which countries have undertaken market access and national treatment commitments in the 155 services subsectors included in the WTO's General Agreement on Trade in Services.

^dUSDOT, MARAD, "Domestic Shipping" (accessed March 12, 2009).

^eUSITC, *Import Restraints*, 2004, 92,102.

^f*Ibid.*, 101–02.

^gGamboa, "Cross-border Trucking Program May Be Revived," March 11, 2009.

results for individual model sectors are given in table E.30. The reported results represent percentage changes relative to the baseline simulation of the economy in 2013. The economy-wide effects are small, with the most significant being increases in imports and exports. For most liberalized sectors, imports and exports are estimated to rise, while domestic production and employment decline. Landed duty-paid prices of imports and U.S. producer prices are expected to decline; private household prices (a weighted average of prices for imports and domestically produced goods) generally fall for the liberalized sectors (table E.30). All price changes are relative to an economy-wide index of final consumption prices.

We note that while this report analyzes the effects of the liberalization of significant U.S. import restraints, it does not address the effects of simultaneous liberalization of significant trade barriers in other countries. In many circumstances, the removal of import restraints maintained by U.S. trading partners could be expected to boost output and employment in affected U.S. industries.

When all significant U.S. import restraints and ROO requirements for apparel are simultaneously eliminated, the analysis suggests that the largest percentage declines in U.S. output would occur in sectors having the most significant import restraints (table 2.2). The apparel and yarn, thread, and fabric sectors shrink the most with declines in output of 11 and 10 percent, respectively.

Several factors determine the model results for output in textiles and apparel. Yarn, thread, and fabric (such as broadwoven fabric and narrow fabric) are subject not only to increased competition through the removal of tariffs, but also face the loss of export markets currently secured by U.S. ROO requirements for downstream products such as apparel.⁶ When all tariff preferences are removed, the benefits to foreign manufacturers of using U.S.-made inputs disappear, thereby lowering the demand for U.S. exports of these products. This effect is most evident in the fabric sectors. The effect of liberalization is mixed for apparel. While export demand for cut pieces (classified under apparel) is anticipated to contract dramatically, the domestic apparel industry benefits from being able to source inputs such as fabric and thread globally, which somewhat dampens the contraction to 11 percent.

Within the dairy industry, domestic producers of butter, dry dairy products, and condensed and evaporated dairy products all benefit from

⁶See the textiles and apparel section below for a more detailed discussion of U.S. ROOs.

TABLE 2.2 Elimination of all significant import restraints: effect on liberalized sectors and broad sectors of the economy, percent, 2013

Sector	Employment	Output	Imports	Exports
Entire economy	0.0	(+)	0.4	0.3
<i>Liberalized sectors</i>				
<i>Food and agriculture</i>				
Sugar	-7.5	0.6	93.2	66.7
Dairy	-1.9	-2.2	77.6	30.2
Ethyl alcohol	-2.2	-2.3	198.0	—
Tuna	-4.5	-9.7	6.3	19.7
Tobacco	-0.5	-0.4	28.8	4.9
<i>All textiles and apparel</i>				
Yarn, thread, and fabric	-11.0	-10.0	0.1	-43.6
Textile products	-1.6	-1.3	2.1	-4.2
Apparel	-11.1	-11.1	2.4	-69.1
<i>Other manufacturing sectors</i>				
Ball and roller bearings	-4.3	-4.3	9.5	0.8
Ceramic wall and floor tile	-4.5	-4.5	2.0	0.6
Costume jewelry	-2.5	-2.4	4.6	1.2
Cutlery and hand tools	-0.8	-1.0	3.7	0.7
Dehydrated fruits, vegetables, soups	0.7	0.7	13.3	10.2
Footwear and leather products	-1.2	-1.2	3.8	0.9
Glass and glass products	-0.1	(-)	5.4	4.8
Pens, mechanical pencils, and parts	-1.9	-1.8	3.7	1.6
Table and kitchenware	-1.9	-1.8	2.3	0.7
Watches, clocks, watchcases, and parts	0.8	0.9	2.0	3.3
<i>Broad sectors</i>				
Agriculture, forestry, and fisheries	-0.1	-0.2	-0.1	1.5
Mining	(+)	(+)	(-)	0.5
Construction	(+)	(+)	—	1.6
Nondurable manufacturing	-0.4	-0.4	1.7	-1.4
Durable manufacturing	0.1	0.1	0.1	0.7
Transportation, communications, and utilities	0.1	0.1	0.4	0.9
Wholesale trade	0.2	0.2	—	-1.1
Finance, insurance, and real estate	(-)	(-)	(-)	0.5
Government and other services	(-)	(+)	(-)	0.6

Source: USITC estimates.

Note: The symbols (+) and (-) denote small positive and negative changes with magnitudes below 0.05 percent. The symbol — denotes that the value is not applicable.

substantial total protection. As a result, all three sectors see substantial declines in output following liberalization (table E.30). Butter output is estimated to decline by 10 percent, dry dairy products by 11 percent, and condensed and evaporated products by 8 percent.

Almost all sectors with high tariffs or TRQs show the expected patterns of declining domestic production, employment, and prices, along with increases in imports and exports, when these measures are eliminated. The only sector that has a sizable increase in output is refined cane sugar (table E.30). Cane refiners can choose to refine either domestically milled or foreign-milled raw sugar. Because sugar beets are essentially untraded, beet refiners mainly process domestic sugar beets and lack access to less-expensive imported inputs. However, cane sugar refiners benefit by gaining access to cheaper foreign raw cane sugar. Cane refiners are expected to respond by expanding production by 14 percent, and exports of refined sugar more than triple. In contrast, both cane millers and growers would be hurt by import competition; sugarcane production and raw sugar milling are expected to drop by 30 and 32 percent, respectively. Growers of sugar beets and refiners of beet sugar would be hurt to a lesser extent, with output of beets and refined beet sugar declining by 9 and 10 percent, respectively.

In other sectors with significant import restraints, estimates are that employment and output generally fall in response to liberalization, while imports and exports are expected to rise. Some high-tariff sectors that face small output declines under sector-by-sector liberalization are estimated to expand under simultaneous liberalization, owing to more favorable export demand conditions (because there is a larger depreciation of the dollar in the simultaneous liberalization). Leather goods not elsewhere classified (n.e.c.) is one such example. Output and exports of this product are estimated to decline 0.4 percent (table E.27) and 0.6 percent (table E.29), respectively, under sector-by-sector liberalization, but output expands marginally and exports increase 0.1 percent under simultaneous liberalization (table E.30).

Sugar and Sugar-Containing Products

Total U.S. sugar use was 10.9 million short tons, raw value (strv), in marketing year (MY) 2008.⁷ U.S. per capita sugar consumption has been

⁷USDA, FAS, Production Supply and Distribution Online. Data are on a marketing year basis, generally October of the previous year through September of the stated year.

in a long-term decline, having peaked at 102.3 pounds, refined basis, in 1972. Per capita consumption was 66.3 pounds in 2008. The decline mainly reflects a shift to lower-cost alternatives, principally high-fructose corn syrup (HFCS), by primary users, mainly soft-drink manufacturers. In calendar year (CY) 2007, refined sugar accounted for approximately 45 percent of the total U.S. consumption of caloric sweeteners, down from 86 percent in 1967, the year before consumption of HFCS was first recorded.⁸

For the purposes of this report, the sugar sector consists of three six-digit categories in the North American Industry Classification System (NAICS): sugarcane mills (311311), cane sugar refining (311312), and beet sugar manufacturing (311313).⁹ Sugar is used as a primary product and as an input in the manufacture of a multitude of food items. These food items, which compose the sugar-containing-products (SCP) sector, span several NAICS categories.¹⁰ The primary focus of this section is the sugar sector; SCPs affected by import restraints are discussed to a lesser extent.

U.S. producers supplied approximately 77 percent of U.S. sugar consumption in MY 2008.¹¹ U.S. raw cane sugar production totaled \$1.4 billion in MY 2007. U.S. refined sugar production totaled \$4.1 billion, with refined beet sugar accounting for 59 percent of the total (table 2.3).¹² The sugar processing sector employed about 13,000 workers in CY 2006. The number of jobs in this sector has been in decline due to long-term industry consolidation. Employment in the upstream sectors of sugarcane and sugar beets totaled 7,337 workers in CY 2006.

The United States is a net importer of sugar, most of which is raw sugar produced from sugarcane. The United States typically exports a small amount of sugar.¹³ The total value of sugar imports declined from MY

⁸USDA, ERS, *Sugar and Sweetener Yearbook Tables*, undated (accessed March 26, 2009).

⁹Sugarcane and sugar beet production (NAICS categories 111930 and 111991, respectively) are not formally included in the sugar sector, as the import restraint is applied to the manufactured product.

¹⁰NAICS categories for SCPs include chocolate and confectionery manufacturing from cacao beans (31132); confectionery manufacturing from purchased chocolate (31133); nonchocolate confectionery manufacturing (31134); bread and bakery product manufacturing (31181); cookie, cracker, and pasta manufacturing (31182); and flavoring syrup and concentrate manufacturing (31193).

¹¹USDA, ERS, *Sugar and Sweetener Yearbook Tables*, undated (accessed March 26, 2009).

¹²Ibid.

¹³Almost all exports of U.S. sugar fall under the refined sugar reexport program that allows cane sugar refiners and manufacturers using refined sugar as an input to import

2006 to MY 2007 as the market recovered from adverse weather that led to a decrease in the domestic supply of sugar. Imports rose in 2008, largely as the result of a decline in refinery capacity caused by a factory explosion. The share of the U.S. sugar market supplied by imports declined in terms of quantity (raw basis), from about 33 percent in MY 2006 to 20 percent in MY 2007, before rising to 24 percent in MY 2008.¹⁴

Nature of Trade Restraints

Trade restraints in the U.S. sugar sector are related to domestic policies that manage supplies in order to maintain market prices for raw cane and refined sugar.¹⁵ If domestic prices fall below legislatively determined prices (loan rates), producers may forfeit their supplies to the Commodity Credit Corporation of the U.S. Department of Agriculture at the loan rates. To maintain U.S. domestic prices sufficiently above the loan rates, the United States administers a system of TRQs for imports of raw cane and refined sugar, blended sugar syrups, and SCPs for WTO member countries in accordance with the WTO Agreement on Agriculture, and for other countries under various bilateral and regional free trade agreements (FTAs) and preferential trade arrangements (PTAs).¹⁶

raw cane sugar at or slightly above world prices. However, the equivalent quantity of imported sugar must be reexported within a given time period. The refined sugar reexport 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 utilization of their refineries' capacity.

¹⁴USDA, ERS, *Sugar and Sweetener Yearbook Tables*, undated (accessed March 26, 2009).

¹⁵The principal domestic policy elements include minimum prices (loan rates), a guaranteed 85 percent market share for U.S. producers, and a feedstock flexibility program to divert surplus sugar to ethanol production. A summary of major changes in the U.S. sugar program resulting from the 2008 farm bill is available at <http://www.ers.usda.gov/FarmBill/2008/Titles/TitleIcommodities.htm#sugar>.

¹⁶Currently the United States has FTAs with Jordan, Singapore, Chile, Australia, Morocco, Costa Rica, the Dominican Republic, El Salvador, Honduras, Nicaragua, Guatemala, Peru, Oman, and Bahrain. Preferential treatment under the raw cane sugar and refined sugar TRQs was not provided in the FTA with Australia. PTAs include programs such as GSP, CBERA, and AGOA. GSP, ATPA, and CBERA provide some benefits with respect to sugar, while AGOA does not.

WTO Agreement on Agriculture TRQs

The United States maintains separate TRQs for raw cane sugar, refined sugar, certain SCPs, and blended sugar syrups, as well as an absolute quota for cocoa powder containing sugar under the WTO Agreement on Agriculture.¹⁷ 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. The majority of in-quota imports benefit from duty-free treatment under various FTAs or PTAs.¹⁸ Imports of all sugar from Mexico have been free of duty under NAFTA since January 1, 2008. Over-quota imports are subject to automatic price-based safeguards, which effectively raise the over-quota tariff by the level of the safeguard.¹⁹

The raw cane sugar TRQ is allocated on a country-specific basis among designated 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 mt annually. During MY 2006–08, the TRQ allocations for raw cane sugar were 1,717,750 mt for MY 2006, 1,336,736 mt for MY 2007, and 1,117,195 mt for MY 2008.²⁰ The current farm bill requires that the minimum level be set at the beginning of each marketing year for sugar (October 1) and not be increased except in cases of emergency.²¹

The minimum level of the global refined sugar TRQ is 22,000 mt annually. However, annual allocations totaled 493,602 mt in MY 2006, largely the result of domestic supply interruptions owing to weather conditions. The refined sugar TRQ totaled 75,144 mt in MY 2007 and initially 85,503 mt in MY 2008. The MY 2008 TRQ was increased to 357,658 mt, largely the result of the domestic refinery explosion mentioned

¹⁷The WTO TRQs for raw cane sugar, refined sugar, certain SCPs, and blended sugar syrups are all provided for in the additional U.S. notes 5, 7, 8, and 9 to chap. 17 of the HTS and pertinent subheadings. The WTO TRQ for cocoa powder containing sugar is provided for in additional U.S. note 1 of chap. 18 of the HTS. 15 C.F.R. 2011 (2009).

¹⁸In-quota imports from Argentina, Australia, Brazil, and Malawi were dutiable during CY 2005–CY 2008.

¹⁹See U.S. note 1 to chap. 99, subchap. IV, of the U.S. HTS. Canada, Mexico, Jordan, Singapore, Chile, Australia, Morocco, El Salvador, Honduras, Nicaragua, Guatemala, Bahrain, the Dominican Republic, Costa Rica, Peru, and Oman are exempt from these special safeguard duties because of FTAs between these countries and the United States.

²⁰USDA, FAS, "Sugar under Tariff Rate Quotas," undated (accessed April 2, 2009).

²¹Emergencies include war, flood, hurricane, or other natural disaster, or other similar event as determined by the Secretary of Agriculture. Food Conservation and Energy Act of 2008, Pub. L. No. 110-234. This new farm bill became effective at the start of MY 2009.

above. A certain amount of the refined sugar TRQ—65,159 mt in 2008—is reserved for specialty sugars.²²

FTA TRQs

TRQs for sugar and SCPs that are in addition to the WTO TRQs are provided for under various FTAs. The partner countries must be net exporters of sugar in order to receive the additional TRQs. Currently only the CAFTA-DR beneficiaries are net exporters. Under the CAFTA-DR, the additional access covers raw cane sugar, refined sugar, and SCPs. The TRQ for these products has increased under the CAFTA-DR agreement for each FTA member, with the initial additional regional access totaling 109,000 mt. After a 15-year staging period, the additional regional access will total 153,140 mt. After the 15-year phase-in period, the TRQ will rise by 2,640 mt annually, in perpetuity. In CY 2008, sugar TRQs under FTAs totaled 89,481 mt, virtually all of which were supplied by CAFTA-DR countries.

Restrictiveness of Trade Restraints

The TRQs in this sector limit U.S. imports (to about 14 percent of the quantity of U.S. sugar consumption on a raw-value basis in MY 2008) and assist in maintaining domestic sugar prices above USDA loan rates for raw cane and refined sugar. The TRQs contribute to a significant gap between U.S. prices and the so-called world price for raw cane and refined sugar. In 2008 the difference between the U.S. price (21.27 cents per pound) and the world price (13.67 cents per pound) for raw cane sugar was 56 percent, while the difference between the U.S. price (29.86 cents per pound) and the world price (15.55 cents per pound) for refined sugar was 92 percent.²³

²²Specialty sugars are defined in 15 C.F.R. 2011.202(i) (2009).

²³The world raw cane sugar price is represented by Contract No. 11 f.o.b. stowed Caribbean port, including Brazil, bulk spot price; the U.S. raw cane sugar price is represented by Contract No. 14, duty fee paid New York, reported by the New York Board of Trade. Prices were obtained from USDA, ERS, *Sugar and Sweetener Yearbook Tables*, undated (accessed March 26, 2009). The world refined sugar price is represented by Contract No. 5, London Daily Price, for refined sugar, f.o.b. Europe, spot price; the U.S. refined sugar price is represented by U.S. wholesale refined beet sugar price, reported by the *Milling & Baking News*. Prices were obtained from USDA, ERS, *Sugar and Sweetener Yearbook Tables*, undated (accessed March 26, 2009). In his testimony on behalf of the Sweetener Users Association, Thomas Earley stated that the gap between U.S. raw sugar price and the adjusted world price averaged about 6 cents per pound in the last three years,

Another measure of the restrictiveness of the TRQs is the quota fill rate—U.S. sugar TRQs are essentially filled each year.²⁴ TRQs restrict and distort the flow of trade to the United States because foreign suppliers cannot compete in the U.S. market at the generally prohibitive over-quota duty rates. Also, the TRQs provide market share to relatively high-cost producers, such as the Dominican Republic, at the expense of lower-cost producers, such as Brazil and Thailand. Despite the restrictions imposed by the TRQs, U.S. policy provides flexibility to allow a greater quantity of imports in cases of emergency.²⁵

Effects of Liberalization

Removal of the restrictions on imports of sugar is expected to result in an increase in U.S. welfare of \$514 million. Table 2.3, figures 2.1 and 2.2 (green lines in the figures show the response of the entire U.S. economy), and tables E.2–E.5 in appendix E show the effects of liberalizing U.S. sugar import restrictions. Liberalizing consists of removing TRQs and eliminating the remaining within-quota tariffs. As a result, the import price of raw cane sugar (landed, duty-paid) would decline by 35 percent, compared with the 2013 baseline projection (table E.4). As prices decline, demand for imported sugar is expected to increase by 66 percent for raw cane sugar and more than 200 percent for refined sugar. The increased competition from imports would push down domestic production of raw cane sugar (by 32 percent) and of refined beet sugar (by 10 percent), as well as production of the sugarcane and beets from which the sugar is produced (table E.3). Employment would decline by similar percentages. However, domestic production of refined cane sugar actually rises by 14 percent because the imported raw cane sugar is an input into domestic sugar refineries. Household prices of refined sugar would decline by 5.2 percent. Because of the reduced cost of sugar, production of SCPs would increase slightly, while household prices of these products would decline by a fraction of a percent.

compared to about 10 cents per pound during 1990–2005, but that the price gap for refined sugar averaged 12 cents per pound over the last three years. USITC, Hearing transcript, January 8, 2009, 16–17 (testimony of Thomas Earley, Sweetener Users Association).

²⁴Minor shortfalls may occur. For more information about the nature of the TRQs, see USITC, *The Economic Effects of Significant U.S. Import Restraints: Fourth Update*, 2004.

²⁵Food, Conservation, and Energy Act of 2008, Pub. L. No. 110-234.

TABLE 2.3 Sugar: summary data, 2005–07^a, and simulation results, 2005–13

Item	Summary data			Simulation, %	
	2005	2006	2007	Baseline 2005–13	Liberali- zation ^b
<i>Employment</i>					
	<i>Full-time equivalent</i>				
Total sugar crop farming ^c	7,489	7,337	—	–18.1	–12.4
Sugarcane ^c	6,088	5,937	—	–35.1	–31.0
Sugarbeets ^c	1,401	1,400	—	–14.6	–9.5
Total sugar processing ^d	13,083	12,758	—	–20.6	–5.7
Raw cane sugar ^d	4,251	3,971	—	–40.8	–32.6
Refined cane sugar ^d	2,722	2,674	—	–8.2	11.0
Refined beet sugar ^d	6,110	6,113	—	–21.2	–10.0
<i>Shipments</i>					
	<i>Millions of \$</i>				
Raw cane sugar ^e	1,367	1,337	1,435	–30.4	–32.2
Total refined sugar	3,773	4,980	4,062	4.9	7.5
Refined cane sugar	1,564	1,989	1,653	9.9	13.8
Refined beet sugar ^f	2,209	2,991	2,409	–4.9	–9.8
<i>Imports</i>					
Total sugar	713	1,403	816	126.8	93.9
Raw cane sugar	600	910	668	104.8	66.0
Refined sugar ^g	113	493	148	329.2	216.1
<i>Exports</i>					
Total sugar ^h	88	117	205	20.9	63.9

Source: USDA, ERS, *Sugar and Sweetener Yearbook Tables*, available at Internet address <http://www.ers.usda.gov/Briefing/Sugar/Data/data.htm>; USDOC, U.S. Census Bureau, *Annual Survey of Manufactures*, various issues; BLS, *Census of Employment and Wages*.

Note: The symbol — denotes that the value is not available.

^aValues for production and trade are reported for marketing years beginning October 1 of the previous year and ending September 30 of the reported year.

^bIncremental effect in 2013 of liberalizing U.S. sugar imports.

^cSugarcane and sugar beet production are not formally included in the sugar sector, as the import restraint is applied to the manufactured product. Data are for sugarcane farming (NAICS 111930) and sugar beet farming (NAICS 111991).

^dThe three subsectors of the sugar processing sector correspond to six-digit NAICS categories: sugarcane mills (NAICS 311311), cane sugar refining (NAICS 311312), and beet sugar manufacturing (NAICS 311313).

^eValued at the U.S. domestic price for raw sugar.

^fValued at the U.S. domestic wholesale price for refined beet sugar.

^gIncludes both refined cane and beet sugar. See figure 2.1 for disaggregated changes in imports of refined cane and beet sugar. The significance of the change in imports of refined beet sugar is exaggerated due to the very small levels of current imports.

^hThe value includes exports of cane and beet sugar, including refined sugar exports under the sugar reexport program.

FIGURE 2.1 Percentage change in imports of sugar and ethyl alcohol, baseline projection and liberalization, 2005–13

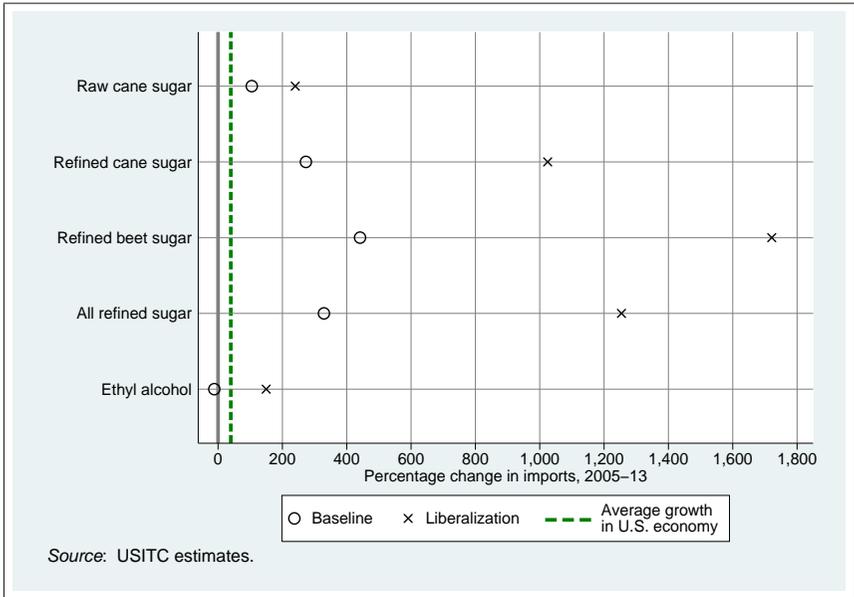
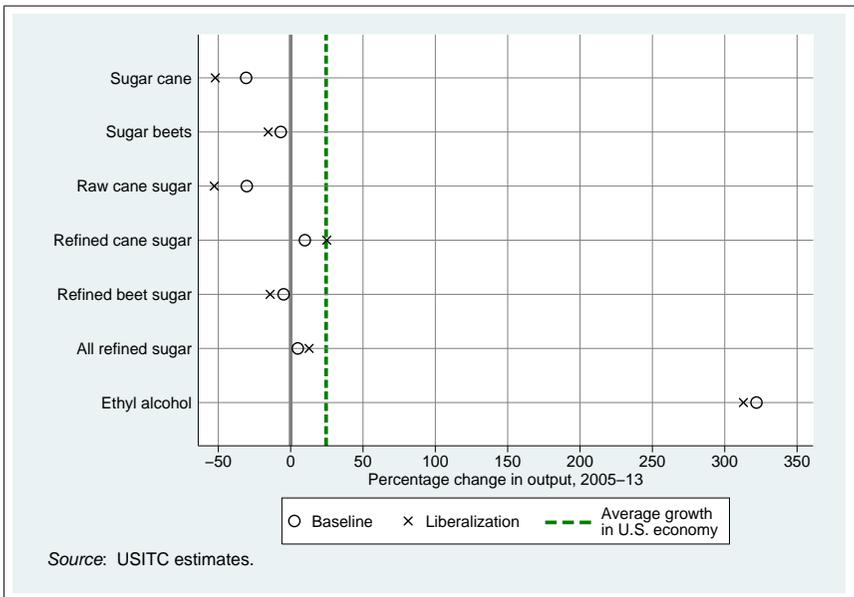


FIGURE 2.2 Percentage change in output of sugar and ethyl alcohol, baseline projection and liberalization, 2005–13



Ethyl Alcohol

Ethyl alcohol for fuel use (ethanol)²⁶ is a clear, colorless liquid produced from corn, sugarcane, or other feedstocks. The bulk of ethanol production in the United States is derived from corn.²⁷ U.S. production of ethanol in 2007 was valued at \$14.3 billion (table 2.4). Production capacity in the United States, as of January 2009, totaled approximately 12.5 billion gallons.²⁸ The U.S. ethanol industry employed 4,262 workers in 2006 (table 2.4). The United States is the leading global producer of ethanol, accounting for 52 percent of world production in 2008.²⁹

The Energy Policy Act of 2005 (EPA) established a renewable fuel program, which mandated that renewable fuels, including ethanol, be blended with gasoline.³⁰ The Energy Independence and Security Act of 2007 made several changes to the EPA and established the Renewable Fuel Standard (RFS).³¹

The RFS requires that 36 billion gallons of renewable fuel be mixed into domestic gasoline supplies by 2022 (figure 2.3). Of this amount, 21 billion gallons must be advanced biofuel, consisting of at least 16 billion gallons of cellulosic biofuel and at least 1 billion gallons of biodiesel. The remaining 4 billion gallons of unspecified advanced biofuel can be provided by noncorn-based feedstocks, such as sugarcane. The remaining 15 billion gallons of unspecified renewable fuel can be provided by corn ethanol. The RFS can be filled by ethanol from domestic production as well as from imports. Depending on feedstock requirements, biofuel in more restrictive categories may fill the requirement in less restrictive categories.³² These amounts are not binding—they are minimums; additional amounts can be blended and receive tax credits. In 2009, the RFS is equivalent to 10.21 percent of projected U.S. gasoline consumption. The RFS is incorporated into the baseline projection.

Nature of Trade Restraints

Imports of ethyl alcohol for fuel use are restricted by duties and an origin quota. Two duties are applied to imports of fuel ethanol. The general

²⁶For the purposes of this study, ethyl alcohol and ethanol are used interchangeably.

²⁷There 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. The production of ethanol from cellulosic biomass

TABLE 2.4 Ethyl alcohol for fuel use: summary data, 2005–07, and simulation results, 2005–13

Item	Summary data			Simulation, %	
	2005	2006	2007	Baseline 2005–13	Liberalization ^a
Employment (full-time equivalent) ^b	3,763	4,262	—	204.9	–2.1
Production (millions of \$) ^c	7,315	12,386	14,316	321.9	–2.1
Imports (millions of \$) ^d	231	1,508	855	–11.7	182.8
Exports (millions of \$) ^e	0	0	7	—	—

Sources: DOC; USITC Oracle database; PIERS; USDOC, BLS *Census of Employment and Wages*.

Note: The symbol — denotes that the value is not available or not applicable.

^aIncremental effect in 2013 of liberalizing U.S. ethyl alcohol imports.

^bUSDOC, U.S. Census Bureau, available at

<http://www.census.gov/epcd/susb/2006/us/US325193.HTM#table1> (accessed April 9, 2009).

^cCalculated based on quantity data from DOE, EIA and price data from LMC International. Production for 2005–07 was 3,904, 4,804, and 6,521 million gallons.

^dHTS subheadings for ethyl alcohol for fuel use are 2207.10.60 and 2207.20.00; imports in HTS subheading 9901.00.50 are subject to additional duties. The imports in the table do not reflect imports of other non-beverage ethyl alcohol, which also enter under the chapter 22 subheadings. Imports of ethyl alcohol for fuel use for 2005–07 totaled 135, 659, and 441 million gallons.

^eEstimated by the USITC based on the PIERS database. Exports in 2007 are believed to be significantly higher than estimated; however, specific data are not available. Exports of ethyl alcohol for fuel use in 2007 are estimated to have been 7 million gallons.

rate of duty in HTS chapter 22 applies to countries with normal trade relations (NTR) status, ranging from 1.9 percent ad valorem (denatured ethanol) to 2.5 percent ad valorem (undenatured ethanol).³³ The NTR duty by itself does not qualify as a significant import restraint by this report's definition. Duty-free treatment applies to beneficiary countries under FTAs and PTAs, including least-developed beneficiary countries

is still under development and is yet to be commercialized.

²⁸Renewable Fuels Association, "Historic U.S. Fuel Ethanol Production," undated (accessed April 9, 2009).

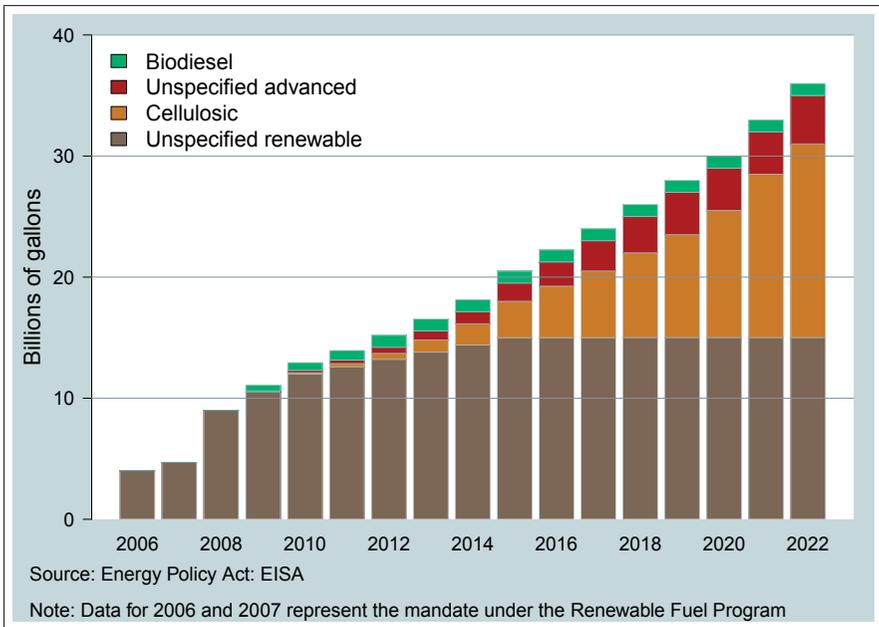
²⁹Calculated based on data from the research firm LMC International.

³⁰Energy Policy Act of 2005, Pub. L. No. 109-58.

³¹Energy Independence and Security Act of 2007, Pub. L. No. 110-140.

³²For example, sugarcane ethanol can fill the RFS for corn ethanol.

³³U.S. imports of fuel ethanol enter under HTS subheadings 2207.10.60 (undenatured) and 2207.20.00 (denatured). 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.

FIGURE 2.3 Renewable fuel standard, 2006–22

with GSP status. These beneficiary countries include Australia, Bahrain, NAFTA partners, Chile, AGOA beneficiaries, CBERA beneficiaries, Israel, ATPA beneficiaries, Jordan, Morocco, Oman, CAFTA-DR beneficiaries, Peru, and Singapore.

An additional “other duty or charge” (ODC) of 14.27 cents per liter (54 cents per gallon) is assessed on fuel ethanol imports from sources other than least-developed GSP beneficiaries, CBERA and CAFTA-DR beneficiaries, ATPA beneficiaries, Canada, Israel, and Mexico.³⁴ The ODC, which is assessed in addition to aforementioned NTR duties, is not subject to WTO reductions. The ODC was established in 1980 to offset the tax credit, which applies to imported as well as domestically produced fuel ethanol.³⁵

³⁴This additional duty is found in chap. 99, subchap. 1 of the HTS. The applicable tariff subheading for the extra duty is 9901.00.50. The “no change” in the special rate of duty column refers to the duty treatment in chap. 22. CBI quota beneficiaries are defined in U.S. Note 3(d)(iv) in chap. 99.

³⁵Omnibus Reconciliation Act of 1980, Pub. L. No. 96-499. The ODC initially was set at 10 cents per gallon.

In addition to duty-free access for ethanol produced from local feedstock under the FTAs and PTAs, certain countries receive duty-free access to the U.S. fuel ethanol market for a specified amount of ethanol produced from imported feedstocks under an origin quota.³⁶ In-quota imports from CBERA and CAFTA-DR beneficiaries, as well as U.S. insular possessions, enter free of duty. Over-quota imports are not considered to be a product of those countries and are assessed the rate applicable to the origin of the feedstocks. The quota has never been filled; the fill rate was 75 percent in 2008.³⁷ The USITC estimated total U.S. domestic consumption of ethanol for the 12-month period ending September 30, 2008, to be 8.88 billion gallons; therefore the quota is 621.5 million gallons for calendar year 2009.³⁸

Restrictiveness of Trade Restraints

The general rates of duty on ethanol are relatively low and are not significantly restrictive. The additional 14.27 cents-per-liter ODC on imports of fuel ethanol was not considered restrictive during most of 2006–08 because most dutiable imports received duty drawbacks.³⁹ However, as of October 1, 2008, the drawback provisions were amended to require that ethanol be contained in any product that is being used to claim duty drawbacks on imports of fuel ethanol.⁴⁰ This policy change essentially reestablished the ODC, which is now applicable to imports from Brazil, the

³⁶Steel Trade Liberalization Program Implementation Act of 1989, Pub. L. No. 101-221, §7. Under the quota, CBERA beneficiaries as of the date of the implementation of the quota (1989) may import and dehydrate hydrous ethanol, mainly from Brazil, and export the finished product free of duty to the United States. The quota confers origin to the finished product; the duty-free treatment then follows. Beneficiaries include those countries currently under the CBERA and CAFTA-DR. The quota also applies to U.S. insular possessions, which receive no less favorable treatment. The quota applies to duties under HTS chaps. 22 and 99.

³⁷Data provided by the U.S. Department of Homeland Security, Customs and Border Protection Agency. For more information on the TRQs, see USITC, *The Economic Effects of Significant U.S. Import Restraints: Fourth Update*, 2004.

³⁸73 Fed. Reg. 75770 (December 12, 2008). The TRQ was 268.1 million gallons in 2006, 343.9 million gallons in 2007, and 452.5 million gallons in 2008.

³⁹U.S. imports of fuel ethanol from dutiable sources, particularly Brazil, benefited from duty drawbacks during 2004–08. For more information on fuel ethanol duty drawbacks, see USITC, *The Economic Effects of Significant Import Restraints: Fifth Update*, 2007.

⁴⁰Food, Conservation, and Energy Act of 2008, Pub. L. No. 110-234, §15334 (2008). Previously, the drawback was eligible for sales of jet fuel that was used for overseas flights. Jet fuel contains no ethanol.

only major dutiable supplier. The ODC likely will be restrictive, depending on market conditions. There were no direct imports of fuel ethanol from Brazil in 2008 following the drawback change. However, unfavorable U.S. market conditions, caused largely by oversupply and the financial crisis, likely were contributing factors as well.

Effects of Liberalization

Liberalization is expected to result in an increase in U.S. welfare of \$356 million. The effects of liberalizing U.S. imports of ethyl alcohol are modeled by removing the quota and all tariffs on imports of ethyl alcohol. Summary results from liberalization are shown in table 2.4; sectoral impacts of the liberalization are shown in figures 2.1 and 2.2 and in tables E.6–E.9.

The only significant impact is felt in the ethanol sector itself; effects on upstream industries are minimal. Elimination of the origin quota would lower the landed, duty-paid price of ethanol by 25 percent from the projected 2013 baseline value, increasing the value of imports by 205 percent (table E.8). Because imports are small relative to domestic production, the effect on domestic output is small, a decrease of about 3 percent.

Dairy Products

In response to increased domestic and foreign demand, U.S. shipments of dairy products rose considerably during 2005–07 and reached \$106.2 billion in 2007 (table 2.5). U.S. trade in dairy products is small compared with total domestic production. In 2007, dairy imports amounted to \$2.1 billion, or about 2 percent of the total value of U.S. dairy shipments, while dairy exports amounted to \$3.1 billion, or just under 3 percent of such shipments. More than 80 percent of dairy imports consisted of cheese, casein/caseinates, and milk protein concentrates (MPC) in 2007. Other imported products include butter and ice cream (nearly 5 percent, combined, of dairy imports). Major dairy exports in 2007 were nonfat dry milk (NDM), whey products (which falls under the dry/condensed milk products category), cheese, and lactose.⁴¹

⁴¹Casein, caseinates, and MPC have not been produced in the United States in large quantities since the early 1950s. After USDA established a price support program for

TABLE 2.5 Dairy products: summary data, 2005–07, and simulation results, 2005–13

Item	Summary data			Simulation, %	
	2005	2006	2007	Baseline 2005–13	Liberali- zation ^a
<i>Employment</i>					
	<i>Full-time equivalent</i>				
Total dairy	132,287	130,253	129,600	-2.7	-2.1
Butter	1,442	1,574	1,600	-0.6	-10.0
Cheese	41,188	40,446	40,000	-5.8	-1.1
Dry/condensed milk	13,933	14,466	15,000	-2.2	-9.6
Fluid milk and cream	56,193	54,649	54,000	-2.6	-1.0
Ice cream	19,531	19,118	19,000	1.7	-0.1
<i>Shipments</i>					
	<i>Millions of \$</i>				
Total dairy	70,966	69,181	106,235	15.7	-2.4
Butter	2,264	2,204	2,581	20.7	-10.4
Cheese	24,396	23,116	41,434	14.0	-0.8
Dry/condensed milk	10,181	10,446	15,579	18.5	-10.6
Fluid milk and cream	25,447	24,814	37,572	14.8	-0.6
Ice cream	8,678	8,601	9,069	18.9	(+)
<i>Imports</i>					
Total dairy	1,910	1,969	2,129	91.8	81.7
Butter	89	63	65	64.5	193.1
Cheese	1,007	1,029	1,108	141.1	36.8
Dry/condensed milk	539	590	646	46.4	143.4
Fluid milk and cream	14	5	8	78.3	31.3
Ice cream	46	42	39	37.0	19.4
<i>Exports</i>					
Total dairy	1,647	1,915	3,058	49.5	29.1
Butter	17	19	112	23.4	284.2
Cheese	201	245	388	34.4	91.7
Dry/condensed milk	1,351	1,569	2,463	52.8	12.5
Fluid milk and cream	16	20	37	30.6	8.5
Ice cream	62	62	60	75.2	1.1

Sources: Shipments and employment: USITC estimates for 2007 are based on price and production data from USDA, AMS, *Dairy Market Statistics: 2007 Annual Summary*, <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=stelprdc5069509> (accessed February 13, 2009). Data for 2005–06 are from the U.S. Census Bureau's *2006 Annual Survey of Manufacturers*, http://factfinder.census.gov/servlet/IBQTable?_bm=y&-_skip=200&-ds_name=AM0631VS101 (accessed February 13, 2009). Ice cream pricing data for 2007 were taken from Brian Gould, Agricultural and Applied Economics, University of Wisconsin-Madison, http://future.aae.wisc.edu/data/monthly_values/by_area/304?tab=prices&grid=true&area=US (accessed February 13, 2009). Imports and exports: USITC Dataweb: Butter HTS 0405, cheese 0406, fluid milk 0401, ice cream 2105, dry/condensed milk, 0402, 0403, 0404, 1702.11, 1702.19, 1901.10, 1901.20, 3501.10, and 3502.

Note: The symbol (+) indicates a small positive value.

^aIncremental effect in 2013 of liberalizing U.S. dairy imports.

Nature and Restrictiveness of Trade Restraints

Several dairy products, including fluid milk and cream, butter, cheese, powdered milk products, ice cream, infant formula, and animal feeds containing milk, have significant import restraints.⁴² Import restraints operate in conjunction with a complex system of federal, state, and local laws to maintain price and production supports for the domestic dairy industry. Federal programs include domestic price supports, milk marketing orders, export supports such as the Dairy Export Incentive Program (DEIP), and domestic and international food aid programs.⁴³ The USDA has not funded the DEIP since the beginning of FY 2005 because U.S. prices for NDM, butter, and several varieties of cheese have been globally competitive, at least through 2007.

Of the approximately 392 U.S. 10-digit HTS numbers considered to be dairy products, 135 are not subject to any TRQs. The other 257 HTS numbers are subject to 27 separate TRQs, most of which have country-specific in-quota volume allocations.⁴⁴ U.S. imports of dairy products subject to these TRQs are primarily cheese, ice cream, butter, and yogurt.

Slightly more than one half (51 percent) of the value of dairy products imported into the United States during 2007 was not subject to TRQs, including MPC, whey protein concentrates, and certain varieties of cheese (mainly cheese made of sheep and goat milk). These imports face low tariffs and account for over 95 percent of domestic consumption of these products, and U.S. production of these products is negligible. For example, the average ad valorem equivalent (AVE) across all nonquota imports was 0.4 percent during 2005–07, with cheese not subject to TRQs averaging 1.4

milk, U.S. butter and milk powder producers realized greater returns from drying their skim milk into nonfat dry milk and selling it to the government intervention agency, the Commodity Credit Corporation (CCC), than from processing it into casein and MPC. Therefore, domestic supplies of casein are furnished by imports.

⁴²Some food preparations and chocolate products covered in chaps. 18, 19, and 21 of the HTS contain both dairy and sugar products.

⁴³DEIP covers NDM, butterfat, and various cheeses. It helps U.S. dairy exporters match prevailing prices in certain export markets by paying cash bonuses, thereby allowing exporters to sell certain U.S. dairy products at prices lower than the exporter's costs of acquiring them. DEIP is designed to develop export markets where U.S. products are not competitive because of subsidized dairy products from other countries. For more information on DEIP, see USDA, FAS, "Dairy Export Incentive Program," undated (accessed February 10, 2009).

⁴⁴Submission by the National Milk Producers Federation, February 6, 2009, 3.

percent. Casein and milk albumin, accounting for 17 percent of all dairy imports, were imported duty-free. By comparison, the average ad valorem equivalent for imports subject to TRQs was 8.4 percent.

