

United States International Trade Commission

# The Impact of Trade Agreements Implemented Under Trade Promotion Authority

Investigation No. TA-2103-1  
USITC Publication 3780  
June 2005



# U.S. International Trade Commission

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# U.S. International Trade Commission

Washington, DC 20436

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## The Impact of Trade Agreements Implemented Under Trade Promotion Authority

Investigation No. TA-2103-1

Publication 3780



June 2005

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# PREFACE

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On April 6, 2005 the United States International Trade Commission (the Commission) instituted Investigation No. TA-2103-1, *The Impact of Trade Agreements Implemented Under Trade Promotion Authority*. On March 31, 2005, the Commission received a letter from the United States Trade Representative (USTR) notifying the Commission that the President had decided to request the extension of trade authorities procedures in accordance with section 2103(c)(3) of the Trade Act of 2002. Following receipt of this notification, the Commission is required by section 2103(c)(3)(B) of the Trade Act to submit a report to Congress on the economic impact on the United States of all trade agreements implemented since enactment of the Trade Act of 2002. In that period, trade agreements, all in the form of free trade agreements, have been negotiated and implemented with Singapore, Chile, and Australia.

The notice of investigation was published in the Federal Register (70-19195) on April 12, 2005. Public comment was solicited in the notice (see appendix B). The views of interested parties are reported in appendix C.



# ABSTRACT

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This report was prepared in response to a requirement of the Trade Act of 2002. The Commission was required by section 2103(c)(3)(B) of the Trade Act to submit a report to Congress on the economic impact on the United States of all trade agreements implemented since enactment of the Trade Act of 2002. In that period, trade agreements have been negotiated and implemented with Singapore, Chile, and Australia.

Assessing the impact on the United States of the three agreements is complicated by two factors. First, the effect of the agreements on the U.S. economy can be expected to be rather small because Singapore, Chile, and Australia account for a relatively small share of U.S. trade; because prior to the agreements trade with these partners was already quite open; and because the terms of the agreements have not yet been fully implemented. Second, the agreements have not had time to establish an empirical record that would allow their effects to be detected and isolated econometrically from other events influencing trade and the U.S. economy, because so little time has passed since implementation of the agreements (17 months for Singapore and Chile, and five months for Australia).

Findings contained in the report are derived from several sources, many of which were available before the implementation of the agreements. A review of economic literature, all of which dates from before implementation, covers estimates of likely effects of the agreements. An analysis of selected industry sectors examines the implications of the agreements for trends in their trade and output. And a mathematical simulation analysis of patterns of trade provides an estimate of the potential long-term impact of the three agreements on U.S. trade, output, and employment. The principal findings are that the three agreements will collectively have very little effect on the the U.S. economy in the aggregate, though trade in some sectors (notably meat products, and textiles and apparel) with the three partners will increase substantially. Even in these sectors, the change is small relative to U.S. trade with the world and to U.S. output.





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## *The Impact of Trade Agreements Implemented Under Trade Promotion Authority*

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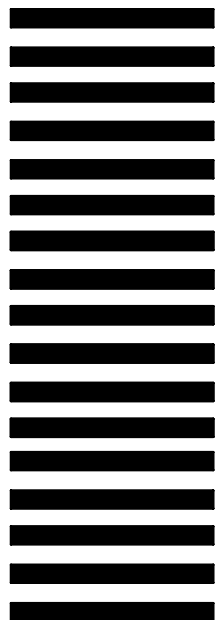
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# EXECUTIVE SUMMARY

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On March 31, 2005, the U.S. International Trade Commission (Commission) received a letter from the United States Trade Representative (USTR) notifying the Commission that the President intends to request the extension of trade authorities procedures in accordance with section 2103(c)(3) of the Trade Act of 2002. Upon receipt of such notification, the Commission is required by section 2103(c)(3)(B) of the Trade Act to submit a report to Congress on the economic impact on the United States of all trade agreements implemented since enactment of the Trade Act of 2002. The Commission has identified three trade agreements, specifically free trade agreements with Singapore, Chile, and Australia, which have been implemented since enactment of the Trade Act of 2002. The agreements with Chile and Singapore were implemented on January 1, 2004, and the agreement with Australia was implemented on January 1, 2005. Agreements which have been signed but not yet been implemented as of April 1, 2005, include Morocco (signed June 15, 2004), Central America and the Dominican Republic (signed with Central American countries on May 28, 2004 and with the Dominican Republic on August 5, 2004), and Bahrain (signed September 14, 2004).

## Study Approach and Scope

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Within 90 days of the President signing the trade agreements, the Commission submitted reports to the President and the Congress on the likely impact on the U.S. economy and on specific industry sectors of each of these agreements. These reports provided detailed analyses of the potential effects of the agreements, from a pre-implementation perspective. Several analytical approaches were used, including a review of literature on trade agreements, an analysis of trends in industry trade with a view to likely effects of specific provisions of the trade agreements, and the use of global models of trade and trade agreements in order to discern likely effects of the negotiated agreements, as fully implemented, on the U.S. economy.

The analysis described in the current report was conducted in a different context (after, rather than before, implementation of the agreements), but it has many of the analytical constraints that attend the analysis of a prospective agreement. The policy changes are small, the trade flows directly affected by the policy changes are relatively small, and the short time period since implementation limits the Commission's ability to discern the effects of the agreements.

The policy changes (the tariff and other market access liberalizations in the agreements) are small because all of the countries involved in these agreements (the United States, Chile, Singapore, and Australia) had relatively open economies before implementation of the respective agreements. Furthermore, Chile, Singapore, and Australia together accounted for less than 2 percent of U.S. imports by customs value in 2004, and for less than 5 percent of U.S. exports (FAS).

The short time since implementation had three effects. First, with respect to their market-opening provisions, all of the agreements liberalize most tariffs between the partners immediately. However, all of them also contain provisions for staging certain tariff liberalizations over a number of years so that despite the relatively small tariff cuts made by the agreements, the full effects will not be felt until the end of the respective staging periods. For U.S. imports, the staging periods are 10 years for Singapore, 12 years for Chile, and 18 years for Australia. Therefore, implementation of these agreements is not yet complete. Second, additional time is needed for the effects of the policy changes to work themselves through the U.S. economy. Firms and consumers require time to adjust to new opportunities and the availability of new products. And third, to provide a comprehensive assessment, data on national and industry-level output, trade flows, employment, and other variables need to be accumulated. Even if all effects of the agreement were felt immediately, a data history needs to be built in order to statistically isolate the effects of the trade agreements from the effects of other events that influence trade.

The effects of other provisions of the agreements, such as those pertaining to quota and investment liberalization, intellectual property protection, or agreements on sanitary and phytosanitary measures, are difficult to quantify and measure. The ability to provide evidence on these effects will improve as the experience of firms and trade agencies accumulates, but to date the Commission's ability to quantify the effects of these measures is limited. It is possible, however, that the effects could be as large or larger than those tied to tariff reductions.

Because there has not been sufficient time for the agreements to exert statistically measurable effects on the economy of the United States, the Commission has used both quantitative and qualitative approaches to provide an assessment of the possible effects of the agreements on the U.S. economy and specific sectors. The quantitative assessment of the agreements, as presented in this report, is limited to examining the liberalization of tariffs and tariff-rate quotas only, using a simulation analysis. The simulation analysis is constructed to assess the effects of the three agreements simultaneously. In contrast, the Commission's previous assessments of these agreements treated them separately. Tariffs among Australia, Chile, and Singapore (e.g. Chile's tariffs on imports from Australia) are not changed, nor are tariffs on goods traded with any other country or region.

The qualitative analysis includes an assessment of the potential impact on U.S. imports, U.S. exports, and the U.S. industry as a whole of specific provisions of the FTAs, including those related to trade facilitation, investment, and the openness of regulatory systems. Product and service sectors identified for qualitative analysis were selected based upon a comprehensive examination and consideration of the following: inspection of the trade liberalization schedules of the FTAs to assess the relative liberalization of sectoral trade with respect to tariff and nontariff measures; bilateral trade flows; assessments of the apparent sensitivity to imports of specific industries, commodities, and service sectors; and determinations made by Commission industry analysts based on their expertise.

## Principal Findings

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The Commission simulation of the quantifiable tariff components of the three trade agreements suggests that the welfare value to the United States of the tariff liberalization under the agreements is \$464 million. This means that, when fully implemented, the FTAs would provide annual benefits to consumers worth \$464 million, in the economy of 2004. This represents an increase of less than 0.01 percent of welfare in the baseline year. Total imports increase by a little over \$1.3 billion (0.08 percent) on a landed-duty paid basis and total exports increase by about \$1.8 billion (0.15 percent) on a free on board (f.o.b.) basis.

The trade volumes with the three FTA partners increase substantially more than aggregate trade with the world. Simply put, the increase in imports from the three FTA partners diverts some of the imports from other sources. U.S. imports from the partners increase by about \$2.2 billion, with increases of about \$1.1 billion, \$0.3 billion, and \$0.9 billion from Australia, Chile, and Singapore respectively. Comparing these findings to the aggregate change in U.S. imports of about \$1.3 billion, the simulated FTAs divert the difference of about \$930 million of trade away from countries other than the three FTA partners.

In general, the sectors facing the greatest trade barriers are the ones experiencing the greatest import effects of eliminating the trade barriers. U.S. imports of goods in five categories—meat products (which includes beef); other processed foods and tobacco; textiles, apparel, and leather products; petroleum and chemicals; and other machinery and equipment such as industrial machinery—increase substantially, accounting for about \$2 billion of the total increase in imports.

The three FTAs are likely to result in expansion in the output of industries that experience increased export demand owing to the removal of tariffs abroad, and indirectly in the expansion of those industries that provide inputs to them. In addition, the reallocation of resources and direct competition from imported goods that are given preferential import treatment into the United States likely will indirectly cause declines in some U.S. industries. In the simulation, the biggest proportional increase in output quantity, 0.1 percent, is felt by the motor vehicles and parts industry. The biggest decline (-0.18 percent) is in the meat products sector.