Overall, the TRQ system has made over-quota imports uncompetitive in the U.S. market. For example, in 2007, the U.S. price of butter (\$1.35 per pound) was significantly higher than the price of imports subject to the in-quota tariff (\$1.26 per pound), but lower than the price of imports subject to the over-quota tariff (\$1.46 per pound). Similarly, for cheese, the over-quota tariff for the most part was sufficient to deter imports above the TRQ level during 2005–07.⁴⁵

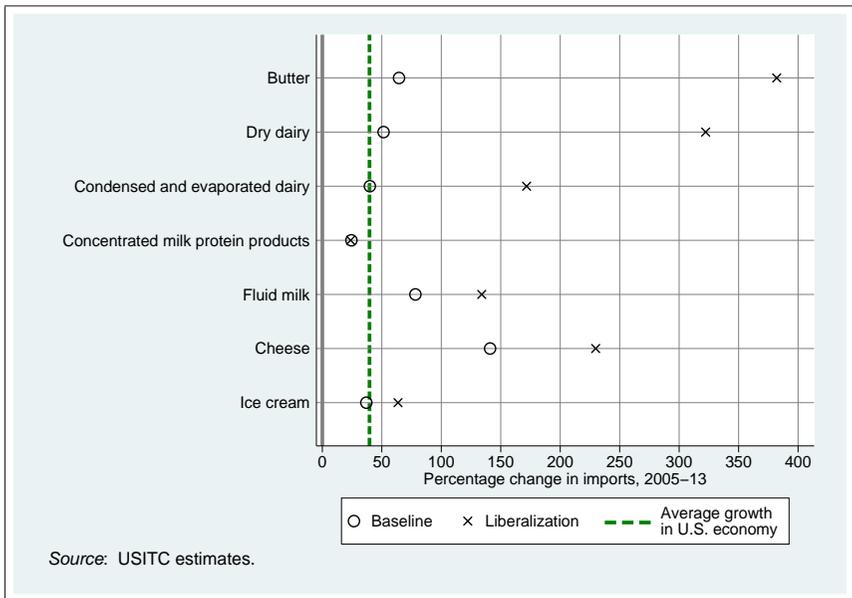
TRQ fill rates, the ratio between imports and the quota level, provide an indication of the restrictiveness of restraints. In 2007 fill rates for butter and cheese exceeded 90 percent, which indicates restrictiveness. In some product categories, however, fill rates show that the TRQs were not constraining in 2007. For instance, the quotas do not appear to be binding for whole milk powder (58 percent fill), NDM (6 percent fill), fluid milk and cream (44 percent fill), and ice cream (69 percent fill). However, it is difficult to gauge whether these TRQs may still have had some small effect because the U.S. licensing system allocates country-specific quantitative limits and thus the quota fill rate may have been higher for particular countries.

In some instances there is clearly no effect from TRQs. For example, since 2005, U.S. imports of milk powders declined, and the United States became a significant exporter of NDM. During 2005–07, the price of NDM in the United States was 2 to 30 percent lower (but typically more than 10 percent lower) than European and Oceania prices for skim milk powder.⁴⁶ Part of the explanation for this price discrepancy is that NDM and skim milk powder are not completely substitutable on world markets. Another explanation is that federal milk programs at times encourage overproduction of NDM at the expense of other dairy products.

⁴⁵Over-quota imports can occur when the U.S. domestic price exceeds the world price by more than the tariff. For example, high U.S. prices of cheese in the second quarter of 2005 led to limited over-quota imports. During this period, the gap between the U.S. price and the world price was as much as \$850 per metric ton. But most of the over-quota imports for any year occur in the fourth quarter, as annual quota volumes fill. For 2006 and 2007, U.S. and international prices for most cheeses tracked closely.

⁴⁶Alan Levitt Corporate Communications, "SMP: World Prices vs. U.S. Prices," undated (accessed February 17, 2009).

FIGURE 2.4 Percentage change in imports of dairy, baseline projection and liberalization, 2005–13

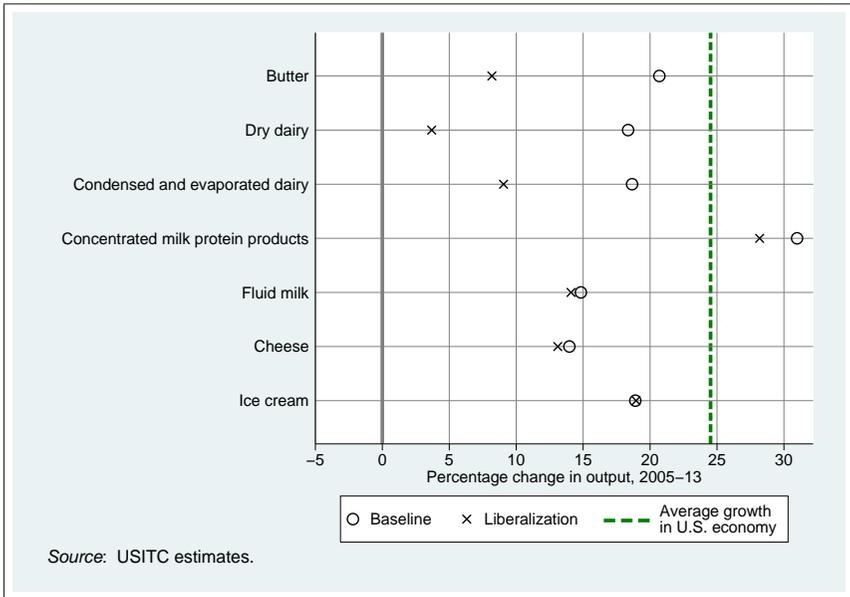


Effects of Liberalization

Liberalization of U.S. import restraints on dairy products would increase U.S. welfare by \$732.5 million by 2013. Liberalization is modeled by removing the TRQs and duties on dry, condensed, and evaporated dairy products, and on butter, cheese, ice cream, and fluid milk. Table 2.5 and figures 2.4 and 2.5 show the summary results of this liberalization. Results on specific dairy sectors, as well as on sectors that provide inputs to dairy production are presented in tables E.14–E.17. Among dairy products, butter is affected the most because its trade restraints are the largest.

The removal of import restraints is expected to lead to a decline in the landed, duty-paid price of imports, especially for butter (–35 percent), dry dairy products (–35 percent), and condensed and evaporated dairy products (–22 percent) (table E.16). These price declines lead to increases in imports, led by butter and dry dairy products (193 percent and 179 percent, respectively). In contrast to increased imports, domestic production is expected to decrease, again led by butter and dry dairy products, where production declines by 10 and 12 percent, respectively (table E.15), and

FIGURE 2.5 Percentage change in output of dairy, baseline projection and liberalization, 2005–13



employment would decline by roughly similar proportions. Declines in domestic production are not expected to entirely offset increased imports, however, and the decline in domestic prices relative to world prices for all dairy commodities actually leads to increased exports. This is especially true for butter and cheese, for which the cost of important input components (fluid milk and dry dairy products) declines as a result of the liberalization of import restraints. The increase in import volume at lower prices would lead to lower household prices for all dairy products except concentrated milk protein products, with the largest decline of 7 percent occurring in the household price of butter (table E.15).

Tobacco and Tobacco Products

The United States’ principal tobacco products are cigarettes and unmanufactured tobacco.⁴⁷ U.S. production of flue-cured and burley

⁴⁷Semiprocessed tobacco (leaf), also referred to as unmanufactured tobacco, is an intermediate product that has undergone some processing, including curing, destemming, and redrying.

tobacco expanded 25 percent to \$1.1 billion during 2005–07 (table 2.6).⁴⁸ Exports increased as U.S. tobacco became more competitive after the U.S. tobacco price support program was eliminated in 2004, which led to lower U.S. tobacco prices.⁴⁹ Exports of unmanufactured tobacco rose to over \$1 billion in 2007 as shipments to certain EU markets recovered from recent lows, and exports increased to emerging markets, including Ukraine and China. Imports of unmanufactured tobacco also increased during 2005–07, largely because U.S. cigarette manufacturers increased their stocks of foreign unmanufactured tobacco during the period. Imports from Brazil, the leading foreign supplier, increased to \$258 million in 2007, nearly double the 2005 level.

Declining domestic cigarette consumption led to a contraction of 3 percent in the volume of U.S. cigarette production (down to 468 billion pieces) during 2005–07. Despite the decline in volume, the value of cigarette shipments rose as manufacturers increased wholesale prices to cover the costs of funding the termination of the U.S. tobacco program.⁵⁰ U.S. exports of cigarettes declined by 16 percent during 2005–07 to \$1.0 billion as the value of exports to Japan, the leading export market, fell by \$119 million.

Nature and Restrictiveness of Trade Restraints

Cigarettes are subject to a 4.4 percent AVE tariff. A TRQ is applied to imports of certain categories of tobacco, mainly semiprocessed flue-cured

⁴⁸There are no available data for the value of U.S. production of semiprocessed tobacco.

⁴⁹Fair and Equitable Tobacco Reform Act of 2004, Pub. L. No. 108-357 (2004). The termination of the U.S. price support program for tobacco effectively allows tobacco to be produced under a free market system without the production quotas or geographic limitations that characterized the 60-year-old supply management system. The end of the tobacco program resulted in lower prices for U.S. unmanufactured tobacco and made U.S.-produced tobacco more competitive in export markets. In addition, the depreciation of the U.S. dollar relative to most major world currencies during 2005–07 contributed to increased U.S. competitiveness during the period.

⁵⁰The U.S. price support program was eliminated through a buyout of tobacco farmers and quota holders, which was funded by increased taxes on domestic and imported tobacco products, primarily cigarettes. For additional information on the buyout of the U.S. tobacco program, see USITC, “U.S. Tobacco Quota Buyout,” 2004, 1–13.

TABLE 2.6 Tobacco: summary data, 2005–07, and simulation results, 2005–13

Item	Summary data			Simulation, %	
	2005	2006	2007	Baseline 2005–13	Liberali- zation ^a
<i>Employment</i>	<i>Full-time equivalent</i>				
Unmanufactured tobacco ^b	2,000	2,000	—	-12.2	-4.8
Cigarettes	13,000	14,000	—	-4.8	0.2
<i>Shipments</i>	<i>Millions of \$</i>				
Tobacco ^c	880	1,025	1,101	10.2	-4.4
Cigarettes ^d	36,857	37,933	—	5.9	0.5
<i>Imports</i>					
Unmanufactured tobacco ^e	210	325	398	14.5	58.7
Cigarettes	194	190	170	22.4	9.1
<i>Exports</i>					
Unmanufactured tobacco ^e	829	982	1,017	22.5	8.3
Cigarettes	1,200	1,214	1,012	33.7	3.2

Sources: USDA, NASS; USDOC, *Annual Survey of Manufactures*, 2005, 2006: Value of Product Shipments; USITC Dataweb.

Note: The symbol — denotes that the value is not available.

^a Incremental effect in 2013 of liberalizing U.S. tobacco imports.

^b Stemming and redrying sector, excluding tobacco farmers.

^c Farm value, flue-cured and burley tobacco.

^d 2006 production USITC estimate.

^e Semi-processed value, stemmed and redried flue-cured and burley tobacco.

and burley tobacco.⁵¹ This TRQ, established in 1995, applies to imports of unmanufactured tobacco and manufactured tobacco used in the production of cigarettes destined for the U.S. market.⁵² The quota is allocated on a country-by-country basis. The total TRQ quantity for quota year (QY) 2007–08 was 150,700 mt, which was divided into 10 separate allocations,

⁵¹ 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), 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.

⁵² The quota year begins on September 13 and continues until September 12 of the following year.

TABLE 2.7 Tobacco: TRQ fill rates, 2005–08, and in-quota quantities allocated and imports, 2007–08 quota year^a

Country	TRQ fill rates, %			Allocation	Imports
	2005–06	2006–07	2007–08	2007–08	2007–08
				<i>metric tons</i>	
Argentina	99	100	100	10,750	10,749
Brazil	95	100	99	80,200	79,601
Chile	0	0	0	2,750	0
EU	54	49	78	10,000	7,827
Guatemala	44	31	40	10,000	3,987
Malawi	100	79	19	12,000	2,247
Philippines	15	36	90	3,000	2,697
Thailand	75	100	100	7,000	6,993
Zimbabwe	2	(+)	1	12,000	65
Other	100	87	100	3,000	3,000
World	78	79	78	150,700	117,166

Source: DHS, U.S. Customs and Border Protection.

Note: The symbol (+) indicates a small positive value less than 0.5 percent.

^aAllocations and imports are for the period determined by the TRQ (September 13, 2007–September 12, 2008).

including nine country/trading group allotments, and a residual allocation of 3,000 mt (2 percent) for all other countries (table 2.7). Brazil was allocated 80,200 mt (53 percent of the in-quota allocation), while Malawi and Zimbabwe, other suppliers of high-quality flavor tobacco,⁵³ were each provided 12,000 mt (8 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 2007, with most in-quota tobacco (HTS subheading 2401.20.85) entering the United States at a duty rate of 37.5 cents per kg (approximately 10 percent AVE).⁵⁴ All over-quota imports are subject to a 350 percent ad valorem duty. A duty drawback program exists for all imports (in-quota and over-quota) that are reexported either as unmanufactured tobacco or as cigarettes. Canada, Mexico, and Israel are not subject to the quantitative restrictions in the TRQ, pursuant to FTAs with those countries.⁵⁵ During

⁵³High-quality flavor tobacco is tobacco that imparts the aroma and taste characteristics to cigarettes, in contrast to filler-type tobacco. Brazil, Argentina, and Zimbabwe are the leading foreign suppliers of flavor-quality, flue-cured tobacco; Brazil and Malawi are the leading suppliers of high-quality burley tobacco.

⁵⁴USITC calculation based on official statistics of the U.S. Department of Commerce.

⁵⁵Under U.S. bilateral free trade agreements, certain nontraditional suppliers of tobacco,

the quota year 2007–08, the TRQ was restrictive for Argentina, Brazil, the Philippines, Thailand, and countries in the other category (table 2.7). Brazil, the dominant U.S. supplier of flavor-quality, flue-cured and burley tobacco, registered a fill rate of 99 percent. Domestic production declined after termination of the U.S. price support tobacco program,⁵⁶ which resulted in increased demand for imported tobacco and contributed to the binding fill rates.

Effects of Liberalization

Removing the TRQ and tariffs on these products is estimated to increase U.S. welfare by \$99 million. The effects of liberalizing U.S. imports of tobacco and tobacco products were modeled by removing the TRQ on unmanufactured tobacco and by eliminating the tariffs on imports of cigarettes. Table 2.6, figures 2.6 and 2.7, and tables E.18–E.21 show the sectoral effects of the trade liberalization for tobacco products relative to the 2013 baseline. Because TRQs were binding for many countries and because of the high over-quota duties, elimination of tobacco TRQs and tariffs would reduce the landed, duty-paid price of tobacco. Imports would then rise by 58.7 percent (table 2.6). Smaller price declines are felt in the tobacco products sectors. Because tobacco is a large input into the cigarette, cigar, and other tobacco products sectors, liberalization of tariffs on tobacco would favor domestic production of the downstream products. Liberalization of restraints on imports of tobacco products themselves is expected to lead to only slight increases in imports of cigarettes and in chewing and smoking tobacco and snuff, while the decline in tobacco import prices dominates the elimination of cigar trade barriers, leading to a slight decrease in imports of cigars, of 0.2 percent. Tobacco shipments and associated employment decline by 4.4 and 4.8 percent, respectively. Also, employment and output would decline in the tobacco farming sector by 2.4 and 2.6 percent, respectively, but rise in all tobacco-products sectors (tables E.18 and E.19).

such as Australia, Bahrain, and Singapore, have been provided additional access at preferential rates; however, this access is unlikely to be utilized. Chile, which already has a TRQ allotment, was granted additional access, but Chile is not an important U.S. tobacco supplier and routinely has one of the lowest fill rates of countries that were provided TRQ access in 1995.

⁵⁶For both flue-cured and burley tobacco, U.S. production volumes for each year during 2005–07 were below 2004 levels (the final year of the tobacco program).

FIGURE 2.6 Percentage change in imports of tobacco and canned tuna, baseline projection and liberalization, 2005–13

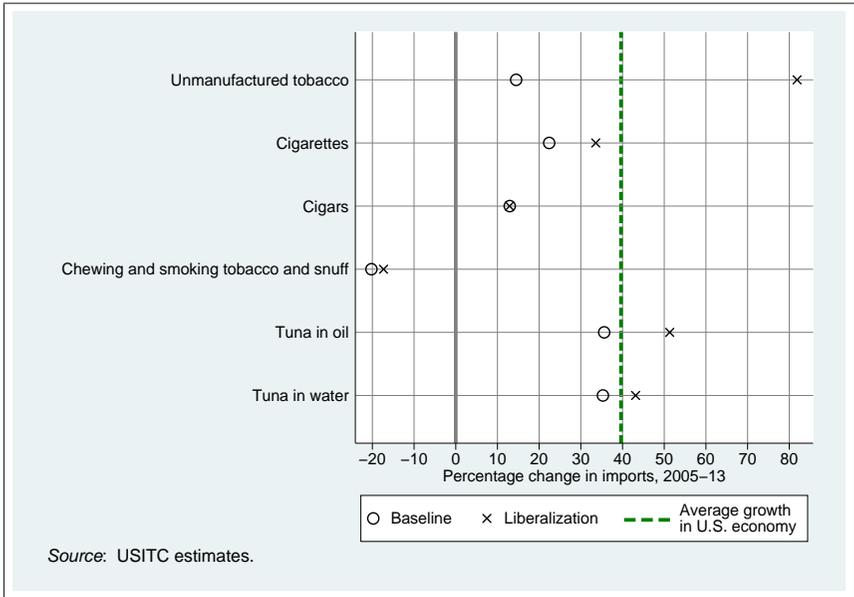


FIGURE 2.7 Percentage change in output of tobacco and canned tuna, baseline projection and liberalization, 2005–13

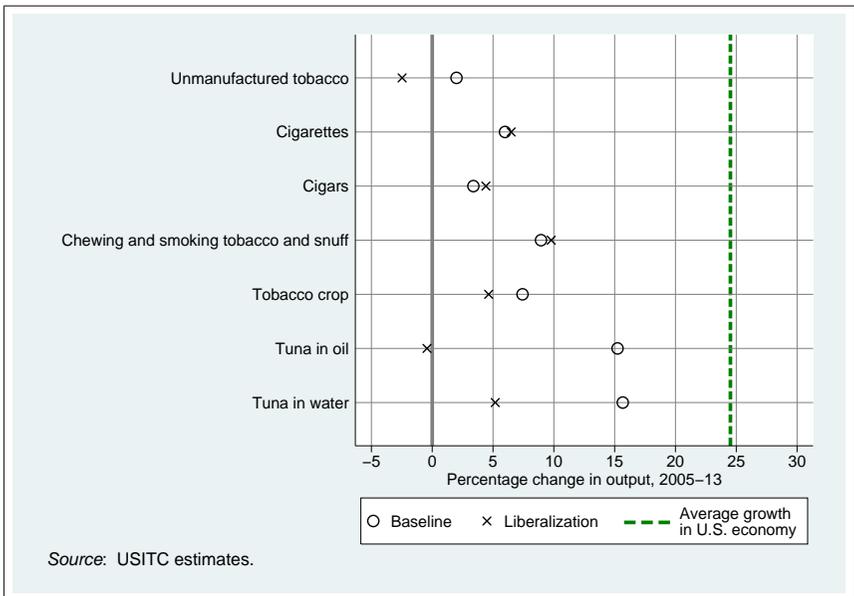


TABLE 2.8 Canned tuna: summary data, 2005–07, and simulation results, 2005–13

Item	Summary data			Simulation, %	
	2005	2006	2007	Baseline 2005–13	Liberali- zation ^a
<i>Employment</i>	<i>Full-time equivalent</i>				
Total tuna	7,000	7,000	7,000	-2.7	-4.5
<i>Shipments</i>	<i>Millions of \$</i>				
Total tuna	627	705	702	15.6	-9.7
Canned tuna, oil-pack ^b	157	106	105	15.3	-13.6
Canned tuna, water-pack ^b	470	599	597	15.7	-9.1
<i>Imports</i>					
Total tuna	533	526	525	35.3	6.3
Oil-pack	22	18	17	35.6	11.6
Total water-pack	512	508	507	35.3	5.8
In-quota water-pack	(+)	(+)	(+)	—	—
Over-quota water-pack	511	508	507	—	—
<i>Exports</i>					
Total tuna	3	6	4	97.4	19.5

Source: Official statistics of the U.S. Department of Commerce, except as noted.

Note: The symbol (+) indicates a small positive value less than \$500,000. The symbol — indicates a value that is not available or not applicable.

^aIncremental effect in 2013 of liberalizing U.S. tuna imports.

^bUSITC staff estimate.

Canned Tuna

Canned tuna is one of the most valuable seafood products in the U.S. market; U.S. production rose to \$702.4 million and U.S. imports totaled \$524.5 million in 2007 (table 2.8).⁵⁷ The United States is the world's largest canned-tuna producer and the largest importer. Imports, which mainly come from low-cost sources such as Thailand, accounted for 42.9 percent of U.S. apparent consumption in 2007. Exports accounted for less than 1 percent of domestic production.

The canned-tuna sector has two principal products: tuna packed in oil and tuna packed in water. Production costs for tuna in oil and tuna in water

⁵⁷In addition to tuna in metal cans, the tuna industry also produces tuna in flexible pouches, which are distributed in the same market channels as tuna in cans. Throughout this section, “canned tuna” is meant to include “pouched tuna.”

are nearly identical; canneries can switch production from one product to the other at little cost. The two products generally have identical wholesale and retail prices (for any given brand and size of can or pouch). Just over 15 percent of U.S. tuna production is packed in oil, and 85 percent is packed in water. Approximately 97 percent of U.S. imports of canned tuna is packed in water.

Nature and Restrictiveness of Trade Restraints

The U.S. rate of duty on canned tuna packed in oil is 35 percent.⁵⁸ A TRQ exists for U.S. imports of canned tuna packed “not in oil” (i.e., in water). Imports within the quota are dutiable at 6 percent, while imports in excess of the quota are dutiable at 12.5 percent.⁵⁹ The in-quota quantity entered in any calendar year cannot exceed 4.8 percent of apparent U.S. consumption (as reported annually by the U.S. Department of Commerce) 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 first-come, first-served basis.

The TRQ reportedly imposes significant costs on importers in the form of increased warehousing needs and uncertainty regarding the extent and timing of reduced tariff-rate benefits. Because the TRQ is usually filled quickly and the tariff gap is 6.5 percent, importers attempt to qualify for the largest share of the TRQ as possible by stockpiling large quantities of canned tuna in customs-bonded warehouses in late December and releasing the warehoused product as soon as the calendar year begins.⁶⁰

Effects of Liberalization

The tuna TRQs were not explicitly modeled because quota levels are small compared to the total volume of U.S. imports and consumption, implying that the over-quota tariff rate is not prohibitively high. Instead, liberalization of U.S. tuna imports was modeled by removing the ad valorem tariff equivalents for both tuna packed in oil and tuna packed in water. The average U.S. ad valorem tariff equivalents for tuna packed

⁵⁸HTS subheading 1604.14.10

⁵⁹HTS subheading 1604.14.22

⁶⁰USITC, *Tuna: Competitive Conditions Affecting the U.S. and European Industries in Domestic and Foreign Markets*, 1990.

in oil and tuna packed in water were 17.2 percent and 10.5 percent, respectively.⁶¹ Removing these tariff equivalents is estimated to increase U.S. welfare by \$23 million. The removal of border measures on tuna packed in oil and in water causes import prices to decline by 17 and 10 percent, respectively, from the 2013 baseline (table E.12). As a result, import levels of tuna packed in oil and in water are estimated to increase by 12 and 6 percent, respectively (table 2.8 and figures 2.6 and 2.7). The estimated effects on related sectors are small, mostly in the canned fish sector (tables E.10–E.13).

Textiles and Apparel

The United States, the world's largest importer of textiles and apparel, accounted for roughly 28.8 percent of global imports by value in 2007.⁶² U.S. imports of textiles and apparel remain subject to tariffs that are among the highest of any sector, entering at rates that range from free of duty to as high as 32 percent. Currently, however, there are no quotas on U.S. imports of textiles and apparel after the quantitative restrictions established under a Memorandum of Understanding (MOU) with China expired on December 31, 2008.⁶³ Expiration of the U.S.-China MOU was preceded by the final phase-out of developed-country quotas on January 1, 2005, on which date the United States, the EU, and Canada eliminated their remaining quotas on imports from WTO countries as required by the Uruguay Round Agreement on Textiles and Clothing (ATC)⁶⁴ and

⁶¹The USAGE-ITC model tracks U.S. imports of oil- and water-packed tuna from 27 groups of countries, some of which are U.S. FTA partners or are given preferential tariff treatment; thus, the tariffs removed in this simulation vary widely by region.

⁶²GTIS, World Trade Atlas Database (accessed January 9, 2009).

⁶³The disruption and uncertainties associated with the U.S. safeguards (discussed below) on certain textile and apparel products from China led to the negotiation of a three-year agreement to limit U.S. imports of such items from China. The MOU established 21 quotas covering 34 categories of textile and apparel products. It went into effect on January 1, 2006 and was extended through December 31, 2008, at which time the right of the United States to invoke safeguards under the textile provision of China's WTO Membership Accession Agreement expired. Office of the USTR, "Memorandum of Understanding between the Governments of the United States of America and the People's Republic of China," November 8, 2005.

⁶⁴The ATC entered into force with the WTO agreements in 1995. It called for the gradual elimination of quotas established under the Multifiber Arrangement, an arrangement negotiated under the General Agreement on Tariffs and Trade (GATT) that had governed world textile and apparel trade since 1974. The ATC required countries to increase the

subsequent U.S. safeguard measures on certain import categories from China.⁶⁵

Following the liberalization of trade in textiles and apparel, U.S. imports of such goods rose 6.4 percent to \$106.8 billion from 2005 to 2007, while U.S. producers' shipments declined 3.1 percent to \$101.0 billion during the same period (table 2.9). Apparel accounted for 77.2 percent of the total value of U.S. imports of textiles and apparel in 2007. As apparel imports increased, the U.S. import penetration ratio in apparel rose from 50 to 73 percent from 1999 to 2007.⁶⁶ Retailers are increasingly sourcing apparel and home furnishings directly from low-cost foreign producers and are focusing their efforts on product design and marketing. As a result, domestic sales of U.S.-produced yarn and fabric have shrunk. With increasing import competition, the U.S. textile industry has undergone extensive restructuring and consolidation. From 2005 to 2007, employment in the U.S. textile and apparel industries declined by 16.0 percent to 541,300 workers, a loss of 103,200 jobs.⁶⁷ Current domestic production of textile and apparel articles is largely for U.S. government defense contracts under the Berry Amendment⁶⁸ and niche fashion production concentrated in New York and Los Angeles.⁶⁹

In the absence of quotas, global textile and apparel production has become concentrated among a handful of lower-cost Asian suppliers. China, whose exports of textiles and apparel to the United States increased

rate at which all quotas grew and to integrate textile and apparel articles into the GATT regime over a 10-year transition period, which ended on January 1, 2005. At that juncture, the articles were brought under GATT discipline and became subject to the same rules as products of other sectors. See also the discussion of textiles and apparel in chap. 3.

⁶⁵The rapid increase in U.S. imports of textiles and apparel from China after the ATC expired led to the establishment of 10 safeguards (quotas) on selected imports of Chinese textile and apparel articles. For a more detailed discussion of the U.S.-China MOU, see USITC, *The Economic Effects of Significant U.S. Import Restraints: Fifth Update*, 2007.

⁶⁶CBO, "Factors Underlying the Decline in Manufacturing Employment since 2000," December 28, 2008, 4.

⁶⁷USDOL, BLS, CES Survey Database, undated (accessed various dates).

⁶⁸The Berry Amendment requires that the U.S. Department of Defense's procurements of clothing or textile articles, including the fibers, yarn, and fabric used to construct such articles, be produced in the United States (10 U.S.C. 2533a). The Berry Amendment applies to clothing and textile articles including outerwear, headwear, underwear, nightwear, footwear, hosiery, handwear, belts, badges, and insignia. For further information on the Berry Amendment, see U.S. Department of Defense, Office of the Under Secretary of Defense for Acquisition Technology and Logistics, Defense Procurement and Acquisition Policy, at http://www.acq.osd.mil/dpap/cpic/ic/berry_amendment_faq.html

⁶⁹USITC, Hearing transcript, January 8, 2009 (testimony of Brenda Jacobs, USA-ITA), 45.

TABLE 2.9 Textiles and apparel: summary data, 2005–07, and simulation results, 2005–13

Item	Summary data			Simulation, %	
	2005	2006	2007	Baseline 2005–13	Liberali- zation ^a
<i>Employment</i>	<i>Full-time equivalent</i>				
Textile mills ^b	218,000	195,000	170,000	–39.0	–11.0
Textile products	176,000	167,000	158,000	–38.1	–1.6
Apparel	251,000	232,000	213,000	–60.4	–11.1
All textiles and apparel	645,000	594,000	541,000	–43.9	–7.7
<i>Shipments</i>	<i>Millions of \$</i>				
Yarn, thread, and fabric	36,012	37,295	34,925	–5.5	–9.9
Textile products ^c	34,326	36,614	33,518	–6.9	–1.3
Apparel ^d	33,879	32,712	32,534	–40.3	–11.1
All textiles and apparel	104,217	106,621	100,977	–16.3	–7.8
<i>Imports</i>					
Yarn, thread, and fabric	7,882	7,777	7,871	22.6	0.2
Textile products	14,472	15,698	16,446	66.0	2.2
Apparel	78,034	80,694	82,497	40.6	2.4
All textiles and apparel	100,388	104,170	106,813	41.6	2.2
<i>Exports</i>					
Yarn, thread, and fabric	8,471	8,520	8,242	14.4	–43.6
Textile products	2,343	2,561	2,628	45.6	–4.2
Apparel	4,069	3,789	3,124	–38.8	–69.1
All textiles and apparel	14,883	14,870	13,993	–0.2	–42.1

Sources: Official statistics of the U.S. Department of Commerce and the U.S. Department of Labor.

^aIncremental effect in 2013 of liberalizing U.S. textile and apparel imports.

^bTextile mills are included in NAICS category 313, which primarily produces yarn, thread, and fabric.

^cTextile products are included in NAICS category 314, which includes carpets, rugs, home linens, canvas products, rope, twine, tire cord, and other miscellaneous made-up textile articles.

^dApparel is included in NAICS category 315, which includes knit, knit-to-shape, and woven garments.

TABLE 2.10 U.S. textiles and apparel imports by source, by value, percentage change, and share, 2005–07

Country	Import value 2007	Change 2005–07	Share of total 2007
	<i>Millions of \$</i>		<i>%</i>
World	106,813	6.4	100.0
Major trading partners			
China	36,887	33.3	34.5
Mexico	6,154	−20.0	5.8
India	5,912	6.7	5.5
Vietnam	4,703	58.4	4.4
Indonesia	4,394	35.7	4.1
Pakistan	3,503	8.4	3.3
Bangladesh	3,405	28.1	3.2
Honduras	2,663	−3.4	2.5
Italy	2,632	5.0	2.5
Canada	2,599	−17.8	2.4
Cambodia	2,571	40.2	2.4
Hong Kong	2,193	−42.3	2.1
Thailand	2,184	−4.1	2.0
Philippines	1,874	−6.8	1.8
Sri Lanka	1,710	−5.1	1.6
Special Import Programs			
AGOA	1,334	−10.6	1.2
ATPDEA	1,213	−11.2	1.1
CBTPA	944	−85.9	0.9

Source: Official statistics of USDOC.

by 33.3 percent from 2005 to 2007 (table 2.10), has benefited greatly from global quota elimination. However, Vietnam, Indonesia, Bangladesh, and Cambodia also increased their U.S. imports by double digits following the phase-out of quotas under the ATC. These countries have seen an upswing in production orders in recent years as costs for Chinese manufacturers have risen.⁷⁰

Nature of Trade Restraints

Trade restraints in the U.S. textiles and apparel sector were historically designed to protect an influential domestic industry. Though domestic

⁷⁰USITC, Hearing transcript, January 8, 2009 (testimony of Julie Hughes, USA-ITA), 72.

production has declined markedly over the past decade, tariffs remain high, especially for man-made fiber garments. With the final phase-out of quotas under the ATC at the end of 2004, global trade in textiles and apparel is being integrated into the broader WTO framework for manufactured goods.

Tariffs

The trade-weighted average ad valorem tariff on all U.S. imports of textiles and apparel in 2007 was 10.5 percent. In general, tariffs on textiles and apparel increase with each stage of manufacturing; that is, the duty rates are usually higher on apparel than on yarn or fabric.⁷¹ The trade-weighted average tariff on apparel was 11.4 percent, compared with 6.7 percent for textile mill articles (mainly yarns and fabrics) and 6.3 percent for textile products.⁷² Tariffs for many heavily traded apparel articles were much higher than the overall averages cited above. For example, the 2007 NTR duty rates on certain women's and girls' woven man-made fiber pants and blouses were 28.6 percent and 26.9 percent, respectively.⁷³ Tariffs are generally higher on man-made fiber apparel than on similar cotton or wool garments (e.g., the 2007 duty rate on man-made fiber sweaters was 32 percent, compared with 16 percent for wool sweaters and 16.5 percent for cotton sweaters). Further, some apparel is subject to compound tariffs at a specific rate per kilogram (kg) plus an ad valorem duty as high as 25.9 percent (e.g., the 2007 duty on men's and boys' wool suits was 52.9 cents per kg plus a 21 percent ad valorem tariff).

Preference Programs and Rules of Origin

Certain U.S. imports of textiles and apparel are eligible for duty-free treatment under FTAs and trade preference programs. The value of U.S. textile and apparel imports that entered duty-free in 2007 was \$24.3 billion, or 22.8 percent of total imports of such goods. More than half of the value

⁷¹This is often referred to as tariff escalation.

⁷²These average tariffs were calculated using NAICS nomenclature. Under NAICS, textile mill articles include intermediate inputs (e.g., yarn and fabric), and textile products consist of made-up textile articles, including towels, bedding, and other house furnishings. See table 2.9 for additional information on the NAICS categories related to textiles and apparel.

⁷³Nearly all U.S. trading partners have permanent normal-trade-relations (NTR) status, formerly known as most-favored-nation status.

of duty-free imports was accounted for by goods originating from CAFTA-DR countries (22.0 percent of the total) and NAFTA partners (30.1 percent of the total).⁷⁴ Remaining duty-free imports consisted mainly of goods that entered under the Andean Trade Promotion and Drug Eradication Act (ATPDEA) (5.0 percent) and the African Growth and Opportunity Act (AGOA) (5.5 percent).⁷⁵

In general, for apparel to qualify for duty-free entry under ROO requirements in U.S. FTAs or preference programs, it must be made from U.S. or regional fabric, with the specific percentages and other requirements varying by program. ROOs redirect trade flows by creating demand for U.S. exports of textile articles for use in the production of apparel, which is then re-exported to the United States free of duty. According to the USA-ITA, duty cost savings associated with sourcing from FTA or preference partner countries are often offset by higher compliance costs for importers. Reportedly, ROOs for apparel are more complicated than for other industries, and firms incur additional costs for hiring staff to ensure compliance and to complete the necessary paperwork to demonstrate compliance.⁷⁶

⁷⁴CAFTA-DR was implemented on a country-by-country basis. It went into force for El Salvador on March 1, 2006, for Honduras and Nicaragua on April 1, 2006, for Guatemala on July 1, 2006, for the Dominican Republic on March 1, 2007, and for Costa Rica on January 1, 2009. On August 15, 2008, the United States implemented two textile provisions designed to promote regional production: (1) the textile cumulation provision, which allows a limited quantity of woven apparel containing Mexican or Canadian inputs to enter the United States duty-free; and (2) the pocketing amendment, which requires that for apparel items containing at least one pocket, the pocket bag fabric must be formed and finished in the territory of one or more CAFTA-DR parties before the apparel can qualify as an originating good and receive duty-free treatment under CAFTA-DR.

⁷⁵The Africa Investment Incentive Act of 2006 (AGOA IV) extended preferential treatment for qualifying textiles and apparel from eligible sub-Saharan African (SSA) countries through September 30, 2015. It provides for duty-free and quota-free treatment for apparel assembled in SSA countries from U.S. fabrics, as well as duty-free and quota-free treatment for specified quantities of apparel made from “regional fabrics” that are produced in SSA countries from U.S. or SSA yarns. A special rule also allows for certain quantities of apparel made in “lesser developed” SSA countries from third-country fabrics to receive duty-free treatment through September 30, 2012.

⁷⁶USITC, Hearing transcript, January 8, 2009 (testimony of Brenda Jacobs, USA-ITA), 56.

Effects of Liberalization

Projected Industry Trends

The baseline simulation estimates an increase of 23.2 percent in the household demand for textiles and apparel between 2005 and 2013. This projection, which incorporates all negotiated trade policy changes, is lower than the estimated 25 percent increase in household consumption of all goods. Despite the demand increase, domestic production of textiles and apparel output is expected to decline sharply (table 2.9 and table E.23). Many sectors would shrink outright, and no sector would increase output by more than the projected GDP increase of 25 percent. The projected employment decline of 43.9 percent is greater than the output decline because the trend toward more capital-intensive production is expected to continue. Exports in the baseline simulation are projected to increase in most sectors owing to the anticipated 9.5 percent depreciation of the dollar. U.S. exports of nonwoven fabrics, curtains and draperies, canvas and related products, and pleating and stitching have the largest increases in the baseline simulation to 2013 (table E.25). Imports in the textile and apparel sectors are generally projected to increase.

Deviations from Projected Trends

Compared to projected trends in the overall economy, liberalization of textiles and apparel is estimated to have a relatively minor effect on production, imports, and exports, although the effect is the largest of any sector in this report. The removal of restraints would increase overall U.S. welfare in 2013 by 0.01 percent, or \$2.2 billion, relative to the baseline value. In detail, efficiency gains from removing tariffs improve welfare by \$2,627 million, but the contraction in demand for U.S. exports by countries with trade preference programs reduces this by \$373 million. The overall increase in welfare is modestly higher than estimated in the last update of this report.⁷⁷ About \$100 million of this increase is attributed to the smaller effects of liberalization due to continued preference erosion in the current

⁷⁷In the previous update, the estimated increase in welfare from tariff liberalization, removal of quotas on Vietnam, and the erosion of ROO-driven demand was \$1.9 billion. USITC, *The Economic Effects of Significant U.S. Import Restraints: Fifth Update*, 2007, 78.

update.⁷⁸ The projected proportion of imports in domestic consumption of textiles and apparel also increases and contributes to the welfare estimate from liberalization.

Liberalization consists of removing all tariffs and ROO requirements on the subject goods. Removal of ROO requirements was modeled by reducing export demand for items that currently benefit from such requirements.⁷⁹ The reduction varies by sector but is generally 95 percent of the U.S. export demand for inputs used to manufacture textiles and apparel. The reduction is less in sectors where industry specialists believed that export demand for U.S. products would remain in the absence of the preference programs. These export demand reductions were applied to the following sectors: broadwoven fabric; narrow fabric; knit fabric; yarn; thread; coated fabric; pleating; automotive and apparel trimmings; hosiery, n.e.c.; and apparel.

In about one-half of textile and apparel sectors, liberalization would cause a small decline in domestic output (figure 2.8), a small increase in imports (figure 2.9), and a decrease in the domestic price (table E.23), which would increase U.S. exports by making them more competitive on world markets. In the 12 sectors for which ROO-based preferences are not a factor, the expected changes from the policy liberalization are small, relative to the projected changes based on industry trends.⁸⁰ However, liberalization would sharply reduce exports in the 10 sectors in which domestic production is encouraged by U.S. preference programs and FTAs because foreign demand would decline for those exports. Although all 10 of these sectors have large estimated declines in exports, the effect on production varies and depends primarily on the export orientation of the sector (table E.25).⁸¹ For example, narrow fabric is the most export-oriented of these sectors and has the largest estimated decline in output

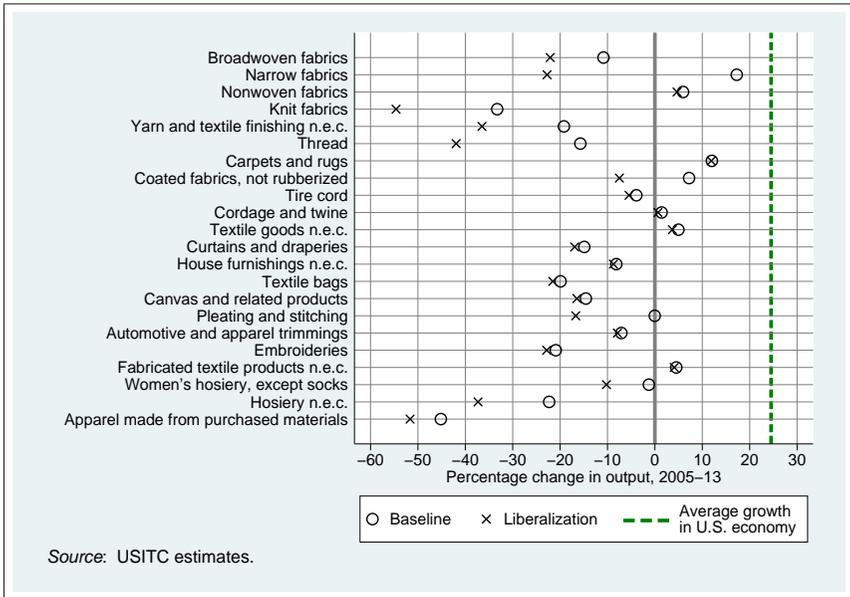
⁷⁸ A significant proportion of foreign demand for U.S. yarn and textiles is due to trade preferences and associated ROOs granted through programs such as CBERA. The value of preferential access to the U.S. market erodes as trade in these goods is liberalized, and so foreign demand for U.S. inputs declines. Because of this preference erosion effect, the negative impact of further trade liberalization on U.S. suppliers of these inputs lessens as liberalization progresses.

⁷⁹ A more complete discussion of the approach used can be found in Fox, Powers, and Winston, "Textile and Apparel Barriers and Rules of Origin," September 2008, 656-84.

⁸⁰ These 12 sectors include nonwoven fabric, carpets, tire cord, cordage, textile goods n.e.c., curtains, house furnishings n.e.c., textile bags, canvas products, automotive and apparel trimmings, embroideries, and fabricated textile products n.e.c.

⁸¹ These 10 sectors include broadwoven fabric, narrow fabric, knit fabric, yarn, thread, coated fabric, pleating, automotive and apparel trimmings, hosiery n.e.c., and apparel.

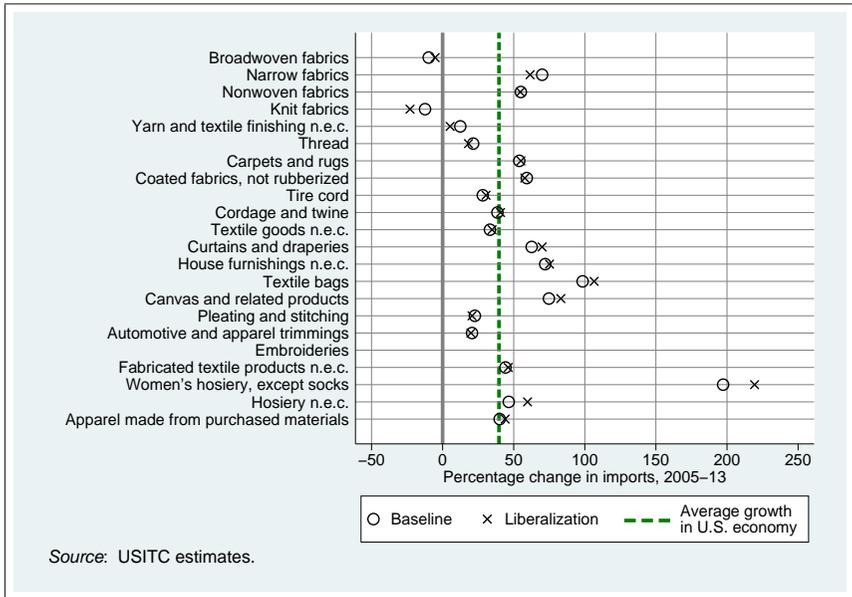
FIGURE 2.8 Percentage change in output of textiles and apparel, baseline projection and liberalization, 2005–13



(33.1 percent) relative to the forecast; conversely, automotive and apparel trimmings is the least export-oriented and has a small estimated decline in output (0.8 percent) (table E.23). The estimated decline in employment for these sectors generally mirrors the decline in output. The estimated effect on other textile and apparel sectors due to the decline in ROO-based foreign demand is minor.

Aside from textiles and apparel, four upstream sectors (cotton, textile machines, synthetic fiber, and cellulosic man-made fiber) are expected to experience declines of at least 1 percent in output as a result of liberalization (table E.23). Employment (table E.22) and imports (table E.24) in these sectors are usually expected to decrease as liberalization reduces domestic output of textiles and apparel. Upstream sectors are more affected by the elimination of ROO-based foreign demand than by the elimination of tariffs, and contraction of export demand accounts for 60 percent or more of the employment decline in these sectors. In contrast, the effects on downstream sectors are expected to be positive but small. Only public building furniture is estimated to expand output more than 1 percent as the prices of textile inputs decline.

FIGURE 2.9 Percentage change in imports of textiles and apparel, baseline projection and liberalization, 2005–13



Other Sectors with Significant Import Restraints

Despite the low average U.S. tariff rate, the sectors discussed in this section remain subject to relatively high tariffs (table 2.11). The largest such sector, in terms of production value in 2007, is the glass and glass products sector with over \$18 billion in production; the largest in terms of both imports and level of protection is footwear and leather products.

The effect of liberalizing imports in these sectors is modeled by removing tariffs, one sector (or group) at a time. Simulation results show that elimination of tariffs in these sectors would decrease the price of imported goods, increase imports, and generally reduce production and employment in the domestic industry (table 2.11, figures 2.10–2.13, and tables E.26–E.30).

The sectors expected to experience the largest welfare effects were in the footwear and leather products group; the total welfare gain attributable to tariff elimination for this group is expected to be \$325 million. Although tariff elimination would have minimal effects on leather goods not elsewhere classified (n.e.c.), eliminating the tariffs on all other footwear and leather products would reduce import prices by between 7.9 percent (shoes,

TABLE 2.11 Sectors with significant tariffs: summary data, 2007, and simulation results, 2005–13

Item	Summary data	Simulation, %	
	2007	Baseline 2005–13	Liberali- zation ^a
<i>Employment</i>	<i>Full-time equivalent</i>		
Ball and roller bearings	34,000	-2.5	-4.3
Ceramic wall and floor tile	6,000	-12.5	-4.5
Costume jewelry	4,000	-23.0	-2.4
Cutlery and hand tools	19,000	-3.3	-0.9
Dehydrated fruits, vegetables, and soups	11,000	-2.2	(+)
Footwear and leather products	16,000	-5.2	-1.5
Glass and glass products, except containers	85,000	-1.6	-0.1
Pens, mechanical pencils, and parts	7,000	-8.1	-1.8
Table and kitchenware	10,000	0.7	-2.0
Watches, clocks, watchcases, and parts	3,000	-24.3	0.8
<i>Shipments</i>	<i>Millions of \$</i>		
Ball and roller bearings	6,798	17.7	-4.3
Ceramic wall and floor tile	1,190	7.1	-4.5
Costume jewelry	790	2.5	-2.4
Cutlery and hand tools	3,491	21.8	-1.1
Dehydrated fruits, vegetables, and soups	3,910	19.0	0.1
Footwear and leather products	2,100	24.7	-1.6
Glass and glass products, except containers	18,345	21.2	-0.1
Pens, mechanical pencils, and parts	1,085	18.6	-1.8
Table and kitchenware	1,050	26.3	-1.9
Watches, clocks, watchcases, and parts	630	26.0	0.9
<i>Imports</i>			
Ball and roller bearings	2,187	40.4	9.4
Ceramic wall and floor tile	1,961	39.2	2.1
Costume jewelry	1,799	29.0	4.8
Cutlery and hand tools	3,839	37.1	3.8
Dehydrated fruits, vegetables, and soups	537	37.5	13.1
Footwear and leather products	28,801	25.3	3.9
Glass and glass products, except containers	4,977	37.5	5.6
Pens, mechanical pencils, and parts	1,154	58.5	3.8
Table and kitchenware	2,301	20.6	2.4
Watches, clocks, watchcases, and parts	4,076	19.3	2.1
<i>Exports</i>			
Ball and roller bearings	1,749	70.3	0.8
Ceramic wall and floor tile	42	54.6	0.6
Costume jewelry	176	51.5	1.1
Cutlery and hand tools	1,601	64.1	0.7
Dehydrated fruits, vegetables, and soups	1,044	58.9	8.1
Footwear and leather products	783	55.1	0.3
Glass and glass products, except containers	3,728	68.7	4.3
Pens, mechanical pencils, and parts	165	15.0	1.6
Table and kitchenware	597	57.1	0.6
Watches, clocks, watchcases, and parts	347	63.0	3.2

Source: U.S. Customs and USDOC data and USITC estimates.

Note: The symbol (+) indicates a small positive value less than 0.05 percent.

^aIncremental effect in 2013 of liberalizing U.S. imports of each respective sector.

FIGURE 2.10 Percentage change in output of sectors with significant tariff restraints, baseline projection and liberalization, 2005–13

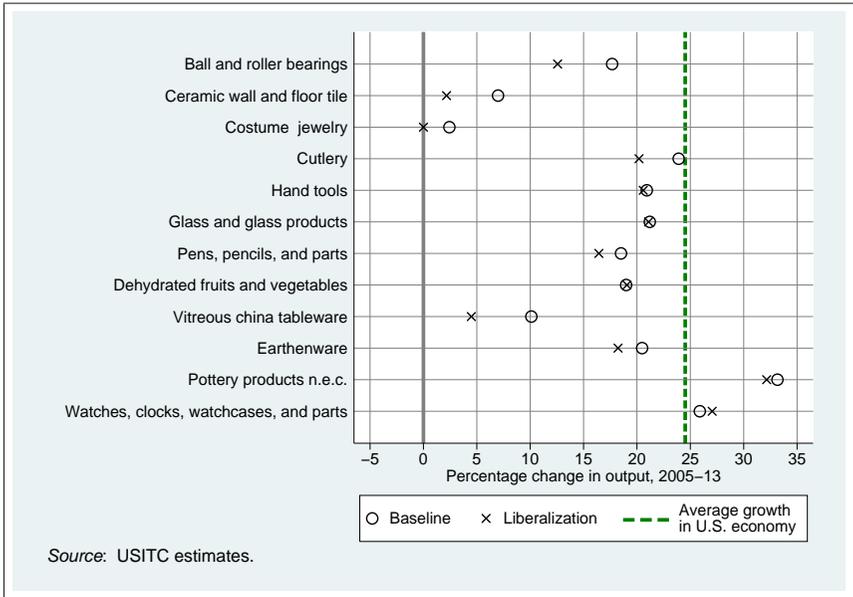


FIGURE 2.11 Percentage change in imports of sectors with significant tariff restraints, baseline projection and liberalization, 2005–13

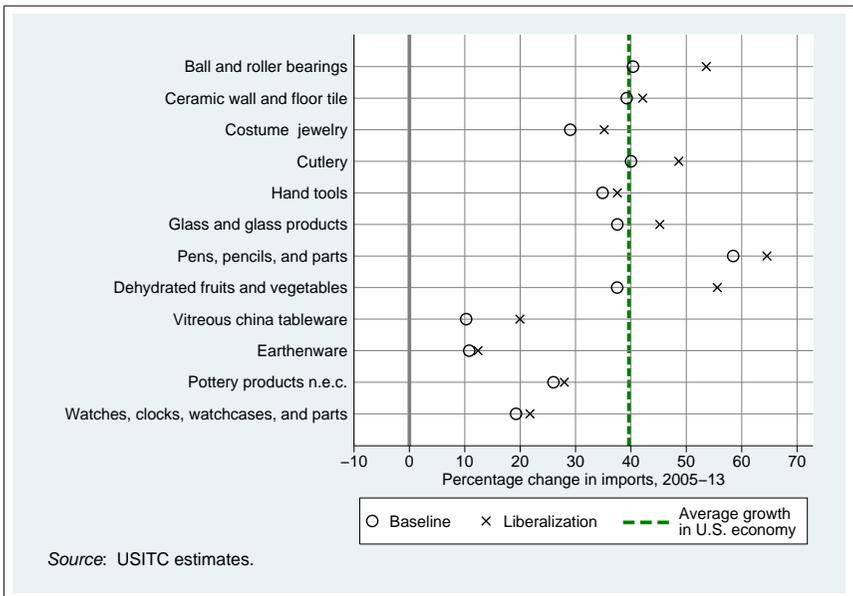


FIGURE 2.12 Percentage change in output of footwear and leather products, baseline projection and liberalization, 2005–13

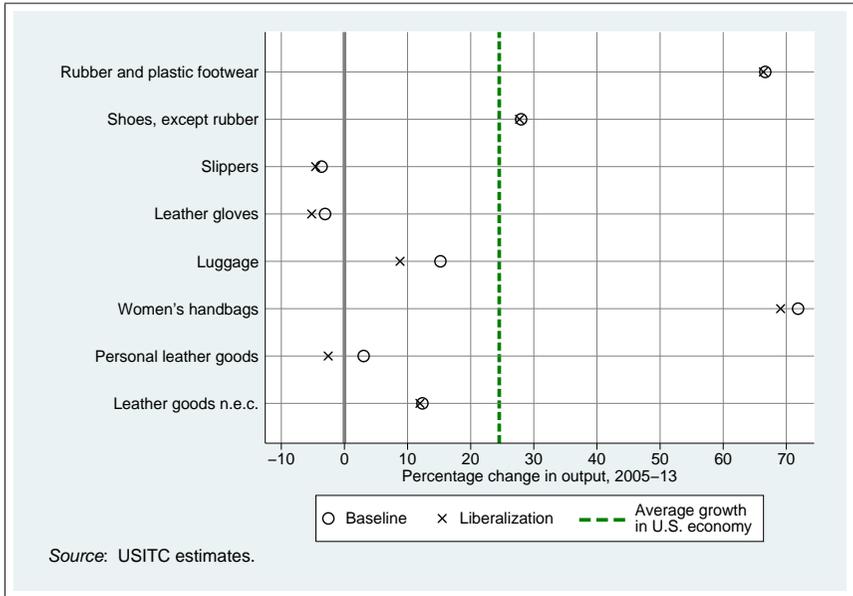
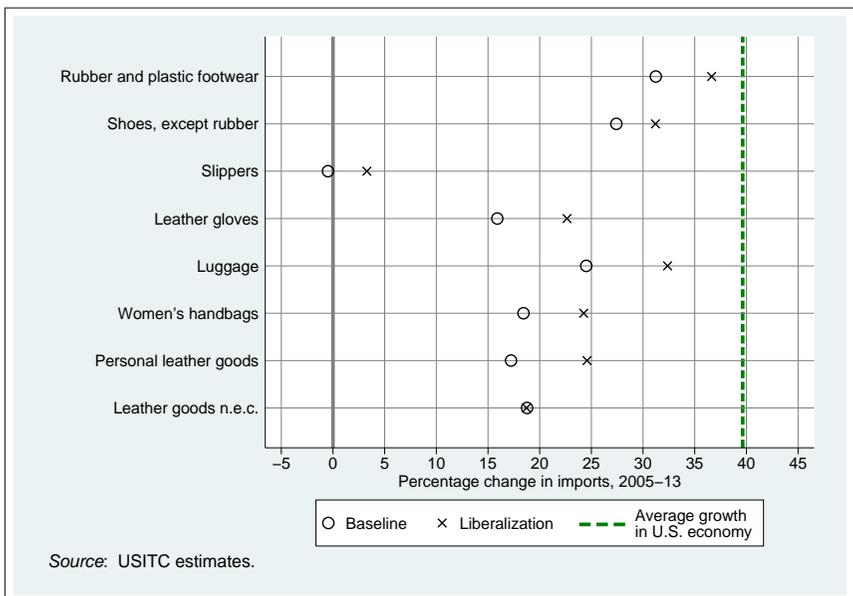


FIGURE 2.13 Percentage change in imports of footwear and leather products, baseline projection and liberalization, 2005–13



except rubber) and 11.4 percent (leather gloves and mittens); the greatest output declines for products in this group are expected in luggage, which declines by 5.5 percent from the projected 2013 baseline, and personal leather goods n.e.c., which declines by 5.4 percent. Employment for these sectors would decline by similar amounts. Total output across this group of industries is expected to decline by 1.6 percent, and total imports are expected to rise by 3.9 percent.

Elimination of tariffs on costume jewelry would result in a welfare increase of \$21 million, which was the next largest welfare gain from liberalization. Liberalization is expected to cause the price of imports (landed, duty-paid) to decline by 5.6 percent, while imports increase by 4.8 percent over the 2013 baseline projection. Domestic output would decline by 2.4 percent. Elimination of tariffs on ball and roller bearings is expected to increase welfare by \$14 million, while imports would increase by 9.4 percent and output is expected to contract by 4.3 percent. In these sectors, as in most, the decline in final domestic prices relative to world prices would lead to small increases in exports.

Similar responses are generally seen in other sectors: the price of imports declines; output and employment in the domestic industry fall, but there is a net welfare gain. Glass products are an exception. Removal of the tariff on glass products is expected to reduce the price of imported products (landed, duty-paid) by 3.9 percent, and imports are expected to increase over the projected 2013 baseline by 5.6 percent. Domestic output and employment are expected to fall by 0.1 percent. A large share of the output in this sector goes into the construction industries, so glass shares many of the characteristics of an investment good as well as a final consumption good. In a general equilibrium framework, increases in investment raise the relative cost of consumption, which attenuates the consumer benefit of the tariff cut that generates the new investment. As a result, the consumer welfare effect of this tariff elimination is estimated to be a negative \$1 million, or essentially zero.

Bibliography

- American Geological Institute. Government Affairs Program. Review of National Research Council Report “Double-Hull Tanker Legislation: An Assessment of the Oil Pollution Act of 1990.” Alexandria, VA, 1997. <http://www.agiweb.org/hearings/nrcopa90.html> (accessed March 24, 2004).
- Congressional Budget Office (CBO). “Factors Underlying the Decline in Manufacturing Employment since 2000.” *Economic and Budget Issue Brief*, December 28, 2008.
- Council of Economic Advisers. *Economic Report of the President*. Washington, D.C.: U.S. Government Printing Office, February 2008.
- Dixon, Peter B. and Maureen T. Rimmer. *Dynamic General Equilibrium Modelling for Forecasting and Policy*. Amsterdam: Elsevier North Holland, 2002.
- Fox, Alan, William Powers, and Ashley Winston. “Textile and Apparel Barriers and Rules of Origin: What’s Left to Gain after the Agreement on Textiles and Clothing?” *Journal of Economic Integration* 23, no. 3 (September 2008): 656–84.
- Global Trade Information Service, Inc. (GTIS). World Trade Atlas Database (accessed various dates).
- Gamboa, Suzanne. “Cross-border Trucking Program May Be Resurrected.” *Houston Chronicle*, March 12, 2009. http://www.chron.com/CDA/archives/archive.mpl?id=2009_4710984.
- Jones, Laura E. U.S. Association of Importers of Textiles and Apparel (USA-ITA). Written submission to the U.S. International Trade Commission in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Review*, December 11, 2008.
- . Written submission to the U.S. International Trade Commission in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Review*, February 6, 2009.

- Alan Levitt Corporate Communications. "SMP: World Prices vs. U.S. Prices," undated. <http://www.levcom.com/LinkClick.aspx?fileticket=3OGPnGLApDU%3D&tabid=56&mid=396> (accessed February 17, 2009).
- Office of the United States Trade Representative (USTR). "Memorandum of Understanding between the Governments of the United States of America and the People's Republic of China Concerning Trade in Textile and Apparel Products," November 8, 2005. <http://www.state.gov/documents/organization/94919.pdf> (accessed August 11, 2009).
- Renewable Fuels Association. "Historic U.S. Fuel Ethanol Production," undated. <http://www.ethanolrfa.org/industry/statistics/#A> (accessed April 9, 2009).
- U.S. Department of Agriculture (USDA). Economic Research Service (ERS). *Sugar and Sweetener Yearbook Tables*, undated. <http://www.ers.usda.gov/Briefing/Sugar/data.htm> (accessed March 26, 2009).
- . Foreign Agricultural Service (FAS). "Dairy Export Incentive Program," undated. <http://www.fas.usda.gov/excredits/deip/deip-new.asp> (accessed February 10, 2009).
- . FAS. Production Supply and Distribution Online. <http://www.fas.usda.gov/psdonline/psdQuery.aspx>, accessed March 26, 2009.
- . FAS. "Sugar under Tariff Rate Quotas," undated. <http://www.fas.usda.gov/itp/imports/Sugar/sugartrq.asp> (accessed April 2, 2009).
- U.S. Department of Commerce (USDOC). Bureau of Economic Analysis (BEA). *Industry Economic Accounts*. Interactive tables. <http://www.bea.gov/industry/index.htm> (accessed various dates).
- . BEA. *U.S. International Services: Cross-Border Trade 1986–2007, and Services Supplied Through Affiliates, 1986–2006*. "Table 1: Summary Data for Trade in Private Services by Type," October 2008.

- . U.S. Census Bureau. Official U.S. Trade Statistics. <http://www.census.gov/foreign-trade/download/dvd/index.html#merch> (accessed monthly).
- U.S. Department of Labor (USDOL). Bureau of Labor Statistics (BLS). “Labor Force Statistics from the Current Population Survey,” undated. http://data.bls.gov/PDQ/servlet/SurveyOutputServlet?data_tool=latest_numbers&series_id=LNS14000000 (accessed May 5, 2009).
- . Current Employment Statistics (CES) Survey (National) Database. <http://data.bls.gov/PDQ/outside.jsp?survey=ce> (accessed various dates).
- U.S. Department of Transportation (USDOT). Maritime Administration (MARAD). “Domestic Shipping,” undated. http://www.marad.dot.gov/ships_shipping_landing_page/domestic_shipping/Domestic_Shipping.htm (accessed January 13, 2009).
- U.S. International Trade Commission (USITC). “U.S. Tobacco Quota Buyout: Issues and Analysis.” *Industry Trade and Technology Review*, USITC Publication 3747. Washington, D.C.: USITC, 2004.
- . *The Economic Effects of Significant U.S. Import Restraints: Fifth Update 2007*, USITC Publication 3906. Washington DC: USITC, 2007.
- . *The Economic Effects of Significant U.S. Import Restraints: Fourth Update 2004*, USITC Publication 3701. Washington DC: USITC, 2004.
- . *The Economic Effects of Significant U.S. Import Restraints: Third Update 2002*, USITC Publication 3519. Washington DC: USITC, 2002.
- . *The Economic Effects of Significant U.S. Import Restraints: Second Update 1999*, USITC Publication 3201. Washington DC: USITC, 1999.
- . *Tuna: Competitive Conditions Affecting the U.S. and European Industries in Domestic and Foreign Markets*. USITC Publication 2339. Washington DC: USITC, 1990.

———. Hearing transcript in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Review*, January 8, 2009.

World Bank. World Trade Indicators 2008.

<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/TRADE/0,,contentMDK:21393040~pagePK:210058~piPK:210062~theSitePK:239071,00.html> (accessed January 5, 2009).

World Trade Organization (WTO). *International Trade Statistics 2008*.

“Table 1.10: Leading Exporters and Importers in World Trade in Commercial Services, 2007.” http://www.wto.org/english/res_e/statis_e/its2008_e/section1_e/i10.xls.

Chapter 3

U.S. Trade Policy since 1934

Introduction

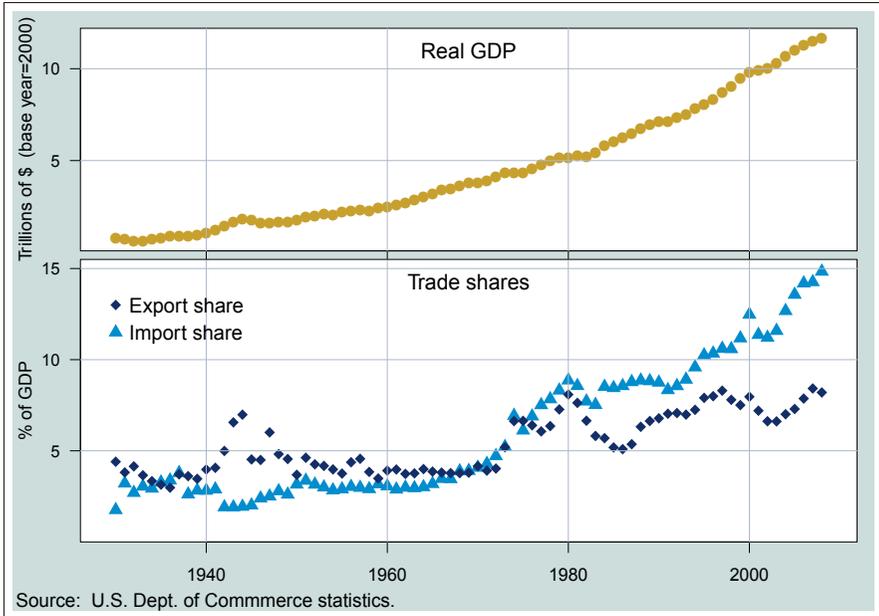
U.S. trade policy has evolved greatly in the 75 years since the passage of the landmark 1934 Reciprocal Trade Agreements Act (RTAA). At the beginning of this era, the United States and its trading partners had in place high import tariffs. There was no multinational international agreement that set out rules of trade between nations, and the few trade agreements that existed had generally been negotiated on a bilateral basis. Trade negotiations, when they occurred, were focused on manufactured goods and the elimination of tariffs.

Since that time, the United States and its trading partners have reduced or removed many barriers to trade. Tariffs have been lowered or eliminated on nearly all products, and average tariff rates for the United States declined from 18.4 percent in 1934 to 1.3 percent in 2007.¹ Other industrialized countries have similarly lowered their tariffs. Trade has become a larger component of U.S. GDP during this time (figure 3.1).

Significant strides have been made in international cooperation. Trade negotiations now take place in an established multilateral framework that provides stability and continuity to the negotiations. An initial set of

¹Data are weighted-average tariff rates as a percent of all imports. Compiled from official statistics of the U.S. Department of Commerce.

FIGURE 3.1 U.S. real GDP (top) and U.S. exports and imports as a share of GDP (bottom), 1930–2008



multilateral trade rules, embodied in the General Agreement on Tariffs and Trade, was negotiated in 1947 with the United States as one of the 23 founding contracting parties.² The General Agreement remained the primary set of rules and organizational structure for nearly 50 years until the negotiation of the Uruguay Round Agreements and the establishment of the World Trade Organization (WTO) in 1995.

Trade negotiations have been extended far beyond their initial emphasis on manufactured goods and tariff rates. In recent decades, nontariff measures have taken on greater importance as tariffs have declined, and multilateral negotiations have included nontariff measures since the beginning of the Kennedy Round in 1964. The Uruguay Round (1986–93) was the widest reaching of all and included significant reductions

²For purposes of this chapter, the term “General Agreement” refers to the agreement itself (the General Agreement on Tariffs and Trade) and the term “the GATT” refers to the organization. However, the reader should be aware that the term “GATT 1947” is now used to refer to the General Agreement as it existed before January 1, 1995, when the Uruguay Round Agreements were implemented. The term “GATT 1994” is used to refer to the General Agreement as it existed on and after January 1, 1995.

in tariffs; the tariffication of quotas on agricultural goods; the phase-out of quotas on textiles and apparel; the expansion of the rules relating to trade in goods; the establishment of new rules relating to investment, intellectual property, and trade in services; a binding dispute settlement process; and the establishment of a permanent organization to administer the agreements, the World Trade Organization.

A survey of the economic literature on trade provides a clear picture of the effects of trade policy on the United States. There is near unanimity in the literature that trade liberalization has broadly benefited the United States, although assessments differ considerably about its precise effects. It is well recognized that the gains from trade liberalization are more widely dispersed than the losses, which may make the losses more apparent. However, the economy-wide benefits of trade liberalization are estimated to be positive even after taking into account the costs of adjusting an economy to trade openness. Another observation made in the literature is that further tariff reductions provide fewer gains to economic welfare when tariff barriers are already at very low levels.³ This is particularly true for the United States and other developed countries as their average tariff rates edge toward zero. Finally, recent economic literature has begun to include analysis of services barriers and nontariff barriers; reductions in these types of barriers are estimated to have a greater potential effect on welfare than can be currently derived from additional reductions in tariffs.

This chapter provides an overview of U.S. trade policy since 1934 and summarizes the literature on the economic effects of these policy changes on the United States. The first part, organized into four time periods, examines the key steps and results of U.S. trade policy since 1934. The second part summarizes the economic literature on the effects of trade liberalization, with brief discussions of economic theories and their quantitative implications. For the purposes of this study, the referenced literature was selected from peer-reviewed literature. For the section on the history of U.S. trade, the literature review drew heavily on experts in the fields of economic history, political economy and U.S. trade law. The section on economic effects focuses on analytical and rigorous studies, both theoretical and quantitative.⁴ Context and summary points have been added where necessary to provide the reader with a narrative structure.

³Welfare is used throughout this chapter in its economic sense; it corresponds approximately to household income, taking into consideration the prices of goods purchased by the household and the variety of goods available.

⁴The chapter will not, as a rule, explore the interplay of exchange rate policy and trade policy. For details on the exchange rate regime that prevailed until the mid 1970s when the

A timeline of important legislation, policy changes, and related events is available at the end of this chapter.

History of U.S. Trade Policy since 1934

This section of the chapter provides a chronology of events since passage of the 1934 Reciprocal Trade Agreements Act (RTAA). This chronology of the last 75 years documents the course of U.S. efforts to increase trade openness. The period can be divided into four major eras. During the first era, from 1934 until the beginning of World War II, the United States began to reduce barriers and expand trade via a series of bilateral agreements with its main trading partners to mutually reduce tariffs. After World War II, trade policy shifted toward a multilateral approach under the auspices of the GATT. Following the post-war period of trade opening came a third era during which progress in multilateral negotiations continued, with successive rounds of negotiations resulting in further tariff reductions and increasingly in rules regulating nontariff issues. As multilateral trade liberalization contributed to the growth of new export-oriented industries in developing countries, the resulting disruptions to importing countries gave rise to a series of measures in the form of voluntary export restraints and marketing arrangements, such as the Multifiber Arrangement for textiles and apparel.

Finally, the most recent period in U.S. trade policy has been marked by a renewed effort toward liberalization on multilateral, regional, and bilateral fronts after the United States completed a free trade agreement with Israel in 1985. In 1989, the United States entered into a free trade agreement with Canada and then in 1994 began implementing an expanded free trade agreement that included Mexico (NAFTA). The Uruguay Round negotiations, concluded in 1994, further reduced tariffs on a global basis and included new agreements on issues of critical importance to many U.S. industries, such as intellectual property, investments, and trade in services. In the post-1995 period, the United States continued to negotiate and implement free trade agreements; chronologically, these agreements were with Singapore, Chile, Australia, a group of Central American and Caribbean countries (CAFTA), Morocco, Bahrain, Oman, and Peru. Three

United States left the gold standard see Krugman and Obstfeld, *International Economics*, 2000, chap. 18, and in particular, 557–61.

additional agreements are awaiting approval at the time of this writing: Colombia, South Korea and Panama.

The Reopening of Trade (1934–1941)

After more than a decade of increasingly high barriers to U.S. imports, the 1934 RTAA signaled what was to be the beginning of a long push to liberalize trade. Before tracing that path, however, it is useful to step back a few years and look at the Tariff Act of 1930, commonly known as the Smoot-Hawley Act.

While economists have debated the precise impact of the Smoot-Hawley Tariff Act of 1930, it has come to epitomize the trade restricting sentiment in the United States at the outset of the Great Depression.⁵ This legislation was originally intended to protect domestic agricultural interests from low-priced imports that arose from global surges in farm production in the aftermath of World War I.⁶ The stock market crash of 1929, however, prompted demands for increased protection from all sectors of the economy. What were initially seen as a series of limited adjustments in duties affecting selected agricultural and manufacturing products escalated through “log rolling” into the more substantial tariff increases incorporated into the Tariff Act of 1930.⁷ International retaliatory moves led to a dramatic decline in the volume of world trade. Such actions included an increase in tariffs by the United Kingdom, prohibitive Italian tariffs on automobiles, significantly increased Spanish duties on products largely imported from the United States (e.g., automobiles, tires, tubes, and motion pictures), and similar Canadian actions against U.S. imports.⁸

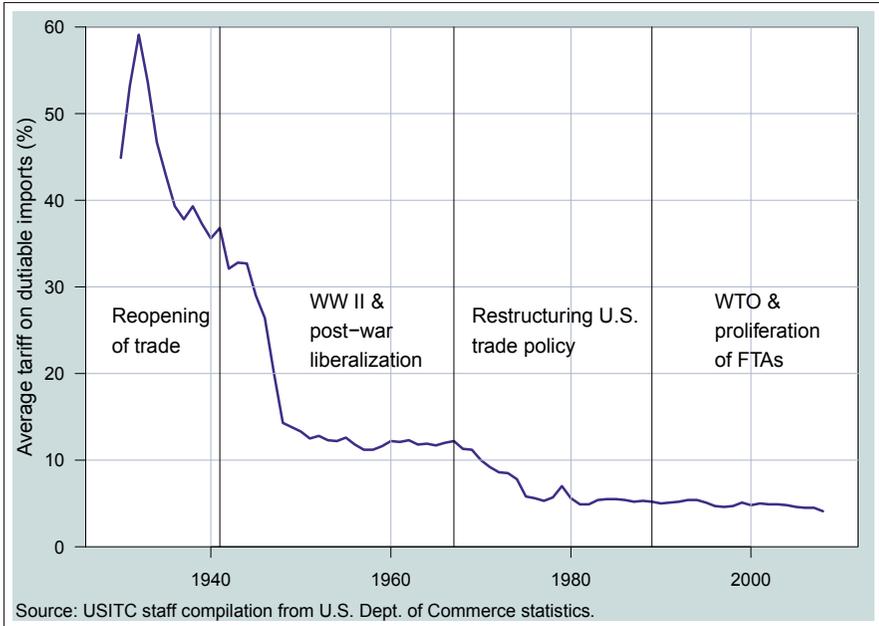
⁵Irwin notes, however, that the increase in average tariffs due to Smoot-Hawley was somewhat more modest than often thought, at about a 23 percent increase (as applied to actual 1928 imports). For purposes of comparison, the Fordney-McCumber tariff increase of just eight years earlier pushed the average tariff rate up by 64 percent. Nevertheless, the cumulative effect was to push tariff rates to historic levels. Irwin, “From Smoot-Hawley to Reciprocal Trade Agreements,” 1998, 334.

⁶Chorev, *Remaking U.S. Trade Policy*, 2007, 44.

⁷Taussig, *The Tariff History of the United States*, 1931, 498.

⁸Eichengreen notes that the extent to which increased foreign trade restrictions were a reaction to Smoot-Hawley versus a reflection of protectionist sentiments in those countries is not completely clear. Eichengreen, “The Political Economy of the Smoot-Hawley Tariff,” August 1986, 47. Retaliatory moves are also discussed in great detail in Jones, *Tariff Retaliation*, 1934.

FIGURE 3.2 U.S. trade-weighted tariffs on dutiable imports and historical periods, 1930–2008



The average ad valorem equivalent tariff rose from 40.1 percent to 47.1 percent from mid-1929 to mid-1930.⁹ More significantly, however, most tariff rates incorporated in the 1930 act were *specific duties* (expressed as dollars per physical unit of the imported good) rather than a percentage of the import value. The effect of specific duties was such that reducing import prices would increase the ad valorem equivalent tariff even with no change in statutory tariff rates.¹⁰ Global price deflation in the early 1930s therefore led to further tariff increases in percentage terms, and the mean U.S. ad valorem tariff peaked at almost 60 percent in 1932 (figure 3.2). Two years after the Smoot-Hawley Act, the volume of both U.S. exports and imports had fallen by approximately 41 percent.

⁹The average ad valorem equivalent tariff is the value of collected tariffs as a percentage of the value of dutiable imports. Irwin, “The Smoot-Hawley Tariff,” May 1998, 327.

¹⁰For example, an item worth \$100 that has a specific duty of \$10 would have an ad valorem equivalent tariff of 10 percent. However, if deflation caused the item’s value to drop to \$50, the item’s ad valorem equivalent tariff would then rise to 20 percent.

Prior to the 1930 act, tariff changes were viewed as entirely the domain of Congress.¹¹ The depth of the global depression and the rise in barriers imposed by foreign trading partners, however, made it clear that international negotiations would be required to reverse these effects, as trading partners were unlikely to lower barriers to U.S. exports unless the United States acted in a similar manner. Although the President could engage in multilateral negotiations, the need for a two-thirds majority in the Senate to approve a resulting treaty made other countries less likely to engage in such negotiations.

The Roosevelt administration, which took office in 1933, was sympathetic to reducing tariffs, but in the midst of the depression, political support for unilateral reductions was lacking.¹² The President therefore requested, though not until March of 1934, that Congress authorize him to negotiate bilateral or multilateral tariff-reduction agreements. The RTAA was signed into law in June 1934.

The goal of the RTAA was export promotion, as its opening line stated it was “[f]or the purpose of expanding foreign markets for the producers of the United States.”¹³ The RTAA permitted the President to conclude bilateral, reciprocal trade agreements with a view toward reducing the tariffs of mutual interest to the United States and specific trade partners.¹⁴ This allowed the President to engage in a more streamlined negotiating process.¹⁵ The RTAA led to a series of bilateral tariff-reduction agreements, although these were not across-the-board cuts but rather selective reductions taking into account the possibility of injury to particular industries. The U.S. reductions were generally applied according to the “most-favored-nation” (MFN) principle that had been in effect under U.S. trade law since 1923, in that tariff preferences granted to one country were automatically granted to imports into the United States from all

¹¹Irwin, “From Smoot-Hawley to Reciprocal Trade Agreements,” 1998, 331.

¹²Dam notes that Secretary of State Cordell Hull, a long-time proponent of low tariffs, called for an “immediate unilateral reduction in U.S. tariffs” via a 1925 draft resolution in the U.S. House of Representatives. Dam, “Cordell Hull,” October 2004, 2.

¹³Reciprocal Trade Agreements Act of 1934, Pub. L. No. 73-316 (1934).

¹⁴These bilateral agreements did not need to be submitted for congressional approval. Irwin, “From Smoot-Hawley to Reciprocal Trade Agreements,” 1998, 341.

¹⁵The initial law was valid for a three-year period. It was renewed repeatedly and has existed in some form since 1934 with a few major lapses: 1967–74, 1994–2002, and since 2007. Currently, the President does not have this power, now called trade promotion authority.

other countries.¹⁶ “Free-riding”¹⁷ by other countries was minimized by striking deals “only on commodities in which the negotiating country was a ‘principal supplier.’”¹⁸

Tariff reduction necessitated finding alternate sources of government revenues.¹⁹ While the share of federal revenues derived from customs duties had been steadily falling since the turn of the century (it was 40 percent in 1910 before the 1913 ratification of the Sixteenth Amendment established the modern system of income taxes), the percentage of federal revenues coming from tariffs was still 14.5 percent in 1930.²⁰ By 1940 this share fell to 4.8 percent and by 1950 to 1 percent (where it has remained to date).

Agreements had been signed under the RTAA with 21 countries representing approximately 60 percent of U.S. trade by June 1940.²¹ The

¹⁶Trebilcock and Howse present an extensive discussion of the rationale for and history of MFN principles. There are both political and economic rationales for the principle, such as avoiding tensions among countries due to perceived discrimination in economic policy and inefficient distortions of trade flows that would result in its absence. Trebilcock and Howse, *The Regulation of International Trade*, 2005. The United States had long adhered to a “conditional” MFN policy in which tariff concessions negotiated with one country would be extended to others *but* only if those others made reciprocal concessions. Irwin, “From Smoot-Hawley to Reciprocal Trade Agreements,” 1998, 333. However, in 1923, President Harding approved adoption of unconditional MFN in future commercial treaties. The United States subsequently announced it would in the future adhere to an “unconditional” MFN policy—in which “any negotiated U.S. tariff reduction would be automatically applied to all countries that had an MFN treaty with the United States.” Irwin, “The Smoot-Hawley Tariff,” 1998, 333; U.S. Tariff Commission, *Operation of the Trade Agreements Program*, Report No. 160, 1949.

¹⁷In other words, a country with MFN status could benefit without liberalizing any of its own import tariffs.

¹⁸Irwin, “From Smoot-Hawley to Reciprocal Trade Agreements,” 1998, 27–28.

¹⁹Taussig, in describing a phase-in period for a reduction in the sugar duty incorporated in the Tariff Act of 1913 notes “the sugar duty contributed heavily to the customs revenue. The income tax, which was expected to make up for the loss in the customs revenue, would almost certainly require time for working out its full yield.” Taussig, *The Tariff History of the United States*, 1914, 426.

²⁰Personal and corporate income taxation provided a rapidly increasing share of federal revenues, rising to 30 percent in 1935, to 77 percent in 1950, and to 93 percent today (including payroll taxes).

²¹Irwin, “From Smoot-Hawley to Reciprocal Trade Agreements,” 1998, 343; Beckett, *The Reciprocal Trade Agreements Program, 1941*, 32, 124. These countries (in chronological order of their effective dates) were: Cuba, Belgium, Haiti, Sweden, Brazil, Canada, the Netherlands, Switzerland, Honduras, Colombia, France, Guatemala, Nicaragua, Finland, El Salvador, Costa Rica, Czechoslovakia, Ecuador, the United Kingdom, Turkey, and Venezuela. Through 1945, 32 agreements were negotiated. Jackson, *World Trade and the Law of GATT*, 1969, 37.

average U.S. ad valorem tariff on dutiable imports had fallen to 25.3 percent by 1946 (figure 3.2).²² Despite these bilateral trade agreements and similar arrangements undertaken by other developed economies, and perhaps due in part to the shift toward war-related production in some countries, growth in global trade lagged behind growth in overall economic activity during the slow recovery from the depression.²³

World War II and Postwar Liberalization (1941–1967)

World War II brought bilateral trade negotiations largely to an end. Bilateral negotiations were not resumed even after the war ended, as there were limitations to the approach. The primary limitation was the obligation under the principle of MFN to provide all trade partners with the same nondiscriminatory treatment as given to a specific partner under a bilateral trade agreement.²⁴ But perhaps more importantly, the 1941 Atlantic Charter between the United States and the United Kingdom promoted the view that broad international economic collaboration was necessary to avoid the “beggar-thy-neighbor” policies that followed World War I, which were thought to have led to the economic inequities and resulting resentments that contributed to the start of World War II.²⁵ In calling for renewal of the Trade Agreements Act in 1945, the President—referring to post-war economic policy underway—said:

The purpose of the whole effort is to eliminate economic warfare, to make practical international co-operation effective on as many fronts as possible, and so to lay the economic basis for the secure and peaceful world we all desire.²⁶

After the war, the United Nations (with the United States as one of the 51 charter member countries) was established to provide a forum for both political and economic issues. One of the first goals of the United Nations, through its Economic and Social Council, was to establish the International Trade Organization (ITO). The 1947–48 Havana Conference on Trade and

²²Irwin, “Trade Restrictiveness,” 2007, 33.

²³Eichengreen and Irwin state that “[f]rom 1932 to 1938, GNP rose 29 percent in the industrialized countries, while export volume increased 24 percent and import volume rose a mere 14 percent.” Eichengreen and Irwin, “Trade Blocs,” 1995, 4.

²⁴Dam, “Cordell Hull,” October 2004, 6.

²⁵Jackson, *World Trade and the Law of GATT*, 1969, 37–38.

²⁶As quoted in Jackson, *World Trade and the Law of GATT*, 1969, 39.

Employment concluded with the Havana Charter, an agreement by 52 countries, which was to prepare the way for the ITO.²⁷ However, the ITO concept of a multilateral institution was abandoned when it became clear that the United States would not accept the Havana Charter.²⁸

Preparatory work on the ITO, however, did result in the set of trade rules and disciplines embodied in the General Agreement on Tariffs and Trade, which was signed by 23 countries including the United States in October 1947.²⁹ The General Agreement, and the informal organization (the GATT) created to oversee its implementation, became the vehicle for multilateral trade negotiations for the next 50 years. The first GATT negotiations, held in Geneva, led to U.S. tariff reductions, effective January 1948, which brought the average U.S. ad valorem rate on dutiable imports down to 13.9 percent from 19.4 percent in 1947, though a considerable part of that reduction was due to increased import prices rather than negotiated reductions in specific duties.³⁰

At the time the General Agreement was drafted, the United States was a major exporter of agricultural goods. Moreover, it had in place a substantial set of price and quantity controls on agriculture established under the 1933 Agricultural Adjustment Act. The General Agreement was drafted to exempt existing agricultural programs maintained by the United States and other parties. The United States played a significant role in this exemption.³¹ After a 1951 amendment to the 1933 act that required certain import quotas, the United States requested and received a waiver in 1955 that permitted the new U.S. agricultural quotas.³²

The Ancey (1949), Torquay (1950–51), Geneva (1955–56) and Dillon (1961–62) Rounds produced only small tariff reductions.³³ However, these rounds slightly increased the number of signatories to the GATT and consolidated the initial gains of the GATT by signaling the commitment of the members to the new structure of trade negotiations (see figure 3.3).³⁴

²⁷McGovern, *International Trade Regulation*, 1995, 1.11-1.