The qualitative analysis of industry characteristics and likely effects of the trade agreements shows that, in general, the trade agreements are expected to have small effects on trade in the covered sectors. Some increases in imports of fruits and processed (but not raw) macadamias are expected, as well as of meat from Australia and textiles and apparel from Chile. Effects on exports are expected to be negligible or very small.



# CHAPTER 1

## Introduction

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This report has been prepared in response to a requirement in section 2103(c)(3)(B) of the Trade Act of 2002 (19 U.S.C. 3803(c)(3)(B)). Section 2103(c)(3)(B) requires the Commission, after having been informed by the President that he has decided that the trade authorities procedures should be extended, to submit to the Congress "...as soon as practicable, but not later than June 1, 2005, a written report that contains a review and analysis of the economic impact on the United States of all trade agreements implemented between the date of enactment of this Act and the date on which the President decides to seek an extension...." Since the enactment of the Trade Act of 2002, trade agreements have been implemented with Singapore, Chile, and Australia. The agreements with Chile and Singapore were implemented on January 1, 2004, and the agreement with Australia was implemented on January 1, 2005.<sup>1</sup> During the process of negotiating and signing the trade agreements, the ITC submitted reports to the President and Congress on the likely impact on the U.S. economy and on specific industry sectors of each of these agreements. Those reports, often referred to as "90/90" studies because of their timing or section 2104 studies because of statutory source,<sup>2</sup> provided detailed analyses of the potential effects of the agreements. Since the publication of the section 2104 studies, few data have become available. In particular, the data on changes in trade with the FTA partner countries cover scarcely more than a year since the implementation of the Chile and Singapore agreements and only a few months for the Australia agreement. The agreements themselves call for, among other things, staged reductions of many tariffs and other barriers between partner countries, especially with respect to U.S. imports, and so the agreements are not yet fully in effect as of the date of this report.<sup>3</sup>

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<sup>1</sup> Agreements have been negotiated and signed with Morocco, Central America and the Dominican Republic, and Bahrain. Although the agreement with Morocco has been approved by Congress, none of these three agreements has yet been implemented.

<sup>2</sup> According to section 2104(f) of the Trade Act of 2002, these studies were to be requested at least 90 days before the date on which the agreements were to be entered into, and they were to be submitted no more than 90 days after the agreements were entered into. In practice, the timing was compressed for some of the studies. See USITC, *U.S.-Singapore Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-6, June 2003; *U.S.-Chile Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-5, June 2003; *U.S.-Australia Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-11, May 2004; *U.S.-Morocco Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-14, June 2004; *U.S.-Central America-Dominican Republic Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-13, August 2004; and *U.S.-Bahrain Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-15, Oct. 2004.

<sup>3</sup> In 1997 the USITC published an analysis of effects of the North American Free Trade Agreement, 3 years after that agreement was implemented. Even after 3 years, for trade with the two largest trading partners of the United States, very few effects could be discerned with empirical statistical evidence. See USITC, *The Impact of the North American Free Trade Agreement on the U.S. Economy and Industries: A Three-Year Review*, Investigation No. 332-381, June 1997.

## Approach

An empirical, econometric assessment of the effects of the trade agreements would require more historical data than are available so soon after the implementation of the agreements. Table 1-1 shows how aggregate trade with the three partners, and with the world as a whole, has varied over recent years. Between 2000 and 2004, imports from Chile increased by more than 50 percent, while U.S. imports from Australia rose by about 20 percent. Note that the FTA with Australia had not yet taken effect in 2004. Imports from Singapore actually declined, by more than 20 percent. In the same period, U.S. imports from the world as a whole increased by about 20 percent. Exports to Chile rose by about 2 percent, while exports to Australia and Singapore rose by 10 percent to 15 percent, and exports to the world rose by about 2 percent. The wide variation in the movements of the trade flows with the FTA partners from year to year, against a background of variable but generally growing trade with the world as a whole, illustrates the difficulty inherent in attempting to attribute the changes in these trade flows to the trade agreements.

Although the agreements have not yet had sufficient time to exert statistically measurable effects on the economy of the United States, an assessment of the likely effects of the agreements on the U.S. economy and specific sectors can be reached by the use of both quantitative and qualitative approaches. The quantitative assessment of the agreements, as presented in this report, is limited to examining the liberalization of tariffs and tariff-rate quotas only, using a simulation analysis. The simulation analysis is constructed to assess the effects of the three agreements simultaneously. In contrast,

**Table 1-1**  
**Value of U.S. bilateral trade with FTA partners and with the world, 2000-04 and January-March 2005**

*(Million dollars)*

	2000	2001	2002	2003	2004	2004 January- March	2005 January- March
<b>Chile</b>							
U.S. imports ..	3,258	3,279	3,557	3,979	5,007	1,225	1,773
U.S. exports ..	3,183	2,823	2,344	2,443	3,236	683	1,002
<b>Singapore</b>							
U.S. imports ..	19,108	14,899	14,116	14,291	14,848	3,519	3,583
U.S. exports ..	15,999	15,799	14,718	14,889	17,850	4,142	4,815
<b>Australia</b>							
U.S. imports ..	6,213	6,333	6,398	6,468	7,564	1,672	1,576
U.S. exports ..	11,684	10,226	12,294	12,450	13,474	3,147	3,412
<b>World</b>							
U.S. imports ..	1,205,339	1,132,635	1,154,811	1,250,097	1,460,160	330,060	378,920
U.S. exports ..	712,287	666,021	629,599	651,424	727,183	176,478	190,012

Note.—U.S. exports are total U.S. exports, FAS. U.S. imports are U.S. imports for consumption, by customs value.

Source: Compiled from official statistics of the U.S. Department of Commerce.

the Commission's previous assessments of these agreements treated them separately. For this purpose, the model shows the effects of reducing or eliminating U.S. tariffs on imports from Australia, Chile, and Singapore at once, while also reducing or eliminating import tariffs on U.S. shipments to Australia, Chile, and Singapore. Tariffs among Australia, Chile, and Singapore (e.g. Chile's tariffs on imports from Australia) are not changed, nor are tariffs on goods traded with any other country or region.

The nonquantifiable effects are primarily associated with provisions related to investment, intellectual property rights, customs administration, labor market and environmental regulation, and government procurement. These effects are not readily quantifiable due to the lack of necessary data and the intangible nature of some of the effects. Limited information, from which to assess the liberalization of some of these nonquantifiable barriers, was obtained from industry and public sources, as well as written submissions in response to a *Federal Register* notice. Government sources also were utilized to assemble information for this report.

For the quantitative assessment of the effects of the liberalization of tariffs and tariff-rate quotas, the study employs a multicountry economic model (a global computable general equilibrium model) with economywide coverage of merchandise sectors and a single aggregate services sector. This USITC model is based on the Global Trade Analysis Project (GTAP) database, which is described more fully in appendix D. The model estimates the likely trade and economic impact of the three implemented FTAs for 23 aggregated sectors. The commodity aggregation adopted here identifies sectors that have relatively high domestic-world price gaps due to tariffs and tariff-rate quotas (TROs) and relatively large trade flows. The economies covered in the analysis include the United States, Australia, Chile, and Singapore, as well as 13 regional aggregates representing the rest of the world.

The GTAP database, which represents the global economy in 2001, was adjusted to reflect projected economic growth to 2004 for the world and for the FTA partners. The adjusted database reflects the January 1, 2005, removal of textile and apparel quotas under the Agreement on Textiles and Clothing, as well as other international agreements.<sup>4</sup> The analysis is static and assumes the FTAs are fully implemented, with their effects felt on January 1, 2004. In the analysis, the FTA provisions are not phased in over time, nor are their effects assumed to be gradually realized over time. Rather, all tariff effects of the agreements are assumed to be felt immediately, with all tariffs reduced to their final negotiated level without an adjustment period. The modeled

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<sup>4</sup> The adjusted database also reflects Uruguay Round tariff reductions insofar as they are reflected in trade data projected to 2004. Moreover, the FTAs between Australia and its trading partners are modeled for selected products where necessary data are available. The agreement between Australia and Thailand pertaining to motor vehicles and parts is incorporated in the analysis.

results can be considered to be long-run effects of fully implemented agreements in an economy otherwise identical to the baseline 2004 economy after all adjustments related to the agreement have worked their way through the economy.<sup>5</sup>

Because no new quantitative analytical work has been identified that examines the effects of the three agreements at once (or on any of the agreements separately), the literature review for this investigation summarizes the reviews contained in the previously cited section 2104 studies. The review includes a description of analyses of the economic effects of the three individual FTAs, as well as a summary of the findings from the previous USITC studies. The non-Commission economic literature reviewed was drawn from relevant academic, public sector, and private sector institutions.

In general, economic models capture many important factors relevant to the analysis; however, they are limited in their ability to reflect the complexity of the real world.<sup>6</sup> Therefore, qualitative analysis is conducted to supplement the model-based analysis. The major contribution of the model-based analysis is its consideration of all sectors in the U.S. economy, as well as their relative economic importance. The contribution of the qualitative analysis is its consideration of commodity-specific issues, services, and provisions for intellectual property rights, government procurement, and SPS measures.

The qualitative analysis includes an assessment of the potential impact on U.S. imports, U.S. exports, and the U.S. industry as a whole of specific provisions of the FTAs. Product and service sectors identified for qualitative analysis were selected based upon a comprehensive examination and consideration of the following: examination of the trade liberalization schedules of the FTAs to assess the relative liberalization of sectoral trade with respect to tariff and nontariff measures; bilateral trade flows; assessments of the apparent sensitivity to imports of specific industries, commodities, and service sectors; determinations made by Commission industry analysts based on their expertise; and, finally, results obtained in the section 2104 studies.

Information for the study was obtained from industry reports, interviews with government and industry contacts, written submissions to the Commission, and the GTAP database. Other data sources include the U.S. Department of Agriculture; the U.S. Department of Commerce; and the U.S. Department of State. A hearing was scheduled to provide an opportunity for interested parties to provide information and comment on the study, but was cancelled when the interested parties elected to submit written statements in place of appearing at the hearing. Their statements are summarized in appendix C.