²⁸Diebold suggests that a variety of domestic groups, as well as the lack of political will or power by the Truman administration, contributed to the charter's failure to pass the U.S. Congress. Diebold, "The End of the ITO," 1952, 3.

²⁹The GATT was originally conceived as an agreement within the context of the ITO. Jackson, *World Trade and the Law of the GATT*, 1969, 43.

³⁰Irwin, "From Smoot-Hawley to Reciprocal Trade Agreements," 1998, 346.

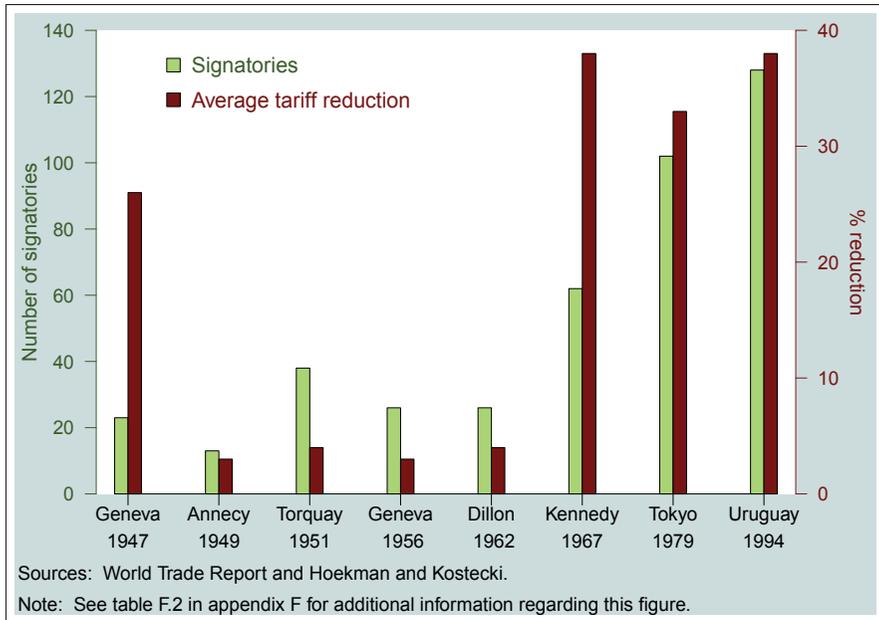
³¹Jackson, *World Trade and the Law of GATT*, 1969, 733.

³²Jackson, *World Trade and the Law of GATT*, 1969, 734-735.

³³Irwin, "From Smoot-Hawley to Reciprocal Trade Agreements," 1998, 346.

³⁴Table F.2, provides a detailed summary of all negotiating rounds under the GATT.

FIGURE 3.3 GATT round summary: number of signatories (left axis) and weighted average tariff reductions (right axis)



Several European countries attempted to create their own economic linkages in order to reduce the possibility of renewed hostilities by forming the European Coal and Steel Community (ECSC) in 1951 and the European Economic Community (EEC) in 1957. These regional trading blocs encouraged subsequent multilateral trade negotiations as the United States was unwilling to be shut out of the European market.³⁵

The United States entered the 1960s in robust macroeconomic health. U.S. productivity growth was stable at an average annual rate of 3 percent during the 1960s, and inflation remained low, with an average below 3 percent over the same time frame.³⁶ The strength of the economy relied heavily on the country's post-war manufacturing preeminence. The European and Japanese economies, decimated by World War II, began the decade still lagging behind the United States but had made significant progress rebuilding their manufacturing capabilities by the end of the decade.

³⁵Irwin, "The GATT in Historical Perspective," 1995, 326.

³⁶Pearson, *United States Trade Policy*, 2004, 10.

In the context of continued growth, the Trade Expansion Act of 1962 was passed. The primary aim of the act was to authorize the President to negotiate further reductions in duties. The act authorized the President to negotiate across-the-board tariff-rate cuts³⁷ as well as tariff reductions of up to 50 percent, an increase from the 1958 extension of the RTAA that only allowed reductions of up to 20 percent. The Trade Expansion Act also moved the locus of trade negotiations to the separate U.S. government office of the newly created Special Trade Representative.³⁸ The 1962 Trade Expansion Act passed Congress with the support of the labor unions, who were reassured by the inclusion of the new Trade Adjustment Assistance (TAA) program designed to help workers in industries adversely affected by trade.³⁹ However, the TAA program was subject to strict criteria, and no favorable action was granted to workers seeking relief until 1969;⁴⁰ even through 1974 relatively few workers had obtained compensation under the TAA.⁴¹

Restructuring U.S. Trade Policy (1967–1989)

The 1967–89 period was marked by a struggle among domestic interests over the trade liberalization framework. This domestic struggle arose out of the considerable pressures placed on U.S. manufacturers in import-competing industries during the 1960s and 1970s when European and Japanese firms emerged from their post-World War II rebuilding efforts with a greater level of competitiveness. Additionally, the late 1960s and 1970s presented a series of macroeconomic challenges, including the oil shocks, the end of fixed exchange rate regimes, and high inflation, which further disrupted U.S. industries. Domestic producers in certain vulnerable industries, particularly labor-intensive manufacturers, pushed for legislation against imports, while export-oriented producers, including certain agricultural exporters, opposed new U.S. barriers that might lead to reciprocal barriers against U.S. exports. Those domestic producers in favor of restricting trade were initially successful in reducing imports from

³⁷As noted by Chorev, this was a change from prior extensions of the RTAA that permitted only line-by-line negotiations. Chorev, *Remaking U.S. Trade Policy*, 2007, 61.

³⁸Office of the USTR, "History of the U.S. Trade Representative," undated (accessed February 2, 2009).

³⁹Destler, *American Trade Politics*, 1995, 23.

⁴⁰Baldwin, "The Changing Nature of U.S. Trade Policy," 1984a, 13.

⁴¹Fewer than 54,000 workers received compensation under the program through 1974. Kenan, *The International Economy*, 2000, 228.

a limited number of countries via quota-based agreements or voluntary export restraints (VERs).⁴² As will be explained in detail in this section, these practices were gradually applied to other vulnerable industries, as well as to a broader set of countries. The effect was a significant loss of momentum in the reduction of trade barriers and an increase in trade barriers in certain areas. However, this trend began to reverse itself toward the end of the era, when a set of trade remedy laws was established to address the concerns of those in the import-competing industries, while at the same time a broader liberalization agenda was revived.

Voluntary Export Restraints (VERs)

As early as the mid-1950s, certain import-competing industries began lobbying for government action against imported goods. The most vulnerable industries—those that employed domestic labor intensively, those that competed with foreign labor-intensive manufacturing processes, or those with easily adoptable technologies—were among the most fervent in their lobbying efforts. Much of this effort was initially directed against Japan’s cotton textile manufacturers.⁴³ In order to deflect charges of unfair trade practices and to avoid punitive tariffs, Japan voluntarily agreed to restrict its exports to many of its trade partners. These VERs were initially applied to certain cotton products in 1955 at the time of Japan’s accession to the GATT. Even with the agreement in place, many GATT members declined to grant MFN status to Japan.⁴⁴ This was done via the “opt-out” clause of the GATT, which allowed any member to refuse to grant MFN status to any country at the time of that country’s accession.⁴⁵ With the trade restraints in place, Japan eventually achieved MFN status from GATT members. The VER agreements with the United States called for Japan to restrain its textiles exports to approximately 1.5 percent of U.S. domestic production of textiles, with a one-time 5.2 percent increase in exports

⁴²Voluntary export restraints are restraints placed by exporting countries (usually exporters of low-priced goods) on their own goods, generally after considerable pressure by the importing country.

⁴³Japan’s exports of cotton textiles increased sixfold from 1945 to 1955, providing sudden competition for U.S. manufacturers. Hunter and Macnaughtan, “Textile Workers in Japan,” 2008, 39. It should be noted, however, that by 1959 Japan had merely regained its prewar share of textile world trade. Keesing and Wolf, *Textile Quotas Against Developing Countries*, 1980, 12.

⁴⁴The United States did extend MFN status to Japan.

⁴⁵Jackson, *The World Trading System*, 1997, 60.

permitted in 1959.⁴⁶ Over time, U.S.-Japanese VER agreements expanded from narrowly defined product categories to agreements covering a diverse set of goods from tuna to kitchen utensils.⁴⁷ Several other countries, including Australia, France and the United Kingdom also concluded VERs with Japan.⁴⁸

The GATT Long-Term Arrangement Regarding International Trade in Cotton Textiles (LTA) was established in 1962. This agreement included 29 exporting and importing nations and imposed VERs on cotton textiles to the United States and several other developed countries.⁴⁹ By 1972, new VER agreements had been made that included increasingly popular man-made fibers, as well as wool, and were applied to South Korea, Taiwan, Hong Kong, and Malaysia. The GATT Multifiber Arrangement (MFA) was implemented in 1974. The MFA initially comprised approximately 40 countries, including nine developed country importers (including the United States).⁵⁰ It restricted exporters to “orderly marketing agreements,” effectively VERs, on certain textile and apparel products including cotton, certain man-made fibers, and wool. The MFA, as with VERs, provided U.S. firms with an adjustment period, enabling them to revise their production process to become more internationally competitive or to shift production to a product more in line with their comparative advantage. The MFA was renewed multiple times until it was replaced by the WTO Agreement on Textiles and Clothing (ATC), to which the United States was a party, under which textile quotas were phased out from 1995 to 2005.

Textile quotas and restraints were applied largely to benefit domestic interests in the United States and other industrialized nations although benefits also accrued to certain developing countries. For example, countries that were allocated quotas received guaranteed market access even for marginally efficient products. Quotas also provided incentives for developing countries to increase value added per unit as a way of maximizing the revenue from abroad.⁵¹

⁴⁶McClenahan, “The Growth of Voluntary Export Restraints,” 1991, 183.

⁴⁷Ibid., 184.

⁴⁸Farrell, *Japanese Investment in the World Economy*, 179.

⁴⁹The LTA was preceded by an interim measure, the GATT Short-Term Arrangement (STA), which provided terms on imports and exports of cotton textiles similar to those of the eventual LTA. The STA was drafted by representatives of 16 countries including the United States and was in effect from 1961 to 1962. USITC, *The History and Current Status of the Multifiber Arrangement*, 1978, 8-9.

⁵⁰Jackson, *The World Trading System*, 1997, 208.

⁵¹For a lengthier treatment of the effects of textiles quotas on developing countries see Keesing and Wolf, *Textile Quotas Against Developing Countries*, 1980, 122-128.

The steel industry also experienced increased competition from imports, which increased dramatically in the mid-1950s. From 1955, when imports made up 1.2 percent of the U.S. steel market, imports increased nearly fivefold to a 5.6 percent market share in 1962.⁵² The steel industry sought relief, and in 1969 a major arrangement was reached between the U.S. government and representatives of the steel industries in Japan and the EEC, wherein these industries voluntarily agreed to restrict their exports to the United States. This arrangement was expanded in 1972 to include the British steel industry,⁵³ but was eliminated a few years later when economic pressures on the steel industry eased.⁵⁴ Renewed efforts by the U.S. steel industry led to the implementation of the steel Trigger Price Mechanism (TPM) in 1977. The TPM established a minimum price for steel and treated any price below the minimum as dumping.⁵⁵ Additional VERs on steel were implemented in 1982 and 1984 and phased out in 1992.

Another set of significant export restrictions was the system of VERs for passenger vehicles exported to the United States from Japan, in place during 1981–84.⁵⁶ These VERs added significantly to the restraints already in place. Imports subject to restrictions under VERs amounted to approximately 6 percent of annual U.S. manufactured imports in 1980, a figure that, by one estimate, doubled with the implementation of passenger vehicle VERs.⁵⁷

Trade Act of 1974

By 1974, reduction of nontariff barriers had come to be seen as critical to progress in multilateral trade liberalization.⁵⁸ Two forces highlighted their importance. The first was the substantial progress that had been made in the reduction of tariffs, which in turn tended to reveal the highly restrictive nature of nontariff measures. The second was the increased use of nontariff measures, such as VERs, that were outside of the negotiating framework. The Trade Act of 1974 addressed the matter from the United

⁵²Adams and Dirlam, "Steel Imports," 1964, 629.

⁵³McClenahan, "The Growth of Voluntary Export Restraints," 1991, 188.

⁵⁴Destler notes that this was a result of both domestic economic growth and the devaluation of the dollar during this time. Destler, *American Trade Politics*, 1995, 188.

⁵⁵Chorev, *Remaking U.S. Trade Policy*, 2007, 121.

⁵⁶Feenstra, "Voluntary Export Restraints in U.S. Autos," 1984, 37.

⁵⁷Destler, *American Trade Politics*, 1995, 210.

⁵⁸93rd Congress, *Trade Act of 1974*, Pub. L. No. 93-618, January 3, 1975 (19 U.S.C. 2101)

States' perspective. It provided relief from injury caused by import competition and provided other adjustment assistance for workers and firms.⁵⁹ At the same time, the 1974 act reduced the overall level of trade barriers, reinstated the President's authority to negotiate tariff reductions in the Tokyo Round (1973–79), and extended trade negotiation authority to the reduction of nontariff measures, which previous trade authorization bills had not explicitly included.⁶⁰ This renewal of trade negotiating authority was similar to the 1934 RTAA (which had finally lapsed in 1962), although the 1974 act required greater consultation with Congress during the negotiating process. The 1974 act provided so-called fast track authority under which Congress agreed that if the President submitted legislation to implement a trade agreement and followed certain procedural requirements, Congress would veto or approve, but not amend, the legislation. This authority signaled the seriousness of the administration's intent when negotiating with trade partners and helped to speed up negotiations by limiting Congress's role to setting negotiating objectives and active consultation.⁶¹

To address concerns from industries about increased competition from abroad, the 1974 act relaxed the requirements for obtaining relief via various measures collectively called trade remedies. These trade remedies, as discussed below, had in some cases been available to firms since 1921.⁶² The intent of the legislation was to provide a rational framework for relief from import competition to replace what some observers claimed had become a series of exemptions for powerful industries.⁶³ Although the relaxed trade-remedy requirements enabled less-powerful industries to successfully obtain relief, industries previously receiving favored treatment continued to do so under the new legislation, and the 1974 act eased the requirements somewhat for obtaining assistance under the Trade Adjustment Assistance program.⁶⁴ The 1974 Trade Act changed the name of the U.S. Tariff Commission—initially established in 1916—to the U.S. International Trade Commission to reflect the expansion of trade issues beyond tariffs. More substantively, the legislation authorized the President

⁵⁹93rd Congress, *Trade Act of 1974*, Pub. L. No. 93-618, January 3, 1975 (19 U.S.C. 2101).

⁶⁰Destler, *American Trade Politics*, 1995, 312.

⁶¹*Ibid.*, 71.

⁶²The first, though rarely used, antidumping provision was in the Antidumping Law of 1916, 15 U.S.C. §71 et seq. The law generally thought of as the basis for current antidumping concepts is the Antidumping Act of 1921.

⁶³Destler, *American Trade Politics*, 1995, 142.

⁶⁴*Ibid.*, 140.

to retaliate against foreign import restraints via Section 301. Continued trade liberalization required a set of measures aimed at providing relief to industries that faced unfair competition from imports, and the 1974 Trade Act sought to broaden the trade remedies available to the President and U.S. industries. The remedies fall into five categories: antidumping duties, countervailing duties, section 337 of the 1930 Tariff Act (certain unfair import practices), safeguard actions (reenacted as section 201 of the 1974 Trade Act), and section 301 of the 1974 Trade Act (box 3.1).

There is debate as to the role of trade remedies in the broader trade liberalization agenda. Some scholars view trade remedy laws as a way to manage the requests for protection from vulnerable domestic industries.⁶⁵ That is, these laws enable firms to target specific goods from specific countries, reducing firms' incentives to band together to push Congress for broad-based increases in tariffs or quotas. A different perspective is that trade remedies are an alternate means of restricting trade. An examination of trade remedies broadly defined to include VERs estimates that these remedies were equivalent to a nearly 20 percent tariff on the goods in the affected industries.⁶⁶ Antidumping proceedings may also encourage foreign firms to raise their prices in U.S. markets to avoid antidumping duties, which can lead to quota rents⁶⁷ being transferred abroad at the expense of U.S. consumers.⁶⁸

Generalized System of Preferences

Another major change resulting from the 1974 act was the authorization of the U.S. Generalized System of Preferences (GSP) that permitted designated developing countries to export certain goods duty-free to the

⁶⁵See, for example, the discussions in Pearson 33, and Choev 144.

⁶⁶De Melo and Tarr, "Welfare Costs of U.S. Quotas," 1990, 492-96. The effects estimated were derived from two sources: somewhat less than 13 percent is obtained strictly from tariff equivalents, while the extra 7 percent results from the transfer of quota rents going to other countries under VERs.

⁶⁷"Quota rents" is an economic term with the following meaning. Any quantity restriction on imports will imply that those few imports permitted into the country can be sold at a premium; this premium is known as a "quota rent." Conventional quotas on imports will see the quota rents accrue domestically, frequently to the importers; export restraints will see the quota rents accrue to foreign exporters.

⁶⁸Galloway, Blonigen, and Flynn, "Welfare Costs of the U.S. Antidumping and Countervailing Duty Laws," 1999, 211-44. In this case, quota rents allow foreign producers to benefit from the higher prices paid by U.S. consumers. An extensive survey of the literature can be found in Blonigen and Prusa, "Antidumping," 2001.

BOX 3.1 Trade remedies

The **antidumping** provisions allow firms to seek relief from dumping (defined as selling imported products below their “fair” or “normal” value) if they are injured by the dumped imports. The determination of whether dumping is occurring is often based on a comparison of the U.S. price of the import with the home-market price, but in many cases is related to cost (specifically, cost plus a reasonable profit margin). The determination of injury by imports was transferred from the U.S. Department of Treasury to the USITC (then called the Tariff Commission) in 1954 under the Customs Simplification Act.^a

The **countervailing duty** provisions may be applied when a foreign country subsidizes exports. An injury test was introduced in the 1974 Trade Act.

Antidumping and countervailing duty laws were strengthened in both the 1974 and 1979 Trade Acts. Prior to the 1970s, neither measure had been used frequently.

Section 337 of the 1930 Tariff Act provided for relief against unfair practices in import trade particularly with respect to infringement of intellectual property rights. The authority of the USITC was strengthened in the 1974 Trade Act to ban imports or issue cease and desist orders in addition to determining violations of the law.^b

Section 201 of the 1974 Trade Act modified provisions of the existing “escape clause” mechanism. The escape clause, also known as a safeguard action, originally provided recourse for domestic industries injured by a reduction in U.S. tariff rates. The previous mechanism found in the Trade Expansion Act of 1962 had strict requirements for demonstrating injury. A specific U.S. tariff concession had to be the “major cause” of injury to an industry, meaning that the concession caused more harm than all other factors combined.^c The 1974 Trade Act relaxed this requirement. Under the new language, imports need only cause damage to the industry to a degree “not less than any other cause.”^d The act also removed the burden of linking the harm to a specific U.S. tariff concession.

United States. GATT signatories agreed to this type of program, and signed a waiver in 1971 permitting this exception to reciprocal trade concessions as embodied in the MFN clause of the GATT, in favor of nonreciprocal concessions for designated developing countries. Thereafter, most industrial countries, including the United States, introduced individual GSP programs for the benefit of developing countries.⁶⁹

⁶⁹Hoekman and Kostecki note that developing countries did not receive special treatment under the original GATT structure. Several developing countries argued at the time that they should be given special access and exemptions in order to be able to compete internationally with products from more developed countries. The Haberler Report, in 1958, was the first major initiative to discuss the needs and concerns specific to developing countries at the multinational level. Hoekman and Kostecki, *The Political Economy of the World Trading System*, 2001, 385; Keck and Low, “Special and Differential Treatment in the WTO,” 2004, 4.

BOX 3.1 Trade remedies, *continued*

Section 301 of the 1974 Act enables a company to seek a remedy against foreign trade barriers. Initially aimed at barriers to trade in goods (e.g., computers to Brazil, tobacco to Japan), section 301 was expanded in the 1979 Trade Agreements Act to include trade-related services (e.g., insurance to South Korea) and possibly exchange controls, government procurement, and import licensing.^{e,f}

Several other expansions of the scope of trade remedies occurred in the decade following the 1974 Trade Act. The 1984 Trade Remedies Reform Act expanded the reach of section 301 to cover foreign investment regulations. In 1988, section 301 was amended with “Super 301,” which required the USTR for two years to identify “priority” foreign country practices whose elimination were likely to have the most significant potential to increase U.S. exports and to initiate section 301 proceedings against foreign countries (rather than waiting for domestic firms to initiate proceedings).^g “Special 301” mandated similar actions by USTR but pertained exclusively to violations of intellectual property rights.

^aDobson, *Two Centuries of Tariffs*, 1976, 119.

^b*Ibid.*, 129.

^cDestler, *American Trade Politics*, 1995, 142.

^d*Ibid.*, 143.

^eChorev, *Remaking U.S. Trade Policy*, 2007, 135.

^fPearson, *United States Trade Policy*, 2004, 26.

^gChorev, *Remaking U.S. Trade Policy*, 2007, 136.

The motivation for the GSP evolved out of a series of multinational discussions beginning with the 1964 meeting of the United Nations Conference on Trade and Development (UNCTAD) that pushed for a special schedule of lowered tariffs on goods imported by developed countries from developing countries.⁷⁰ In 1979, during the Tokyo Round, the so-called GATT Enabling Clause formalized the idea of special and differential treatment for less-developed countries.⁷¹ The GSP was the first preference program geared specifically toward developing countries, but in subsequent years the United States implemented a series of programs targeted at assisting developing countries by providing enhanced access to U.S. markets.⁷² The primary goal of these programs, still in place today, is

⁷⁰See Jackson, *The World Trading System*, 1997, 322–23.

⁷¹Keck and Low, “Special and Differential Treatment in the WTO,” 2004, 5.

⁷²The initiatives were the Caribbean Basin Initiative (1983), the Andean Trade Preference Agreement (1991), and the African Growth and Opportunity Act (2000).

to assist the developing countries by encouraging their economic growth, although the United States benefits as well.⁷³

Addressing Nontariff Measures

A series of multilateral initiatives began in the late 1960s to counter the proliferation of nontariff measures, in particular quotas and VERs. The Kennedy Round (1964–67) was the first multilateral round to deal with nontariff measures, although its success was limited. Several agreements were reached, notably on antidumping measures and a unified method for customs valuation. However, the U.S. Congress never passed the agreements, and the agreements became voluntary. The President, according to Congress, exceeded his authority by attempting to implement the nontariff measures as an executive agreement. Congress insisted that nontariff measures negotiated during the subsequent Tokyo Round be submitted to it for final approval.⁷⁴ The main accomplishment of the Kennedy Round was a reduction in tariffs, which participating countries cut in 1967 to an average of 8.7 percent, a decrease of 35 percent.⁷⁵

The Tokyo Round (1973–79) raised the subject of nontariff measures again, and this time an agreement was reached. The agreements resulting from the Tokyo Round were in the form of so-called codes, which were agreements signed by only a subset of GATT countries—generally the OECD countries plus a few developing countries. The codes included agreements on a number of subjects: customs valuation, government procurement, import licensing procedures, subsidies and countervailing duties, antidumping duties, standards (technical barriers to trade), and a civil aircraft agreement. This time, the U.S. Congress approved the agreements without difficulty.

⁷³A body of literature seeks to quantify these benefits. Hoekman, Martin, and Braga (2006) summarize some of this literature. Dean and Wainio, in estimating the value of the preference programs for the developing countries, point out that, as trade barriers are reduced, countries that are the beneficiaries of preference programs no longer have an advantage vis-à-vis the rest of the world. However, the key question as to whether preference programs aid in integrating developing countries into the world economy has not yet been conclusively answered. Hoekman, Martin, and Braga, “Preference Erosion”, 2006, 19; Dean and Wainio, “Quantifying the Value of U.S. Tariff Preferences,” 2006.

⁷⁴Baldwin, “The Changing Nature of U.S. Trade Policy Since World War II,” 1984, 19. Jackson attributes this failure to “procedural devices engineered by domestic interests” to uphold protection for their products. Jackson, *The World Trading System*, 1997, 75.

⁷⁵*Ibid.*, 74.

TABLE 3.1 Trade-weighted average tariffs by selected regions and negotiating round

Country	Pre-Kennedy Round	Kennedy Round	Tokyo Round	Uruguay Round
Japan	7.3	4.5	2.7	1.7
United States	9.2	5.9	4.3	3.5
European Union	7.7 ^a	4.8 ^a	4.6 ^b	3.6 ^c

Source: *World Trade Report 2007*, Table 8, 209.

^aEEC6: Germany, France, Italy, the Netherlands, Belgium, and Luxembourg.

^bEEC9: EEC6 plus Denmark, Ireland, and the United Kingdom.

^cEU12: EEC9 plus Greece, Portugal, and Spain.

Nonetheless, these codes produced only limited results for nontariff barrier liberalization. In addition, an effective enforcement structure was lacking in that the codes were voluntary. Dispute settlement provisions lacked effective penalties for failure to uphold commitments. Major issues, notably textile quotas and nontariff issues pertaining to the sensitive agriculture sector, were left out of these Tokyo Round codes. Moreover, the codes did not halt the spread of VERs, as new quantitative restrictions were agreed upon shortly after the negotiations ended.

Meanwhile, tariff cuts continued apace. The Tokyo Round resulted in a decrease in average bound tariff rates of 34 percent by participating countries, with post-Tokyo Round tariffs averaging 6.3 percent in 1979.⁷⁶ Although concrete progress on nontariff barriers was limited, the Kennedy and Tokyo Rounds provided continuity of negotiations and continued the process of liberalization (table 3.1 shows tariff levels for the Kennedy, Tokyo, and Uruguay Rounds for Japan, the European Union, and the United States).

The Trade Agreements Act of 1979 further eased the requirements for obtaining relief under domestic trade remedies. The 1979 Trade Act also shifted responsibility for administering aspects of antidumping and countervailing duty law (shared with the USITC) from the U.S. Department of the Treasury to the Department of Commerce.⁷⁷ In addition, the act added a requirement of an injury test to most countervailing duty investigations and established streamlined procedures for both the Commerce Department and the USITC to complete preliminary and final investigations much more rapidly than had been the case previously.

⁷⁶Jackson, *The World Trading System*, 1997, 74.

⁷⁷USITC, *Antidumping and Countervailing Duty Handbook*, 2008.

The 1988 Omnibus Trade and Competitiveness Act established the U.S. negotiating objectives for the Uruguay Round. Its overarching objectives were the reciprocal lowering of trade barriers and other trade distortions and an improved system of dispute settlement. Specific objectives were detailed in areas such as agriculture, services, intellectual property, and foreign direct investment.⁷⁸ Another key component of the 1988 act was an amendment to section 301 of the Trade Act of 1974 (see box 3.1 for details). The 1988 act sought to increase exports via a set of domestic measures including promotion of technological competitiveness. The act also promoted competitiveness in technology (e.g. federal research programs in semiconductor and other advanced manufacturing technologies) and expanded adjustment assistance for workers in industries adversely affected by increased imports.

The World Trade Organization and the Proliferation of Free Trade Agreements (since 1989)

The era since 1989 has been marked by several initiatives to revitalize trade negotiations. During this period, the United States committed to multiple agreements and focused on expanding the reach of trade negotiations into sensitive and technically difficult areas. The agreements implementing the results of the Uruguay Round of multilateral trade negotiations and establishing the World Trade Organization were signed in 1993. The United States also signed a string of bilateral and regional agreements, including the politically and economically significant North American Free Trade Agreement.

The economic backdrop of these agreements was the increasingly globalized nature of trade. During the 1980s, worldwide exports grew on average 68 percent faster than global GDP, and in the 1990s, exports grew nearly 140 percent faster than global GDP.⁷⁹ Improvements in transportation and communications, in addition to lower policy barriers, have expanded trade in goods (and increasingly in services) and facilitated the creation of widely dispersed production networks.⁸⁰ Partly as a result of these lower trade costs and improved communication, firms began to break

⁷⁸Omnibus Trade and Competitiveness Act of 1988, Pub. L. No. 100-418.

⁷⁹World Bank, World Development Indicators Online.

⁸⁰Feenstra provides a summary of the recent growth in international trade as well as a detailed analysis of changes in international production methods. Feenstra, "Integration of Trade," 1998.

apart their production processes and distribute them around the world. Companies sourced and produced parts internationally according to where the item could be made at a better quality or at a lower cost. This growing trade in intermediate goods contributed to trade expanding more rapidly than GDP and increased the number of players having a vested interest in lower trade barriers.⁸¹ Additionally, technical improvements permitted previously nontradable services to become increasingly traded.⁸² Trade liberalization in this era saw a resurgence in the use of bilateral and regional agreements, which contrasted with the prior era's emphasis on multilateral, GATT-based negotiations. The GATT (primarily via Article XXIV of GATT 1994) permits regional agreements provided that the countries adhere to certain conditions, such as a commitment not to increase duties between the regional trade area and other WTO members. An extensive body of literature debates whether free trade agreements (either regional or bilateral) have had a beneficial effect on global trade.⁸³ One branch of this literature⁸⁴ argues that regional trade works against the drive for global integration because it undermines the motivation to reduce barriers to all countries and increases trade diversion.⁸⁵ Another branch of the trade literature argues that regional trade blocs are a way of moving forward in trade liberalization when multilateral negotiations are temporarily blocked. Regional or bilateral trade agreements could persuade recalcitrant WTO members to reengage and are a forum to test ideas on new areas of trade liberalization.

⁸¹Barton et al., *The Evolution of the Trade Regime*, 2006, 124.

⁸²Prime examples are technical developments in information technology that allow for the tradability of software development and call centers.

⁸³A detailed exposition of this literature is found in Feenstra, *Advanced International Trade*, 2004, 175–208. A less formal discussion appears in Krugman and Obstfeld, *International Economics*, 2000, 241–45.

⁸⁴Krueger, “Are Preferential Trade Arrangements Trade-Liberalizing or Protectionist?” 1999, provides a synthesis of the two sides; see Bhagwati, Krishna, and Panagariya, *Trading Blocs*, 1999, for a discussion regarding the issues brought about by free trade agreements; and Baldwin, “The Causes of Regionalism,” 1997, for a counterpoint.

⁸⁵If the United States applies uniform tariffs to all countries, it will import an item from the most efficient producer. However if it lowers tariffs through a free trade agreement to a country that is not an efficient producer, imports from that country will increase at the expense of those from the efficient producer. This is called trade diversion.

Trade Agreements in North America

The U.S.-Canada Free Trade Agreement, which entered into force in 1989, was an important milestone in U.S. trade policy.⁸⁶ It signaled a renewed U.S. interest in bilateral or regional free trade agreements, one that had been largely absent from the trade policy agenda since the pre-World War II accords.⁸⁷ Moreover, it implemented certain innovations, such as liberalization of financial services and a dispute-settlement process, ahead of the Uruguay Round negotiations. The agreement emerged from Canada's interest in greater access to the U.S. market and both countries' frustration with the multilateral process. It was hoped that the agreement would spur the international community to a resolution of the Uruguay Round.⁸⁸ The U.S.-Canada agreement was formalized between the two countries while talks were still ongoing at the multilateral level.

Soon after the U.S.-Canada Free Trade Agreement was signed, and partly as a consequence, Mexico approached the United States for a similar accord.⁸⁹ As a result, the North American Free Trade Agreement (NAFTA), comprising the United States, Canada, and Mexico, was signed and entered into force in 1994.⁹⁰ In many cases, tariffs on goods trade between NAFTA countries were lifted immediately, and others were gradually phased out. For example, U.S. restrictions on imports of sugar were phased out over 15 years; Mexico received a tariff-free quota allocation, which increased incrementally, and all restrictions on sugar were finally eliminated at the beginning of 2008.⁹¹

At the same time, Mexico lowered its barriers to U.S. agricultural products, reduced its restrictions on imports of automobiles, and applied

⁸⁶A prior agreement, the 1965 U.S.-Canadian Automobile Agreement, was significant. It provided reciprocal duty-free access for newly manufactured automobiles and related parts between the United States and Canada. To qualify for duty-free treatment, North American content of the automobiles had to be at least 50 percent, and Canada imposed certain additional restrictions on manufacturers to ensure a minimum level of domestic production. Helmers, *The United States-Canadian Automobile Agreement*, 1967.

⁸⁷The United States did sign two free trade agreements, with Israel in 1985 and with Jordan in 2000 in which political considerations predominated, according to Rosen, "Free Trade Agreements as Foreign Policy," 2004, 53–55.

⁸⁸Pearson, *United States Trade Policy*, 2004, 108.

⁸⁹Destler, *American Trade Politics*, 1995, 135.

⁹⁰The NAFTA Implementation Act was submitted to Congress on November 4, 1993. U.S. House of Representatives, Committee on Ways and Means, *Overview and Compilation of U.S. Trade Statutes*, 1995 ed., 199.

⁹¹Hearing transcript, January 8, 2009, 13 (testimony of Thomas Earley, Sweetener Users Association).

national treatment rules to foreign direct investment from the United States and Canada in services such as telecommunications and finance.⁹² To prevent circumvention of existing tariffs by other countries, the U.S. automobile and textile industries secured rules of origin requirements⁹³ for their products.⁹⁴ The rules of origin requirements for automobiles, for example, required that 62.5 percent of a car's production cost (calculated according to specific formulas set out in the agreement) be produced within the free trade area to qualify for tariff-free entry into the United States.⁹⁵

Within the United States, environmental organizations and organized labor strongly opposed NAFTA.⁹⁶ Provisions safeguarding the interests of labor and the environment were not incorporated into the main agreement. To address the opposition, the Clinton administration negotiated side agreements on the environment, workers' rights, and safeguards against import surges that were ultimately approved by Congress.

The Uruguay Round

Simultaneous with negotiations of the U.S.-Canada FTA and NAFTA, the United States also participated in trade negotiations in the Uruguay Round (1986-93).⁹⁷ The Uruguay Round agreement was concluded in late 1993 and entered into force in January 1995. It is generally considered to have been a highly beneficial agreement for the United States. This was particularly true for the agreements on services and intellectual property rights protection. U.S. negotiators, as well as observers, felt that it was

⁹²Barton et al., *The Evolution of the Trade Regime*, 2006, 165.

⁹³Rules of origin requirements pertain to where a product is made and are important for trade statistics and trade agreements. Because raw materials and parts may originate from many points, determination of origin is not straightforward. Rules of origin requirements in a free trade agreement may grant preferential tariff treatment to goods made wholly or in part in the beneficiary country or group of countries.

⁹⁴Destler, *American Trade Politics*, 1995, 219.

⁹⁵*Ibid.*, 227.

⁹⁶In addition to these well defined groups, there was a more general trepidation about NAFTA; large segments of the middle class were worried by NAFTA's potential effect on jobs. Destler, *American Trade Politics*, 1995, 223. This was manifested most strongly by Ross Perot's surprising third-party candidacy in the 1992 presidential elections.

⁹⁷The Omnibus Trade and Competitiveness Act of 1988 provided the President with the authority to enter into trade agreements before June 1, 1993, subject to implementation under special "fast track" Congressional approval procedures. U.S. House of Representatives, Committee on Ways and Means, *Overview and Compilation of U.S. Trade Statutes*, 1993 ed., 162.

in the interest of the United States to open foreign markets for services as it had a comparative advantage in several services sectors⁹⁸ and had significant growth potential in the export of services trade, particularly in the areas that employed highly skilled labor.⁹⁹ The lack of intellectual property rights abroad prior to the Uruguay Round was estimated to be very costly to the United States; by one estimate, U.S. firms lost revenues of \$23.8 billion due to inadequate intellectual property rights protection.¹⁰⁰

In addition to another round of tariff cuts, which reduced industrialized country tariffs by 38 percent,¹⁰¹ the Uruguay Round extended prior gains in certain nontariff measures and expanded the range of topics negotiated in a multilateral setting, most significantly trade in services and certain politically sensitive domestic regulatory issues. The Uruguay Round also established more robust multilateral administrative structures for negotiations and trade policy review, and its dispute resolution system provided a stronger enforcement mechanism.

The Uruguay Round's most obvious structural achievement was the establishment of the WTO (in the Marrakech Agreement of 1994), a formal international organization that took the place of the ad hoc GATT administration that had been set up after it had become clear that the ITO agreement would not be implemented.¹⁰²

The second accomplishment of the Uruguay Round was the consolidation of the gains from prior rounds of negotiation.¹⁰³ New tariff bindings were added. Most of the voluntary codes of the Tokyo Round (rules on import licensing; antidumping duties, subsidies, and countervailing measures; customs valuation methods; and standards on health, safety, and

⁹⁸Hoekman and Kostecki, *The Political Economy of the World Trading System*, 237.

⁹⁹Congressional Budget Office, *The GATT Negotiations and U.S. Trade Policy*, 1987, 17.

¹⁰⁰USITC, *Foreign Protection of Intellectual Property Rights and the Effect on U.S. Industry and Trade*, 1988, 4-3.

¹⁰¹Jackson, *The World Trading System*, 1997, 74.

¹⁰²Countries were no longer able to "opt out" of agreements with which they did not agree, as was the case during the Tokyo Round negotiations for nontariff measures. On the other hand, the possibility that fewer agreements will be reached is greater because an agreement requires a commitment by each member. Hoekman and Kostecki, *The Political Economy of the World Trading System*, 2001, 1.

¹⁰³A detailed explanation of the WTO and the GATT in the context of the WTO is found in Hoekman and Kostecki, *The Political Economy of the World Trading System*, 2001, 9-73. The following discussion summarizes some of their main points.

consumer protection, among others) were amended, incorporated into the main body of the agreement, and made mandatory.¹⁰⁴

The Uruguay Round also provided for the phase out, over a 10-year period, of quotas on textiles and apparel, nearly half a century after a framework for their imposition was first implemented. The ATC, which replaced the MFA, phased out the textile quota system in four stages: by 16 percent (by volume of imports) upon entry into force of the agreement, by an additional 17 percent within the first three years, a further 18 percent within seven years, and the rest by 2005. The agreement did not, however, mandate lowering tariffs on textiles and apparel.¹⁰⁵

Finally, the scope of negotiations was expanded. This included major strides forward on trade liberalization with the General Agreement on Trade in Services (GATS), the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), Trade Related Investment Measures (TRIMs), and the Agreement on Agriculture. Each of these broke new topical ground at the multilateral level and increased the reach of trade negotiations beyond the borders of countries and into their domestic governance structure.

The GATS addressed, for the first time in a multilateral setting, the opening of trade in services. Services present a unique set of challenges to trade negotiators, as their nonphysical and highly heterogeneous nature makes them more difficult than goods to count and assess for tariffs.¹⁰⁶ The obligations, subscribed to by all members, extended MFN principles to services, with temporary exceptions made for preexisting free trade agreements. In addition, member countries subscribed to sector-specific commitments, separated into national treatment and market access commitments. National treatment requires countries to treat foreign and domestic firms equally under the law. Market access requires countries to permit both domestic and foreign firms to compete in a market. Restricted

¹⁰⁴A few of the Tokyo Round codes were appended as plurilateral agreements; that is, they remained binding only on those that had previously committed to them. These were in the areas of government procurement, civil aircraft, select bovine products, and milk products. The agreements on the latter two were terminated in 1997 and are now covered by the Sanitary and Phytosanitary agreement. WTO, "Sanitary and Phytosanitary Measures," undated (accessed December 9, 2008).

¹⁰⁵The sector reportedly continues to face high U.S. import tariffs and complex rules of origin requirements. USITC, Hearing transcript, January 8, 2009, 7 (testimony of Brenda Jacobs, Esquire, Sidley Austin LLP on behalf of U.S. Association of Importers of Textiles and Apparel).

¹⁰⁶Hoekman, "Liberalizing Trade in Services," 2006, 10–12.

market access tends to be a particular problem in services, as it includes sectors such as telecommunications and transportation that are frequently monopolies or restricted to a few firms.

The TRIPS Agreement dealt with intellectual property rights, the first time the international community sought to require governments to enforce international laws regarding intellectual property.¹⁰⁷ The agreement included protection of copyrights, trademarks, patents, geographic indicators and certain other trade secrets.

TRIMs extended to foreign direct investment the GATT principle of national treatment of goods and the GATT rules limiting the use of quantitative restrictions.¹⁰⁸ Resistance to addressing investment measures meant that the resulting agreement was limited to rules on foreign investment in the manufacture of goods, rather than including broader commitments on investment in services.¹⁰⁹

The Agreement on Agriculture addressed, among other issues, subsidies and quotas on agricultural goods. Developed countries committed to reduce export subsidies by 21 percent by volume and 36 percent by value by 2000, while developing countries committed to reductions of 14 percent by volume and 24 percent by value by 2004. Developed countries also agreed to expand market access by 36 percent by 2000, while developing countries committed to expand market access by 15 percent by 2000. Nontariff measures, including quotas, were converted into equivalent tariffs, and the United States and other countries introduced two-tiered tariff rate quotas (TRQs) that allowed limited imports at low tariff rates and unlimited imports at higher rates. The point where the high tariff is first applied is referred to as the quota point, and the TRQs are usually designed so that only minimal imports enter at the high rate.¹¹⁰

Domestically, the Uruguay Round agreement proved less controversial for the United States than NAFTA for several reasons. First, although the structure was different, the legal implications—in particular, sovereignty over trade issues—were not materially more onerous than the prior GATT commitments.¹¹¹ Second, much of the new agreement, such as the

¹⁰⁷Ibid., 126.

¹⁰⁸Hoekman and Kosteci, *The Political Economy of the World Trading System*, 2001, 202.

¹⁰⁹Ibid., 202–03; also found in the WTO TRIMs Agreement.

¹¹⁰WTO, “Agriculture: Fairer Markets for Farmers,” undated (accessed January 2, 2009).

¹¹¹Hoekman and Kosteci, *The Political Economy of the World Trading System*, 2001, 49.

intellectual property and services agreements, was perceived to benefit the United States. The arrangement on intellectual property in particular was instrumental in obtaining U.S. support for the Uruguay Round, and industry groups reliant on intellectual property protection—pharmaceuticals, software, semiconductors, and entertainment, in particular—were very supportive.¹¹² Labor and environmental groups remained opposed, but this time free-trade supporters were more numerous and vocal than with NAFTA. Third, the round created a binding dispute settlement system, which was especially important to the United States. The Uruguay Round Agreements Act passed the U.S. Congress and entered into force one year after NAFTA, in January 1995.

Fast track authority lapsed in 1993; the ensuing decade saw only the U.S.-Jordan FTA signed into law in 2001. Fast track authority was renewed under the name trade promotion authority in the Trade Act of 2002, when language about the importance of labor and environmental standards was placed in the act as a result of the debate over these issues that arose during the approval of NAFTA.¹¹³ Under trade promotion authority of the Trade Act of 2002, President Bush signed into law eight bilateral trade agreements and a regional free trade agreement with Central American countries (table 3.2). Trade promotion authority expired in 2007 and has not been reauthorized at the time of this report.¹¹⁴

The Doha Development Agenda

The current round of multilateral negotiations, the Doha Development Agenda (DDA or “Doha Round”) remains unfinished. The DDA was initiated at the Fourth Ministerial Conference of the World Trade Organization in 2001. The declared development objectives, as suggested by its title, and the prominent role taken by developing countries are the new features of this round of negotiations.¹¹⁵ Many developing countries believe that the Uruguay Round disproportionately benefited the developed world.¹¹⁶ Developing countries believed that the issue of subsidized agricultural commodities in developed countries, which compete with exports from

¹¹²Chorev, *Remaking U.S. Trade Policy*, 2007, 159.

¹¹³*Ibid.*, 185.

¹¹⁴See table F.1 for details on the successfully concluded agreements and their economic effects.

¹¹⁵Hoekman, “Strengthening the Global Trade Architecture,” 2002, 13.

¹¹⁶Mehta, “The Doha Development Agenda,” 2003, 11.

TABLE 3.2 Free trade agreements, proposed and implemented

Entered into Force	Agreement	Status ^a
1985	US-Israel	Implemented
1989	US-Canada	Subsumed into NAFTA
1994	NAFTA (US-Canada-Mexico)	Implemented
2001	US-Jordan	Implemented
2004	US-Singapore	Implemented
2005	US-Chile	Implemented
2005	US-Australia	Implemented
2006	US-Morocco	Implemented
2006	CAFTA-DR (US-Dominican Republic-Central America)	Implemented
n.a.	Free Trade Area of the Americas (Western Hemisphere)	Negotiations (2001)
n.a.	US-South Africa Customs Union (US-South Africa-Namibia-Lesotho-Botswana-Swaziland)	Negotiations (2003)
2006	US-Bahrain	Implemented
n.a.	US-Thailand	Negotiations (2006)
n.a.	US-Colombia	Signed, Pending legislation (2007)
2009	US-Peru	Implemented
n.a.	US-Ecuador	Negotiations (2006)
n.a.	US-Panama	Signed, Pending legislation (2006)
n.a.	US-Republic of Korea	Signed, Pending legislation (2007)
n.a.	US-UAE	Negotiations (2007)
2009	US-Oman	Implemented
n.a.	US-Malaysia	Negotiations ongoing (negotiations begun 2005)
n.a.	Trans-Pacific SEP (US-Singapore-Chile-Brunei-New Zealand)	Negotiations planned

Sources: *Washington Trade Daily*, "U.S. Certifies Peru FTA," January 19, 2009; U.S. Trade Representative web site. <http://www.ustr.gov> (accessed February 2, 2009).

^aDates refer to date of last negotiation unless otherwise specified

developing countries, had not been adequately addressed. Further, they were concerned that the TRIPS agreement on intellectual property affected their access to affordable drugs for HIV/AIDS, malaria, tuberculosis, and other diseases. Additionally, many technical aspects of the Uruguay Round commitments proved burdensome to developing countries whose human and financial resources are limited.¹¹⁷

In addition to these overarching issues, participants agreed in the Doha Declaration to review a number of WTO provisions that pose frequent problems for the developing and least developed countries: issues

¹¹⁷Oyejide, "Interests and Options of Developing and Least-developed Countries," 2000, 8.

concerning trade, debt, and finance; trade and the transfer of technology; technical cooperation and capacity building; and WTO provisions concerning special and differential treatment.

Negotiations in the DDA reached an impasse in July 2008; the proximate cause was a stalemate over special safeguards on agricultural imports between a group including India, China, and other developing countries and another group composed primarily of developed countries.¹¹⁸ The proposal on offer included a provision for a tariff increase of up to 15 percent for an import “surge” (defined as a 40 percent increase in imports over the average of the previous three years). The tariff was to be applicable to only 2.5 percent of tariff lines. Developing countries countered with an offer of a 30 percent tariff increase on up to 7 percent of tariff lines.¹¹⁹ The issue could not be resolved, and negotiations were eventually suspended.

The Economic Effects of Trade Liberalization

This section summarizes the existing economic literature on trade with an emphasis on the quantitative assessments of trade policy over time. This literature suggests that the benefits of trade liberalization have been significant, although the size of the gains and the methods of analysis have changed over time.

In the early years, both trade negotiations and the economic analysis of trade policies focused heavily on tariffs, with minimal emphasis on nontariff barriers. There is general agreement in the economic literature that the United States benefited as tariff barriers were lowered. Gains from trade were greater than the costs even after taking into consideration the losses experienced by import-competing segments of the economy. The Tokyo Round (1973–79) was the first round to produce agreements on nontariff measures. Economic analysis during this period took on the new task of attempting to compute the effects of these less easily quantified reductions in nontariff measures. To the extent that researchers have been able to quantify these effects, their results suggest a significant increase in welfare, compared with tariff-only liberalization.

The economic literature on trade has evolved at least as much as the subject it examines. At the beginning of the period under examination, the

¹¹⁸Baldwin, “Resolving the Conflict,” September 25, 2008.

¹¹⁹The proposal details are cited in Baldwin, “Resolving the Conflict,” 2008.

economic literature was confined to highly abstract representations of the economy and had put forth only a limited number of theories to explain patterns of international trade. The lack of detail meant that quantitative assessments of trade policy were at best suggestive; indeed there were few attempts at quantitative analysis. In contrast, models in the current era can be enormous, complex, and require more computational power than was previously available.

This evolution in the literature has been driven by a number of trends. First, the economic literature pertaining to trade was relatively underdeveloped in 1934; formal mathematical analysis in the field was not the norm. Second, even if theories were articulated in a mathematical framework, models remained simple and had to be solved analytically rather than computationally, which limited the number of details that could be addressed. Over time computing power grew, and economists took advantage by constructing more computationally intensive models with many sectors and goods. The economic literature also responded to new observations in the trade data. For example, early theory suggested that a country would export those goods that it produces most efficiently and import those that it produces least efficiently. However, trade data showed that countries import and export the same types of goods. For instance, the United States both imports and exports automobiles. New hypotheses were posited to explain this behavior. Finally, the literature evolved to address issues of trade policy. For example, the Tokyo Round (1973–79) was the first round to include nontariff measures, and contemporary economists took on the task of estimating the effects of policy changes in nontariff barriers.

International trade is a dynamic field of research, and recently there has been a considerable increase in theoretical work. Theories are still being tested and modified, and researchers are grappling with technical issues that arise when applying theories to obtain quantitative results. For example, the theory of product variety proposes that individuals have preferences for a large number of goods and that the improved access to variety made possible by increased trade improves welfare. Applying these ideas requires determining (or assuming) a great deal about individuals' preferences for a large number of goods (i.e. elasticities of substitution across goods).¹²⁰ Yet, controversy and uncertainty about the details of the approach remain. Another difficulty faced by researchers, one that is

¹²⁰This has been the subject of some recent research. See, for example, Broda and Weinstein, "Globalization and the Gains from Variety," 2006.

particularly problematic for the analysis of services, is the lack of adequate data.¹²¹ The following section is divided into two parts. The first briefly summarizes the types of assumptions and explanations currently prevalent in economic analysis. The second part proceeds chronologically through the empirical literature and summarizes the findings.

Approaches in the Literature

Evaluating trade policies requires that assumptions be made regarding the channels through which these policies affect the economy, as well as assumptions regarding the underlying economy itself. The assumptions selected can have significant consequences on the quantitative assessment of trade policy. For example, current estimates of the U.S. welfare effects of trade liberalization vary widely, from a fraction of a percent of GDP to as much as 13 percent, depending on the treatment of services, nontariff measures and other modeling specifications.

Table 3.3 provides some examples of these assumptions and approaches and their effects on welfare outcomes. A note of caution must be sounded regarding this table in that it should be seen as a rule of thumb only. The effects of the assumptions and approaches on welfare gains do indeed reflect the results of the majority of empirical studies; however, not all studies fall in line with these generalizations. Until recently, applied trade policy analysis was concentrated on elements of the left-hand column of table 3.3, which led to relatively modest estimates of gains from liberalization. As new models gain acceptance, assumptions from the right-hand column are increasingly being used. These tend to result in relatively larger gains from trade liberalization although newer models and techniques do not universally show greater effects from trade liberalization. More practically but equally important, estimates change as computing power and data availability improve. As a result of these changing factors, comparing model results across time periods can be difficult unless those factors are controlled for.

Partial versus full liberalization. Full liberalization, the elimination of all trade barriers, is rarely if ever achieved in practice, but it is sometimes used in quantitative analysis in order to compare policies or countries'

¹²¹See, for example, Francois, Hoekman, and Woerz, "Does Gravity Apply to Intangibles?" 2007.

TABLE 3.3 A sample of modeling assumptions and approaches

	Effect: Fewer welfare gains		More welfare gains
Assumptions and approaches:	Partial liberalization	→	Full liberalization
	Static	→	Dynamic
	Goods only	→	Goods and services
	Tariffs only	→	Tariffs and nontariff measures
	Low product variety	→	High product variety
	Constant returns to scale	→	Increasing returns to scale

Source: Formulated by Commission staff.

Note: The labels “fewer” and “more” welfare gains only denote the general tendency of these assumptions’ impact on welfare. Conceivably the reverse could occur; however, most trade literature is in line with the relationships articulated in this table.

responses to a particular policy. Partial liberalization is often used to model the effects of particular trade agreements or trade in a particular sector.

Static versus dynamic modeling. A large share of empirical work is static, rather than dynamic. As such, it estimates the effect on economic variables during a single period of time. Although some issues can realistically be examined in a static framework, it assumes perhaps unrealistically that capital investments can be set up and disassembled instantaneously. Models for evaluating trade policy increasingly incorporate dynamic elements and are better able to handle issues related to capital stock, investment, savings, and growth.

Goods only versus goods and services; tariffs only versus tariffs and nontariff measures. As mentioned in the introduction to this section, early literature and early trade negotiations focused on goods and on tariffs on these goods. As trade policy negotiations were broadened to include services and nontariff measures, these issues have been increasingly incorporated into the economic analysis.

Product variety and returns to scale. These assumptions refer to relatively recent advances in trade theory, which are explained in box 3.2 along with a description of several other channels of the effects of trade liberalization. Over time the economic literature has developed diverse explanations of the observed patterns of international trade and how, in turn, changes in trade affect the domestic economy.

Survey of Economic Literature

Examining the literature chronologically, three major periods emerge: the pre-Tokyo Round literature, the early computational literature, and the recent complex and computationally intensive literature. The first is primarily based on small models applying the classic gains from trade (or comparative advantage) literature to the liberalization questions of the time. With some exceptions, the literature tends to apply theory to contemporaneous problems rather than examining issues retrospectively.¹²² The second era saw the development of large-scale computer models with detailed modeling of country- and sector-specific attributes. The third wave of literature combines the computational approaches with increasing innovation in the economic literature of the channels through which trade liberalization affects economies. Further, it increasingly incorporates liberalization of the services sector. Box 3.3 explains some key issues related to tariff data upon which many studies are based.

There are two general approaches to applied economic policy analysis. The first is simulation of proposed changes in trade policy (often using computable general equilibrium models), while the other involves econometrically estimating a set of variables from historical or current data to explain changes in trade. The approaches are not exclusive, as the parameters of a simulation model may be estimated econometrically, or work that is primarily econometric could be based on a model that is used for simulations.

Early Literature

There are only a few quantitative assessments of the effects of trade barriers before World War II. Indeed, quantitative assessments remain scarce until the Kennedy Round (1964–67) for the reasons outlined in the introduction to this section. The findings of these quantitative studies vary substantially and are only suggestive of the effects of trade liberalization.

Irwin quantitatively examined tariff liberalization and its welfare effects from the Civil War through 1961, just prior to the Kennedy Round.¹²³

¹²²Even with an ambitious researcher applying current methods to prior periods, newer methods are frequently more data-intensive and require data that were not collected in prior eras.

¹²³Irwin, “Trade Restrictiveness,” 2007.

BOX 3.2 Channels of the effects of trade liberalization

The theoretical literature forms the underpinnings of applied work. It also shows the number of channels through which trade (and by extension trade barriers) affects an economy, including gains from trade, demand for variety, and productivity improvements.

The classical benefits from trade liberalization result from comparative advantage, first articulated by David Ricardo in the early 19th century. In a two-good, two-country model, the idea that a country that can produce a good with fewer resources or at a lower cost than another country will gain from specializing in the export of that commodity is fairly intuitive. However, two countries can still both gain from trade even when one of the countries can produce both goods more efficiently than the other country, if one of the countries produces one of the goods more efficiently than the other good. Ricardo's explanation was based on differences in technology, which allow one country to produce a certain good more efficiently than the other country. Similar results can be obtained when two countries have different factor endowments (i.e., land, labor, and capital).^a

Recent work has built upon this foundation. The newer work takes the fundamental principle of Ricardo, the differences in technology across countries, and generalizes it to a multicountry model with a more general structure encompassing differences in technology across countries.^b

Krugman introduced a different line of research, which analyzed the trade benefits that are achieved through greater variety. He noted that an individual obtains greater enjoyment from consuming a variety of, say, different automobiles than being confined to domestically produced varieties, even when the total quantity of automobiles purchased remains the same.^c In this model, countries are assumed to produce different varieties of goods; therefore, even two countries with the same endowments and technology will want to trade with each other, unlike in the earlier, classical benefits literature. This provides an explanation for the prevalence of intra-industry trade, for example why the United States both imports and exports fruit. Individuals in both countries benefit both from lower prices and from an increase in the available varieties of products.^d

Trade liberalization can also improve a country's welfare by increasing firm productivity. This can occur in a variety of ways. One such way is via technological diffusion, the movement of technological know-how across borders in a way that benefits the importing country. This may occur directly via a transfer of research and development from one country to another, as in Grossman and Helpman.^e Alternatively, as in Eaton and Kortum,^f the technological know-how may be embodied in intermediate and capital goods that are imported from abroad and then used to produce another good domestically.

BOX 3.2 Channels of the effects of trade liberalization, *continued*

Broader-based productivity gains may result from trade liberalization. A set of papers, originating with Melitz,⁹ deals with productivity in the face of competition. When a country has many firms, each with its own level of productivity, the papers hypothesize that the least-productive ones will go out of business when the country opens itself up to foreign competition. Domestic productivity, as an average of the remaining firms, rises as a result, although there will be some negative distributional effects for the firms that go out of business.

Another productivity improvement can be seen through increasing-returns-to-scale firms (or firms that require very large markets to operate efficiently). Certain industries (for example, aircraft manufacturing) have enormous start-up costs, and such industries require large markets to recoup their investment. Reducing trade barriers allows such firms to access international markets and sell more products, thereby increasing the firms' per-unit productivity. Although unusual, potential negative effects could occur, for example if such a firm overtakes a foreign market, drives out local firms, and then uses its monopoly power to raise prices and lower production.

Another potential benefit of trade liberalization is the procompetitive effect. When a firm within a country has monopoly power, it will choose to sell fewer goods at premium prices. The result is a loss in welfare to the country as a whole, although the monopoly itself gains. Opening up to trade will allow competition into the industry and force the domestic firm to behave in a more competitive manner, improving the country's overall welfare.

^aMore detailed explanations of this literature can be found in textbooks on international economics; for example, Caves, Frankel, and Jones, *World Trade and Payments*, 2002; and Krugman, "Ricardo's Difficult Idea," 1996 (accessed April 20, 2009).

^bEaton and Kortum "Technology, Geography, and Trade," 2002.

^cKrugman, "Increasing Returns," 1979; Krugman, "Scale Economies," 1980.

^dThis is obtained from the assumptions in the paper regarding increasing returns to scale and monopolistic competition.

^eGrossman and Helpman, "Technology and Trade," 1995.

^fEaton and Kortum, "Trade in Capital Goods," 2001.

^gMelitz, "The Impact of Trade," 2003.

BOX 3.3 Summary statistics for tariffs

Assessing the size of tariff barriers can be done in a variety of ways. Many statistics have been created to summarize the size of tariff barriers, each with its own strengths and weaknesses. A trade-weighted average takes the average of all tariff rates imposed on imports, weighted by the value of the goods imported in each category. The advantage of this measure is that it gives the precise amount of tariffs actually collected and correctly accounts for high-value items. The disadvantage is that prohibitively high tariffs will not be recorded by the measure because no goods subject to that tariff will be traded. Trade in goods with high tariffs will be limited and therefore result in an underrepresentation of the degree of restrictiveness.

Simple average tariffs take the unweighted average of all tariffs. The advantage is that changes in policy will be reflected in changes in the index; the disadvantage is that changes to a low-volume good with a small economic impact will have the same effect as changes to a high-volume good with significant effects on the economy.

Anderson and Neary propose an explicitly welfare-driven measure, the Trade Restrictiveness Index (TRI).^a The TRI is a direct computation of the effect on welfare of import tariffs in a general equilibrium framework. They compute the loss of welfare from current tariff levels and then compute the uniform tariff equivalent—the tariff rate that would need to be applied uniformly to all goods in order to obtain the same welfare loss. This has the advantage of being the correct theoretical measure to examine, but it is computationally intensive to calculate and relies on various model assumptions, including elasticities of substitution among goods.

Finally, there is a range of rates that may be used. GATT and WTO negotiations center on “bound rates” for tariff lines, which are the upper bounds for tariffs that have been committed to by a country. A country may choose to levy a tariff rate below the bound rate—the “applied rate”—but not above it. A tariff average based on bound rates is useful for measuring progress in negotiations, whereas the applied rate is more useful for quantifying effects on an economy.

^aAnderson and Neary, “A New Approach to Measuring Trade Policy,” 1996.

TABLE 3.4 Pre-Tokyo Round studies

Author (date published)	Focus country	Estimated effects (% of GNP)	Remarks
Stern (1964)	United States	< 0.11	Efficiency gains from the removal of all U.S. tariffs in 1960 (ignoring the terms of trade effects)
Balassa and Kreinin (1967)	Several industrial countries	< 1.0	Gains from Kennedy Round tariff cuts
Magee (1972)	United States	1.0	Gains from removing all trade barriers (ignoring the terms of trade effects)

Source: Panagariya, "Alternative Approaches to Measuring the Cost of Protection," table 1, 2002, 5.

This paper computed the restrictiveness of existing tariffs and estimated the resulting effects on welfare for the entire time period. Irwin found that U.S. tariffs were equivalent to an across-the-board tariff of 32.2 percent in 1934. From this high rate, the index fell steadily over the years to 12.5 percent in 1961, a drop of nearly two-thirds. Irwin estimated that welfare losses imposed by even the highest tariffs were modest; even in 1934, the loss was less than 1 percent (0.21) of GDP because the share of international trade in the overall U.S. economy was low.¹²⁴ This welfare loss decreased to 0.04 percent of GDP in 1961. As noted, these are single-period static effects based on classical gains from trade.

Panagariya provided a summary of several other papers that estimate the negative effects of trade barriers on GNP during this period (table 3.4).¹²⁵ The researchers modeled only a small number of goods and generally assumed a small open economy (that is, an economy whose imports or exports are not large enough to affect prices). The welfare gains derived from assumptions of differences in technology, initial endowments, or demand for goods.

Tokyo Round and Computational Models

In the 1970s, computational power became more available for intensive, detailed calculations. In this era, researchers began using large scale CGE models (box 3.4). Beginning with the Tokyo Round (1973–79), the

¹²⁴Ibid., 2.

¹²⁵Panagariya, "Alternative Approaches to Measuring the Cost of Protection," 2002.

TABLE 3.5 Tokyo Round studies

Author (date published)	Year studied	Economic effects (% of GNP)	Remarks
Baldwin et al. (1980)	1967	0.01	50 percent multilateral tariff cut
Cline et al. (1978)	1974	0.03	60 percent agriculture NTM
Deardorff and Stern (1979)	1976	0.04	Tokyo Round tariff cut
Deardorff and Stern (1979)	1976	0.06	Tokyo Round tariff and NTM cut
Deardorff and Stern (1981)	1976	0.02–0.05	Tokyo Round tariff and NTM cut
Whalley and Wigle (1982)	1977	-0.05	50 percent multilateral tariff cut

Source: Panagariya, "Alternative Approaches to Measuring the Cost of Protection," table 1, 2002, 5.

economic literature began to focus in earnest on obtaining quantitative estimates of the effects of negotiated tariff reductions. In addition to tariff barriers, two other areas became the focus of quantitative analysis during this period: trade-adjustment assessments and nontariff barriers.

The effects of tariff barriers computed by this new generation of models were small, although they showed net benefits from trade liberalization in the majority of cases. Several papers examined the effects of the Tokyo Round and obtained very small estimates of gains in GDP. The largest gain, in Deardorff and Stern, was only 0.06 percent of GNP.¹²⁶ One paper actually predicted a small negative welfare effect, which means that the U.S. economy loses out by trading.¹²⁷ This is driven by a negative terms-of-trade effect in their model.¹²⁸ Whalley computed that a 33 percent cut in the tariff rate results in a less than 0.1 percent gain in GNP to the United States.¹²⁹ His estimates showed a decrease in GNP for the EEC and Japan.

Several papers that have estimated the effects on the U.S. economy of different types of trade barrier reductions are summarized in table 3.5. Although there are some differences in model specification among the papers, all use fundamentally the same modeling principle and show very small effects on GNP.

Trade adjustment is a critical and politically important issue for trade policy analysis. When trade barriers are lowered, industries that export or

¹²⁶Deardorff and Stern, *An Economic Analysis of the Effects of the Tokyo Round*, 1979.

¹²⁷Whalley and Wigle, "Price and Quantity Rigidities," 1982.

¹²⁸Terms of trade refers to the price of a country's exports relative to the price of its imports, the calculation of which is usually based on import and export price indexes.

¹²⁹Whalley, "An Evaluation of the Tokyo Round," 1982, 353.

BOX 3.4 Computable general equilibrium models

General equilibrium analysis has a long history in economics with the theoretical aspects largely worked out in the mid-20th century. Applied general equilibrium analysis seeks to explain consumer and producer behavior of an entire economy. In the 1970s and early 1980s, computable general equilibrium (CGE) models were first implemented.^a These models typically contain production or supply relations for a number of commodities, including producers' purchases of inputs from other producers. There are also equations that represent consumers' preferences for goods and their supply of labor. Typically a government sector is included that collects taxes and also purchases goods and services. Later models also incorporate savings and investment behavior. Every good and service has a market, and equilibrium occurs when supply equals demand in all markets. A typical modeling sequence is to calibrate a model with existing data so that it replicates current conditions; then a policy change is invoked, and the model is solved for a new equilibrium, which is compared to the initial equilibrium.

The strength of CGE models is in showing the interaction between different parts of the economy (i.e., producers, consumers, government, and foreign sectors) in a consistent manner. Budget and resource constraints in CGE models add a measure of realism. Large-scale CGE models require a large number of parameters, such as supply and demand elasticities. The demand for imported goods often assumes that similar domestic and imported goods are imperfect substitutes for each other, and this choice is represented by an elasticity of substitution between each imported and domestic good. Some newer models sidestep the difficulty of estimating these elasticities by using a monopolistic competition setup where industries produce similar but differentiated products; however, this approach leads to other data challenges.^b Progress has been made in constructing models with a greater number of sectors. Most of these models assume that firms are perfectly competitive, but there are CGE models with imperfectly competitive firms. Modeling investment behavior has improved with dynamic versions of CGE models, although this considerably increases computational intensity.

^aDixon et al., *ORANI*, 1997; Shoven and Whalley, *Applying General Equilibrium*, 1992.

^bPiermartini and Teh, "Demystifying Modelling Methods," 2005, 11.

that use imported inputs are likely to grow via increased export demand or reduced production costs. Industries that compete with imports will likely witness a decline as foreign goods become relatively more competitive. The transition to this new equilibrium where some industries are larger and others smaller is not instantaneous, but the adjustment costs of moving to the new equilibrium are predicted to be smaller than the positive benefits from freer trade to the country. There are effectively two types of negative effects. One is the immediate loss of jobs and wages; the second is the need to revamp factories, or make other changes to the capital structure, and to retrain workers. This is costly, as resources are required for retraining, and some existing capital goods may be useless in a new industry. Because adjustment costs tend to be small relative to the benefits, income transfers are possible, so that everyone can be made better off through liberalization.

Several papers have computed these adjustment costs for the Tokyo Round. Baldwin, Mutti, and Richardson calculated that 50 percent multilateral cuts in tariffs would lead to labor adjustment costs of \$3 million (1967 dollars) and capital adjustment costs of \$2.3 million versus an approximate consumer surplus gain of \$610 million.¹³⁰ Despite the overall benefit, difficulties occur because these costs tend to be concentrated either geographically or within an industry; five negatively affected industries were projected to lose more than 10 percent of their workforce.¹³¹ Baldwin reviewed several other contemporary studies of adjustment costs.¹³² He cited Mutti's 1977 estimate that there is roughly \$1.30 in benefits for every \$1 in adjustment costs. Other values are much higher: a 28-to-1 ratio from Baldwin and an 8-to-1 ratio from Cline.

Reforms of the Tokyo Round were also estimated to have a net positive effect on employment. Deardorff and Stern calculated that the United States would gain approximately 15,000 jobs, or a 0.02 percent net increase in the labor force as a result of Tokyo Round reforms.¹³³ This figure includes sectors with net job losses as well as sectors with net job gains.¹³⁴ Industrialized nations as a whole were projected to see a net gain of 134,000 jobs due to the Tokyo Round agreement. In making these estimates, Deardorff and Stern included liberalization of a few nontariff barriers, such as quotas and restrictions on government procurement.

¹³⁰Baldwin, Mutti, and Richardson, "Welfare Effects on the United States," 1980.

¹³¹Ibid., 419.

¹³²Baldwin, "Trade Policies in Developed Countries," 1984b, 593.

¹³³Deardorff and Stern, *An Economic Analysis of the Effects of the Tokyo Round*, 1979.

¹³⁴Ibid., V, table 1.

TABLE 3.6 Imports affected by NTMs, 1966 and 1986

Area	Share of total imports (%)		Import value (billions of \$)	
	1966	1986	1966	1986
United States	36.4	45.0	9.4	103.1
All countries ^a	25.3	48.0	29.5	355.5

Source: Laird and Yeats (1990), table 6.

^a“All Countries” refers to the European Community, Finland, Japan, Norway, Switzerland, and the United States.

As discussed in the history section, the Tokyo Round was the first to deal substantively with nontariff issues. This was reflected in the focus of some researchers in estimating nontariff barriers. The notable result was that the effects of lowering these barriers often dwarfed the effects from lowering tariff barriers.

Nontariff barriers, now increasingly called nontariff measures (NTMs), are much more difficult to quantify. As the first round to deal with NTMs, the Tokyo Round was uniquely difficult to assess. This difficulty was compounded by vague wording and relatively weak commitments. As an example of the difficulty, one NTM code of the Tokyo Round discussed the importance of maintaining international standards in health and safety “whenever possible,” (Technical Barriers to Trade, Article 2) and contained other similarly vague language. Laird and Yeats were among the first to construct quantitative measures of NTMs.¹³⁵ They constructed measures of such barriers by examining the number of products (at the SITC four-digit level¹³⁶) that have nontariff barriers attached to them. They found that the value of imports affected by NTMs (and their associated shares of total imports) increased between 1966 and 1986 both for the United States and all countries (table 3.6). Their estimates are somewhat exaggerated relative to the individual tariff lines (that is, at the SITC five-digit level); if any tariff line is restricted, then every line within that group is considered to be “affected.” Although their aggregation procedure overstates the effects of NTMs, it remains clear that NTMs affected an increasing share of imports between 1966 and 1986.

¹³⁵Laird and Yeats, “Trends in Nontariff Barriers of Developed Countries, 1966–1986,” 1990.

¹³⁶SITC refers to the Standard International Trade Classification, which is a commodity classification system of the United Nations. It is hierarchical. For example, suppose that 1111 is four-digit code; then any commodity defined by a five-digit code whose first four digits are 1111 is a subset of the aggregate commodity 1111.

To compute the changes in welfare when evaluating the effects of the Tokyo Round, Whalley incorporated NTMs into a CGE model and computed the effects of their removal.¹³⁷ He quantified a particular NTM by estimating a tariff equivalent of the distorting effect of the NTM, that is, the tariff rate that would have a similar effect on the economy. Whalley incorporated only those NTMs for which reasonably good estimates of the tariff equivalent could be made, although substantial subjectivity remained. For example, “buy domestic” restrictions on government procurement were incorporated into the model as a 50 percent tariff on imports for the EEC and Japan.¹³⁸ Moreover, government procurement does not behave strictly like a tariff; in certain circumstances—for example, if there is a sudden bout of inflation—the government may not be willing to pay as much for its supplies, which implies a smaller tariff equivalent.

Empirical studies of the Uruguay Round’s effects were largely focused on the more readily quantifiable trade policies of tariff and quota reduction. Table 3.7, reproduced from Piermartini and Teh, summarizes several key studies.

Recent Literature

There has been an explosion of research in recent years on the effects of trade liberalization. Three areas of research have received increasing interest. The first area is services, which are increasingly being traded. The second area is NTMs, which have been given more attention as they have grown in prominence during trade negotiations. In the current literature, the definition of NTMs is expanding, and more careful attention is paid to modeling the incidence and behavior of NTMs.¹³⁹ The third area is the channels of trade benefits, where a number of theoretical papers have proposed new approaches to quantifying the benefits from trade. These papers tended to project larger benefits from trade liberalization compared with previous literature. According to many papers, the effects of liberalizing NTMs eclipse those of liberalizing tariff measures. Similar large effects have been found from liberalization of the services industries, which were largely ignored in the foregoing literature. Empirical studies

¹³⁷Whalley, “An Evaluation of the Tokyo Round Trade Agreement,” 1982.

¹³⁸*Ibid.*, 350.

¹³⁹Nearly all services barriers fall into the category of nontariff barriers; however, as services are a critical component of modern economies, it is frequently worth defining and describing them separately.

TABLE 3.7 Uruguay Round studies

Author (date published)	Model assumptions	Liberalization assumptions	Increase in U.S. GDP (%)
Brown, Dearnodff, Fox, and Stern (1996)	Static; perfect competition in agriculture; monopolistic competition and increasing returns to scale in manufacturing	Manufacturing, agriculture as scheduled; services barriers reduced by 25 percent	0.9
Francois, McDonald, and Nordstrom (1996)	Dynamic; increasing returns to scale and monopolistic competition	Manufacturing, agriculture as scheduled; MFA quotas lifted	0.6
Goldin and van der Mensbrugge (1996)	Static; perfect competition; primary focus on agriculture	Manufacturing, agriculture as scheduled	0.1
Hertel, Martin, Yanagishima, and Dimaranan (1996)	Static; perfect competition, constant returns to scale	Manufacturing, agriculture as scheduled; MFA quotas lifted	0.4
Harrison, Rutherford, and Tarr ^a (1995)	Static; perfect competition, constant returns to scale	Manufacturing, agriculture as scheduled	0.4

Source: Piermartini and Teh, "Demystifying Modelling Methods," table 2, 2005, 23–24.

^aThis paper differs from that of Hertel et al. (1996) principally in that it assumes a greater number of sectors and regions.

tend to focus on two distinct aspects. The first is an assessment of the size of trade barriers, and the second is the effect of a partial or total removal of the barriers.

Nontariff measures are not always directly observable in the way that tariff barriers are. However, researchers have devoted considerable efforts to finding indirect ways of estimating these barriers. Ferrantino, in summarizing these methods, found that, broadly speaking, researchers look at anomalies in either prices or quantities to determine the extent to which trade is impeded.¹⁴⁰ Economic theory predicts that prices for a given good, adjusted for transportation costs, should be the same everywhere, provided there are no impediments to trade,¹⁴¹ and that any difference in price should imply the presence of such impediments. Determining the trade barrier,

¹⁴⁰Ferrantino, "Quantifying the Trade and Economic Effects," 2006.

¹⁴¹This is often referred to as the law of one price.

however, is not as simple as looking at price differences across countries because prices vary due to a number of nonpolicy reasons. Moreover, in the case of a good that is produced in only a few countries, determining the world price (i.e., what the price of the good would be in an unfettered market) is not a straightforward exercise.

More attention has been paid to modeling services since the Uruguay Round, when it emerged as a dominant agenda item. Generally, services require special treatment and cannot be modeled simply as a different type of good because of their complex interindustry linkages. Several papers attempt to quantify the effect of reducing barriers to trade in services. Robinson, Wang, and Martin attempted to quantify barriers in several services sectors while at the same time carefully laying out the difficulties of the exercise.¹⁴² These authors found a 50 percent cut in services barriers leads to a slightly less than 1 percent increase in welfare.¹⁴³ Brown, Deardorff, and Stern simulated a 33 percent reduction to barriers to trade in services and found a 1.45 percent positive effect on U.S. welfare.¹⁴⁴ Both studies were based on CGE models with service barriers constructed similarly to tariff barriers.

Services liberalization may provide greater gains from liberalization than those generated by goods liberalization, particularly where tariffs on goods have already reached low levels. Several papers suggest that lowering barriers to trade in services can produce a welfare effect 8 to 12 times greater than an equivalent decrease in goods barriers.¹⁴⁵ The result from Robinson, Wang, and Martin was something of an anomaly: they estimate up to 124 times greater benefits for services liberalization, primarily because they estimated an unusually small effect from goods liberalization.

To illustrate a potential best-case scenario, Bradford, Grieco, and Hufbauer used a number of elements from the right hand column of table 3.3 and arrived at several extremely large values for the benefits from trade liberalization.¹⁴⁶ For example, they calculated that trade policy liberalization after World War II had increased U.S. GDP by between 7

¹⁴²Robinson, Wang, and Martin, "Capturing the Implications of Services Trade Liberalization," 2002.

¹⁴³*Ibid.*, 23.

¹⁴⁴Brown, Deardorff, and Stern, "Multilateral, Regional and Bilateral Trade Policy," 2003.

¹⁴⁵Hoekman, "Liberalizing Trade in Services," 2006, 24.

¹⁴⁶Bradford, Grieco, and Hufbauer, "The Payoff to America from Globalisation," July 2006.

and 13 percent. Also, they found that the removal of all remaining trade restrictions will raise U.S. GDP by an additional 4 to 12 percent annually. This calculation provides a useful illustration of potential gains, although caution is in order as economists have not yet completely delineated each individual channels' contribution to the domestic economy, and there are likely overlapping effects that must be dealt with carefully. It may, however, establish an upper bound on the economic effects of trade liberalization.

There is also a considerable body of econometric work that uses historical data to determine the effect of a past policy decision on an economy. Many of these studies focused on NAFTA, as well as the U.S.-Canada Free Trade Agreement. The consensus is that trade among partners increased after signing NAFTA, although this effect was generally more pronounced between the United States and Mexico. However, the research was divided between those that estimate a small level of trade diversion and those that estimate significant trade diversion. The potential for trade diversion is a major drawback of free trade agreements (FTAs). For example, suppose that the United States has historically imported a good from Malaysia when the tariffs imposed on Malaysian and Mexican goods were the same (presumably because Malaysia is the most efficient producer). NAFTA, by reducing Mexican tariffs, creates an incentive to purchase Mexican goods, even if they are produced in a less efficient manner. As a result, even if trade between two partners increases subsequent to a trade agreement, some of this increase could simply be replacing trade with countries outside of the free trade area. Romalis found evidence on the trade diversion side of the debate, arguing that despite significant increases in trade among NAFTA signatories, a large portion of this was made up of trade diversion, implying only small net gains from NAFTA.¹⁴⁷ On the other hand, Clausing estimated only a small trade diversion effect, with far more significant net welfare effects.¹⁴⁸ Aside from these agreements, a series of bilateral agreements have been struck since 2002. These agreements, while generally having economic significance for the partner country and political significance for both the United States and the partner country, have small effects on U.S. welfare.¹⁴⁹

¹⁴⁷Romalis, "NAFTA's and CUSFTA's Impact on International Trade," 2005.

¹⁴⁸Clausing, "Trade Creation and Trade Diversion," 2001. See USITC, *The Impact of Trade Agreements*, 2003, 93–100, for a detailed summary of the literature addressing this question.

¹⁴⁹See table F.1 for a summary of these agreements.

Negotiations for the Doha Round, assuming that they continue, have been estimated to provide little in the way of specific benefits to member countries. Two papers provided analysis of the economic effects of proposed tariff rate changes. Anderson and Martin examined the potential effects on agriculture,¹⁵⁰ while Gootiiz and Mattoo examined services, and both papers come to similar results.¹⁵¹ Currently, many countries have set many of their tariffs below the bound rates (rates that define the upper bound on tariffs that a country can levy) agreed upon in the Uruguay Round. The bound rates proposed in the DDA are substantially lower than those in the Uruguay Round, but are mostly still well above the current applied rates. As Gootiiz and Mattoo point out, the DDA therefore does not increase liberalization; rather it formalizes the current status, which at a minimum prevents future increases in tariffs.

Decreux and Fontagné used a CGE model to measure the potential effects of the DDA. Given that no agreements have been reached, the authors focused on a large number of potential scenarios, including tariff reductions on agriculture, nonagricultural market access, and services. Applied tariff rates were used, with assumptions made regarding the effect of lowering the bound rates. As with the literature for the Uruguay Round, these authors also found that cuts in services barriers have a much larger effect on welfare than do cuts in goods barriers; for example, services barriers may only need to be cut by a mere 25 percent to provide the same welfare gains as a 70 percent cut in goods barriers.¹⁵² The models (summarized in table 3.8) provide additional estimates of the potential effects of the DDA. Trade facilitation is modeled as a reduction in trade costs of between 1 to 3 percent of total world trade.¹⁵³ The main difference between the results obtained by Brown, Deardorff, and Stern and those found by Francois, Hoekman, and Woerz is in the effects of services barriers, where the former obtain far higher gains from liberalization with a more modest liberalization assumption (33 percent for Brown, Deardorff, and Stern, versus 50 percent for Francois, Hoekman, and Woerz).

¹⁵⁰Anderson and Martin, "Agricultural Trade Reform," 2005.

¹⁵¹Gootiiz and Mattoo, "Services in Doha," 2008.

¹⁵²Decreux and Fontagné, "A Quantitative Assessment of the Outcome of the Doha Development Agenda," 2006, 6.

¹⁵³Piermartini and Teh, "Demystifying Modelling Methods," 2005, 35.

TABLE 3.8 Doha Round studies

Study	Description	Increase in global GDP	
		%	Billions of 1997 \$
Anderson, Martin, and van der Mensbrugghe (2005)	Constant returns to scale and perfect competition; agriculture and manufacturing tariffs liberalized	0.9	263.5
Anderson, Dimaranan, Francois, Hertel, Hoekman, and Martin (2003)	Constant returns to scale and perfect competition; agriculture and manufacturing tariffs liberalized	0.9	264.8
Brown, Deardorff, and Stern (2003)	Increasing returns to scale and monopolistic competition; agriculture, manufacturing, and service barriers liberalized	7.2	2, 154.5
Cline (2004)	Constant returns to scale and perfect competition; agriculture tariffs and manufacturing tariffs and quotas	0.8	227.8
Francois, van Meijl, and van Tongeren (2003)	Increasing returns to scale and monopolistic competition (manufacturing only); agriculture, manufacturing, services barriers and trade facilitation	1.2	367.3
OECD (2003)	Constant returns to scale and perfect competition; agriculture, manufacturing tariffs and trade facilitation	0.6	173.6

Source: Piermartini and Teh, "Demystifying Modelling Methods," tables 3 and 4, 2005, 27–29, 31.

Conclusion and Timeline

An enormous amount of constructive work has been done to establish trade liberalization as a common international goal and to construct the necessary regulations and institutions to support that goal. Aside from the tangible and quantifiable reductions in barriers to trade and the establishment of the World Trade Organization, the liberalization process has resulted in a legacy of conventions and procedures intended to reduce the possibility of reversals of trade liberalization commitments. There have, of course, been obstacles along the way. These include domestic economic and political struggles within negotiating countries that spill over into international trade negotiations and conflicts between developed and developing nations regarding the role of international trade in development. The economic literature has extensively evaluated the progress of trade liberalization. The consensus of this literature is that the United States has benefited substantially from past tariff liberalization. Moreover, significant future gains are expected as liberalization of services and other nontariff measures are negotiated.

Currently trade liberalization faces three potential obstacles. The Doha Development Agenda faces an uncertain future. These talks have been ongoing since 2001 and may still be completed, but it is far from certain when, or if, this will occur. The President's authority to present agreement-implementing legislation to Congress for a simple up-or-down vote—trade promotion authority—has lapsed, and it is unclear when this will be reinstated by Congress. Finally, the global financial crisis has raised the possibility of an increase in protectionist sentiment. There are a large number of institutional mechanisms in place that will make a retreat to the levels of protection seen during the Great Depression unlikely; nevertheless, the current economic situation may have a substantial influence on the future direction of trade policy.

Important legislation, policy changes, and events of the past 75 years of U.S. trade policy are summarized in a timeline below.

Timeline of Important U.S. Legislation, Policy Changes and Related Events

- June 17, 1930 The U.S. Tariff Act of 1930 (Smoot-Hawley Tariff, Pub. L. No. 71-361) is enacted.
- June 12, 1934 The U.S. Act to Amend the Tariff Act of 1930 (Reciprocal Trade Agreements Act, Pub. L. No. 73-316) is enacted.
- Aug. 22, 1947 The United Nations Economic and Social Council approves the Draft Charter for the International Trade Organization (ITO) of the United Nations in Geneva, Switzerland.
- Oct. 30, 1947 Participating governments sign the General Agreement on Tariffs and Trade (GATT), which consists of broad trade provisions to govern particular concessions made during the Geneva Round of multilateral tariff negotiations.
- Jan. 1, 1948 The GATT enters into force.
- Mar. 24, 1948 Participants at the United Nations Conference on Trade and Employment in Havana, Cuba sign the draft charter to create the ITO.
- Dec. 8, 1950 After submitting the Draft Charter for the ITO to the U.S. Congress the previous year, President Truman withdraws it from congressional consideration and does not resubmit it.
- June 16, 1951 The Trade Agreements Extension Act of 1951 (Pub. L. No. 82-50) is enacted, establishing a statutory “escape clause” procedure.
- Sept. 10, 1955 Japan accedes to the GATT.
- Nov. 1, 1955 Japan begins to place voluntary export restraints on cotton textiles, plywood, and other goods to the United States to avoid possible restrictive import measures to protect U.S. domestic markets.
- Jan. 1, 1958 The Treaty Establishing the European Economic Community (“Treaty of Rome”) enters into force.
- Aug. 20, 1958 The U.S. Trade Agreements Extension Act of 1958 (Pub. L. No. 85-686) is enacted, establishing procedures that limit the president’s authority to reduce tariff rates when negotiating a foreign trade agreement.
- Sept. 1, 1960 The GATT Dillon Round of multilateral trade negotiations begins.