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<sup>5</sup> If the product is a nonqualifying good under rules of origin (ROO), the model results may be overstated to the extent that the model does not reflect the restrictiveness of the ROO. Failures by importers to claim or document eligibility for some shipments likewise cannot be taken into account, resulting in a slight overstatement of model results. See ch. 5.

<sup>6</sup> See appendix D for a discussion of the limitations related to the modeling framework.



## Organization

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Chapter 2 of this report provides an overview of the trade agreements implemented prior to March 30 under the Trade Act of 2002. By providing a time line of the negotiation and implementation of the agreements and by describing their principal provisions, the chapter helps to form expectations of the effects of these agreements on the U.S. economy. Chapter 3 then briefly reviews the economic literature on preferential trade agreements, in general, and on the expected effects of the Singapore, Chile, and Australia agreements, in particular.

Owing to the fact that the trade flows covered by the agreements are relatively small, that the quantifiable tariffs and other trade restrictions reduced by the agreements were generally small, and that the agreements were implemented so recently (and, in some cases, only partially, in terms of tariffs), there are not sufficient data to support empirical econometric analysis of the agreements' effects. As noted above, no econometric literature has been found to report in the literature review in chapter 3, and no econometric analysis was performed for the current report. Chapter 4 provides a qualitative analysis of updated trade flows between the United States and the partner economies in selected goods, including textiles and apparel, fresh and processed fruit, macadamia nuts, grain, meat and livestock, pharmaceuticals, and various services.

Chapter 5 reports quantitative estimates of the likely aggregate and sectoral trade and economywide effects for the United States of increased market access due to the removal of tariff and selected nontariff barriers (for which tariff equivalents were available) in the U.S., Singaporean, Chilean, and Australian economies. Chapter 6 discusses other, nonquantifiable effects of the agreements' provisions on investment, intellectual property rights, and trade facilitation measures.



# CHAPTER 2

## Overview of Three U.S. Trade Agreements Implemented Under the Trade Authorities Procedures of the Trade Act of 2002

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### Introduction

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The purpose of this chapter is to provide a descriptive overview of the three trade agreements implemented under the Trade Act of 2002—the FTAs with Singapore, Chile, and Australia, respectively—followed by a description of the provisions in the agreements. This overview will provide context for the subsequent analysis of the effects of the agreements. As a framework, this report makes use of the four analytical areas originally used in Commission reports to assess each agreement individually.<sup>1</sup> These categories are (1) market access, (2) trade facilitation, (3) investment, and (4) regulatory environment. Later chapters in this report will describe the impact of these agreements, to the extent possible due to the short time they have been in effect.

### Overview

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In the Trade Act of 2002, Congress states that—

“The expansion of international trade is vital to the national security of the United States. Trade is critical to the economic growth and strength of the United States and to its leadership in the world. Stable trading relationships promote security and prosperity. Trade agreements today serve the same purpose that security pacts played during the Cold War, binding nations together through a series of mutual rights and obligations. Leadership by the United States in international trade fosters open markets, democracy, and peace throughout the world.”<sup>2</sup>

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<sup>1</sup> During negotiation of these FTAs, the USITC prepared documents that provided greater detail on the provisions included in these agreements. United States International Trade Commission (USITC), *U.S.-Singapore Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-6, USITC Publication 3603, June 2003; USITC, *U.S.-Chile Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-5, USITC Publication 3605, June 2003; and USITC, *U.S.-Australia Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-11, USITC publication 3697, May 2004.

<sup>2</sup> Pub. L. 107-210, Sec. 2101(b)(1), 19 U.S.C. 3801.

Since the August 6, 2002 signing of the Trade Act, the United States has negotiated and implemented three trade agreements under the trade authorities procedures in the Act—the United States-Singapore Free Trade Agreement (FTA), the United States-Chile FTA, and the United States-Australia FTA. The following discussion of the structure of the agreements draws on the three agreements that have been implemented. This discussion is followed by a more detailed description of the agreements that have entered into force.

## FTA Structure and Elements

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The FTAs reviewed in this report are not identical, but they share many common elements (table 2-1). The agreements typically address trade in goods, trade in services, government procurement opportunities, investment measures, intellectual property rights, labor provisions, and environmental provisions; overarching rules on the conduct of particular economic activities in areas such as customs administration, regulatory transparency, and competition policy; and institutional provisions addressing areas such as exceptions, trade remedies, and dispute settlement.

The FTAs under review in this report contain roughly 20 to 25 chapters that address the following subjects in generally the following sequence: (1) definitions used in the agreement, (2) national treatment and market access for goods, (3) agriculture, (4) sanitary and phytosanitary measures, (5) rules of origin, (6) customs administration, (7) textiles and apparel, (8) technical barriers to trade, (9) safeguards/trade remedies, (10) cross-border trade in services, (11) telecommunications, (12) financial services, (13) temporary entry of business persons, (14) competition policy, (15) government procurement, (16) electronic commerce, (17) investment, (18) intellectual property rights, (19) labor, (20) environment, (21) transparency, (22) dispute settlement, (23) administration of the agreement, (24) general and final provisions, and (25) exceptions. Typically, the negotiated agreements contain three annexes that address nonconforming measures with respect to services, as well as side letters on individual subjects specific to each agreement. Finally, the agreements include both countries' tariff schedules, preceded by each schedule's "general notes," along with product-specific rules of origin and tariff-rate quotas (TRQs).

As table 2-1 shows, few structural differences of any significance appear among the FTAs implemented to date, other than minor format changes. One difference concerns the separate inclusion of specific industry sectors or provisions—agriculture, sanitary and phytosanitary (SPS) measures, and textiles and apparel, in particular. The FTA with Australia contains a separate chapter on agriculture, whereas the FTAs with Singapore and Chile do not. The FTAs with Australia and Chile each contain a separate chapter on SPS measures, whereas the FTA with Singapore does not. The FTAs with Singapore and Australia contain an individual chapter on textiles and apparel, but not the FTA with Chile.

**Table 2-1  
Comparison of FTA chapters**

<b>United States-Singapore Free Trade Agreement</b>	<b>United States-Chile Free Trade Agreement</b>	<b>United States-Australia Free Trade Agreement</b>
<b>I. Market Access</b>		
Ch. 2 National Treatment and Market Access for Goods	Ch. 3 National Treatment and Market Access for Goods	Ch. 2 National Treatment and Market Access for Goods
Ch. 3 Rules of Origin	Ch. 4 Rules of Origin and Origin Procedures	Ch. 3 Agriculture
Ch. 5 Textiles and Apparel		Ch. 5 Rules of Origin
Ch. 8 Cross-border Trade in Services	Ch. 11 Cross-Border Trade in Services	Ch. 4 Textiles and Apparel
Ch. 13 Government Procurement	Ch. 9 Government Procurement	Ch. 10 Cross-border Trade in Services
		Ch. 15 Government Procurement
<b>II. Trade Facilitation</b>		
Ch. 1 Establishment of a Free Trade Area and Definitions	Ch. 2 General Definitions	Ch. 1 Establishment of a Free Trade Area and Definitions
Ch. 4 Customs Administration	Ch. 5 Customs Administration	Ch. 6 Customs Administration
Ch. 6 Technical Barriers to Trade	Ch. 7 Technical Barriers to Trade	Ch. 8 Technical Barriers to Trade
	Ch. 6 Sanitary and Phytosanitary Measures	Ch. 7 Sanitary and Phytosanitary Measures
Ch. 19 Transparency	Ch. 20 Transparency	Ch. 20 Transparency
Ch. 20 Administration [and Dispute Settlement]	Ch. 21 Administration of the Agreement	Ch. 21 Institutional Arrangements [and Dispute Settlement]
Ch. 20 [Administration and] Dispute Settlement	Ch. 22 Dispute Settlement	Ch. 21 [Institutional Arrangements and] Dispute Settlement
Ch. 21 General and Final Provisions	Ch. 24 Final Provisions-Chile, Final Provisions-United States	Ch. 23 Final Provisions
<b>III. Investment</b>		
Ch. 15 Investment	Ch. 10 Investment	Ch. 11 Investment
<b>IV. Regulatory Environment</b>		
Ch. 7 Safeguards	Ch. 8 Trade Remedies	Ch. 9 Safeguards
Ch. 9 Telecommunications	Ch. 13 Telecommunications	Ch. 12 Telecommunications
Ch. 10 Financial Services	Ch. 12 Financial Services	Ch. 13 Financial Services
Ch. 11 Temporary Entry of Business Persons	Ch. 14 Temporary Entry for Business Persons	
Ch. 12 Anticompetitive Business Conduct, Designated Monopolies, and Government Enterprises	Ch. 16 Competition Policy, Designated Monopolies, and State Enterprises	Ch. 14 Competition-related Matters
Ch. 14 Electronic Commerce	Ch. 15 Electronic Commerce	Ch. 16 Electronic Commerce
Ch. 16 Intellectual Property Rights	Ch. 17 Intellectual Property Rights	Ch. 17 Intellectual Property Rights