- May 2, 1961 President Kennedy announces a program to help the U.S. textile industry that was hurt by increased imports.
- July 21, 1961 The Short-Term Arrangement on Cotton Textiles is negotiated and established under the GATT.
- July 1, 1962 The European Economic Community's (EEC) Common Agricultural Policy enters into force.
- Oct. 1, 1962 The Long-Term Arrangement on Cotton Textiles is negotiated and established under the GATT.
- Oct. 11, 1962 The U.S. Trade Expansion Act of 1962 (Pub. L. No. 87-794) is enacted, establishing the Office of the Special Trade Representative and the Trade Adjustment Assistance Program.
- Jan. 7, 1964 The United States suspends concessions on goods imported from the EEC (e.g., light trucks) in response to the implementation of the EEC Common Agricultural Policy that sharply raises import duties on U.S. exports of poultry to the EEC (U.S.-EEC "chicken war").
- May 4, 1964 The GATT Kennedy Round of multilateral trade negotiations begins.
- Jan. 16, 1965 U.S.-Canada Agreement Concerning Automotive Products is signed.
- Jan. 1, 1969 Japan and the members of the European Coal and Steel Community agree to place voluntary export restraints on steel products destined for the United States.
- Aug. 16, 1971 The United States suspends the convertibility of the U.S. dollar into gold; imposes temporary U.S. wage and price controls, as well as import surcharges.
- Oct. 1, 1971 The United States reaches voluntary export restraint agreements with Hong Kong, Japan, South Korea, and Taiwan for textiles made with wool and man-made fibers.
- Dec. 18, 1971 The "Smithsonian Agreement" enters into force in Dec. 1971 and provides a temporary realignment of currency exchange rates; the Aug. 1971 U.S. import surcharges are subsequently terminated.
- Dec. 31, 1971 The United States records its first merchandise trade deficit in the 20th century—a deficit of approximately \$2.5 billion in 1971.
- Sept. 14, 1973 The GATT Tokyo Round of multilateral trade negotiations begins.

- Oct. 16, 1973 The first OPEC oil price shock takes place from Oct. 1973 to Mar. 1974.
- Jan. 1, 1974 The GATT Multifiber Arrangement governing trade in textiles and apparel enters into force, succeeding the 1962 GATT Long-Term Arrangement on Cotton Textiles.
- Jan. 3, 1975 The U.S. Trade Act of 1974 (Pub. L. No. 93-618) is enacted. The act introduces “fast track” congressional approval provisions for U.S. trade agreements, creates section 301 provisions to counter “unfair trade practices,” and authorizes a U.S. Generalized System of Preferences for developing countries. Title IV (Jackson-Vanik Amendment) includes provisions to extend nondiscriminatory tariff treatment (“most favored nation” status) to nonmarket economies (such as in Communist East Europe) that permit their citizens to emigrate freely, but effectively denies such treatment to countries (notably, the Soviet Union) that do not.
- Jan. 1, 1976 The U.S. Generalized System of Preferences enters into force.
- Feb. 15, 1978 The U.S. Treasury Department introduces a trigger-price mechanism to monitor dumping of steel imports in the United States.
- July 26, 1979 Trade Agreements Act of 1979 (Pub. L. No. 96-39) is enacted. The act provided implementing legislation for the Tokyo Round and eased the requirements for obtaining relief under domestic trade remedies.
- May 2, 1981 Japan announces voluntary export restraint measures on its automobile exports to the United States.
- Aug. 5, 1983 The U.S. Caribbean Basin Economic Recovery Act (CBERA, Pub. L. No. 98-67) is enacted, providing preferential duty treatment for eligible products from the region.
- Nov. 9, 1983 The first U.S.-Japan semiconductor agreement is reached.
- Jan. 28, 1985 The U.S.-Japan Market-Oriented Sector-Specific talks open, concerning electronics, forest products, medical equipment, pharmaceuticals, and telecommunication products.
- Sept. 1, 1985 The U.S.-Israel Free Trade Agreement enters into force.
- Sept. 22, 1985 The United States, Japan, West Germany, France, and the United Kingdom sign the Plaza Accord to reduce the value of the U.S. dollar on foreign-exchange markets in response to the large U.S. current account deficit.

- Sept. 2, 1986 The second U.S.-Japan semiconductor agreement is reached.
- Sept. 20, 1986 The GATT Uruguay Round of multilateral trade negotiations begins.
- Feb. 22, 1987 The United States, Japan, West Germany, France, the United Kingdom, and Canada sign the Louvre Accord to stabilize the value of the U.S. dollar on foreign-exchange markets, whose decline began after the Plaza Accord 18 months earlier.
- Aug. 23, 1988 The U.S. Omnibus Trade and Competitiveness Act of 1988 (Pub. L. No. 100-418) is enacted, establishing the negotiating principles for the next multilateral round of trade talks, including a focus on services, intellectual property rights, and investments as well as the establishment of an improved dispute settlement mechanism. The act also introduced “super” and “special” section 301 trade provisions and requires annual reports on foreign trade barriers. The act also included provisions to promote domestic competitiveness and to enact the HTS.
- Dec. 31, 1988 The U.S. trade deficit declines for the first time in seven years, from \$170.3 billion in 1987 to \$119.1 billion in 1988.
- Jan. 1, 1989 The U.S.-Canada Free Trade Agreement enters into force.
- Dec. 4, 1991 The U.S. Andean Trade Preference Act (ATPA, Pub. L. No. 102-182) is enacted, providing preferential duty treatment for eligible products from Bolivia, Colombia, Ecuador, and Peru.
- Jan. 9, 1992 A U.S.-Japan agreement on auto and auto parts is reached to voluntarily increase Japanese imports of U.S.-made automobile parts.
- Oct. 21, 1992 The U.S. Export Enhancement Act of 1992 (Pub. L. No. 102-429) is enacted, calling for a government-wide strategy for U.S. export promotion that is announced in Sept. 1993 as the National Export Strategy.
- Dec. 15, 1993 The GATT Uruguay Round of multilateral trade negotiations concludes, with 125 countries signing the Uruguay Round Agreements.
- Jan. 1, 1994 The North American Free Trade Agreement (NAFTA) enters into force.
- Dec. 11, 1994 The Summit of the Americas is held, in which participants pledge to complete negotiations for a free trade agreement of the Americas by 2005.

- Jan. 1, 1995 The World Trade Organization (WTO) is established as a successor to the General Agreement on Tariffs and Trade.
- July 1, 1997 The WTO Information Technology Agreement enters into force.
- Feb. 6, 1998 The WTO Basic Telecommunications Agreement enters into force.
- Jan. 29, 1999 The WTO Financial Services Agreement enters into force.
- Dec. 3, 1999 The WTO Ministerial Conference at Seattle, Washington, fails to launch a new Millennium Round of multilateral trade negotiations.
- May 18, 2000 The U.S. Trade and Development Act of 2000 (Pub. L. No. 106-200) is enacted, providing duty-free treatment for eligible products from designated developing countries and territories. Title I of the act is the African Growth and Opportunity Act (AGOA) which amends the U.S. GSP program to provide duty- and quota-free treatment for certain products from eligible sub-Saharan African beneficiary countries.
- Oct. 1, 2000 The U.S. Caribbean Basin Trade Partnership Act amends the 1984 CBERA to authorize duty- and quota-free treatment for apparel from qualifying CBERA countries.
- Nov. 14, 2001 The WTO Ministerial Conference at Doha, Qatar, launches the Doha Development Agenda (DDA or Doha Round) of multilateral trade negotiations.
- Dec. 17, 2001 The U.S.-Jordan Free Trade Agreement enters into force.
- Mar. 20, 2002 The United States imposes increased tariffs and tariff-rate quotas on 14 steel products under Section 201 (“safeguard” or “escape clause”) provisions of the U.S. Trade Act of 1974.
- May 13, 2002 The U.S. Farm Security and Rural Investment Act of 2002 (Pub. L. No. 107-17) is enacted and increases domestic support for U.S. farmers.
- Aug. 6, 2002 The Trade Act of 2002 is enacted (Pub. L. No. 107-210), including the authorization of trade promotion (formerly fast track) authority and the reauthorization of trade adjustment assistance.
- Sept. 14, 2003 The WTO Ministerial Conference at Cancun, Mexico, closes without consensus, largely because of disputes about reductions in agricultural support payments and a tariff-cutting formula to liberalize market access for nonagricultural products.

- Jan. 1, 2004 The U.S.-Singapore Free Trade Agreement enters into force.
- Jan. 1, 2004 The U.S.-Chile Free Trade Agreement enters into force.
- Jan. 1, 2005 The U.S.-Australia Free Trade Agreement enters into force.
- Nov. 8, 2005 The U.S.-China Memorandum of Understanding is signed, limiting exports of Chinese textiles and clothing to the United States during 2006-08.
- Jan. 1, 2006 The U.S.-Central America-Dominican Republic Free Trade Agreement enters into force.
- Jan. 1, 2006 The U.S.-Morocco Free Trade Agreement enters into force.
- July 24, 2006 The WTO Doha Round of multilateral trade negotiations is suspended over the inability to agree on market-access liberalization for agricultural and nonagricultural products and reductions in agricultural support.
- Aug. 1, 2006 The U.S.-Bahrain Free Trade Agreement enters into force.
- Nov. 22, 2006 The United States signs the U.S.-Colombia Free Trade Agreement, which is pending congressional approval in 2009.
- June 22, 2007 The WTO Doha Round resumes in Feb. 2007 but is suspended again in June 2007 after failing to agree on issues of market-access liberalization for agricultural and nonagricultural products.
- June 28, 2007 The United States signs the U.S.-Panama Trade Promotion Agreement, which is pending congressional approval in 2009.
- June 30, 2007 The United States signs the U.S.-Korea Free Trade Agreement, which is pending congressional approval in 2009.
- July 30, 2008 The WTO Doha Round resumes in Feb. 2008 but is suspended again in July 2008 after failing to agree on issues of market-access liberalization for agricultural and nonagricultural products and, in particular, a special safeguard mechanism for developing country agricultural imports.
- Jan. 1, 2009 The U.S.-Oman Free Trade Agreement enters into force.
- Feb. 1, 2009 The U.S.-Peru Trade Promotion Agreement enters into force.

Bibliography

- Adams, Walter, and Joel B. Dirlam. "Steel Imports and Vertical Oligopoly Power." *The American Economic Review* 54, no. 5 (1964): 626–55.
- Anderson, James E., and J. Peter Neary. "A New Approach to Measuring Trade Policy." *Review of Economic Studies* 63, no. 1 (1996): 107–25.
- Anderson, Kym, and Will Martin. "Agricultural Trade Reform and the Doha Development Agenda." *The World Economy* 28, no. 9 (2005): 1301–27.
- Baldwin, Robert E. "Resolving the Conflict Leading to the Collapse of the Doha Round." *Vox*, September 25, 2008.
<http://www.voxeu.org/index.php?q=node/1697> (accessed December 9, 2008).
- . "The Causes of Regionalism." *The World Economy* 20, no. 7 (1997): 865–88.
- . "The Changing Nature of U.S. Trade Policy Since World War II." In *The Structure and Evolution of Recent U.S. Trade Policy*, edited by Robert E. Baldwin and Anne Krueger, 5–31. Chicago: University of Chicago Press, 1984a.
- . "Trade Policies in Developed Countries." In *Handbook of International Economics Volume I International Trade*, edited by Ronald W. Jones and Peter B. Kenan, 571–619. Amsterdam: North-Holland, 1984b.
- Baldwin, Robert E., John H. Mutti, and J. David Richardson. "Welfare Effects on the United States of a Significant Multilateral Tariff Reduction." *Journal of International Economics* 10 (1980): 405–23.
- Barton, John H., Judith L. Goldstein, Timothy E. Josling, and Richard H. Steinberg. *The Evolution of the Trade Regime: Politics, Law and Economics of the GATT and the WTO*. Princeton, NJ: Princeton University Press, 2006.
- Beckett, Grace. *The Reciprocal Trade Agreements Program*. New York: Columbia University Press, 1941.

- Bergsten, C. Fred. "A Renaissance for U.S. Trade Policy?" *Foreign Affairs* 81, no. 6 (2002): 86–98.
- Bhagwati, Jagdish, Pravin Krishna, and Arvind Panagariya. *Trading Blocs: Alternative Approaches to Analyzing Preferential Trade Agreements*. Cambridge, MA: MIT Press, 1999.
- Blonigen, Bruce A., and Thomas J. Prusa. "Antidumping." NBER Working Paper 8398, 2001.
- Bradford, Scott C., Paul L.E. Grieco, and Gary C. Hufbauer. "The Payoff to America from Globalisation." *The World Economy* 29, no. 7 (July 2006): 893–916.
- Broda, Christian, and David E. Weinstein. "Globalization and the Gains from Variety." *Quarterly Journal of Economics* 121, no. 2 (2006): 541–85.
- Brown, Drusilla, Alan Deardorff, and Robert M. Stern. "Multilateral, Regional and Bilateral Trade Policy Options for the United States." *The World Economy* 26, no. 6 (2003): 803–28.
- Caves, Richard E., Jeffrey A. Frankel, and Ronald W. Jones. *World Trade and Payments: An Introduction*. 9th ed. Boston: Addison Wesley, 2002.
- Chorev, Nitsan. *Remaking U.S. Trade Policy: From Protectionism to Globalization*. Ithaca and London: Cornell University Press, 2007.
- Clausing, Kimberly A. "Trade Creation and Trade Diversion in the Canada-U.S. Free Trade Agreement." *The Canadian Journal of Economics* 34, no. 3 (2001): 677–96.
- Congressional Budget Office (CBO). *The GATT Negotiations and U.S. Trade Policy*, CBO Study. Washington, D.C.: Congress of the United States, Budget Office, 1987.
- Dam, Kenneth W. "Cordell Hull, the Reciprocal Trade Agreement Act, and the WTO." John M. Olin Law and Economics Working Paper 228, October 2004.
- Dean, Judith M., and John Wainio. "Quantifying the Value of U.S. Tariff Preferences for Developing Countries." World Bank Policy Research Working Paper 3977, 2006.

- Deardorff, Alan V., and Robert M. Stern. "A Disaggregated Model of World Production and Trade: An Estimate of the Impact of the Tokyo Round." *Journal of Policy Modeling* 3, no. 2 (1981): 127–52.
- . *An Economic Analysis of the Effects of the Tokyo Round of Multilateral Trade Negotiations on the United States and the Other Major Industrialized Countries*. MTN Studies no. 5. Committee on Finance, U.S. Senate 96th Congress, 1st Session. Washington, D.C.: U.S. Government Printing Office, 1979.
- Decreux, Yvan, and Lionel Fontagné. "A Quantitative Assessment of the Outcome of the Doha Development Agenda." CEPII Working Paper 2006-10, 2006.
- Destler, I.M. *American Trade Politics*. 3d ed. New York: The Twentieth Century Fund, 1995.
- De Melo, Jaime, and David Tarr. "Welfare Costs of U.S. Quotas in Textiles, Steel and Autos." *The Review of Economics and Statistics* 72 (1990): 489–97.
- Diebold, William. "The End of the ITO." In *Essays in International Finance* 16. Princeton, NJ: Princeton University Press, 1952.
- Dixon, Peter, Brian Parmenter, John Sutton, and Dave Vincent. *ORANI: A Multisectoral Model of the Australian Economy*. Amsterdam: North Holland, 1997.
- Dobson, John M. *Two Centuries of Tariffs*. Washington, D.C.: USITC, 1976.
- Eaton, Jonathan, and Samuel Kortum. "Technology, Geography, and Trade." *Econometrica* 70, no. 5 (2002): 1741–79.
- . "Trade in Capital Goods." *European Economic Review* 45, no. 7 (2001): 1195–1235.
- Economist*. "The WTO Under Fire," September 18, 2003.
- Eichengreen, Barry. "The Political Economy of the Smoot-Hawley Tariff." NBER Working Paper 2001, August 1986.
- Eichengreen, Barry, and Douglas A. Irwin. "Trade Blocs, Currency Blocs, and the Reorientation of World Trade in the 1930s." *Journal of International Economics* 38 (February 1995): 1–24.

- Farrell, Roger. *Japanese Investment in the World Economy: A Study of Strategic Themes in the Internationalization of Japanese Industry*. Cheltenham, UK: Edward Elgar Publishing, 2008.
- Feenstra, Robert C. *Advanced International Trade: Theory and Evidence*. Princeton, NJ: Princeton University Press, 2004.
- . “Integration of Trade and Disintegration of Production in the Global Economy,” *Journal of Economic Perspectives* 12 no. 4 (1998): 31–50.
- . “Voluntary Export Restraints in U.S. Autos, 1980-81: Quality, Employment, and Welfare Effects.” In *Structure and Evolution of Recent U.S. Trade Policy*, edited by Robert E. Baldwin and Anne O. Krueger, 35–59. Chicago: University of Chicago Press, 1984.
- Ferrantino, Michael. “Quantifying the Trade and Economic Effects of Non-Tariff Measures.” OECD Trade Policy Working Paper 28, 2006.
- Francois, Joseph, Bernard Hoekman, and Julia Woerz. “Does Gravity Apply to Intangibles? Measuring Openness in Services.” Paper presented at the CEPII-OECD Workshop on Recent Developments in International Trade in Services, Paris, 2007.
- Gallaway, Michael P., Bruce A. Blonigen, and Joseph E. Flynn. “Welfare Costs of the U.S. Antidumping and Countervailing Duty Laws.” *Journal of International Economics* 49 (1999): 211–44.
- Gootiiz, Batshur, and Aaditya Mattoo. “Services in Doha: What’s on the Table?” Development Economics Research Group Working Paper, 2008.
- Grossman, Gene M., and Elhanan Helpman. “Technology and Trade.” In *Handbook of International Economics, Volume III*, edited by Gene M. Grossman and Elhanan Helpman, 1279–1337. Amsterdam: North-Holland, 1995.
- Helmers, Henrik O. *The United States-Canadian Automobile Agreement: A Study in Industry Adjustment*. Michigan International Commerce Reports 1. Ann Arbor, MI: Bureau of Business Administration, University of Michigan, 1967.

- Hertel, T., Martin, W., Yanagishima, K. and B. Dimaranan.
 “Liberalizing Manufactures in a Changing World Economy.” In *The Uruguay Round and the Developing Economies*, edited by W. Martin and L.A. Winters, 183–215. Cambridge: Cambridge University Press, 1996.
- Hoekman, Bernard. “Liberalizing Trade in Services: A Survey.” World Bank Policy Research Working Paper 4030, 2006.
- . “Strengthening the Global Trade Architecture for Development.” *World Trade Review* 1, no. 1 (2002): 2–45.
- Hoekman, Bernard M., and Michael M. Kostecki. *The Political Economy of the World Trading System: The WTO and Beyond*. 2nd ed. Oxford: Oxford University Press, 2001.
- Hoekman, Bernard M., William J. Martin, and Carlos A. Primo Braga. “Preference Erosion: The Terms of the Debate.” In *Trade, Doha and Development*, edited by Richard Newfarmer, 329-40. Washington DC: World Bank, 2005.
- Hunter, Janet, and Helen Macnaughtan. “Textile Workers in Japan.” In *The Ashgate Companion to the History of Textile Workers*, edited by Lex Heerma van Voss, Els Hiemstra-Kuperus and Elise van Nederveen Meerkerk, forthcoming. Surrey, UK: Ashgate Publishers. <http://www.iisg.nl/research/japan-rev.doc>
- Irwin, Douglas A. “From Smoot-Hawley to Reciprocal Trade Agreements: Changing the Course of U.S. Trade Policy in the 1930s.” In *The Defining Moment: The Great Depression and the American Economy in the Twentieth Century*, edited by Michael D. Bordo, Claudia Goldin, and Eugene N. White, 325-352. Chicago: University of Chicago Press for the NBER, 1998.
- . “The GATT in Historical Perspective.” *American Economic Review Papers and Proceedings* 85, no. 2 (1995): 323–28.
- . “The Smoot-Hawley Tariff: A Quantitative Assessment.” *The Review of Economics and Statistics* 80, no. 2 (May 1998): 326–34.
- . “Trade Restrictiveness and Deadweight Losses from U.S. Tariffs, 1859–1961.” NBER Working Paper 13450, 2007.

- Jackson, John H. *The World Trading System: Law and Policy of International Economic Relations*. 2nd ed. Cambridge, MA: MIT Press, 1997.
- . *World Trade and the Law of GATT*. Indianapolis, IN: Bobbs-Merrill, 1969.
- Jones, Joseph M. *Tariff Retaliation: Repercussions of the Hawley-Smoot Bill*. Philadelphia: University of Pennsylvania Press, 1934.
- Keck, Alexander, and Patrick Low. “Special and Differential Treatment in the WTO: Why, Where and How?” WTO Staff Working Paper ERSD-2004-03, 2004.
- Keesing, Donald B., and Martin Wolf. *Textile Quotas Against Developing Countries*. London: Trade Policy Research Centre, 1980.
- Kenan, Peter B. *The International Economy*. 4th ed. Cambridge: Cambridge University Press, 2000.
- Krueger, Anne O. “Are Preferential Trade Arrangements Trade-Liberalizing or Protectionist?” *The Journal of Economic Perspectives* 13, no. 4 (1999): 105–24.
- Krugman, Paul. “Increasing Returns, Monopolistic Competition, and International Trade.” *Journal of International Economics* 9, no. 4 (1979): 469–79.
- . “Ricardo’s Difficult Idea,” paper for the Manchester Conference on Free Trade, March 1996.
<http://web.mit.edu/krugman/www/ricardo.htm> (accessed April 20, 2009).
- . “Scale Economies, Product Differentiation, and the Pattern of Trade.” *The American Economic Review* 70, no. 5 (1980): 950–59.
- Krugman, Paul, and Maurice Obstfeld. *International Economics: Theory and Policy*. 5th ed. Boston: Addison-Wesley, 2000.
- Laird, Sam, and Alexander Yeats. “Trends in Nontariff Barriers of Developed Countries, 1966–1986.” *Review of World Economics* 126, no. 2 (1990): 299–325.

- McClenahan, William. "The Growth of Voluntary Export Restraints and American Foreign Economic Policy, 1956–1969." *Business and Economic History*, 2nd ser. 20 (1991): 180–90.
- McGovern, Edmond. *International Trade Regulation*. 3d ed. Exeter: Globefeld Press, 1995.
- Mehta, Pradeep S. "The Doha Development Agenda: The Road Ahead." In *Canadian Development Report 2003*. Ottawa: The North-South Institute, 2003.
- Melitz, Marc J. "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity." *Econometrica* 71, no. 6 (2003): 1695–1725.
- Office of the U.S. Trade Representative (USTR). "History of the U.S. Trade Representative," undated. <http://www.ustr.gov/> (accessed February 2, 2009).
- Oyejide, T. Ademola. "Interests and Options of Developing and Least-developed Countries in a New Round of Multilateral Trade Negotiations." G-24 Discussion Paper Series 2. United Nations Conference on Trade and Development–Center for International Development, Harvard University. 2000.
- Panagariya, Arvind. "Alternative Approaches to Measuring the Cost of Protection." 2002. Mimeo.
- Pearson, Charles S. *United States Trade Policy: A Work in Progress*. Hoboken, NJ: John Wiley & Sons, 2004.
- Piermartini, Roberta, and Robert Teh. "Demystifying Modelling Methods for Trade Policy." WTO Discussion Papers 10, 2005.
- Robinson, Sherman, Zhi Wang, and Will Martin. "Capturing the Implications of Services Trade Liberalization." *Economic Systems Research* 14, no. 1 (2002): 3–33.
- Romalis, John. "NAFTA's and CUSFTA's Impact on International Trade." NBER Working Paper 11059, 2005.
- Rosen, Howard. "Free Trade Agreements as Foreign Policy Tools: The U.S.-Israel and U.S.-Jordan FTAs." In *Free Trade Agreements: U.S. Strategies and Priorities*, edited by Jeffrey J. Schott, 53–58. Washington, D.C.: Peterson Institute, 2004.

- Shoven, John B. and John Whalley. *Applying General Equilibrium*. Cambridge: Cambridge University Press, 1992.
- Taussig, Frank W. *The Tariff History of the United States*. 6th ed. New Rochelle: G.P. Putnam's Sons, 1914.
- Taussig, Frank W. *The Tariff History of the United States*. 8th ed. New Rochelle: G.P. Putnam's Sons, 1931.
- Trebilcock, Michael J., and Robert Howse. *The Regulation of International Trade*. 3rd ed. London and New York: Routledge, 2005.
- U.S. Department of Commerce. U.S. Census Bureau. Official U.S. trade statistics. <http://www.census.gov/foreign-trade/download/dvd/index.html#merch> (accessed monthly).
- U.S. House of Representatives. Committee on Ways and Means. *Overview and Compilation of U.S. Trade Statutes*, 1993 ed.
- U.S. House of Representatives. Committee on Ways and Means. *Overview and Compilation of U.S. Trade Statutes*, 1995 ed.
- U.S. Tariff Commission. *Operation of the Trade Agreements Program, June 1934 to April 1948 – Part II. History of the Trade Agreements Program*. Report no. 160, Second Series. Washington, D.C.: U.S. Tariff Commission, 1949.
- U.S. International Trade Commission (USITC). *Antidumping and Countervailing Duty Handbook*. 13th ed. USITC Publication 4056. Washington, D.C.: USITC, 2008.
- . Hearing transcript in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Update*, January 8, 2009.
- . *Foreign Protection of Intellectual Property Rights and the Effect on U.S. Industry and Trade*. USITC Publication 2065. Washington, D.C.: USITC, 1988.
- . *The History and Current Status of the Multifiber Arrangement*, USITC Publication 850. Washington, D.C.: USITC, 1978.

- . *The Impact of Trade Agreements: Effect of the Tokyo Round, U.S.-Israel FTA, U.S.-Canada FTA, NAFTA, and the Uruguay Round on the U.S. Economy*, USITC Publication 3621. Washington, D.C.: USITC, 2003.
- Washington Trade Daily*. “US Certifies Peru FTA.” Volume 18. no 13. January 19, 2009. Trade Reports International Group.
- Whalley, John. “An Evaluation of the Tokyo Round Trade Agreement Using General Equilibrium Computational Methods.” *Journal of Policy Modeling* 4, no. 3 (1982): 341–61.
- Whalley, John, and R. Wigle. “Price and Quantity Rigidities in Adjustment to Trade Policy Changes: Alternative Formulation and Initial Calculations.” 1982. Mimeo (cited in Baldwin (1984)).
- World Bank Group. World Development Indicators Online. <http://go.worldbank.org/3SGLDH5V10> (accessed February 2, 2009).
- World Trade Organization (WTO). “Agriculture: Fairer Markets for Farmers,” undated. http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm3_e.htm (accessed January 2, 2009).
- . “Sanitary and Phytosanitary Measures: Gateway,” undated. http://www.wto.org/english/tratop_e/sps_e/sps_e.htm (accessed December 9, 2008).
- . *World Trade Report 2007*. Geneva: WTO Publications, 2007. http://www.wto.org/english/res_e/reser_e/wtr_arc_e.htm.

Appendix A

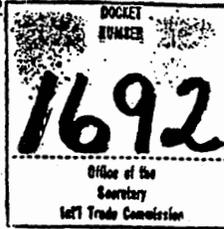
Request Letters

THE UNITED STATES TRADE REPRESENTATIVE
Executive Office of the President
Washington, D.C. 20506

RECEIVED
OFFICE OF THE SECRETARY
U.S. INTERNATIONAL TRADE COMMISSION

92 MAY 19 10 49 AM '88

MAY 15 1992



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

2

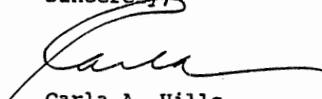
antidumping or countervailing duty investigations, section 337 or 406 investigations, or section 301 actions.

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

EXECUTIVE OFFICE OF THE PRESIDENT
THE UNITED STATES TRADE REPRESENTATIVE
WASHINGTON, D.C. 20508

The Honorable Shara Aranoff
Chairman
U.S. International Trade Commission
500 E Street, S.W.
Washington, D.C. 20436

AUG 21 2008

ER - AUG 22 2008 - 063
332-325

RECEIVED
OFFICE OF THE SECRETARY
U.S. INTERNATIONAL TRADE COMMISSION
2008 AUG 25 AM 9:10

Dear Madam Chairman:

The U.S. International Trade Commission's series of reports on the economic effects of significant U.S. import restraints, prepared as part of inv. No. 332-325, has been an excellent source of objective, balanced information for the President, the Congress, the trade policy community, and the public. As your reports have shown, the costs imposed on U.S. economic welfare by U.S. import restraints, have declined significantly since 1992.

From a trade perspective, the United States now stands as one of the world's most open economies. As you begin work on the 6th update of the Commission's Report, and in light of the high degree of openness of U.S. markets to imports already achieved, I would like to request that the Commission report on one other aspect of the U.S. trade liberalization story.

In 1934, at the beginning of the Reciprocal Trade Agreements Program, which launched the United States on a course of pursuing liberalized trade both at home and abroad, the United States was a relatively closed market. The course and progress of more than 70 years of U.S. efforts to move the world toward more open trade is known by many trade professionals, but I would like to make this information accessible to a wider audience. I am therefore requesting that the Commission report in this 6th update, on the major steps and results of U.S. trade liberalizing efforts since 1934 and effects of the liberalization as reported in the economic literature. This does not need to be a lengthy document, but a summary of the respected literature that is accessible to readers who may not be professional economists could be a useful contribution.

Given the nature of the U.S. Import Restraints Study, the Commission Report should focus on steps in the path of removing barriers in the U.S. market, without losing from view the reciprocal nature of many of these steps which have reduced or eliminated barriers to trade in other countries as well. The Commission should include in this Report a discussion of any existing economic literature on this subject that the Commission deems appropriate. Due to this additional aspect of the Report, I recognize that it will take slightly longer to develop.

Please provide the 6th update of this Report, with the additional section, 12 months after receipt of this request. As stated in the original 1992 request letter, subsequent updates of the report should be provided thereafter at intervals of approximately two years. USTR intends to make the Commission's reports available to the general public in their entirety. Therefore, the reports should not contain any confidential business or national security classified information.

The Commission's assistance in this matter is greatly appreciated.

Sincerely,

Susan C. Schwab
Susan C. Schwab

Appendix B

Federal Register Notice

prompt competitive interest in unleased Federal coal in this area. The alternate tract configurations for each of the LBAs that BLM is evaluating are described and analyzed as separate alternatives in the DEIS. Under these alternatives, competitive sales would be held and leases issued for Federal coal lands included in tracts modified by the BLM. The DEIS also analyzes the alternative of rejecting the application(s) to lease Federal coal as the No Action Alternative. The Proposed Actions and alternatives for each of the LBAs being considered in the DEIS are in conformance with the Approved Resource Management Plan for Public Lands Administered by the Bureau of Land Management Buffalo Field Office (2001).

Requests to be included on the mailing list for this project and to request copies of the DEIS or notification of the comment period or hearing date, or both, may be sent in writing, by facsimile, or electronically to the addresses previously stated at the beginning of this notice. The BLM asks that those submitting comments on the DEIS make them as specific as possible with reference to page numbers and chapters of the document. Comments that contain only opinions or preferences will not receive a formal response; however, they will be considered as part of the BLM decision-making process.

Please note that comments and information submitted including names, street addresses, and e-mail addresses of respondents will be available for public review and disclosure at the above address during regular business hours (7:45 a.m. to 4:30 p.m.), Monday through Friday, except holidays.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Donald A. Simpson,
Acting State Director.
[FR Doc. E8-24632 Filed 10-16-08; 8:45 am]
BILLING CODE 4310-22-P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[OR-930-6350-DQ-047H] HAG-08-0204

Notice of Availability of the Final Environmental Impact Statement for the Revision of the Resource Management Plans of the Western Oregon Bureau of Land Management Districts of Salem, Eugene, Roseburg, Coos Bay, and Medford, and the Klamath Falls Resource Area of the Lakeview District

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of Availability.

SUMMARY: In accordance with the National Environmental Policy Act of 1969 and the Federal Land Policy and Management Act of 1976, the Bureau of Land Management (BLM) has prepared six Resource Management Plans with a single associated Final Environmental Impact Statement (RMP/FEIS) for the Salem, Eugene, Roseburg, Coos Bay, and Medford Districts and the Klamath Falls Resource Area of the Lakeview District in western Oregon.

DATES: The Assistant Secretary of the Interior for Land and Minerals Management is the responsible official for the RMP. Accordingly, there will be no administrative review "protest" on the RMP/FEIS under 43 CFR 1610.5-2. The Record of Decision (ROD) will not be signed until at least 30 days after the Environmental Protection Agency (EPA) publishes this notice of availability of the Final EIS in the *Federal Register*.

ADDRESSES: Copies of the RMP/FEIS have been sent to affected federal, state, and local government agencies, and to tribal governments. Interested persons may review the RMP/FEIS on the Internet at <http://www.blm.gov/or/plans/wopr/index.php>. Copies of the RMP/FEIS are available for public inspection at Salem, Eugene, Roseburg, Coos Bay, and Medford District offices and the Grants Pass, Klamath Falls and Tillamook Resource Area offices.

FOR FURTHER INFORMATION, CONTACT: Jerry Hubbard, Western Oregon Plan Revisions Public Outreach Coordinator, at (503) 808-6115.

SUPPLEMENTARY INFORMATION: The BLM has analyzed revision of six Resource Management Plans with this single Environmental Impact Statement. These plans are the Salem, Eugene, Roseburg, Medford, and Coos Bay District RMPs and the Klamath Falls Resource Area RMP. The RMP/FEIS for the Western Oregon Bureau of Land Management Districts has identified and analyzed

four action alternatives, including the RMP, for managing approximately 2,550,000 acres of federal land, most of which are revested Oregon and California Railroad Grant and Coos Bay Wagon Road Grant lands, within the western Oregon planning area.

The major resource management plan issues include:

- Providing a sustainable supply of wood and other forest products, as mandated by the Oregon & California Lands Act of 1937, while also meeting other applicable laws.
 - Providing for conservation of species listed under the Endangered Species Act.
 - Contributing to meeting the goals of the Clean Water Act and the Safe Drinking Water Act.
 - Reducing the risk of wildfire and integrating fire back into the ecosystem.
- Comments received on the Draft Environmental Impact Statement (DEIS) were important in shaping the Resource Management Plans. The RMP is based on Alternative 2 from the DEIS, but includes portions of the other alternatives in the DEIS.

Some of the key changes include:

- Wider riparian management areas, as described in Alternative 1 of the DEIS.
- Late successional management areas were reconfigured to match the Final Northern Spotted Owl Recovery Plan.
- Deferring harvest for 15 years in "older and more structurally complex multi-layered conifer stands," as described in Final Northern Spotted Owl Recovery Plan in the timber management area.

- Using uneven-aged management, as described in Alternative 3 of the DEIS, in the southern portion of the Medford District and the Klamath Falls Resource Area to decrease fire hazard and increase fire resiliency.

Dated: September 8, 2008.

Edward W. Shepard,
State Director, Oregon/Washington, Bureau of Land Management.

[FR Doc. E8-24655 Filed 10-16-08; 8:45 am]
BILLING CODE 4310-33-P

INTERNATIONAL TRADE COMMISSION

[Investigation 332-325]

The Economic Effects of Significant U.S. Import Restraints: Sixth Update

AGENCY: United States International Trade Commission.

ACTION: Notice of sixth update report and scheduling of public hearing.

61906

Federal Register / Vol. 73, No. 202 / Friday, October 17, 2008 / Notices

SUMMARY: This notice announces the schedule and scope of the Commission's sixth update report in investigation No. 332–325, *The Economic Effects of Significant U.S. Import Restraints*, including the expansion in scope to include a summary of the major steps and results of U.S. trade liberalizing efforts since 1934 and effects of liberalization as reported in the economic literature, as requested in the U.S. Trade Representative's (USTR) letter received on August 22, 2008. This series of reports was originally requested in a letter from the USTR dated May 15, 1992.

DATES: *December 2, 2008:* Deadline for filing requests to appear at the public hearing.

December 11, 2008: Deadline for filing pre-hearing briefs and statements.

January 8, 2009: Public hearing.

February 6, 2009: Deadline for filing post-hearing briefs and statements.

August 20, 2009: Transmittal of Commission report to USTR.

ADDRESSES: All Commission offices, including the Commission's hearing rooms, are located in the United States International Trade Commission Building, 500 E Street SW., Washington, DC. All written submissions should be addressed to the Secretary, United States International Trade Commission, 500 E Street SW., Washington, DC 20436. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://www.usitc.gov/secretary/edis.htm>.

FOR FURTHER INFORMATION CONTACT:

William Deese, Project Leader (william.deese@usitc.gov or 202–205–2626) or Kyle Johnson, Deputy Project Leader (kyle.johnson@usitc.gov or 202–205–3229) for information specific to this sixth update report. For information on the legal aspects of this investigation, contact William Gearhart of the Commission's Office of the General Counsel (202–205–3091 or william.gearhart@usitc.gov). The media should contact Margaret O'Laughlin, Office of External Relations (202–205–1819 or margaret.oaughlin@usitc.gov). Hearing-impaired individuals may obtain information on this matter by contacting the Commission's TDD terminal at 202–205–1810. General information concerning the Commission may also be obtained by accessing its Internet server (<http://www.usitc.gov>). 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.

Background: The Commission instituted this investigation under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)) 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 after the initial report. The Commission published a notice of institution of the investigation in the *Federal Register* of June 17, 1992 (57 FR 27063). The first report was delivered to the USTR in November 1993, the first update in December 1995, the second update in May 1999, the third update in June 2002, the fourth update in June 2004, and the fifth update in February 2007.

As requested by the USTR in a letter received on August 22, 2008, the Commission in this sixth update will include a summary of the major steps and results of U.S. trade liberalizing efforts since 1934 and the effects of liberalization as reported in the economic literature. The USTR asked that the summary be accessible to readers who may not be professional economists. As in previous reports in this series, the sixth update will continue to assess the economic effects of significant import restraints on U.S. consumers and firms, the income and employment of U.S. workers, and the net economic welfare of the United States. This assessment will use the Commission's computable general equilibrium model. However, as per earlier instructions from the USTR, the Commission will not assess import restraints resulting from antidumping or countervailing duty investigations, section 337 and 406 investigations, or section 301 actions.

Public Hearing: A public hearing in connection with this investigation will be held beginning at 9:30 a.m. on January 8, 2009, at the United States International Trade Commission, 500 E Street SW., Washington DC. Requests to appear at the hearing should be filed with the Secretary no later than 5:15 p.m., December 2, 2008, in accordance with the requirements in the "Written Submissions" section below. In the event that, as of the close of business on December 2, 2008, 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 December 2, 2008 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 or briefs concerning this investigation. All written submissions, including requests to appear at the hearing, statements, and briefs, should be addressed to the Secretary. Any pre-hearing statements or briefs should be filed not later than 5:15 p.m., December 11, 2008; and post-hearing statements and briefs and all other written submissions should be filed not later than 5:15 p.m., February 6, 2009. All written submissions must conform with the provisions of section 201.8 of the Commission's *Rules of Practice and Procedure* (19 CFR 201.8). Section 201.8 of the rules requires that a signed original (or a copy designated as an original) and fourteen (14) copies of each document be filed. In the event that confidential treatment of the document is requested, at least four (4) additional copies must be filed, in which the confidential information must be deleted (see the following paragraph for further information regarding confidential business information). 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 rules (see *Handbook for Electronic Filing Procedures*, http://www.usitc.gov/secretary/fed_reg_notices/rules/documents/handbook_on_electronic_filing.pdf; persons with questions regarding electronic filing should contact the Secretary at 202–205–2000. Any submissions that contain confidential business information must also conform with the requirements of section 201.6 of the Commission's *Rules of Practice and Procedure* (19 CFR 201.6). Section 201.6 of the rules requires that the cover of the document and the individual pages be clearly marked as to whether they are the "confidential" or "non-confidential" version, and that the confidential business information be clearly identified by means of brackets. All written submissions, except for confidential business information, will be made available in the Office of the Secretary to the Commission for inspection by interested parties.

The USTR stated that her office intends to make the Commission's report in this investigation available to the public in its entirety and asked that the Commission not include any confidential business or national security information in this report. Consequently, the report that the Commission sends to the USTR will not contain any such information. Any

confidential business information received by the Commission in this investigation and used in preparing its report will not be published in a manner that would reveal the operations of the firm supplying the information.

By order of the Commission.
Issued: October 10, 2008.

Marilyn R. Abbott,

Secretary to the Commission.

[FR Doc. E8-24607 Filed 10-16-08; 8:45 am]

BILLING CODE 7020-02-P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 701-TA-431 (Review)]

Drams and Dram Modules From Korea

AGENCY: United States International Trade Commission.

ACTION: Termination of five-year review.

SUMMARY: The subject five-year review was initiated in July 2008 to determine whether revocation of the countervailing duty order on DRAMs and DRAM modules from Korea would be likely to lead to continuation or recurrence of material injury. On October 3, 2008, the Department of Commerce published notice that it was revoking the order effective August 11, 2008, "(b)ecause the domestic interested party did not file a substantive response by the applicable deadline and has withdrawn its notice of intent to participate in this sunset review * * *" (73 FR 57594).

Accordingly, pursuant to section 751(c) of the Tariff Act of 1930 (19 U.S.C. 1675(c)), the subject review is terminated.

DATES: *Effective Date:* August 11, 2008.

FOR FURTHER INFORMATION CONTACT:

Mary Messer (202-205-3193), Office of Investigations, U.S. International Trade Commission, 500 E Street, SW., Washington, DC 20436. Hearing-impaired individuals 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 also be obtained by accessing its Internet server (<http://www.usitc.gov>).

Authority: This review is being terminated under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.69 of the Commission's rules (19 CFR 207.69).

By order of the Commission.

Issued: October 10, 2008.

Marilyn R. Abbott,

Secretary to the Commission.

[FR Doc. E8-24601 Filed 10-16-08; 8:45 am]

BILLING CODE 7020-02-P

INTERNATIONAL TRADE COMMISSION

[USITC SE-08-028]

Government in the Sunshine Act Meeting Notice

AGENCY HOLDING THE MEETING: United States International Trade Commission.

TIME AND DATE: October 21, 2008 at 11 a.m.

PLACE: Room 101, 500 E Street SW., Washington, DC 20436, Telephone: (202) 205-2000.

STATUS: Open to the public.

MATTERS TO BE CONSIDERED:

1. *Agenda for future meetings:* none.
2. Minutes.
3. Ratification List.
4. Inv. Nos. 731-TA-1131-1134 (Final) (Polyethylene Terephthalate Film, Sheet, and Strip from Brazil, China, Thailand, and the United Arab Emirates)—briefing and vote. (The Commission is currently scheduled to transmit its determinations and Commissioners' opinions to the Secretary of Commerce on or before October 31, 2008.)