**Table 2-1—Continued**  
**Comparison of FTA chapters**

<b>United States-Singapore Free Trade Agreement</b>	<b>United States-Chile Free Trade Agreement</b>	<b>United States-Australia Free Trade Agreement</b>
Ch. 17 Labor	Ch. 18 Labor	Ch. 18 Labour
Ch. 18 Environment	Ch. 19 Environment	Ch. 19 Environment
<b>ANNEXES</b>		
Annex 8A U.S., Singapore, Services Market Access Restrictions	Annex I untitled [Services/Investment Non-Conforming Measures]	Annex I untitled [Services/Investment Non-Conforming Measures]
Annex 8B U.S., Singapore, Services Market Access Restrictions	Annex II untitled [Services/Investment Non-Conforming Measures]	Annex II untitled [Services/Investment Non-Conforming Measures]
Annex 10B U.S., Singapore, Financial Services Reservations	Annex III Non-Conforming Measures of the United States, of Chile, with Respect to Financial Services	Annex III Banking and Other Financial Services Non-Conforming Measures
<b>SIDE LETTERS</b>		
Side Letter on Customs Valuation	Side Letter on Professional Services	Ch. 2 [National Treatment and Market Access for Goods]
Side Letter on Legal Services	Side Letter on Local Agents	Ch. 3 [Agriculture]
Side Letter on State Issues/Telecom	Side Letter on Television	Ch. 9 [Safeguards]
Side Letter on Telecom/Divestment	Side Letter on Annex 14.3 [Temporary Entry for Business Persons]	Ch. 10 [Cross-border Trade in Services]
Exchange of Letters on Financial Services Intermediaries	Side Letter on Annex 14.3(d) [Temporary Entry for Business Persons]	Ch. 11 [Investment]
Exchange of Letters on Temporary Entry of Professionals	Side Letter on Poultry	Ch. 12 [Telecommunications]
Exchange of Letters on Customary International Law		Ch. 13 [Financial Services]
Exchange of Letters on Expropriation		Ch. 15 [Government Procurement]
Exchange of Letters on Land Expropriation		Ch. 17 [Intellectual Property Rights]
Exchange of Letters on the Possibility of Bilateral Appellate Mechanism		
Letter on Denial of Benefits		
Exchange of Letters on Transfers		
Side Letters on Intellectual Property		
<b>TARIFF SCHEDULES</b>		
Annex 2B General Notes		
Annex 2B U.S. Tariff Schedule		
Annex 2C General Notes		
Annex 2C Singapore Tariff Schedule		

**Table 2-1—Continued**  
**Comparison of FTA chapters**

<b>United States-Singapore Free Trade Agreement</b>	<b>United States-Chile Free Trade Agreement</b>	<b>United States-Australia Free Trade Agreement</b>
<b>REMAINDERS</b>		
Annex 3A Product-Specific Rules of Origin		
Annex 3B Integrated Sourcing Initiative		
Annex 3C Remanufactured Products		

Source: USITC Compilation

The FTAs contain three services-related annexes as a rule, including one entitled “nonconforming measures with respect to financial services.” The United States-Australia FTA specifies banking services in its annex title (“Banking and Other Financial Services Non-Conforming Measures”). The United States-Singapore FTA, the first FTA negotiated under 2002 Trade Act legislation, contains in annexes I and II the parties’ respective market-access restrictions on services, and in annex III the parties’ financial services reservations.

Although some side letters on individual subjects specific to each particular agreement remain no more than simple records of understanding, others can amount to agreed interpretations that add to or make effective changes in the body text of the document.

## Overview of Implemented Agreements

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### *United States-Singapore Free Trade Agreement*

#### Timeline

The United States and Singapore officially began bilateral negotiations on an FTA on November 16, 2000,<sup>3</sup> and concluded the agreement on January 15, 2003. The FTA was signed on May 6, 2003. The agreement entered into force on January 1, 2004. The agreement covers market access for goods, services, investment, government procurement, and intellectual property and provides for cooperation in promoting labor rights and the environment. The agreement serves as the foundation for other possible FTAs in Southeast Asia as part of the President’s “Enterprise for ASEAN” Initiative.<sup>4</sup>

#### Overview of Provisions of Primary Interest<sup>5</sup>

##### *Market access*

**Market Access for Goods.** The agreement provides national treatment and market access for goods in general in chapter 2, with particular provisions set out for textile

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<sup>3</sup> USTR, “Quick Facts: U.S.-Singapore Free Trade Agreement,” press release [unnumbered], May 6, 2003, found at Internet address [http://www.ustr.gov/ Document\\_Library/ Fact\\_Sheets/ 2003/ Quick\\_Facts\\_U.S.-Singapore\\_Free\\_Trade\\_Agreement.html](http://www.ustr.gov/Document_Library/Fact_Sheets/2003/Quick_Facts_U.S.-Singapore_Free_Trade_Agreement.html), retrieved Dec. 20, 2004.

<sup>4</sup> *Ibid*

<sup>5</sup> WTO, Committee on Regional Trade Agreements, “Free Trade Agreement Between the United States and Singapore – Goods Aspects,” WT/REG161/3, Jan. 24, 2005; WTO, Committee on Regional Trade Agreements, “Free Trade Agreement Between the United States and Singapore – Services Aspects,” WT/REG161/4, Jan. 24, 2005; pre-submission drafts obtained from USTR email to the USITC, Feb. 4, 2005; Office of the United States Trade Representative, “Free Trade with Singapore: America’s First Free Trade Agreement in Asia,” 12/13/2002, found at Internet address [http://www.ustr.gov/Document\\_Library/Fact\\_Sheets/2002/Free\\_Trade\\_with\\_Singapore\\_America's\\_First\\_Free\\_Trade\\_Agreement\\_in\\_Asia.html](http://www.ustr.gov/Document_Library/Fact_Sheets/2002/Free_Trade_with_Singapore_America's_First_Free_Trade_Agreement_in_Asia.html), retrieved Dec. 22, 2004.



and apparel products in chapter 5.<sup>6</sup> The FTA is comprehensive, and it includes commitments by the United States and Singapore on all goods in chapters 1 to 97 of the Harmonized System of 2002. It provides for elimination of all customs duties on bilateral trade in originating agricultural and industrial products within 10 years. The United States agreed to eliminate customs duties on originating products from Singapore upon entry into force of the agreement on January 1, 2004, or over 4, 8, or 10 years, depending on the product. Singapore agreed to eliminate customs duties on all originating goods from the United States upon entry into force of the agreement.

The United States provided immediate duty-free access to nearly 80 percent of U.S. tariff lines affecting goods from Singapore. The United States also established market access for certain agricultural goods (beef, dairy, sugar, tobacco, cotton, and peanut items) through the creation of preferential tariff-rate quotas with duty-free access for a negotiated quantity and other preferential access for an additional quantity, and agreed to expand the TRQ trigger quantities for such imports. Duties on the remaining portion will be phased out over 4, 8, or 10 years, depending on the product, including the over-quota duties on the preferential tariff-rate quotas.

For those goods subject to progressive elimination of duties, the parties agreed to follow tariff elimination schedules set out in annexes to chapter 2. Each tariff line under the agreement is assigned a staging category that specifies conditions and contains a schedule for reducing customs duties to zero.

Textile and apparel products that wholly originate in the two parties or otherwise meet the agreement's rules of origin are free of duty immediately. Such products qualify as originating goods only in two ways: if all processing meets a "yarn forward" rule, in which all processing after fiber formation<sup>7</sup> takes place in the territory of either party, or if a change in tariff classification occurs as specified in an annex to chapter 3. Article 3.3.3 sets out a special *de minimis* rule for a limited quantity of textile or apparel goods that may nonetheless be treated as originating goods despite containing yarns from neither party. The agreement also provides for extensive monitoring and anticircumvention commitments.

The agreement sets out various legal principles regarding rules of origin (chapter 3), customs administration (chapter 4), technical barriers to trade (chapter 5), safeguards (chapter 7), as well as on transparency (chapter 19). Provisions covering dispute settlement or rules governing the administration of the agreement are treated below separately.

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<sup>6</sup> For an analysis of the agreement conducted as the FTA was under negotiation, see United States International Trade Commission, *U.S.-Singapore Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-6, USITC publication 3603, June 2003.

<sup>7</sup> For example, yarn spinning, fabric production, cutting, or assembly.

**Rules of Origin.** The agreement defines originating goods as being either (1) wholly obtained or produced in one or both parties' territory; (2) made from nonoriginating materials that undergo a specified change in tariff classification;<sup>8</sup> or (3) produced in a party's territory entirely from originating materials. The parties also agree to share information to combat illegal transshipment of goods.

**Trade in Services.** The agreement guarantees national treatment and most-favored-nation treatment for covered services. It covers the four modes of delivery for services outlined in the WTO General Agreement on Trade in Services (GATS): (1) mode 1, cross-border supply of services; (2) mode 2, consumption abroad of supplied services; (3) mode 3, commercial presence abroad for supplied services; and (4) mode 4, presence abroad of natural persons supplying services. On cross-border trade in services, the agreement eliminates substantially all legal bases for discrimination relating to a substantial part of all trade in services. The "negative list" approach of the agreement liberalizes all service sectors unless a specific reservation is taken. The parties maintain a limited schedule of reservations ("nonconforming measures") in annexes to the chapter. The list of reservations largely affects national treatment (art. 8.3), most-favored-nation treatment (art. 8.4), local presence (art. 8.6), and market access (art. 8.5). Should either party liberalize a particular nonconforming measure, that liberalization becomes "bound" automatically under the agreement and must be continued. In a third chapter annex on professional services, Singapore agrees to ease certain restrictions concerning U.S. law firms and lawyers, the makeup of boards of directors for architectural and engineering firms, the registration and certification of patent agents, and capital ownership requirements for land surveyor services. The parties agree to cooperate to develop criteria and standards for the certification and licensing of other professional service providers. With respect to express delivery services, Singapore commits to prevent its postal service from cross-subsidizing express letters with revenues from its monopoly services. Also, express shipments benefit from provisions contained in the chapter on customs administration, which, among other things, requires release of shipments within a specified time period.

**Government Procurement.** The FTA expands on the provisions of the plurilateral WTO Agreement on Government Procurement, to which Singapore and the United States are signatories. The FTA requires nondiscrimination and national treatment for goods, services, and suppliers relating to government procurement contracts, as well as expands market access by lowering the monetary thresholds for when the agreement's provisions apply.

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<sup>8</sup> The good can be considered an originating good if it meets any applicable requirement for regional value content and the good satisfies all other requirements of FTA chapter 3 (Rules of Origin). Regional value content can be calculated by either the "build-up" or "build-down" method based on, respectively, the value of originating materials used or the value of nonoriginating materials used. The tariff shift requirements are set at the 4- or 6-digit HS level and reflect processing needed to cause classification of a good for tariff purposes to change.

### *Trade facilitation*

**Customs Administration and Technical Barriers to Trade.** The agreement requires transparent customs administration, and the parties commit to specific obligations on how to conduct customs procedures so as to enhance efficiency of import entry processing and procedural certainty. Also, the parties agree to additional cooperation in the areas of technical regulations, standards, and conformity assessment procedures. Consultations under the FTA may be held to address issues on the use of international standards in these three areas. The agreement encourages expanded cooperation.

**Transparency.** The agreement sets out requirements to foster openness, fairness, and transparency in the adoption and application of administrative measures of the agreement. The parties agree to publish promptly all laws, regulations, procedures, and administrative rulings that apply to matters covered under the agreement, and as possible, must provide reasonable opportunity for interested persons to offer comment on them.

**Dispute Settlement.** The agreement establishes a Joint Committee as the initial forum to resolve disputes through consultations, and a dispute panel. The possibility of a monetary penalty as compensation provides for an enforcement mechanism that does not unduly restrict trade, as would the withdrawal of trade concessions.

**Side Letters.** There are 14 side letters and exchanges of letters on a range of subjects, including one letter from the United States clarifying its position on the denial of benefits references in various chapters.<sup>9</sup> The only apparent change in Singaporean national law required by the agreement is the need for Singapore to provide a legislative basis for adopting transaction value as its primary basis for customs valuation. Some letters specifically reference particular chapters in the agreement, while others do not.

### *Investment*

The agreement guarantees national treatment and most-favored-nation treatment for the parties' investors and investments. Each party maintains a limited schedule of reservations in annexes to the chapter. The list of reservations largely affects national treatment (art. 15.4), most-favored-nation treatment (art. 15.4), performance requirements (art. 15.8), and senior management and boards of directors (art. 15.9). Should either party liberalize a particular nonconforming measure, that liberalization becomes bound automatically under the agreement.

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<sup>9</sup> A Letter on Denial of Benefits, referencing chapters 8 (market access), 10 (financial services) and 15 (investment), states that the United States sanctions laws do not prevent companies from foreign countries that are subject to sanctions in the United States from establishing themselves in Singapore.

### *Regulatory environment*

**Safeguards.** The agreement establishes a bilateral safeguard mechanism that permits a party to impose a temporary safeguard measure abrogating concessions made under the FTA when, as a result of the reduction or elimination of a duty under the agreement, a good of the other party is imported in such increased quantities and under such conditions as to constitute a substantial cause of serious injury or threat of serious injury to a domestic industry. The FTA does not affect the ability of either party to take global safeguard actions under provisions of GATT 1994 Article XIX or the WTO Safeguards Agreement. Special safeguard provisions for textile products are provided for in chapter 5 (Textiles and Apparel) of the FTA.

**Telecommunications.** The agreement sets out rules on the telecommunications sector separately. The parties guarantee users nondiscriminatory access and national treatment status regarding the telecommunications network. This access includes the right for companies to interconnect with networks on terms that are transparent, cost-oriented, and timely. Nondiscriminatory access also includes the right to access infrastructure locations (e.g., buildings containing telephone switches, submarine cable heads) to build a physical network, as well as the right to lease telecommunications network capacity from suppliers and re-sell telecommunication services to customers on a retail basis. The agreement requires publication of interconnection agreements and service rates, with the goal of making the rulemaking procedures of the parties' telecommunications regulatory authorities more open. Singapore commits to deregulate the telecommunication services sector as competition emerges. The agreement is technology neutral, meaning that private firms will decide issues of technology and resulting standards rather than having either government mandate the technical standards.

**Financial Services.** The agreement sets out rules on financial services in a separate chapter. The parties agree to national treatment and most-favored-nation treatment, which is likely to benefit banking firms through additional market access as Singapore phases out discriminatory restrictions. Singapore agreed to lift its ban on new licenses for "full banks" (those supplying wholesale or retail services) on July 1, 2005, and for "wholesale banks" (those serving only large banking transactions) on January 1, 2007. Full banks may offer services at up to 30 locations during 2004, and at an unlimited number of locations by January 1, 2006. Insurance firms may establish branches, subsidiaries, and joint ventures under the agreement. Singapore permits U.S. insurance firms market access through cross-border supply, and U.S. financial service firms may establish a commercial presence. Singapore agreed to allow U.S. firms to supply pension management services under Singapore's privatized social security system. The parties maintain a limited schedule of reservations in annexes to the chapter.

**Temporary Entry of Business Persons.** The parties agree to the temporary entry of business persons in a number of categories to engage in a wide range of business activity. Categories include business visitors, traders and investors, transferees within a company, and other professionals.

**Competition Policy.** The parties agree to establish an authority that proscribes anticompetitive business conduct. Each party retains the right to designate monopolies, private or public, but both parties agree that such monopolies will act in a nondiscriminatory fashion with respect to firms of the other party and will operate on the basis of commercial considerations.

**Electronic Commerce.** The parties agree that digital products imported or exported via electronic transmission (e.g., text delivered via the Internet, video, music, software) will not be subject to customs duties, and that the same products delivered in physical format will be assessed customs duties only on the value of the medium (e.g., the disc) rather than the content (e.g., the information contained on the disc). The parties agree this commitment extends to the supply of services delivered electronically, such as financial or investment services.

**Intellectual Property Rights.** The agreement provides protection and enforcement on a nondiscriminatory basis for intellectual property rights.

*Trademarks.* The parties agree to apply the principle “first-in-time, first-in-right” to trademarks and geographical indications (place-names). Provisions streamline the trademark filing process, allowing applicants to use their own national trademark offices to file trademark applications.

*Copyrights.* The parties agree that authors, performers, and producers have exclusive rights to authorize or prohibit reproduction and communication to the public of their works. Thus, these copyright owners retain the rights, for example, to temporary copies of their work. Works are copyright protected for extended terms, that is, 70 years protection beyond the lifetime for human works or a minimum of 70 years protection for a corporate work. Anticircumvention provisions make criminal tampering with technology—such as embedded codes on discs—designed to prevent unauthorized replication or distribution of protected works a criminal offence. Provisions also extend protection to satellite signals that carry encrypted programs, so that both the programming and the signals are covered.

*Patents.* The parties agree to extend the patent term to compensate for administrative or regulatory delay encountered during the initial patent grant. The parties agree to protect test data submitted for product approval purposes from disclosure for a 5-year period for pharmaceuticals, and a 10-year period for agricultural chemicals.

*Enforcement.* The parties agree to provide criminal procedures and penalties in cases of willful trademark counterfeiting, or commercial scale piracy of copyrights or related rights. The parties agree to provide service providers (e.g., Internet service providers) with legal incentives to cooperate with rights holders, as well as limitations on their liability.

**Labor.** The parties agree not to weaken or waive their own domestic labor laws to encourage trade or investment. Both reaffirm their obligations as members of the

International Labor Organization to provide labor standards consistent with internationally recognized labor principles.

**Environment.** The parties agree not to weaken or waive their own domestic environmental laws to encourage trade or investment.

## *United States-Chile Free Trade Agreement*

### **Timeline**

The United States and Chile opened bilateral negotiations on an FTA in December 2000, held a series of 14 negotiating rounds, and concluded with the final round in December 2002.<sup>10</sup> The agreement was signed on June 6, 2003. The agreement entered into force on January 1, 2004.<sup>11</sup> More than 85 percent of two-way trade in consumer and industrial products became eligible for duty-free entry immediately, with most remaining duties on eligible goods eliminated within 4 years.<sup>12</sup> More generally, over 90 percent of the total amount of trade between the United States and Chile is expected to be liberalized within a period of 4 years following entry into force of the Agreement.<sup>13</sup>

### **Overview of Provisions of Primary Interest<sup>14</sup>**

#### *Market access*

**Market Access for Goods.** The agreement provides for national treatment and market access for goods in general in chapter 2, with particular provisions set out in the same

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<sup>10</sup> USTR, "United States and Chile Sign Historic Free Trade Agreement," press release [unnumbered], June 6, 2003, found at Internet address [http://www.ustr.gov/Document\\_Library/Press\\_Releases/2003/June/United\\_States\\_Chile\\_Sign\\_Historic\\_FreeTrade\\_Agreement.html](http://www.ustr.gov/Document_Library/Press_Releases/2003/June/United_States_Chile_Sign_Historic_FreeTrade_Agreement.html), retrieved Dec. 20, 2004.

<sup>11</sup> USTR, "The U.S.-Chile Free Trade Agreement: An Early Record of Success," press release [unnumbered], found at Internet address [http://www.ustr.gov/Document\\_Library/Fact\\_Sheets/2004/The\\_U.S.-Chile\\_Free\\_Trade\\_Agreement\\_An\\_Early\\_Record\\_of\\_Success.html](http://www.ustr.gov/Document_Library/Fact_Sheets/2004/The_U.S.-Chile_Free_Trade_Agreement_An_Early_Record_of_Success.html), retrieved Dec. 20, 2004.

<sup>12</sup> WTO, Committee on Regional Trade Agreements, "Free Trade Agreement Between the United States and Chile – Goods Aspects," WT/REG160/3, Jan. 14, 2005; presubmission drafts obtained from USTR email to the USITC, Feb. 4, 2005.

<sup>13</sup> The 90-percent figure includes trade covered by tariff reduction commitments and by preferential tariff-rate quotas, taking the trade figures for 2003, when the negotiations were completed.