5. *Outstanding action jackets:* none.

In accordance with Commission policy, subject matter listed above, not disposed of at the scheduled meeting, may be carried over to the agenda of the following meeting.

By order of the Commission.

Issued: October 14, 2008.

William R. Bishop,

Hearings and Meetings Coordinator.

[FR Doc. E8-24769 Filed 10-16-08; 8:45 am]

BILLING CODE 7020-02-P

DEPARTMENT OF JUSTICE

Notice of Lodging of Amended Consent Decree; Under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA")

Consistent with Section 122(d) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. 9622(d), and 28 CFR 50.7, notice is hereby given that on October 7, 2008, the United States lodged an Amended Consent in *United States of*

America v. Lockheed Martin Corporation, et al., Civil No. 4:02-cv-146 (USDC W.D. Ky.) for the Green River Landfill Superfund Site, located in Maceo, Daviess County, Kentucky (the "Site"). This Court originally approved a Consent Decree in this matter on September 27, 2002. Since the time the original Consent Decree was approved by the Court, the "Settling Defendants" as defined therein, and the United States Environmental Protection Agency ("EPA") have been unable to implement the institutional controls required at the Site by Section IX of the Consent Decree. Under the proposed Amended Consent Decree, one "Settling Defendant," Browning-Ferris Industries of Kentucky, Inc. ("BFKY") has or will acquire the property needed to institute the necessary institutional controls and, after entry of the Amended Consent Decree, will transfer such property to de maximis inc., defined in the proposed Amended Consent Decree as the "Owner Settling Defendant." In addition, BFKY will donate another parcel to Daviess County, which desires to keep it as open space. These property transfers will permit the remaining defendants to institute the required institutional controls and the open space will be an important buffer around the Site.

Under the proposed Amended Consent Decree, in exchange for the property transfers referenced above, BFKY will have no further obligations under the Amended Consent Decree and will receive from the United States a covenant not to sue or to take administrative action pursuant to Sections 106 or 107 of Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"), 42 U.S.C. 9606 and 9607 as amended, and Section 7003 of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. 6973, for the United States' past and future costs at the Site. The remaining Settling Defendants will receive from the United States a covenant not to sue or to take administrative action pursuant to Sections 106 and 107 of CERCLA, 42 U.S.C. 9606 and 9607 as amended, and Section 7003 of RCRA, in exchange for implementing the remedy and required institutional controls at the Site and paying EPA's remaining costs under the terms of the proposed Amended Consent Decree.

The Department of Justice will receive for a period of thirty (30) days from the date of this publication comments relating to the Consent Decree Amendments. Comments should be addressed to the Assistant Attorney General, Environment and Natural

Appendix C

Positions of Interested Parties

Introduction

The summaries of the positions of interested parties are based on information provided at a public hearing held January 8, 2009 and material submitted to the USITC in conjunction with this investigation. The U.S. Association of Importers of Textiles and Apparel, the Sweetener Users Association, and the U.S. Industrial Users Coalition provided testimony at the hearing. The U.S. Association of Importers of Textiles and Apparel and the Sweetener Users Association submitted prehearing and posthearing briefs. Additionally, the American Sugar Alliance, the Meat Importers Council of America, and the National Milk Producers Federation, all of whom did not participate in the hearing, made posthearing submissions.

The summaries express the views of the submitting parties and not those of the Commission, whose staff did not attempt to confirm the accuracy of or make corrections to the information provided. The full text of the hearing testimony and written submissions associated with the *Economic Effects of Significant U.S. Import Restraints, Sixth Update* (investigation no. 332-325) can be found by searching the Commission's Electronic Docket Information System (<http://searchapp.usitc.gov/edis3/app>).

American Sugar Alliance¹

The American Sugar Alliance (ASA) represents domestic sugar beet and sugarcane growers, sugar beet refiners, sugarcane millers, cane sugar refiners, and providers of goods and services to the domestic sugar industry. The ASA reiterates its position in prior Commission import restraint investigations and states that previous Commission analyses regarding U.S. import restraints on sugar have been fundamentally flawed. The ASA states that the Commission has underestimated sugar industry employment and the price effects that would result from sugar import-tariff elimination. The ASA further states that the Commission has overestimated the extent to which domestic food manufactures would pass any savings from lower sugar prices to consumers, the consumer demand reaction to any such savings, the gain in exports of sweetened products, the growth in food manufacturing industry employment, and the capacity of U.S. cane sugar

¹ASA, written submission to the USITC, February 6, 2009.

refiners to process larger quantities of imported raw cane sugar. The ASA also maintains that the Commission ignored quality and safety concerns regarding increased imports of refined sugar for human consumption that occurred as a result of weather disasters in 2005. The ASA concluded that lifting import restraints in the sugar sector would have a more damaging effect on U.S. producers and a less beneficial effect on U.S. consumers than indicated in previous Commission analyses.

Meat Importers Council of America²

The Meat Importers Council of America (MICA) represents the interests of U.S. importers of fresh, chilled, and frozen beef into the United States. It states that its regular members account for most non-NAFTA imports of fresh, chilled, or frozen beef. Its members also include some who provide associated services, such as customs brokers and refrigerated warehouses.

MICA states that it is incorrect to view domestic and imported beef as directly competitive and instead asserts that they are complementary. Most domestic beef is grain-fed and table-ready, while imported beef is grass-fed and destined for manufacturing use. MICA notes that lean beef is mixed with fat trimmings that are a byproduct of grain-fed beef production in order to achieve the desired fat content to produce processed beef products such as hamburgers, meat balls, and hot dogs. Further, MICA states that imported frozen lean beef is not directly competitive with domestic lean beef, which is normally not frozen, because processors require a mix of fresh and frozen beef. The difference between imported and domestic beef is highlighted by the discrepancy in prices that generally exists between imported and domestic beef.

According to MICA, curtailing beef imports would not aid U.S. cattle producers because these producers have not been adversely affected by imports. MICA argues that returns to cattle producers have been at record highs for several years and that the recent downturn in 2008 cannot be attributed to imports because imports of beef declined sharply in 2008. In the past 5 years, the discovery of BSE severely impacted beef trade flows in North America. MICA asserts that the resulting increased supply of beef in the domestic market could not meet the needs of domestic grinders and

²MICA, written submission to the USITC, February 6, 2009.

processors for manufacturing grade beef. According to MICA, the factor that has had the biggest negative impact on the profitability of beef trade has been the unprecedented rise in feed costs as a result of the increased use of corn to produce ethanol.

MICA states that imports of beef in the United States have fallen in recent years because of the decline in cattle stock since 2006. Further, a weak U.S. dollar and strong demand from Europe and Russia combined to attract product from suppliers who had traditionally supplied the U.S. market, creating a shortage of frozen beef in the United States. MICA asserts that this has forced processors to freeze fresh domestic beef despite the resulting additional cost.

MICA asks that the Commission not listen to requests to treat live cattle as a perishable commodity. It asserts that in many other cases (such as Commerce Department dumping cases, the CBERA, and the Andean Trade Preference Act) live cattle are not considered perishable, and asks that this rule be followed in trade statutes. MICA does not view cattle as a food product that will perish or decay beyond marketability within a limited period of time. MICA looks forward to an analysis by the Commission that considers imported beef not just as a product that competes to a limited degree with U.S. beef (as it has been treated historically), but as a product that complements the U.S. beef industry. MICA argues that both effects should be integrated into the ITC's economic model so that more balanced and accurate conclusions may be reached.

National Milk Producers Federation³

The National Milk Producers Federation (NMPF) represents U.S. dairy producers and cooperatives that are collectively owned. It states that the members of the 31 cooperatives that it represents produce the majority of the U.S. milk supply.

The NMPF states that many countries maintain a variety of import restraints, subsidies, and other trade distortions that affect the world dairy market. Levels of protection differ widely between countries even for the same product, such as skim milk powder. According to them, U.S. import restraints are designed, in part, to counteract the exorbitant levels of export subsidies in the EU.

³NMPF, written submission to the USITC, February 6, 2009.

The NMPF acknowledges that the United States imposes TRQs on a number of dairy products and operates a price support program to support the domestic dairy industry. Despite this, the NMPF says that the U.S. dairy industry cannot be accurately described as highly protected. Of the approximately 400 HTS tariff lines that relate to dairy, approximately one-third are subject to low, fixed tariffs or are duty-free. An NMPF analysis shows that in practice, significant import restraints apply to less than one-half of dairy products.

The NMPF draws the Commission's attention to one notable exception to the U.S. TRQ framework, namely milk protein concentrate (MPC), casein, and caseinates. Imports of these products enjoy virtually unrestricted access to U.S. dairy markets, are increasing in importance, and may grow to such an extent that they interfere with the operation of the dairy price support system.

Sweetener Users Association⁴

The Sweetener Users Association (SUA) represents users of sugar, including confectioners, beverage companies, food manufacturers, bakers, dairy product manufacturers, cereal makers, and other companies and trade associations.⁵ The SUA states that the current system of import restraints on sugar is inefficient and negatively affects domestic sugar users and consumers. The SUA states that changes in the price of sugar are eventually passed through to the consumer, although there have been periods in which prices remained the same.⁶ The SUA focuses on recent developments that have affected the sweetener trade. First, as of January 1, 2008, trade in sweeteners with Mexico was fully liberalized under NAFTA. The SUA states that, while this could increase the availability of imported sugar, the U.S. sugar industry has attempted to manage such trade. Second, SUA notes that the 2008 farm bill made several significant changes that negatively affect the availability of sugar imports.⁷ These changes involve setting the WTO TRQs at minimum commitment levels and setting more restrictive conditions for raising them, setting a guaranteed domestic market share of 85 percent for domestic producers, and establishing a

⁴SUA, written submissions to the USITC, December 11, 2008, and February 5, 2009; USITC, Hearing transcript, January 8, 2009, 12-19 (testimony of Thomas Earley, SUA).

⁵SUA, written submission to the USITC, December 11, 2008, 1.

⁶SUA, written submission to the USITC, February 5, 2009.

⁷USITC, Hearing transcript, January 8, 2009, 14 (testimony of Thomas Earley, SUA).

feedstock flexibility program whereby surplus sugar must be converted to ethanol. Third, the SUA states that several characteristics of the TRQs negatively impact U.S. sugar users and consumers. The SUA notes that the historical basis for the establishment of the TRQs is outdated and results in inefficiencies such as shortfalls and that the HTS classification boundary between raw and refined sugar is compromising the administration of the TRQs. The SUA urges a modern market-based and efficient sugar policy, a restructuring of the TRQ system, and a thorough study of both the refined and raw sugar price gaps and their employment impact. The SUA states that present U.S. sugar policies are poorly designed and distort markets to the long-term detriment of the entire sugar industry.

U.S. Industrial Users Coalition⁸

The U.S. Industrial Users Coalition (USIUC) states that it represents the interests of U.S. manufacturers that use imported raw materials and other inputs.⁹ It stated that in order to compete globally from their U.S. manufacturing bases, its members need access to inputs at globally competitive prices.

The USIUC claims that the Commission's analysis of the impacts on trade of lowering or removing import restraints is incomplete; the USITC specifically excludes certain import restraints from its analysis that hamper the ability of U.S. companies to compete globally. The USIUC stated that the largest category of remaining import restraints is antidumping and countervailing duties (AD/CVD). It added that AD/CVD orders can provide important protection against truly unfair trade practices, but they may also have negative effects on the U.S. economy if they are misapplied or continue beyond their effective date. The coalition provided information at the hearing about the potential negative impacts of AD/CVD import restrictions on U.S. manufacturers.¹⁰ The Coalition maintains that both the positive and negative effects of AD/CVD policies should be brought to light.

⁸USIUC, written submission to the USITC, February 6, 2009; USITC, Hearing transcript, January 8, 2009, 20-26 (testimony of Laurin Baker, USIUC).

⁹The USIUC stated that it has members in a variety of industries, such as the automotive, heavy equipment, and appliance industries; however, its members are not publicly listed because of concerns about retaliation from suppliers.

¹⁰USIUC, Hearing transcript, January 8, 2009, 20-26 (testimony of Laurin Baker, USIUC).

According to USIUC, in recent years U.S. manufacturers have routinely experienced severe problems in securing adequate supplies of raw materials and basic inputs at world prices for their manufacturing processes, making it difficult for them to compete globally from their U.S. manufacturing base (USIUC points to steel as one such example). In the Coalition's view, both domestic producers of raw materials and basic inputs and their customers would benefit if U.S. industrial users were able to compete globally from their U.S. manufacturing base. The Coalition added that free trade in raw materials and basic inputs to manufacturing would strengthen the U.S. manufacturing base that relies on these inputs, thereby improving the long-term viability of domestic producers of those raw materials and basic inputs. The Coalition states that industrial users do not participate in the process to determine whether and at what level trade relief should be granted, even though such industrial users must pay the cost if the relief is improperly granted or if it continues beyond such time as it is needed. The Coalition urges the ITC to be aware of the potential misuse of laws that protect domestic industries against predatory and unfair trade practices.

U.S. Association of Importers of Textiles and Apparel¹¹

The U.S. Association of Importers of Textiles and Apparel (USA-ITA) states that it represents the interests of approximately 200 U.S. firms, including retailers, apparel manufacturers, distributors, and related service providers. It indicates that one of its roles is to articulate and advocate the concerns and interests of the textile and apparel importing community before Congress, the executive branch agencies, and the courts.¹² In its submissions to and testimony before the Commission, the USA-ITA indicates that although the United States eliminated the remaining quotas on imports of textiles and apparel at the end of 2008, significant import restraints remain in the form of high tariffs (including compound tariffs) and complicated requirements pertaining to rules of origin (ROOs) under U.S. preference programs and free trade areas.

¹¹USA-ITA, written submissions to the USITC, December 11, 2008, and February 6, 2009; USITC, Hearing transcript, January 8, 2009, 6-12 (testimony of Brenda Jacobs, USA-ITA).

¹²USA-ITA Web site. <http://www.usaita.com/685.html> (accessed January 8, 2009).

The USA-ITA states that textiles and apparel will be imported into the United States in 2009 without absolute quotas for the first time in nearly 50 years.¹³ It expressed the view that the termination of quotas on textile and apparel imports from China on December 31, 2008 would only minimally affect prices because most of the quotas were not binding, resulting in low quota rents on the 34 affected products during 2005-07.¹⁴ It states that it now intends to focus its efforts on lowering tariffs on U.S. imports of textiles and apparel, which it said remain high compared with duties on other manufactured items. The USA-ITA notes that while textile and apparel imports accounted for 5 percent of total entered value in fiscal year 2008, such imports represented 42 percent of total duties collected during the same period.¹⁵ Further, the association pointed out the “highly regressive” nature of the U.S. tariff schedule, citing higher tariffs on man-made-fiber garments than on “luxury” garments of silk or cashmere.¹⁶

According to the USA-ITA, burdensome ROOs also constitute a significant import restraint, as they increase the costly risk of non-compliance and even discourage the use of U.S. trade preference programs and free trade agreements. It stated that complicated ROOs also increase compliance costs for U.S. importers by adding costs related to training in relevant rules and processes, paperwork to certify compliance, hiring staff to oversee and handle compliance issues, and legal fees associated with ensuring and confirming compliance. The USA-ITA indicated that such costs can discourage U.S. importers from utilizing the preference programs in order to reduce potential errors and other risks; in some cases, the risks of non-compliance offset the potential benefits from lower duties under the programs.¹⁷

The USA-ITA indicated in its prehearing brief that U.S. employment in textiles and apparel decreased from 1990 to 2007 despite significant levels of protection in the U.S. market in the form of quotas and high tariffs.¹⁸ It points out that clothing stores, clothing accessory stores, and department stores employed roughly 3.2 million workers in 2007, equal to roughly six

¹³USA-ITA, written submission to the USITC, December 11, 2008, 1.

¹⁴USITC, Hearing transcript, January 8, 2009, 28 (testimony of Brenda Jacobs, USA-ITA).

¹⁵USA-ITA, written submission to the USITC, December 11, 2008, 1; USITC, Hearing transcript, January 8, 2009, 98 (testimony of Brenda Jacobs, USA-ITA).

¹⁶USITC, Hearing transcript, January 8, 2009, 9 (testimony of Brenda Jacobs, USA-ITA).

¹⁷USA-ITA, written submission to the USITC, February 6, 2009, 4.

¹⁸USA-ITA, written submission to the USITC, December 11, 2008, 4.

times the size of textile and apparel employment in the United States.¹⁹ From such data, the USA-ITA concluded that protection has not stopped job loss in the sector, but has added to the price that consumers pay for apparel.²⁰

Bibliography

- American Sugar Alliance (ASA). Written submission to the U.S. International Trade Commission in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Update*, February 6, 2009.
- Meat Importers Council of America (MICA). Written submission to the U.S. International Trade Commission in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Update*, February 6, 2009.
- National Milk Producers Federation (NMPF). Written submission to the U.S. International Trade Commission in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Update*, February 6, 2009.
- Sweetener Users Association (SUA). Written submission to the U.S. International Trade Commission in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Update*, December 11, 2008.
- . Written submission to the U.S. International Trade Commission in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Update*, February 5, 2009.

¹⁹USA-ITA, written submission to the USITC, December 11, 2008, 6.

²⁰USITC, Hearing transcript, January 8, 2009, 10 (testimony of Brenda Jacobs, USA-ITA).

- U.S. Association of Importers of Textiles and Apparel (USA-ITA). Written submission to the U.S. International Trade Commission in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Update*, December 11, 2008.
- . Written submission to the U.S. International Trade Commission in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Update*, February 6, 2009.
- U.S. Industrial Users Coalition (USIUC). Written submission to the U.S. International Trade Commission in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Update*, February 6, 2009.
- U.S. International Trade Commission (USITC). Hearing transcript in connection with inv. no. 332-325, *The Economic Effects of Significant U.S. Import Restraints: Sixth Update*, January 8, 2009.

Appendix D

Calendar of Public Hearing

CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject: The Economic Effects of Significant U.S.
Import Restraints: Sixth Update
Inv. No.: 332-325
Date and Time: January 8, 2009 - 9:30 a.m.

Sessions were held in connection with this investigation in the Main Hearing Room (room 101), 500 E Street, S.W., Washington, D.C.

ORGANIZATION AND WITNESS:

Sidley Austin LLP
Washington, D.C.
on behalf of

U.S. Association of Importers of Textiles and Apparel, USA-ITA

Julia K. Hughes, Senior Vice President, USA-ITA

Brenda A. Jacobs) - OF COUNSEL

Sweetener Users Association
Washington, D.C.

Thomas Earley, Economic Consultant, Promar International

U.S. Industrial Users Coalition
Washington, D.C.

Laurin M. Baker, Executive Director

-END-

Appendix E

The USITC Modeling Framework

Introduction

This appendix describes the USAGE model and presents tables that show details from the baseline and policy simulations.¹

The distinguishing features of computable general equilibrium (CGE) models are related to the combination of scope and detail afforded by the framework: an economy-wide focus coupled with an explicit, detailed modeling of multi-sectoral linkages and recognition of the interactions between all flows in the economy. For example, CGE models consider market interactions between producers and consumers for produced goods and services, explicitly model upstream and downstream production and consumption linkages, and address competition among industries for primary factors (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 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 the dynamic mechanisms contained in the current USAGE-ITC framework and the explicit modeling of tariff-rate quotas (TRQs).

Overview of the USAGE-ITC Framework

The USAGE-ITC framework has three components: (1) input-output (I-O) accounts for over 500 industries and more than 500 commodities, (2) behavioral parameters, and (3) a system of equations that constitute the model specification or theory. The I-O accounts specify the transactions among all economic agents in the U.S. economy for 2005 (the base year in this study), derived from I-O accounts for 498 industries and 40 types of

¹The USAGE-ITC framework was developed at the Centre of Policy Studies, Monash University in collaboration with the USITC. For a complete specification of the USAGE-ITC framework, see Dixon and Rimmer, "USAGE-ITC: Theoretical Structure," April 2002. For more detail on the CGE approach to economic analysis, see Dixon and Rimmer, *Dynamic General Equilibrium Modelling for Forecasting and Policy*, 2002.

²Many of the import substitution elasticities, which describe the degree of substitutability between imported and domestic products, were scrutinized and adjusted when necessary by USITC staff, based on industry knowledge and comparisons between U.S. -produced products and imports.

final demand (i.e., imports, exports, private and government consumption and investment expenditures, and inventory changes) published by the Bureau of Economic Analysis, 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 Examples of the types of elasticities used by USAGE-ITC are:

1. elasticities of substitution between imported and domestic goods
2. elasticities of import supply
3. elasticities of export demand
4. elasticities of substitution between inputs in production
5. income elasticities.

Where possible, the USITC has estimated some of these parameters using time series data, and otherwise, relied on published studies for estimates. With the exception of textiles and apparel and meatpacking, 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 meatpacking plants sector and for the textiles and apparel sectors are based on Hertel et al.⁶

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, represent an Arrow-Debreu competitive general equilibrium.⁷ First, all constant returns activities must earn zero real economic profits at the margin, and all the production technologies and preferences are derived from theoretical

³The 535 industries and 539 commodities in USAGE-ITC are derived from the industries and final demands found in the BEA I-O accounts (see Dixon and Rimmer, "MONASH-USA: Creating a 1992 Benchmark Input-Output Database," May 2001; and Winston, "Enhancing Agriculture and Energy Sector Analysis in CGE Modelling," (2009)).

⁴An 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.

⁵Donnelly et al., "Revised Armington Elasticities of Substitution," January 2004.

⁶The Armington elasticity for the beef-packing plants sector is the lower bound, while the textiles and apparel elasticities are the mid-point estimates. See Hertel et al., "How Confident Can We Be in CGE-Based Assessments?" May 2003.

⁷Debreu, *The Theory of Value*, 1959.

formulations constrained by these zero-profit conditions.⁸ Second, the market for each product must clear such that supply equals demand. The third general condition is that income must balance (i.e., income is exhausted on final demand and savings).

Dynamic Mechanisms in the USAGE-ITC Model

The USAGE-ITC model contains four dynamic mechanisms that link successive years:

1. capital at the start of year t equals capital at the end of year $t - 1$;
2. net foreign liabilities at the start of year t equals net foreign liabilities at the end of year $t - 1$;
3. public sector debt at the start of year t equals public sector debt at the end of year $t - 1$; and
4. the deviation in the real wage rate away from its forecast path in year t caused by a policy shock equals the deviation in year $t - 1$ plus a term reflecting the gap in year t between the employment deviation and the deviation in labor supply.⁹

In addition, the following six assumptions underlie the simulations in this report:

1. The simulated removal of significant import restraints has no effect on real national savings (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.

⁸Using the analogy in duality theory between cost and expenditure functions, all preferences are captured in a zero-profit condition on the activity that produces utility or welfare.

⁹For a more detailed discussion of the dynamic mechanisms in the USAGE-ITC model see Dixon and Rimmer, "Mini-USAGE: Reducing Barriers to Entry," June 2005; and Dixon and Rimmer (2002), *Dynamic General Equilibrium Modelling for Forecasting and Policy*, 2002.

3. 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.
4. Real wage rates adjust sluggishly so that the policy has no effect on aggregate employment in the long run. The policy has no effect on technology or consumer preferences in the simulation.
5. The policy has no effect on the aggregate price index for private consumption in the simulation; that is, the aggregate price index for private consumption is the numeraire price.¹⁰

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.¹¹

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.¹² The LES is a generalization of the Cobb-Douglas utility function in which the origin is translated such that income elasticities can differ from unity. While the income expansion paths are

¹⁰The numeraire price is the price relative to which all other prices and income are measured in this analysis.

¹¹For a complete specification of the USAGE-ITC framework, see Dixon and Rimmer, "USAGE-ITC: Theoretical Structure," April 2002.

¹²For an introduction to the LES, see chap. 5 of Layard and Walters, *Microeconomic Theory* 1978; chap. 3 of Deaton and Muellbauer, *Economics and Consumer Behavior*, 1980; app. A.5 of Dervis, de Melo, and Robinson, *General Equilibrium Models for Development Policy*, 1982; chap. 11 of Silberberg, *The Structure of Economics*, 1990; and chap. 2 of Chung, *Utility and Production Functions*, 1994.

linear, the displaced origin allows preferences to be nonhomothetic.¹³ Practically, this allows consumers' relative preferences for goods and services to vary with their income levels.

In the specification of government demand, real government spending is exogenous and fixed. This assumption is imposed on the model to reflect the belief that trade policy changes do not directly influence the spending behavior of governments. Exogenous real government spending is accommodated by endogenously adjusting government transfers to households such that changes in government revenues are compensated via a tax.

In modeling investment demand, investors (or "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.¹⁴

Production Technology

Production technologies are modeled using nested combinations of constant ratios of elasticities of substitution, homothetic (CRESH), constant elasticity of substitution (CES), Cobb-Douglas and Leontief functions. Figure E.1 illustrates these relationships.

In the lower half of figure E.1, a primary-factor composite and intermediate-goods composites are combined to produce output of a given commodity. At this level, it is assumed that the primary factor bundle and the intermediate goods composite are combined in nearly fixed proportions (i.e. close to a Leontief specification), reflecting assumptions regarding the technical constraints on their substitutability in production. This is handled by setting the relevant substitution elasticities to relatively small values. Each intermediate goods composite is created via an Armington (CES) nest of the domestic and foreign sources. The primary factor

¹³Homothetic 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 Silberberg, *The Structure of Economics*, 1990.). Preferences that do not have this property are known as nonhomothetic preferences.

¹⁴Unlike 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.

composite is created in the “value-added nest” where land, capital, and labor substitution possibilities are based on the CRESH specification.¹⁵ Capital and labor units are the results of nesting functions of investment goods and occupations, respectively, while investment goods flow through from an Armington (CES) nest of the foreign and domestic sources.

In the upper half of figure E.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.¹⁶ The resulting combinations and relative outputs of commodities by an industry inform the notion of an industry “activity” level. This is strictly distinct from the concept of “output” only in cases where industries can make multiple products.

Factor Supplies

The supply of primary factors of production—land, labor, and capital—is changing from year to year because of investment or exogenous changes which are reflected in the baseline.

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 an imported variety (IM_i) or imports) destined for domestic consumption.¹⁷ In each case, the substitution possibilities between the domestic and the imported variety (i.e., the degree of product differentiation) are specified with a CES substitution parameter, σ_{D_i} . Figure E.2 summarizes the structure of product differentiation, which is generally known as an Armington aggregation.¹⁸ The resulting output is the composite commodity A_i , which is available for domestic absorption.¹⁹

¹⁵Hanoch, “CRESH Production Functions,” September 1971.

¹⁶Dixon, Vincent, and Powell, “Factor Demand and Product Supply Relations in Australian Agriculture,” 1976.

¹⁷The treatment of traded goods follows de Melo and Robinson, “Product Differentiation and the Treatment of Foreign Trade,” August 1989.

¹⁸The CES elasticity σ is often referred to as the “Armington” elasticity; see Armington, “A Theory of Demand for Products Distinguished by Place of Production,” March 1969.

¹⁹Domestic absorption is the measure of both intermediate and final demand for a product.

FIGURE E.1 Production in the USAGE-ITC Model

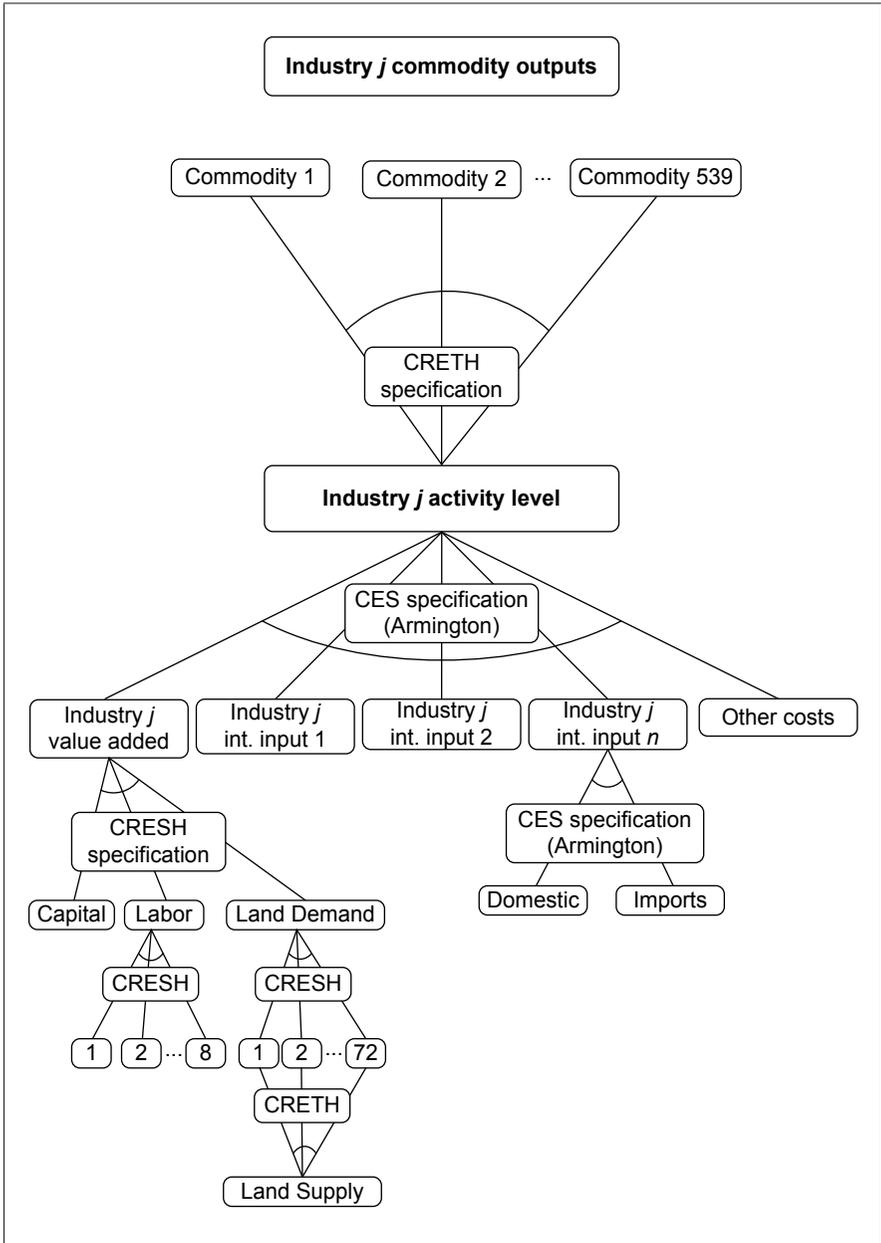
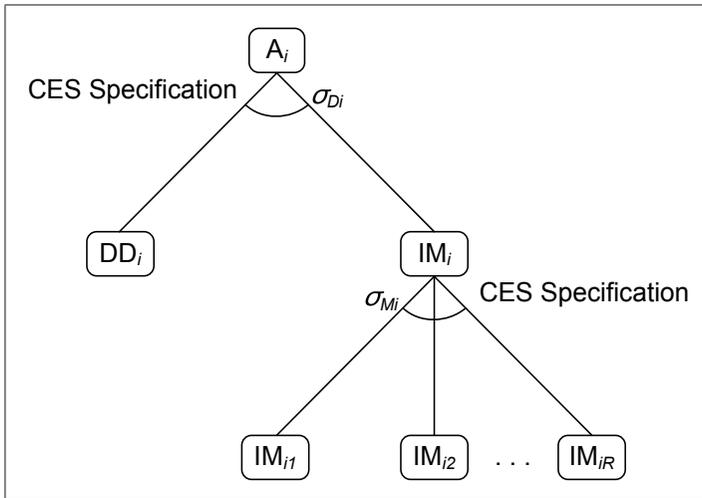


FIGURE E.2 Commodity differentiation and sourcing of imports

The sourcing of imports is modeled in a similar fashion. Substitution possibilities among imports from various sources (IM_{ir} , $r = 1, \dots, R$; $R = 23$) are determined with a CES substitution parameter, σ_{M_i} .

Figure E.2 establishes the sourcing of demands in the United States by commodity. 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.

Capital

Capital stock in industry i at the end of year t , $K1_i(t)$, equals capital stock at the start of year t , $K0_i(t)$, depreciated (at a rate D_i) plus investment in year t for industry i , $I_i(t)$:

$$K1_i(t) = K0_i(t) \times [1 - D_i] + I_i(t).$$

In USAGE-ITC, investment in year t for industry i , $I_i(t)$, is a function of the expected rate of return in industry i . The expected rate of return is a function of the rental and asset prices of i 's capital in year t , depreciation, taxes on capital, and expected changes in all of these variables.

Net Foreign Liabilities

Net foreign liabilities at the end of year t , $NFL1(t)$, equal net foreign liabilities at the start of year t , $NFL0(t)$, plus the current account deficit for year t , $CADEF(t)$:

$$NFL1(t) = NFL0(t) + CADEF(t).$$

The current account deficit for year t is imports less exports plus interest payments for foreign liabilities less exports of royalties and less net transfers from foreigners to U.S. residents. In USAGE-ITC all foreign liabilities are debt repayable in U.S. currency. In calculating interest charges on the foreign debt we apply an interest rate to the start-of-year foreign debt.

Public Sector Debt

Public sector debt at the end of year t , $PSD1(t)$, equals public sector debt at the start of year t , $PSD0(t)$, plus the public sector deficit for year t , $GOVDEF(t)$:

$$PSD1(t) = PSD0(t) + GOVDEF(t).$$

In calculating net interest on public sector debt, we apply an interest rate to the start-of-year public sector debt.

Wage Determination in Policy Runs

In USAGE-ITC, real wages are sticky in the short run and flexible in the long run. In this case, favorable shocks generate short-run gains in aggregate employment and long-run gains in real wages.

More specifically, in USAGE-ITC simulations, the deviation in the real wage rate from its baseline forecast level increases at a rate that is proportional to the deviation in aggregate hours of employment from its baseline forecast level:

$$\left\{ \frac{W^p(t)}{W^f(t)} - 1 \right\} = \left\{ \frac{W^p(t-1)}{W^f(t-1)} - 1 \right\} + \alpha \times \left\{ \frac{E^p(t-1)}{E^f(t-1)} - 1 \right\}$$

where $W^p(t)$ and $W^f(t)$ are the real before-tax wage rate in the policy and forecast runs in year t ; $E^p(t)$ and $E^f(t)$ are aggregate employment

in the policy and forecast runs in year t ; and α is a positive parameter. The coefficient of proportionality, α , is chosen so that the employment effects of a shock to the economy are largely eliminated after five years. This model of wage determination is consistent with conventional macroeconomic modeling in which the NAIRU (non-accelerating inflation rate of unemployment) is either exogenous or only weakly dependent on real wage rates.²⁰

Significant Import Restraint Analysis with USAGE-ITC

The dynamic CGE analysis considers the effects of removing significant U.S. import restraints relative to a projection that incorporates expected changes in the United States over eight years.

USAGE-ITC is calibrated to 2005 data with the significant import restraints in place.²¹ Simulation of significant import restraint removal is accomplished by setting the relevant tariffs (and/or the tariff-equivalents of quotas) and TRQ rates to zero, removing remaining TRQ quotas, and solving the model for new equilibrium prices and quantities. A comparison of the new equilibrium prices and quantities to the baseline prices and quantities gives estimates of the economic effects of removing the significant import restraints.

The USAGE-ITC model is solved for 535 industries and 539 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:²²

1. Agriculture, forestry, and fishing
2. Mining and mineral resources
3. Construction
4. Nondurable manufacturing

²⁰If U^* is the NAIRU and U is the observed unemployment rate, the NAIRU theory postulates that: if $U < U^*$ for a few years, inflationary expectations rise, so that the inflation rate tends to accelerate; if $U > U^*$ for a few years, inflationary expectations fall, so that the inflation rate tends to slow; and if $U = U^*$, the inflation rate tends to stay the same.

²¹Tariffs are taken from official statistics of the U.S. Department of Commerce; the tariff equivalents of quotas are estimated by USITC staff.

²²The nine aggregates cover all industries and commodities in USAGE-ITC, i.e., the nine aggregates include the sectors with significant import restraints.

5. Durable manufacturing
6. Transportation, communication, and utilities
7. Wholesale and retail trade
8. Finance, insurance, and real estate
9. Personal, business, and public services

For the purposes of this report, the main outputs of the USAGE-ITC model reported are the equilibrium prices and quantities computed in solving the system of equations. The model also calculates a measure of the change in economic welfare 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 (1) 2005 national income and product accounts data published by the Bureau of the Census, (2) the 1992 and 1997 BEA I-O accounts, (3) 2005 trade flows from the U.S. Department of Commerce (DOC), (4) the final text of free trade agreements provided by the United States Trade Representative (USTR), (5) 2005 tariffs on U.S. exports from the United Nations Conference on Trade and Development (UNCTAD) Trade Analysis and Information System (TRAINS) and World Trade Organization (WTO) statistics, and (6) agriculture value-added data from the USDA ARMS survey.²³ 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 DOC.

The current version of USAGE-ITC explicitly models most U.S. TRQs. All three instruments of a TRQ are modeled: the quota level, as well as the in-quota and over-quota tariff rates. The commodities with full

²³For a complete discussion of the data, see Dixon and Rimmer, "MONASH-USA: Creating a 1992 Benchmark Input-Output Database," May 2001; Dixon and Rimmer, "USAGE-ITC: Creating Historical Shocks for 1992 to 1998," June 2003; and Dixon, Rimmer, and Tsigas, "Creating a USAGE-ITC Database for 2002," February 2004.

TRQs are raw cane and refined sugar; butter; cheese; dry dairy products; concentrated and evaporated dairy products; ice cream; ethanol; and tobacco.²⁴

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.²⁵ Based on research findings and earlier USITC work, it is assumed that (1) rents due to the butter and cheese TRQs are shared equally between U.S. and foreign traders and that (2) foreign traders capture TRQ rents due to all other TRQs.²⁶ 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. It is also assumed that U.S. import tariff rates are equal to those observed in 2005 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 2005. The relationship between price gap, U.S. import tariff, and TRQ rents is that $(1 + \text{price gap}/100) = (1 + \text{U.S. import tariff}/100) \times (1 + \text{rate of TRQ rents}/100)$.

Setting the Exogenous Variables in the Forecast Simulation

In creating a forecast for the period 2005–13, we start with a complete dataset (values for every model variable) for 2005. Then we apply shocks to exogenous variables to represent movements from their 2005 values to their forecast values for 2013. The exogenous variables that are shocked in our 2005–13 forecast simulation can be partitioned into the following groups:

²⁴While canned tuna is subject to a TRQ, it is not modeled as such in our framework. Because the vast majority of tuna imported to the United States enters over quota, the over-quota rate is used as the prevailing tariff to be removed.

²⁵See Boughner, de Gorter, and Sheldon, “The Economics of Two-Tier Tariff-Rate Import Quotas in Agriculture,” April 2000.

²⁶USITC, *The Economic Effects of Significant U.S. Import Restraints: Second Update 1999*, 1999, 52–53; USITC, *The Economic Effects of Significant U.S. Import Restraints, First Biannual Update 1995*, 1995, 4–9; Horning, Boisvert, and Blandford, “Explaining the Distribution of Quota Rents for U.S. Cheese Imports,” April 1990, 1–20; and Horning, Boisvert, and Blandford, “Quota Rents and Subsidies,” 1990, 421–34.

1. *Macro variables.* Our shocks for these variables are derived from forecasts made by U.S. government agencies.
2. *Technology and consumer preferences.* Our shocks for these variables are obtained from extrapolations from historical simulations.
3. *Shifts in foreign demand curves for U.S. products and foreign-currency prices for U.S. imports.* Our shocks for these variables are derived mainly from extrapolations from historical simulations.
4. *Interest, dividend, and revaluation rates for U.S. foreign assets and liabilities.* Our shocks for these variables are derived from extrapolations from historical simulations.

Macro Variables

The macroeconomic assumptions underlying our baseline forecasts for 2005–13 are based on forecasts from the Congressional Budget Office, the U.S. Department of Agriculture, the U.S. Bureau of Labor Statistics, and the U.S. Energy Information Administration. For variables for which forecasts are provided by more than one agency, there is a high degree of consensus.

Technology and Consumer Preferences, Exports and Imports

USAGE-ITC contains many technology and preference variables. Technology variables in USAGE-ITC are predominantly of the input- or output-augmenting/savings type. Nearly all of the USAGE-ITC technology and preference variables are treated exogenously in the 2005–13 forecast simulation and are given the same movements that they had, either endogenously or exogenously, in our historical simulation for 1998 to 2005. Technology and preference variables that were given non-zero shocks in 2005 to 2013 are listed in table E.1. The first of these, $a1prim(j)$, imparts a uniform shock in industry j 's production function. Biases in industry j 's primary-factor-saving technical change are introduced via $f_twistlk(j)$. The $a0ci(i, j)$ variables refer to shocks to the $A0$ variables in j 's production function. In our historical simulations, we have only aggregate data on the use of commodity i as a margin service and as an input to current production and capital creation. Consequently, our historical simulations reveal only a single value for commodity- i -using technical change which is projected forward from 2005 to 2013 through shocks to the

TABLE E.1 Shocked technology and preference variables in the 2005–13 forecast simulation

USAGE-ITC variable	Domain ^a	Description
a1prim(<i>j</i>)	$j \in \text{IND}$	Primary-factor-saving technical change in industry <i>j</i>
f.twistlk(<i>j</i>)	$j \in \text{IND}$	Shift in industry <i>j</i> towards the use of labor and away from the use of capital
a0ci(<i>i, j</i>)	$i \in \text{COM}, j \in \text{IND}$	Output- <i>i</i> -augmenting technical change in industry <i>j</i>
ac(<i>i</i>)	$i \in \text{COM}$	Input- <i>i</i> -saving technical change in production, capital creation and margin use throughout the economy
a3com(<i>i</i>)	$i \in \text{COM}$	Preference shift against commodity <i>i</i>
impftwist(<i>i</i>)	$i \in \text{COM}$	Shift throughout the economy towards the use of imported commodity <i>i</i> and away from domestic commodity <i>i</i>

^aIND is the set of all industries and COM is the set of all commodities.

USAGE-ITC variable ac(*i*). The variables a3com(*i*) refer to shocks to the A3 variables in the household utility function. Shocks to impftwist(*i*) impart biases in commodity-*i*-using technical change throughout the economy in favor of the imported variety of commodity *i* and against the domestic variety.

Import Prices

In our forecast simulation for 2005–13, we assume for most commodities that the percentage changes in foreign-currency import prices will be the same as for the period 1998–2004. For petroleum products, we assume that foreign-currency import prices will fall by 16.17 percent between 2005 and 2010. We take this forecast from table 30 in *International Energy Outlook 2005*.²⁷

The Balance of Payments, and Foreign Assets and Liabilities

USAGE-ITC identifies three types of foreign assets: U.S. credits repayable by foreigners in U.S. dollars; U.S. credits repayable by foreigners in foreign currency; and U.S. holdings of foreign equity. In our forecasts for 2005 to 2013, we assume that total U.S. foreign assets will grow in relation to U.S. GDP in the same way as they did between 1998 and 2005

²⁷EIA, *International Energy Outlook 2005*, 2005.

and that the shares of each of the three types of assets will remain at their 2005 levels.