<sup>14</sup> WTO, Committee on Regional Trade Agreements, "Free Trade Agreement Between the United States and Chile – Goods Aspects," WT/REG160/3, Jan. 14, 2005; WTO, Committee on Regional Trade Agreements, "Free Trade Agreement Between the United States and Chile – Services Aspects," WT/REG160/4, Jan. 14, 2005; WTO, Committee on Regional Trade Agreements, "Free Trade Agreement Between the United States and Chile – Goods Aspects – Corrigendum," WT/REG160/3/Corr.1, Jan. 20, 2005; presubmission drafts obtained from USTR email to the USITC, Feb. 4, 2005; Office of the United States Trade Representative, "Free Trade with Chile: Summary of the U.S.-Chile Free Trade Agreement," 12/11/2002, found at Internet address [http://www.ustr.gov/Document\\_Library/Fact\\_Sheets/2002/Free\\_Trade\\_with\\_Chile\\_Summary\\_of\\_the\\_U.S.-Chile\\_Free\\_Trade\\_Agreement.html](http://www.ustr.gov/Document_Library/Fact_Sheets/2002/Free_Trade_with_Chile_Summary_of_the_U.S.-Chile_Free_Trade_Agreement.html), retrieved Dec. 22, 2004.

chapter for agriculture and for textiles and apparel.<sup>15</sup> The FTA is comprehensive, with commitments by the United States and Chile on all tariff rate lines in chapters 1 to 97 of the Harmonized System 2002. The agreement eliminated all customs duties on more than 85 percent of bilateral trade in consumer and industrial products upon its entry into force on January 1, 2004. The intent of the agreement is to eliminate customs duties on over 90 percent of bilateral trade within 4 years of taking effect, i.e. before 2008. The parties agreed to progressively eliminate their customs duties on originating goods under agreement rules according to the tariff elimination schedules set out in annexes to chapter 3. Each tariff line under the agreement was assigned a staging category that specifies conditions and contains a schedule for reducing customs duties to zero percent. The parties agree to publish a list of other import duties, fees, and charges that could apply to bilateral trade.

Chile provided immediate market access for nearly 87 percent of U.S. exports. Chile also established preferential tariff-rate quotas with duty-free access for an expanding eligible quantity of imports for certain beef and poultry products. Chile will phase out duties on remaining U.S. exports in various stages, within a maximum of 12 years of the agreement taking effect, i.e. before 2016.

The United States provided immediate market access for about 94 percent of U.S. tariff lines affecting goods from Chile. The United States also established preferential tariff-rate quotas with duty-free access for an expanding eligible quantity of imports, to provide market access for certain agricultural and industrial goods from Chile—including beef, poultry, dairy products, sugar, tobacco, avocados, processed artichokes, tires, copper, and hotel/restaurant chinaware items. The United States will phase out duties on remaining Chilean exports in various stages, within the same 12-year maximum, including over-quota duties on the preferential tariff-rate quotas. The United States also agreed to undertake to eliminate customs duties on originating nonagricultural goods designated eligible for duty-free treatment under the U.S. Generalized System of Preferences.

For trade in agriculture, the parties agreed to the use of an automatic and transitional “agricultural safeguard mechanism” for specified products, whenever the unit import value of the good enters a party’s customs territory below the trigger set for that good in the annex attached to the chapter. Use of this safeguard mechanism ends once the remaining tariff is eliminated. Chile also committed under the agreement to phase out the use of price bands.<sup>16</sup> Both parties agree to eliminate use of agricultural export subsidies on their bilateral trade. The parties agreed to various grading, quality, and marketing measures for beef in another annex to the chapter.

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<sup>15</sup> For an analysis of the agreement conducted as the FTA was under negotiation, see United States International Trade Commission, *U.S.-Chile Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-5, USITC publication 3605, June 2003.

<sup>16</sup> According to the United States’ notification to the WTO Committee on Regional Trade Agreements, WT/REG160/3 of 14 January 2005, “The Parties agreed to the use of an automatic and

Textiles and apparel became eligible for duty-free entry upon entry into force of the agreement, wherever these goods meet the agreement's rules of origin requirements. A limited quantity of textile and apparel products that contain yarn, fiber, or fabric not originating in the parties' territories may qualify annually for duty-free treatment.

**Rules of Origin.** The agreement sets out various rules regarding rules of origin (chapter 4), customs administration (chapter 5), sanitary and phytosanitary rules (chapter 6), technical barriers to trade (chapter 7), and trade remedies (chapter 8). Provisions covering dispute settlement or rules governing the administration of the agreement are treated below separately.

The agreement defines originating goods as (1) those wholly obtained or produced in a party's territory; (2) those made from nonoriginating materials used in a party's territory that undergo a specified change in tariff classification, or otherwise satisfying a regional value content as specified in an annex to the chapter; or (3) those produced in the territory entirely from originating materials. A good or raw material is not considered as originating when it undergoes simple combining or packaging operations within either party that do not materially alter the good.

**Trade in Services.** The agreement guarantees national treatment and nondiscriminatory treatment on covered services. It covers the four modes of delivery for services outlined in the WTO General Agreement on Trade in Services (GATS): (1) mode 1, cross-border supply of services; (2) mode 2, consumption abroad of supplied services; (3) mode 3, commercial presence abroad for supplied services; and (4) mode 4, presence abroad of natural persons supplying services. The "negative list" approach of the agreement liberalizes all service sectors unless a specific reservation is taken. The parties set forth a schedule of reservations ("nonconforming measures") in annexes to the chapter. The list of reservations largely affects national treatment (art. 11.2), nondiscriminatory or most-favored-nation treatment (art. 11.3), local presence (art. 11.5), and market access (art. 11.4) for specified service sectors. Should either party liberalize a particular nonconforming measure, that liberalization would become bound automatically under the agreement. In other annexes to the chapter, the parties address express delivery shipments, as well as the possibility of mutual recognition regarding professional services such as foreign legal consultants or civil engineers.

**Government Procurement.** The agreement includes provisions that apply to government procurement contracts for central and subcentral government entities as

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<sup>16</sup>—*Continued*

transitional 'agricultural safeguard mechanism' for specified products if the unit import price of the good enters the Party's customs territory at a level below a trigger price for that good as set out in the Annex 3.18 to the Agreement. The mechanism allows the possibility of adding additional import charges to the preferential tariff but never above MFN rates. The ability to use this mechanism disappears once the tariffs are at zero."



set out in annexes to the chapter. The agreement requires nondiscrimination and national treatment for goods and services relating to government procurement contracts, subject to the monetary thresholds and certain exceptions specified in the agreement.

### *Trade facilitation*

**Customs Administration and Technical Barriers to Trade.** The agreement establishes provisions to govern customs administration applicable to bilateral trade and covering customs laws, regulations, and procedures. It requires advance notice and a comment period on proposed customs regulations where possible, and allows Chile 3 years to reach complete compliance with these commitments. The agreement affirms each party's existing rights and obligations toward one another under the WTO Agreement on Technical Barriers to Trade. The FTA establishes a Committee on Technical Barriers to Trade to address matters raised by the parties under the chapter.

**Sanitary and Phytosanitary Measures.** The agreement affirms each party's existing rights and obligations toward one another under the WTO Agreement on Sanitary and Phytosanitary Measures. The FTA establishes a Committee on Sanitary and Phytosanitary Measures to address SPS matters under the FTA as well as in other international and regional fora treating food safety, and human, animal, and plant health.

**Transparency.** The parties agree to publish promptly all laws, regulations, procedures, and administrative rulings that apply to or under the agreement and, as possible, provide for reasonable opportunity for comment by interested persons. For services, the parties agree to provide a summary of comments on draft regulations. The parties also agree to allow time between publishing a final regulation on services and its entry into force.

**Dispute Settlement.** The agreement sets out a dispute resolution process for matters under the agreement. The agreement establishes a Free Trade Commission to supervise implementation of the agreement and act as the initial forum, to resolve a dispute through consultations and, where needed, to form a dispute panel. Following a panel's final report, the parties must enter into negotiations to develop mutually acceptable compensation. The possibility of a monetary penalty as compensation provides for an enforcement mechanism that does not restrict trade through the withdrawal of trade concessions. The agreement's chapter on investment (ch. 10) also contains provisions that address dispute resolution between an investor in one party and the government of the other party.

**Other Provisions.** The agreement incorporates as part of its provisions the general exceptions found under GATT 1994 Art. XX and GATS Art. XIV, the former with regard to (1) national treatment and market access for goods, (2) rules of origin and origin procedures, (3) customs administration, (4) sanitary and phytosanitary measures, and (5) technical barriers to trade. The latter includes exceptions with regard to (1) cross-border trade in services, (2) telecommunications, and (3) electronic commerce.

The agreement permits the parties to provide exceptions to protect their essential security interests. The parties agree to impose any balance-of-payments measure on trade in goods in accordance with WTO rules such as the WTO Understanding on the Balance of Payments Provisions of the GATT 1994. In the area of fiscal policy, with certain exceptions, a party's rights and obligations under a tax convention are deemed to prevail in the event of any inconsistency between a tax convention and the agreement.<sup>17</sup>

**Side Letters.** There are six side letters covering subjects of professional services, services/investment nonconforming measures, the temporary entry of business persons, and poultry. None of the letters requires that Chile amend its laws or regulations. The United States will need to amend its immigration laws to comply with the agreement's provisions on the temporary entry of business persons.

### *Investment*

The agreement guarantees national treatment and most-favored-nation treatment for the parties' investors and investments. Each party maintains a limited schedule of reservations in annexes to the chapter. The list of reservations largely affects certain reservations affecting national treatment (art. 10.2), most-favored-nation treatment (art. 10.3), performance requirements (art. 10.5), and senior management and boards of directors (art. 10.6). Should either party liberalize a particular nonconforming measure, that liberalization would become bound automatically under the agreement. The agreement prohibits certain restrictions such as local content requirements. Annexes to the chapter set out provisions on fair market valuation of property in the event of expropriation.

### *Regulatory environment*

**Trade Remedies.** The agreement establishes a mechanism that allows the parties to impose temporary safeguard measures if, as a result of the reduction or elimination of a duty under the agreement, an originating good of the other party is being imported in such increased quantities and under such conditions as to constitute a substantial cause of serious injury, or threat thereof, to a domestic industry.

**Telecommunications.** The agreement sets out rules on telecommunications in a separate chapter. The parties guarantee users nondiscriminatory access and national treatment status regarding the telecommunications network. This access includes the

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<sup>17</sup> According to the United States' notification to the WTO Committee on Regional Trade Agreements, WT/REG160/3 of 14 January 2005, under the taxation section regarding general provisions of the agreement, "With certain exceptions, the provisions of the Agreement do not apply to tax measures or affect the rights and obligations of the Parties under tax conventions. In the event of inconsistency between the Agreement and any such convention, that convention prevails to the extent of the inconsistency."

right for companies to interconnect with networks on terms that are transparent, cost-oriented, and timely. This nondiscriminatory access also includes the right to access infrastructure locations (e.g., buildings containing telephone switches, submarine cable heads) to build a physical network, as well as the right to lease.