Similarly, USAGE-ITC identifies three types of foreign liabilities: U.S. debts repayable in U.S. dollars; U.S. debts repayable in foreign currency; and foreign holdings of U.S. equity. Foreign holdings of U.S. equity are identified by industry. With accumulation of foreign assets already tied down in relation to GDP, our forecast for the movement between 2005 and 2013 in total U.S. foreign liabilities is determined largely by current account deficits, which are, in turn, determined largely by exports and imports and by dividend and interest payments on debts, credits, and equities. As with the split of assets, we assume that the split of liabilities between the three different types will remain as it was in 2005.

In our forecasts for 2005–13, we assume that interest rates on all U.S. credits and debts will remain at their 2005 levels. For the rate of dividends on U.S. -owned foreign equity we assume the same movement for 2005–13 as occurred over the period 1998–2004. The rate of dividends on foreign-owned equity in the United States is largely endogenous in USAGE-ITC, determined by the profitability of U.S. industries in which foreigners hold equity. However, we introduce exogenous variables that allow for differences between the profitability of foreign and domestic investments in each U.S. industry. In our 2005–13 forecasts we assume that these exogenous variables move in the same way as they did over the period 1998–2005.

Foreign assets accumulate not only through new U.S. lending and investment, but also through revaluation effects (changes in the values of existing assets). USAGE-ITC handles revaluation effects arising from exchange rate changes endogenously. Two further revaluation effects operate on the value of U.S. equity assets: general asset inflation in foreign countries, and accumulation of goodwill specific to U.S. assets in foreign countries. Both these effects are handled exogenously. We assume that they will operate in 2005–13 as they did in 1998–2004. Our treatment of revaluations affecting U.S. foreign liabilities is symmetrical to our treatment of revaluations affecting U.S. foreign assets.

Detailed Baseline Projections and Simulation Results

Tables E.2 through E.30 present model baseline values for 2005 and 2013 and the effects of liberalization relative to the 2013 baseline for employment, output, imports, and exports for the detailed model sectors analyzed in this study. All baseline values are reported in millions of 2005 dollars. Baseline wage bills and employment effects from liberalization are reported by industry, while baseline output, imports, and exports and associated effects of liberalization are reported by commodity. Reporting by industry in the case of employment and by commodity in the case of imports, exports, and output is necessary because industries may produce more than one commodity and commodities may be produced by more than one industry. The percent impact of liberalization is reported relative to the 2013 baseline.

TABLE E.2 Employment in sugar:
Projected baseline and effect of liberalization, 2005–13

Industry	Baseline wage bill ^a		Percent impact of liberalization
	2005	2013	Employment
Sugarcane	86	56	-31.0
Sugarbeets	416	356	-9.5
Raw cane sugar	215	127	-32.6
Refined cane sugar	389	357	11.0
Refined beet sugar	741	584	-10.0
Cereal breakfast foods	1,787	1,680	0.5
Prepared flour mixes and doughs	1,102	1,052	0.4
Chocolate and cocoa products	559	533	0.8
Candy and other confectionery products	2,614	2,583	0.4

Source: USITC estimates.

^aWage bills for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.3 Output of sugar:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline output ^a		Percent impact of liberalization	
	2005	2013	Output	Household price
Sugarcane	991	686	-30.8	—
Sugarbeets	2,210	2,059	-9.3	—
Raw cane sugar	1,628	1,134	-32.2	—
Refined cane sugar	4,086	4,489	13.8	—
Refined beet sugar	3,865	3,676	-9.8	—
Total refined sugar	8,023	8,420	7.5	-5.2
Cereal breakfast foods	8,952	9,720	0.6	(-)
Prepared flour mixes and doughs	4,964	5,193	0.4	-0.1
Chocolate and cocoa products	1,951	2,242	1.3	(-)
Candy and other confectionery products	16,524	19,748	0.5	-0.2

Source: USITC estimates.

Note: The symbol (-) denotes a small negative value. The symbol — denotes that the value is not applicable.

^aOutput for 2005 and 2013 is expressed in millions of 2005 dollars.

TABLE E.4 Imports of sugar:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline imports ^a		Percent impact of liberalization	
	2005	2013	Imports	LDP price ^b
Raw cane sugar	638	1,307	66.0	−35.4
Refined cane sugar	46	173	201.4	−27.1
Refined beet sugar	23	126	236.4	−24.7
Cereal breakfast foods	509	575	−0.1	(+)
Prepared flour mixes and doughs	201	225	−0.4	(+)
Chocolate and cocoa products	1,943	2,836	0.1	(+)
Candy and other confectionery products	2,317	2,846	−0.8	(+)

Source: USITC estimates.

Note: The symbol (+) denotes a small positive value.

^aImports for 2005 and 2013 are expressed in millions of 2005 dollars.

^bLanded, duty-paid is abbreviated as “LDP.”

TABLE E.5 Exports of sugar:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline exports ^a		Percent impact of liberalization
	2005	2013	Exports
Sugarcane	1	1	782.7
Sugarbeets	9	9	78.7
Raw cane sugar	141	116	39.9
Total refined sugar	264	374	71.3
Cereal breakfast foods	524	1,120	4.6
Prepared flour mixes and doughs	110	180	9.8
Chocolate and cocoa products	693	970	2.5
Candy and other confectionery products	428	857	6.1

Source: USITC estimates.

^aExports for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.6 Employment in ethyl alcohol:
Projected baseline and effect of liberalization, 2005–13

Industry	Baseline wage bill ^a		Percent impact of liberalization
	2005	2013	Employment
Dry corn milling	2,621	6,413	-2.6
Wet corn milling	1,103	944	0.1
Cellulosic ethanol	9	601	(-)
Alternative feedstock ethanol	9	1,038	(-)
Sugar-based ethanol	1	1	—
Other ethanol	1	1	—
Feedgrains	2,235	2,653	-0.5
Genetically engineered crops	5,184	5,965	-0.1
Switchgrass	(+)	3	0.3
Crop residue	5	437	(-)
Cellulosic material	0	0	—
Organic byproducts	7	991	(-)

Source: USITC estimates.

Note: The symbols (+) and (-) denote small positive and negative values. The symbol — denotes that the value is not applicable.

^aWage bills for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.7 Output of ethyl alcohol:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline output ^a		Percent impact of liberalization	
	2005	2013	Output	Household price
Corn-based ethanol	7,821	27,673	-2.6	—
Cellulosic ethanol	20	2,000	0.0	—
Alternative feedstock ethanol	20	3,500	0.0	—
Sugar-based ethanol	1	1	0.0	—
Other ethanol	1	1	0.0	—
Corn	21,829	28,983	-0.6	-0.2

Source: USITC estimates.

Note: The symbol — denotes that the value is not applicable.

^aOutput for 2005 and 2013 is expressed in millions of 2005 dollars.

TABLE E.8 Imports of ethyl alcohol:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline imports ^a		Percent impact of liberalization	
	2005	2013	Imports	LDP price ^b
Sugar-based ethanol	410	362	205.4	–25.4
Other ethanol	51	45	(+)	(+)
Corn	223	362	–1.0	(+)

Source: USITC estimates.

Note: The symbol (+) denotes a small positive value.

^aImports for 2005 and 2013 are expressed in millions of 2005 dollars.

^bLanded, duty-paid is abbreviated as “LDP.”

TABLE E.9 Exports of ethyl alcohol:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline exports ^a		Percent impact of liberalization
	2005	2013	Exports
Corn-based ethanol	0	0	—
Corn	2,923	4,145	0.6

Source: USITC estimates.

Note: The symbol — denotes that the value is not applicable.

^aExports for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.10 Employment in tuna:
Projected baseline and effect of liberalization, 2005–13

Industry	Baseline wage bill ^a		Percent impact of liberalization
	2005	2013	Employment
Canned and cured fish and seafood	168	163	-4.5
Commercial fishing	1,128	1,391	(-)
Prepared fresh or frozen fish and seafood	1,514	1,499	-0.1
Metal cans	2,086	1,901	(-)
Canned specialties	1,164	1,031	-0.1

Source: USITC estimates.

Note: The symbol (-) denotes a small negative value.

^aWage bills for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.11 Output of tuna:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline output ^a		Percent impact of liberalization	
	2005	2013	Output	Household price
Canned tuna, oil-pack	78	90	-13.6	-8.0
Canned tuna, water-pack	442	512	-9.1	-4.8
Other canned and cured fish and seafood	814	1,117	-2.3	(+)
Commercial fishing	3,801	5,943	(-)	(+)
Prepared fresh or frozen fish and seafood	12,817	16,856	(-)	(+)
Metal cans	11,575	12,520	(-)	—
Canned specialties	7,150	7,818	(-)	(+)

Source: USITC estimates.

Note: The symbols (+) and (-) denote small positive and negative values. The symbol — denotes that the value is not applicable.

^aOutput for 2005 and 2013 is expressed in millions of 2005 dollars.

TABLE E.12 Imports of tuna:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline imports ^a		Percent impact of liberalization	
	2005	2013	Imports	LDP price ^b
Canned tuna, oil-pack	139	188	11.6	−16.7
Canned tuna, water-pack	1,324	1,792	5.8	−9.6
Other canned and cured fish and seafood	1,282	1,802	0.1	(+)
Commercial fishing	13,513	18,095	−0.2	(+)
Prepared fresh or frozen fish and seafood	0	0	—	—
Metal cans	159	185	(−)	(+)
Canned specialties	177	189	(+)	(+)

Source: USITC estimates.

Note: The symbols (+) and (−) denote small positive and negative values. The symbol — denotes that the value is not applicable.

^aImports for 2005 and 2013 are expressed in millions of 2005 dollars.

^bLanded, duty-paid is abbreviated as “LDP.”

TABLE E.13 Exports of tuna:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline exports ^a		Percent impact of liberalization
	2005	2013	Exports
Canned tuna, oil-pack	0	0	—
Canned tuna, water-pack	7	14	19.5
Other canned and cured fish and seafood	506	831	−2.7
Commercial fishing	3,633	5,751	(+)
Prepared fresh or frozen fish and seafood	21	33	−2.9
Metal cans	112	180	(+)
Canned specialties	151	269	−1.0

Source: USITC estimates.

Note: The symbol (+) denotes a small positive value. The symbol — denotes that the value is not applicable.

^aExports for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.14 Employment in dairy:
Projected baseline and effect of liberalization, 2005–13

Industry	Baseline wage bill ^a		Percent impact of liberalization
	2005	2013	Employment
Butter	87	87	-10.0
Dry, condensed, and evaporated dairy products	1,082	1,058	-9.6
Fluid milk	4,048	3,942	-1.0
Cheese	2,022	1,903	-1.1
Ice cream	1,270	1,292	-0.1
Dairy farm products	5,617	5,639	-1.6
Feedgrains	2,235	2,653	-0.1
Prepared feeds n.e.c.	965	905	-0.2

Source: USITC estimates.

^aWage bills for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.15 Output of dairy:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline output ^a		Percent impact of liberalization	
	2005	2013	Output	Household price
Butter	1,764	2,129	-10.4	-6.7
Dry dairy products	5,896	6,982	-12.4	-4.9
Condensed and evaporated dairy products (except CMPP)	4,370	5,185	-8.1	-2.4
Fluid milk	26,497	30,430	-0.6	-0.1
Cheese	21,874	24,930	-0.8	-1.0
Ice cream	8,025	9,542	(+)	-0.2
Concentrated milk protein products	270	354	-2.1	0.7
Dairy farm products	26,739	29,312	-1.7	-0.3
Corn	21,829	28,983	-0.2	-0.1
Barley, sorghum, and oats	6,727	7,549	-0.2	-0.1
Prepared feeds n.e.c.	14,607	15,435	-0.2	(-)

Source: USITC estimates.

Note: The symbols (+) and (-) denote small positive and negative values.

^aOutput for 2005 and 2013 is expressed in millions of 2005 dollars.

TABLE E.16 Imports of dairy:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline imports ^a		Percent impact of liberalization	
	2005	2013	Imports	LDP price ^b
Butter	147	242	193.1	−35.0
Dry dairy products	529	801	178.8	−34.8
Condensed and evaporated dairy products (except CMPP)	412	577	94.2	−22.4
Fluid milk	28	50	31.3	−7.3
Cheese	989	2,384	36.8	−9.1
Ice cream	29	40	19.4	−5.1
Concentrated milk protein products	19	24	−0.6	(+)
Dairy farm products	139	175	−2.7	(+)
Corn	223	362	−0.7	(+)
Barley, sorghum, and oats	71	91	−0.7	(+)
Prepared feeds n.e.c.	255	303	−0.6	(+)

Source: USITC estimates.

Note: The symbol (+) denotes a small positive value.

^aImports for 2005 and 2013 are expressed in millions of 2005 dollars.

^bLanded, duty-paid is abbreviated as “LDP.”

TABLE E.17 Exports of dairy:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline exports ^a		Percent impact of liberalization
	2005	2013	Exports
Butter	20	24	284.2
Dry dairy products	721	1,074	15.2
Condensed and evaporated dairy products (except CMPP)	336	543	7.0
Fluid milk	88	116	8.5
Cheese	370	497	91.7
Ice cream	164	287	1.1
Concentrated milk protein products	75	130	−3.3
Dairy farm products	45	64	9.6
Corn	2,923	4,145	0.2
Barley, sorghum, and oats	937	1,437	0.2
Prepared feeds n.e.c.	956	1,673	0.3

Source: USITC estimates.

^aExports for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.18 Employment in tobacco:
Projected baseline and effect of liberalization, 2005–13

Industry	Baseline wage bill ^a		Percent impact of liberalization
	2005	2013	Employment
Unmanufactured tobacco	799	702	−4.8
Cigarettes	3,908	3,720	0.2
Cigars	146	135	0.8
Chewing and smoking tobacco and snuff	419	382	0.6
Tobacco crop	168	167	−2.4

Source: USITC estimates.

^aWage bills for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.19 Output of tobacco:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline output ^a		Percent impact of liberalization	
	2005	2013	Output	Household price
Unmanufactured tobacco	4,190	4,617	−4.4	—
Cigarettes	17,799	18,842	0.5	−0.7
Cigars	299	308	1.0	−0.4
Chewing and smoking tobacco and snuff	1,686	1,834	0.8	−0.5
Tobacco crop	1,095	1,232	−2.6	—

Source: USITC estimates.

Note: The symbol — denotes that the value is not applicable.

^aOutput for 2005 and 2013 is expressed in millions of 2005 dollars.

TABLE E.20 Imports of tobacco:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline imports ^a		Percent impact of liberalization	
	2005	2013	Imports	LDP price ^b
Unmanufactured tobacco	695	795	58.7	−21.9
Cigarettes	452	553	9.1	−4.9
Cigars	424	479	(−)	−0.3
Chewing and smoking tobacco and snuff	28	22	3.6	−1.9

Source: USITC estimates.

Note: The symbol (−) denotes a small negative value.

^aImports for 2005 and 2013 are expressed in millions of 2005 dollars.

^bLanded, duty-paid is abbreviated as “LDP.”

TABLE E.21 Exports of tobacco:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline exports ^a		Percent impact of liberalization
	2005	2013	Exports
Unmanufactured tobacco	1,413	1,731	8.3
Cigarettes	1,886	2,520	3.2
Cigars	35	45	3.8
Chewing and smoking tobacco and snuff	270	537	2.3

Source: USITC estimates.

^aExports for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.22 Employment in textiles and apparel:
Projected baseline and effect of liberalization, 2005–13

Industry	Baseline wage bill ^a		Percent impact of liberalization
	2005	2013	Employment
Broadwoven fabric mills	4,442	2,633	-12.7
Narrow fabric mills	375	264	-32.7
Nonwoven fabrics	825	536	0.1
Knit outerwear mills	371	133	-12.7
Knit underwear and nightwear mills	124	50	-11.4
Knitting mills, n.e.c.	43	18	-4.5
Knit fabric mills	645	247	-31.0
Yarn mills and finishing of textiles, n.e.c.	2,340	1,425	-18.6
Thread mills	132	78	-30.9
Carpets and rugs	2,053	1,469	(+)
Coated fabrics, not rubberized	426	300	-12.0
Tire cord and fabrics	163	96	-1.4
Cordage and twine	210	137	-0.4
Textile goods, n.e.c.	681	445	-0.5
Curtains and draperies	647	330	-2.2
Housefurnishings, n.e.c.	1,765	1,054	(+)
Textile bags	337	176	-1.9
Canvas and related products	431	234	-2.2
Pleating and stitching	407	253	-16.6
Automotive and apparel trimmings	2,722	1,830	-1.2
Embroideries	198	104	-2.8
Fabricated textile products, n.e.c.	1,124	748	0.8
Women's hosiery, except socks	297	201	-8.7
Hosiery, n.e.c.	496	298	-11.2
Apparel from purchased materials	5,787	2,108	-11.3
Cotton	601	692	-2.3
Cellulosic man-made fiber	879	804	-3.8
Synthetic fiber	3,648	2,952	-5.5
Textile machinery	758	808	-1.1
Public building furniture	2,198	2,923	1.8

Source: USITC estimates.

Note: The symbol (+) denotes a small positive value.

^aWage bills for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.23 Output of textiles and apparel:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline output ^a		Percent impact of liberalization	
	2005	2013	Output	Household price
Broadwoven fabrics	26,185	23,351	-12.4	-1.3
Narrow fabrics	1,167	1,368	-33.1	-0.9
Nonwoven fabrics	4,664	4,942	(-)	-0.1
Knit fabrics	4,957	3,309	-31.3	-1.4
Yarn and textile finishing, n.e.c.	9,149	7,394	-21.0	-1.7
Thread	738	622	-30.8	-1.6
Carpets and rugs	15,330	17,174	0.1	-0.2
Coated fabrics, not rubberized	1,947	2,086	-13.4	—
Tire cord and fabrics	1,097	1,054	-1.0	—
Cordage and twine	804	816	-0.4	-0.3
Textile goods, n.e.c.	2,550	2,673	-0.7	(-)
Curtains and draperies	1,599	1,361	-2.2	-2.2
Housefurnishings, n.e.c.	8,520	7,830	-0.5	-1.3
Textile bags	835	669	-1.9	-1.2
Canvas and related products	1,194	1,020	-2.1	-1.5
Pleating and stitching	1,028	1,028	-16.6	-2.0
Automotive and apparel trimmings	7,299	6,770	-0.8	-0.2
Embroideries	348	275	-2.3	(-)
Fabricated textile products, n.e.c.	3,718	3,885	0.8	-1.3
Women's hosiery, except socks	3,880	3,831	-8.8	-0.8
Hosiery, n.e.c.	1,116	867	-15.4	-3.6
Apparel from purchased materials	35,425	19,435	-11.3	-3.3
Cotton	5,797	7,051	-2.6	—
Cellulosic man-made fiber	2,414	2,620	-3.7	—
Synthetic fiber	12,790	11,941	-7.3	—
Textile machinery	2,534	3,753	-1.2	—
Public building furniture	10,316	16,942	1.9	—

Source: USITC estimates.

Note: The symbol (-) denotes a small negative value. The symbol — denotes that the value is not applicable.

^aOutput for 2005 and 2013 is expressed in millions of 2005 dollars.

TABLE E.24 Imports of textiles and apparel:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline imports ^a		Percent impact of liberalization	
	2005	2013	Imports	LDP price ^b
Broadwoven fabrics	3,710	3,346	5.4	-6.4
Narrow fabrics	943	1,603	-4.6	-3.5
Nonwoven fabrics	799	1,239	0.1	-0.3
Knit fabrics	1,183	1,037	-11.3	-8.0
Yarn and textile finishing, n.e.c.	1,005	1,130	-5.8	-6.5
Thread	101	123	-2.5	-4.9
Carpets and rugs	2,171	3,341	0.8	-1.4
Coated fabrics, not rubberized	607	967	-0.6	-2.2
Tire cord and fabrics	371	476	2.4	-1.1
Cordage and twine	242	335	1.7	-2.3
Textile goods, n.e.c.	519	692	1.4	-1.8
Curtains and draperies	1,178	1,916	4.6	-8.4
Housefurnishings, n.e.c.	7,959	13,701	1.8	-6.1
Textile bags	344	684	4.1	-4.2
Canvas and related products	538	941	4.9	-5.5
Pleating and stitching	171	209	-1.4	-5.7
Automotive and apparel trimmings	1	1	-0.4	0.1
Embroideries	0	0	—	—
Fabricated textile products, n.e.c.	2,429	3,502	1.5	-4.1
Women's hosiery, except socks	184	547	7.4	-9.6
Hosiery, n.e.c.	1,379	2,021	2.4	-9.6
Apparel from purchased materials	84,839	118,877	2.4	-10.6
Cotton	13	22	-18.0	0.1
Cellulosic man-made fiber	158	152	0.8	-4.3
Synthetic fiber	2,294	2,316	-8.6	0.1
Textile machinery	1,710	2,246	-3.9	0.1
Public building furniture	2,422	3,353	(-)	0.1

Source: USITC estimates.

Note: The symbol (-) denotes a small negative value. The symbol — denotes that the value is not applicable.

^aImports for 2005 and 2013 are expressed in millions of 2005 dollars.

^bLanded, duty-paid is abbreviated as "LDP."

TABLE E.25 Exports of textiles and apparel:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline exports ^a		Percent impact of liberalization
	2005	2013	Exports
Broadwoven fabrics	3,429	2,883	-74.0
Narrow fabrics	859	982	-46.2
Nonwoven fabrics	1,328	2,051	(+)
Knit fabrics	1,476	1,563	-55.0
Yarn and textile finishing, n.e.c.	1,031	1,320	-83.5
Thread	154	213	-87.9
Carpets and rugs	1,005	1,428	2.0
Coated fabrics, not rubberized	374	494	-63.2
Tire cord and fabrics	111	147	-0.4
Cordage and twine	75	102	1.3
Textile goods, n.e.c.	314	431	-0.5
Curtains and draperies	61	103	6.2
Housefurnishings, n.e.c.	378	379	-0.2
Textile bags	54	68	4.6
Canvas and related products	37	66	3.9
Pleating and stitching	108	195	-88.9
Automotive and apparel trimmings	38	55	2.4
Embroideries	0	0	—
Fabricated textile products, n.e.c.	1,149	1,793	2.2
Women's hosiery, except socks	278	405	-72.3
Hosiery, n.e.c.	142	177	-82.3
Apparel from purchased materials	5,559	3,075	-67.9
Cotton	3,686	5,155	1.3
Cellulosic man-made fiber	1,180	1,665	-0.3
Synthetic fiber	1,744	2,591	-8.6
Textile machinery	1,069	1,753	0.9
Public building furniture	2,020	4,037	7.4

Source: USITC estimates.

Note: The symbol (+) denotes a small positive value. The symbol — denotes that the value is not applicable.

^aExports for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.26 Employment in high tariff sectors:
Projected baseline and effect of liberalization, 2005–13

Industry	Baseline wage bill ^a		Percent impact of liberalization
	2005	2013	Employment
Ball and roller bearings	2,812	2,740	-4.3
Ceramic wall and floor tile	313	274	-4.5
Costume jewelry	664	512	-2.4
Cutlery	678	655	-2.9
Handtools	2,343	2,266	-0.3
Dehydrated fruits, vegetables, and soups	670	655	(+)
Rubber and plastics footwear	267	341	-0.2
Shoes, except rubber	397	370	-0.2
House slippers	19	15	-0.9
Leather gloves and mittens	41	31	-2.0
Luggage	181	158	-5.2
Women's handbags and purses	155	206	-1.6
Personal leather goods, n.e.c.	136	112	-5.7
Leather goods, n.e.c.	133	115	-0.4
Glass and glass products	5,723	5,629	-0.1
Pens, mechanical pencils, and parts	605	556	-1.8
Vitreous china table and kitchenware	272	243	-5.0
Fine earthenware table and kitchenware	35	34	-1.8
Pottery products, n.e.c.	571	608	-0.7
Watches, clocks, watchcases, and parts	163	124	0.8

Source: USITC estimates.

Note: The symbol (+) denotes a small positive value.

^aWage bills for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.27 Output of high tariff sectors:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline output ^a		Percent impact of liberalization	
	2005	2013	Output	Household price
Ball and roller bearings	7,133	8,395	-4.3	—
Ceramic wall and floor tile	738	790	-4.5	—
Costume jewelry	2,189	2,244	-2.4	-2.0
Cutlery	2,803	3,474	-3.0	-1.2
Handtools	7,074	8,556	-0.3	-0.9
Dehydrated fruits, vegetables, and soups	3,414	4,062	0.1	-0.5
Rubber and plastics footwear	722	1,205	-0.2	-4.9
Shoes, except rubber	1,017	1,302	-0.2	-3.6
House slippers	58	56	-1.0	-3.9
Leather gloves and mittens	78	76	-2.2	-5.8
Luggage	487	561	-5.5	-6.3
Women's handbags and purses	374	643	-1.6	-5.2
Personal leather goods, n.e.c.	407	420	-5.4	-3.8
Leather goods, n.e.c.	317	357	-0.4	0.1
Glass and glass products	19,359	23,461	-0.1	-0.7
Pens, mechanical pencils, and parts	2,630	3,119	-1.8	-1.2
Vitreous china table and kitchenware	486	535	-5.1	-1.9
Fine earthenware table and kitchenware	85	102	-1.9	-2.5
Pottery products, n.e.c.	1,201	1,600	-0.8	-1.6
Watches, clocks, watchcases, and parts	1,339	1,686	0.9	-1.8

Source: USITC estimates.

Note: The symbol — denotes that the value is not applicable.

^aOutput for 2005 and 2013 is expressed in millions of 2005 dollars.

TABLE E.28 Imports of high tariff sectors:
 Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline imports ^a		Percent impact of liberalization	
	2005	2013	Imports	LDP price ^b
Ball and roller bearings	3,101	4,354	9.4	-5.4
Ceramic wall and floor tile	1,813	2,525	2.1	-5.6
Costume jewelry	2,796	3,608	4.8	-5.6
Cutlery	1,638	2,294	6.2	-4.3
Handtools	2,209	2,979	2.0	-4.0
Dehydrated fruits, vegetables, and soups	588	809	13.1	-3.9
Rubber and plastics footwear	9,324	12,236	4.1	-10.5
Shoes, except rubber	20,895	26,623	3.0	-7.9
House slippers	229	228	3.8	-9.0
Leather gloves and mittens	559	648	5.8	-11.4
Luggage	5,205	6,480	6.3	-11.3
Women's handbags and purses	2,396	2,837	4.9	-10.0
Personal leather goods, n.e.c.	1,114	1,306	6.3	-8.3
Leather goods, n.e.c.	670	795	(-)	(+)
Glass and glass products	4,654	6,401	5.6	-3.9
Pens, mechanical pencils, and parts	1,940	3,074	3.8	-4.6
Vitreous china table and kitchenware	375	413	8.8	-8.4
Fine earthenware table and kitchenware	677	750	1.4	-5.2
Pottery products, n.e.c.	1,919	2,419	1.6	-3.4
Watches, clocks, watchcases, and parts	4,223	5,036	2.1	-4.6

Source: USITC estimates.

Note: The symbols (+) and (-) denote small positive and negative values.

^aImports for 2005 and 2013 are expressed in millions of 2005 dollars.

^bLanded, duty-paid is abbreviated as "LDP."

TABLE E.29 Exports of high tariff sectors:
Projected baseline and effect of liberalization, 2005–13

Commodity	Baseline exports ^a		Percent impact of liberalization
	2005	2013	Exports
Ball and roller bearings	1,339	2,279	0.8
Ceramic wall and floor tile	65	101	0.6
Costume jewelry	245	372	1.1
Cutlery	615	1,052	1.3
Handtools	656	1,033	(–)
Dehydrated fruits, vegetables, and soups	750	1,192	8.1
Rubber and plastics footwear	511	966	(+)
Shoes, except rubber	685	893	(+)
House slippers	11	10	0.7
Leather gloves and mittens	6	10	1.1
Luggage	158	253	2.4
Women's handbags and purses	227	526	0.4
Personal leather goods, n.e.c.	33	57	4.1
Leather goods, n.e.c.	146	213	–0.6
Glass and glass products	3,407	5,747	4.3
Pens, mechanical pencils, and parts	292	336	1.6
Vitreous china table and kitchenware	39	49	0.6
Fine earthenware table and kitchenware	34	51	0.3
Pottery products, n.e.c.	659	1,050	0.6
Watches, clocks, watchcases, and parts	339	552	3.2

Source: USITC estimates.

Note: The symbols (+) and (–) denote small positive and negative values.

^aExports for 2005 and 2013 are expressed in millions of 2005 dollars.

TABLE E.30 Projected effect of liberalization of all significant import restraints on liberalized sectors, 2013

Sector	Quantity effects ^a (%)			Price effects (%)	
	Output	Imports	Exports	LDP ^b	Household
Broadwoven fabrics	-12.4	5.3	-74.0	-6.4	-1.3
Narrow fabrics	-33.1	-4.7	-46.2	-3.4	-0.8
Nonwoven fabrics	(-)	0.1	(+)	-0.2	(-)
Knit fabrics	-31.3	-11.3	-55.0	-7.9	-1.3
Yarn and textile finishing, n.e.c.	-21.0	-5.8	-83.5	-6.5	-1.7
Thread	-30.9	-2.5	-87.9	-4.8	-1.6
Carpets and rugs	0.1	0.8	2.1	-1.3	-0.1
Coated fabrics, not rubberized	-13.5	-0.7	-63.2	-2.1	—
Tire cord and fabrics	-1.0	2.4	-0.4	-1.1	—
Cordage and twine	-0.5	1.6	1.3	-2.2	-0.2
Textile goods, n.e.c.	-0.7	1.4	-0.5	-1.7	(+)
Curtains and draperies	-2.2	4.6	6.2	-8.3	-2.1
Housefurnishings, n.e.c.	-0.5	1.8	-0.2	-6.0	-1.2
Textile bags	-1.9	4.1	4.5	-4.1	-1.2
Canvas and related products	-2.1	4.9	4.0	-5.5	-1.5
Pleating and stitching	-16.6	-1.5	-88.9	-5.6	-1.9
Automotive and apparel					
trimmings	-0.8	-0.4	2.4	0.2	-0.1
Embroideries	-2.3	—	1.4	0.2	0.1
Fabricated textile products, n.e.c.	0.8	1.5	2.2	-4.0	-1.2
Women's hosiery, except socks	-8.8	7.3	-72.3	-9.6	-0.7
Hosiery, n.e.c.	-15.4	2.4	-82.4	-9.5	-3.5
Apparel from purchased					
materials	-11.4	2.3	-67.9	-10.5	-3.2
Sugarcane	-30.3	—	888.1	0.2	—
Sugarbeets	-9.1	—	97.1	0.2	—
Raw cane sugar	-31.9	65.4	41.8	-35.3	—
Refined cane sugar	13.6	201.0	260.6	-27.0	—
Refined beet sugar	-9.7	234.5	14.6	-24.5	—
Total refined sugar	7.4	—	72.4	0.2	-5.1
Butter	-10.1	190.9	302.0	-34.8	-6.5
Dry dairy products	-11.3	160.9	14.0	-32.4	-4.3
Condensed and evaporated					
dairy products (except CMPP)	-8.0	95.9	7.8	-22.4	-2.4
Concentrated milk protein					
products	-1.9	-0.8	-2.9	0.2	0.8
Fluid milk	-0.6	31.1	17.6	-7.1	0.1
Cheese	-0.6	35.6	95.7	-8.8	-0.8
Ice cream	0.1	18.7	1.6	-4.9	-0.2
Ethyl alcohol	—	—	—	0.2	—
Canned tuna, oil-pack	-13.6	11.5	69.8	-16.6	-7.9

Continued on next page

TABLE E.30 Projected effect of liberalization of all significant import restraints on liberalized sectors, 2013, *continued*

Sector	Quantity effects ^a (%)			Price effects (%)	
	Output	Imports	Exports	LDP ^b	Household
Canned tuna, water-pack	-9.1	5.7	19.7	-9.4	-4.6
Cigarettes	0.5	9.0	3.3	-4.7	-0.5
Cigars	1.0	-0.1	3.9	-0.1	-0.2
Chewing and smoking tobacco and snuff	0.8	3.5	2.4	-1.8	-0.3
Unmanufactured tobacco	-4.4	60.7	8.7	-21.9	—
Ball and roller bearings	-4.3	9.5	0.8	-5.2	—
Ceramic wall and floor tile	-4.5	2.0	0.6	-5.4	—
Costume jewelry	-2.4	4.6	1.2	-5.4	-1.8
Cutlery	-3.0	6.1	1.4	-4.1	-1.0
Handtools	-0.2	1.9	(+)	-3.9	-0.7
Shoes, except rubber	-0.1	2.9	0.2	-7.7	-3.5
Rubber and plastics footwear	0.5	4.0	0.9	-10.4	-4.7
House slippers	-0.9	3.7	1.2	-8.9	-3.8
Leather gloves and mittens	-2.4	5.7	0.5	-11.3	-5.7
Luggage	-4.9	6.2	3.6	-11.1	-6.2
Women's handbags and purses	-1.4	4.8	0.6	-9.8	-5.0
Personal leather goods, n.e.c.	-5.4	6.2	4.3	-8.2	-3.7
Leather goods, n.e.c.	(+)	-0.1	0.1	0.2	0.2
Glass and glass products	(-)	5.4	4.8	-3.7	-0.5
Pens, mechanical pencils, and parts	-1.8	3.7	1.6	-4.4	-1.0
Dehydrated fruits, vegetables, and soups	0.7	13.3	10.2	-3.7	-0.3
Vitreous china table and kitchenware	-5.1	8.8	0.6	-8.2	-1.7
Fine earthenware table and kitchenware	-1.9	1.4	0.4	-5.0	-2.3
Pottery products, n.e.c.	-0.7	1.5	0.7	-3.3	-1.4
Watches, clocks, watchcases, and parts	0.9	2.0	3.3	-4.4	-1.6

Source: USITC estimates.

Note: The symbols (+) and (-) denote small positive and negative values. The symbol — denotes that the value is not applicable.

^aBaseline values for 2005 and 2013 can be found in the individual liberalization tables E.2–E.29.

^bLanded, duty-paid.

Bibliography

- Armington, P. S. "A Theory of Demand for Products Distinguished by Place of Production." *IMF Staff Papers* 16, (March 1969): 159–76.
- Boughner, Devry S., Harry de Gorter, and Ian M. Sheldon. "The Economics of Two-Tier Tariff-Rate Import Quotas in Agriculture." *Agricultural and Resource Economics Review* 29, no. 1 (April 2000): 58–69.
- Chung, Jae Wan. *Utility and Production Functions: Theory and Applications*. Cambridge, MA: Blackwell Publishers, 1994.
- Deaton, Angus, and John Muellbauer. *Economics and Consumer Behavior*. Cambridge, UK: Cambridge University Press, 1980.
- Debreu, Gerard. *The Theory of Value*. New York: Wiley, 1959.
- Dervis, Kermal, Jaime de Melo, and Sherman Robinson. *General Equilibrium Models for Development Policy*. Cambridge, UK: Cambridge University Press, 1982.
- De Melo, Jaime, and Sherman Robinson. "Product Differentiation and the Treatment of Foreign Trade in Computable General Equilibrium Models of Small Economies." *Journal of International Economics* 27 (August 1989): 489–97.
- Dixon, Peter B., and Maureen T. Rimmer. *Dynamic General Equilibrium Modelling for Forecasting and Policy: A Practical Guide and Documentation of MONASH*. Amsterdam: Elsevier, 2002.
- . "Mini-USAGE: Reducing Barriers to Entry in Dynamic CGE Modelling." Paper presented at the 8th Annual Conference on Global Economic Analysis, Lübeck, Germany, and June 2005.
- . "MONASH-USA: Creating a 1992 Benchmark Input-Output Database." COPS Working Paper. Centre of Policy Studies, Monash University, May 2001.
- . "USAGE-ITC: Creating Historical Shocks for 1992 to 1998." COPS Working Paper. Centre of Policy Studies, Monash University, June 2003.

- . “USAGE-ITC: Theoretical Structure.” COPS Working Paper. Centre of Policy Studies, Monash University, April 2002.
- Dixon, Peter B., Maureen T. Rimmer, and Marinos Tsigas. “Creating a USAGE-ITC Database for 2002.” Centre of Policy Studies, Monash University, February 2004.
- Dixon, Peter B., David P. Vincent, and Alan A. Powell. “Factor Demand and Product Supply Relations in Australian Agriculture: The CRESH/CRETH Production System.” IMPACT Preliminary Working Paper no. OP-08. Mimeo, 1976. .
- Donnelly, William A., Kyle Johnson, Marinos Tsigas, and Dave Ingersoll. “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, Office of Economics, January 2004.
- Energy Information Administration (EIA). *International Energy Outlook 2005*. Washington, DC, EIA, 2005.
<http://www.eia.doe.gov/oiaf/ieo/oil.html>.
- Hanoch, Giora. “CRESH Production Functions.” *Econometrica* 39 (September 1971): 695–712.
- Hertel, Thomas, David Hummels, Maros Ivanic, and Roman Keeney. “How Confident Can We Be in CGE-Based Assessments of Free Trade Agreements?” GTAP Working Paper no. 26. Center for Global Trade Analysis, May 2003.
- Horning, Ellen, Richard N. Boisvert, and David Blandford. “Explaining the Distribution of Quota Rents for U.S. Cheese Imports.” *Australian Journal of Agricultural Economics* 34 (April 1990): 1–20.
- . “Quota Rents and Subsidies: The Case of U.S. Cheese Import Quotas.” *European Review of Agricultural Economics* 17, no. 4 (1990): 421–34.
- Layard, P.R.G., and A.A. Walters. *Microeconomic Theory*. New York: McGraw-Hill, 1978.
- Silberberg, Eugene. *The Structure of Economics*. New York: McGraw-Hill, 1990.

U.S. International Trade Commission (USITC). *The Economic Effects of Significant U.S. Import Restraints: First Biannual Update 1995*, USITC Publication 2935. Washington DC: USITC, 1995.

———. *The Economic Effects of Significant U.S. Import Restraints: Second Update 1999*, USITC Publication 3201. Washington DC: USITC, 1999.

Winston, R. Ashley P. “Enhancing Agriculture and Energy Sector Analysis in CGE Modelling: An Overview to Modifications of the USAGE Model.” COPS Working Paper. Centre of Policy Studies, Monash University, January 2009.

Appendix F

Trade Negotiation Tables

TABLE F.1 Selected U.S. free trade agreements

U.S. free trade agreements	Estimated effects on bilateral trade		
	U.S. economic welfare effects	Imports	Exports
Chile (2003)	By 2016, -0.001–0.003 percent gain	By 2016, 6–14 percent growth	By 2016, 18–52 percent growth
Korea (pending)	\$10–12 billion gain	21 percent (\$10 billion) growth	Likely 54 percent (\$19 million) growth
Australia (2004)	Less than 0.01 percent (\$434–639 million) gain	15.5 percent growth	14.1 percent growth
Morocco (2006)	Less than 0.005 percent (\$111–132 million) gain	14.3 percent (\$198 billion) growth	40.8 percent (\$743 million) growth
Central American, Dominican Republic	Less than 0.01 percent (\$135–248 million) gain	12 percent (\$2.8 billion) growth	14.8 percent (\$2.7 billion) growth
Bahrain	At most \$19 million gain	Apparel imports from Bahrain more than double; overall impact minimal	Negligible effect: Bahrain is the destination for 0.1 percent of U.S. exports
Singapore	0.002–0.001 percent decline	\$40–120 million growth	\$320–870 million growth
Jordan	No effect to negligible effect	Negligible effect: Jordan's imports about 0.003 percent of U.S. imports	Negligible effect: Jordan is the destination for about 0.042 percent of U.S. exports
Israel	\$300 million gain	Less than 1 percent growth	Less than 10 percent growth
Canada	\$6 billion gain	26 percent growth	Not available
NAFTA	\$14 billion gain	10.0 percent growth from Mexico in 1994, 5.7 percent in 1995, 6.4 percent in 1997	Overall 14–37 percent (\$297–\$676 billion) growth in 1994; to Mexico, 1.3 percent growth in 1994, 3.8 percent growth in 1995, 3.2 percent growth in 1996

Sources: Various USITC studies on the economic effects of free trade agreements (complete list in bibliography).

TABLE F.2 Summary of GATT rounds

Phase-in	Round covered	No. of signers	Average tariff cut ^a (%)	Weight year	Subjects, modalities	Outcome
1948	Geneva (1947)	23	-26	1939	Tariffs: item-by-item offer-request	Concessions on 45,000 tariff lines
1950	Annecy (1949)	13	-3	1947	Tariffs: item-by-item offer-request	5,000 tariff concessions, 9 accessions
1952	Torquay (1950-51)	38	-4	1949	Tariffs: item-by-item offer-request	8,700 tariff concessions; 4 accessions
1956-58	Geneva (1955-56)	26	-3	1954	Tariffs: item-by-item offer-request	Modest reductions
1962-64	Dillon (1961-62)	26	-4	1960	Tariffs: item-by-item offer-request; motivated in part by need to rebalance concessions following creation of the EEC	4,400 concessions exchanged; EEC proposal for a 20 percent linear cut in manufactures tariffs rejected
1968-72	Kennedy (1964-67)	62	-38	1964	Tariffs: formula approach (linear cut) and item-by-item talks. Nontariff measures: antidumping, customs valuation	Average tariffs cut by 35 percent; some 33,000 tariff lines bound; agreements on customs valuation and antidumping
1980-87	Tokyo (1973-79)	102	-33	1977 (or 1976)	Tariffs: formula approach with exceptions. Nontariff measures: antidumping, customs valuation, subsidies and countervailing duties, government procurement, import licensing, product standards, safeguards, special and differential treatment of developing countries	Average tariffs reduced by one third to six percent for OECD manufactured imports; voluntary codes of conduct agreed for all nontariff issues except safeguards.
1995-99	Uruguay (1986-94)	128	-38	1988 (or 1989)	Tariffs: formula and item-by-item. Nontariff measures: Tokyo issues plus services, intellectual property, pre-shipment inspection, rules of origin, trade-related investment measures, dispute settlement, transparency and surveillance of trade policies.	Average tariffs again reduced by one third. Agriculture and textiles and clothing subjected to rules; creation of WTO; new agreements on services and TRIPS; majority of Tokyo Round codes extended to all WTO members.

Sources: WTO, World Trade Report 2007, Table 5, 207; Hoekman and Kostecki, Table 4.1, 101.

^aTariff reductions for the first five rounds refer to the United States only. Average rates of reductions are weighted by MFN import values in specified years.