**Financial Services.** The parties agree to national treatment and nondiscriminatory or most-favored-nation treatment for financial services. Banks and securities firms are allowed to establish branches, subsidiaries, and joint ventures under the agreement. Chile agrees to phase in commitments allowing (1) U.S. firms to offer asset management services for voluntary pension plans, (2) insurance branching, and (3) certain insurance brokerage services such as access to markets in marine, aviation, and transport insurance; re-insurance; and re-insurance brokerage.

**Temporary Entry for Business Persons.** The parties agree to allow the temporary entry of business persons in a number of categories to engage in a wide range of business activities, including business visitors, traders and investors, transferees within a company, and other professionals. Under the agreement, the United States will approve annually up to 1,400 special visas for professionals seeking temporary entry into the United States to engage in business activity at a professional level. This number must be provided without regard to the worldwide numerical limit on persons entering the United States and must meet other criteria.

**Competition Policy.** The parties agree to establish an authority that proscribes anticompetitive business conduct. Each party retains the right to designate a monopoly or establish a state enterprise. Such firms are to treat firms of the other party in a nondiscriminatory fashion.

**Electronic Commerce.** The parties agree that digital products imported or exported via electronic transmission (e.g., text delivered via the Internet, video, music, software) will not be subject to customs duties, and that the same products delivered in physical format will be assessed customs duties only on the value of the medium (e.g., the disc) rather than the content (e.g., the information contained on the disc).

**Intellectual Property Rights.** The agreement provides protection and enforcement on a nondiscriminatory basis for intellectual property rights.

*Trademarks.* The parties agree to apply the principle “first-in-time, first-in-right” to trademarks and geographical indications (place-names).

*Copyrights.* The parties agree that authors, performers, and producers have exclusive rights to authorize or prohibit reproduction and communication to the public of their works. Thus, these copyright owners retain the rights, for example, to temporary copies of their work, and the agreement prohibits unauthorized sharing of such work via the Internet. Works are copyright protected for extended terms, that is, 70 years protection beyond the lifetime for human works or a minimum of 70 years protection for a corporate work. Anticircumvention provisions make

tampering with technology—such as embedded codes on discs—designed to prevent unauthorized replication or distribution of protected works a criminal offense.

**Patents.** The parties agree to extend the patent term to compensate for administrative or regulatory delay encountered during the initial patent grant. The parties agree to protect test data submitted for product approval purposes from disclosure for a 5-year period for pharmaceuticals, and a 10-year period for agricultural chemicals.

**Enforcement.** The parties agree to provide criminal procedures and penalties in cases of willful trademark counterfeiting, or commercial scale piracy of copyrights or related rights. The parties agree to provide service providers (e.g., Internet service providers) with legal incentives to cooperate with rights holders, as well as limitations on their liability.

**Labor.** The parties agree not to weaken or waive their own domestic labor laws to encourage trade or investment. Both reaffirm their obligations as members of the International Labor Organization (ILO) to provide labor standards consistent with internationally recognized labor principles. An annex to the chapter provides for a Labor Cooperation Mechanism to promote respect for the principles in the 1988 ILO Declaration on Fundamental Principles and Rights at Work, as well as compliance with ILO Convention 182 on the Worst Forms of Child Labor.<sup>18</sup> Cooperative activities may include discussions of legislation, practice, and implementation of the elements of the 1988 declaration, as well as improving systems for the administration and enforcement of labor laws.

**Environment.** The parties agree not to weaken or waive their own domestic environmental laws to encourage trade or investment. The chapter creates an Environmental Affairs Council to provide a forum to discuss and pursue a number of activities relating to environmental cooperation.<sup>19</sup>

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<sup>18</sup> World Trade Organization, Committee on Regional Trade Agreements, *Free Trade Agreement Between the United States and Chile*, WT/REG160/1, Jan. 22, 2004. Under Annex 18.5 of the agreement on establishment of a Labor Cooperation Mechanism, each Party will designate an office within its ministry of labor to serve as a point of contact to support the work of the Labor Cooperation Mechanism. These offices will develop cooperative activities on labor matters including establishing priorities for cooperative activity and developing a pertinent work program, exchanging information on labor practices and best labor practices, promoting common data collection on labor matters and its publication.

<sup>19</sup> World Trade Organization, Committee on Regional Trade Agreements, *Free Trade Agreement Between the United States and Chile*, WT/REG160/1, Jan. 22, 2004. Annex 19.3 of the agreement provides for regular consultation with the Environment Affairs Council established in Article 19.3 (Environment Affairs Council) regarding the priorities that the Parties identify, as well as future cooperative work.

# *United States-Australia Free Trade Agreement*

## **Timeline**

The United States and Australia opened bilateral negotiations on an FTA in March 2003.<sup>20</sup> Negotiations were completed on February 8, 2004, and the agreement was signed on May 18, 2004. Congress approved the agreement in July 2004, and the President signed the implementing legislation (HR 4759) into law on August 3, 2004.<sup>21</sup> The U.S.-Australia FTA entered into force on January 1, 2005.

## **Overview of Provisions of Primary Interest<sup>22</sup>**

### *Market access*

**Market Access for Goods.** The agreement provides for national treatment and market access for goods in general in chapter 2, with particular provisions set out for agriculture in chapter 3 and for textiles and apparel in chapter 4.<sup>23</sup> The agreement will eliminate customs duties on manufactured goods over 10 years. The parties agree to liberalize certain nontariff measures that distort trade between the parties by banning export taxes, and freezing or preventing duty waivers related to performance requirements. The parties agree to eliminate merchandise processing fees ("the U.S. customs user fee") on originating goods, although certain administrative fees related to the cost of services rendered are allowed, such as filing fees or fees for obtaining customs clearance. The agreement establishes a Committee on Trade in Goods to promote bilateral trade and address trade barriers. Annexes set out each party's exclusions from coverage under the chapter, including U.S. log export controls, the U.S. Merchant Marine Act, and Australian exemptions on agricultural marketing arrangements for various goods.

The parties affirm their support for certain principles regarding health care and pharmaceuticals in an annex to the chapter. These include the principles of (1) the importance of innovative pharmaceuticals in the delivery of high quality health care; (2) the importance of research and development in the pharmaceutical industry, as

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<sup>20</sup> USTR, "U.S. and Australia Address FTA Implementation Issues – FTA to Take Effect January 1, as Planned," press release 2004-82, Nov. 17, 2004, found at Internet address [http://www.ustr.gov/assets/Document\\_Library/Press\\_Releases/2004/November/asset\\_upload\\_file236\\_6752.pdf](http://www.ustr.gov/assets/Document_Library/Press_Releases/2004/November/asset_upload_file236_6752.pdf), retrieved Dec. 13, 2004.

<sup>21</sup> Trade Reports International Group, "President Bush Signs Australia FTA Bill," *Washington Trade Daily*, Aug. 4, 2004, vol. 13, No. 155, p. 1.

<sup>22</sup> The Office of the United States Trade Representative, "U.S.-Australia FTA Summary of the Agreement," 07/15/2004, found at Internet address [http://www.ustr.gov/Trade\\_Agreements/Bilateral/Australia\\_FTA/U.S.-Australia\\_FTA\\_Summary\\_of\\_the\\_Agreement.html](http://www.ustr.gov/Trade_Agreements/Bilateral/Australia_FTA/U.S.-Australia_FTA_Summary_of_the_Agreement.html), retrieved Dec. 22, 2004.

<sup>23</sup> For an analysis of the agreement conducted as the FTA was under negotiation, see United States International Trade Commission, *U.S.-Australia Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-11, USITC publication 3697, May 2004.

well as the importance that appropriate government support plays through intellectual property protection and other policies; and (3) the need to promote timely and affordable access to innovative pharmaceuticals through adoption and maintenance of procedures that appropriately value the therapeutic significance of a pharmaceutical as objectively demonstrated. The parties agree to establish a Medicines Working Group to promote discussion and understanding of pharmaceutical issues. The agreement requires that national health care programs apply transparent procedures in listing new pharmaceuticals for reimbursement.

**Rules of Origin.** The agreement defines originating goods as (1) those wholly obtained or produced in a party's territory; (2) those including nonoriginating materials that undergo a specified change in tariff classification, or otherwise satisfying a regional value content; and (3) those produced in a party's territory entirely from originating materials. The agreement contains provisions to help determine the origin of goods produced, including accumulation (art. 5.3); regional value content (art. 5.4); accessories and spare parts (art. 5.6); fungible goods (art. 5.7); and indirect materials (art. 5.10). For a number of agricultural goods, such as sugar and dairy products from Australia covered by U.S. tariff-rate quotas, a list specifically excludes these products from being made eligible for FTA benefits by the *de minimis* provisions in the rules of origin chapter, which ignore a small amount of third-country ineligible content.

**Agriculture.** The agreement sets out provisions on trade in agricultural products, including the implementation and administration of tariff-rate quotas and prohibition of agricultural export subsidies. Australia provided duty-free access to all U.S. agricultural exports to Australia upon entry into force of the agreement. Duties on most of Australia's agricultural exports to the United States will be phased out over a period from 4 to 18 years. U.S. duties will remain on sugar and certain dairy products. The agreement establishes a Committee on Agriculture to address trade barriers. The agreement includes additional mechanisms to regulate trade for certain agricultural goods<sup>24</sup> from Australia through preferential tariff-rate quotas and agricultural safeguards. The parties agree to cooperate in agricultural negotiations under way in the WTO to end agricultural trade barriers and trade-distorting agricultural support payments.

**Textiles and Apparel.** Textile and apparel goods are covered by a separate set of provisions on rules of origin. A textile or apparel product will qualify as an originating good only if all processing meets a "yarn forward" rule of origin whereby all after-fiber formation processing occurs in or is attributable to the territory of either party. An annex to chapter 4 specifies the separate rules of origin for Harmonized System chapters 50-63 as well as textile goods in chapters 42, 70, and 94.

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<sup>24</sup> Including beef, dairy, cotton, peanuts, and certain horticultural products.

**Trade in Services.** The agreement guarantees national treatment and nondiscriminatory or most-favored-nation treatment on covered services. Local presence requirements are prohibited. Regulation of services and qualification requirements may not be unduly burdensome. Domestic regulation of services must be based on objective and transparent criteria. Payments and transfers relating to cross-border trade in services are to be allowed freely and without delay. Provisions in the customs chapter of the agreement facilitate the movement of express delivery services firms' shipments.

**Government Procurement.** The agreement includes provisions that apply to particular procurement contracts for values exceeding the agreed thresholds as set out in annexes on specific subject matter. The agreement sets out principles of national treatment and nondiscrimination, consistent with the plurilateral WTO Agreement on Government Procurement, to which the United States is signatory but Australia is not. The parties reaffirm their commitments under their existing reciprocal defense procurement agreement of 1995. A number of purchases are specifically not covered, and exceptions for public purposes are listed, including a provision authorizing prison and sheltered workshops.

### *Trade facilitation*

**Customs Administration and Technical Barriers to Trade.** The agreement establishes provisions to govern customs administration, covering customs laws, regulations, and procedures. The provisions aim to facilitate the release of goods, and to formalize and expand customs cooperation, if possible. The agreement also affirms each party's commitments toward one another under the WTO Agreement on Technical Barriers to Trade. Several mechanisms are included to facilitate the acceptance of conformity assessment results, as well as procedural requirements for accrediting and licensing conformity assessment bodies.

**Sanitary and Phytosanitary Measures.** The agreement affirms each party's existing rights and obligations toward one another under the WTO Agreement on Sanitary and Phytosanitary Measures. The FTA establishes a Committee on Sanitary and Phytosanitary Matters to address food safety, and human, animal, and plant health.<sup>25</sup> An annex to the chapter also establishes a Standing Technical Working Group on

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<sup>25</sup> World Trade Organization, Committee on Regional Trade Agreements, *Free Trade Agreement Between the United States and Australia*, WT/REG184/1, Feb. 11, 2005. Under the agreement, each party will identify a representative and the parties will establish operating procedures for the committee. The committee is then to enhance each party's implementation of the WTO SPS Agreement; protect human, animal, and plant life or health; and facilitate trade between the two parties. The committee is to enhance mutual understanding of each other's regulatory processes relating to such measures, and review progress on SPS matters between the agencies responsible for such matters.

Animal and Plant Health Inspection Measures to engage at the earliest appropriate point in each country's regulatory process to cooperate in developing science-based measures that affect trade between the parties.<sup>26</sup>

**Dispute Settlement.** The chapter sets up a Joint Committee to consider all disputes raised to it concerning the agreement, including environmental concerns and labor issues. The chapter includes provisions on the composition, operation, and timeframe for dispute-settlement panels and their reports, and implementation of panel reports. The provisions authorize a suspension of benefits under the agreement where no other resolution is accepted by the parties, although monetary assessments of up to US\$15 million, adjusted for inflation, are available under the agreement as a dispute resolution alternative designed as an enforcement mechanism that does not restrict trade.

**Side Letters.** There are 26 side letters on a range of subjects. The only apparent change to national law required by the agreement is mentioned in a letter on safeguards, which states that U.S. implementing legislation would be required for the President of the United States to exclude goods originating in Australia from global safeguard measures. Pursuant to a side letter on investment, Australia undertakes to review the treatment of portfolio investment under the provisions of its Foreign Acquisitions and Takeovers Act within 18 months of entry into force of the agreement.

### *Investment*

The agreement guarantees national treatment and most-favored-nation treatment for investments in the markets of both parties. Thresholds for investment acquisitions by U.S. investors in virtually all sectors in Australia have been increased from A\$50 million to A\$800 million, in effect exempting the vast majority of such transactions from screening by Australia's Foreign Investment Review Board. Treatment must accord with customary international law as set out in an annex to the chapter, including full protection and security. Expropriation is permitted only for a public purpose, must be nondiscriminatory, and must be accompanied by prompt, adequate compensation with due process of law. A party cannot impose performance requirements on a firm, nor can it impose nationality requirements on a firm's senior management or board of directors.

Investment disputes may be submitted to arbitration, although the claimant and respondent to a dispute are initially urged to attempt resolution through consultation, negotiation, and nonbinding third-party procedures. The agreement specifically does not include an investor-state mechanism for dispute resolution in light of the shared legal traditions and longstanding economic ties between the two countries, although this issue may be revisited if circumstances change.

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<sup>26</sup> Under Annex 7-A of the agreement, the parties establish a standing technical working group to be co-chaired by the chief administrator of the Australian Government's Department of Agriculture and the U.S. Government's Department of Agriculture's Animal and Plant Health Inspection Service. The group is to be a forum in which to resolve specific bilateral animal and plant health concerns, and engage in scientific cooperation regarding such health concerns.



### *Regulatory environment*

**Safeguards.** The agreement establishes a bilateral safeguard mechanism that permits a party to impose a temporary safeguard measure abrogating concessions made under the FTA if, as a result of the reduction or elimination of a duty under the agreement, an originating good of the other party is being imported in such increased quantities and under such conditions as to constitute a substantial cause of serious injury, or threat thereof, to a domestic industry. The agreement does not affect the parties' rights or obligations regarding safeguard actions taken pursuant to Article XIX of GATT 1994 and the WTO Agreement on Safeguards.

**Telecommunications.** The agreement sets out rules for telecommunications in a separate chapter. The parties guarantee users nondiscriminatory access and national treatment status regarding the public telecommunications network. This access includes the right for companies to interconnect with networks on terms that are transparent, cost-oriented, and timely. Nondiscriminatory access also includes the right to access infrastructure locations (e.g., buildings containing telephone switches and submarine cable heads), where a supplier is authorized to operate as a public telecommunications service provider. The agreement includes provisions that allow firms to lease and resell capacity over established telecommunications networks.

**Financial Services.** The agreement sets out rules for financial services in a separate chapter. Banks, insurance companies, securities firms, and other financial service suppliers of both parties already enjoy significant market access to one another through investment in the form of branches, subsidiaries, and joint ventures. Under the agreement, access through cross-border trade in financial services is permitted. Financial services firms must be granted market access without limit on the number of financial institutions, value of transactions, number of service operations, or number of persons employed. An annex to the chapter sets out additional provisions on banking, insurance, and portfolio management. Australia is to permit access to the cross-border supply of services via electronic means for markets in marine, aviation, and transport insurance; re-insurance; insurance brokerage; insurance auxiliary services; financial information and data processing services; and financial advisory services; as well as provide new rights for portfolio management. The parties establish a financial services committee under the chapter to deal with provisions relating to exceptions and nonconforming measures; issues of transparency concerning policies about and regulation of financial services; and development of expedited procedures for offering insurance services.

**Competition Matters.** The parties agree to establish an authority that proscribes anticompetitive business conduct. Each party retains the right to designate a monopoly or establish a state enterprise, although such monopolies or enterprises must not operate in a manner that creates obstacles to trade and investment by the partner country, and must pursue pricing strategies based on normal commercial considerations. Most of this chapter's provisions are barred from the agreement's dispute-settlement procedures.

**Electronic Commerce.** The parties agree that digital products imported or exported via electronic transmission (e.g., text delivered via the Internet, video, music, software) will

not be subject to customs duties. A party cannot accord less favorable treatment to some digital products on the basis of the nationality of the author, performer, producer, developer, or distributor of the products, or on the grounds that the digital products were created, stored, transmitted, or published outside its territory. The agreement includes provisions on facilitating the authentication of electronic signatures, encouraging paperless transactions.

**Intellectual property rights.** The agreement provides protection and enforcement on a nondiscriminatory basis for intellectual property rights.

***Trademarks.*** The owner of a registered mark is granted exclusive rights to prevent third parties from using identical or similar signs without consent. The parties agree to provide an electronic system for application, registration, and maintenance of trademarks. Registration and renewals will be for a minimum 10-year period.

***Copyrights.*** The parties agree that authors, performers, and producers have exclusive rights to authorize or prohibit reproduction and communication to the public of their works. The parties agree that works are copyright protected for 70 years beyond lifetime for human works or a minimum of 70 years for corporate works. Anticircumvention provisions make tampering with technology designed to prevent unauthorized replication or distribution of protected works a criminal offense. Provisions also extend protection to satellite signals that carry encrypted programs, so that both the programming and the signals are covered.

***Patents.*** The parties agree to extend the patent term to compensate for administrative or regulatory delay encountered during the initial patent grant. The parties agree to protect test data submitted for product approval purposes from disclosure for pharmaceuticals and agricultural chemicals.

***Enforcement.*** The parties agree to provide criminal procedures and penalties in cases of willful trademark counterfeiting or commercial scale piracy of copyrights or related rights. The parties agree to provide service providers (e.g., Internet service providers) with legal incentives to cooperate with rights holders, as well as limitations on their liability. The parties' customs services may initiate border enforcement *ex officio* against goods passing in transit. Goods determined to be pirated or bearing counterfeit marks must be destroyed.

**Labor.** The parties agree not to weaken or waive their own domestic labor laws to encourage trade or investment. Both reaffirm their obligations as members of the International Labor Organization (ILO) to provide labor standards consistent with internationally recognized labor principles. The agreement establishes a Joint Committee, as well as a Subcommittee on Labor Affairs, to help ensure that persons with legally recognized interests under local law have access to all forms of "tribunals" set up to enforce labor laws. The chapter provisions extend to relevant Federal and

State laws in Australia, as responsibility for labor matters is shared at the Federal and State level.

**Environment.** The parties agree not to weaken or waive their own domestic environmental laws to encourage trade or investment. Each party must ensure that its environmental protection laws provide for high levels of protection, effective remedies and sanctions for their violation, and opportunities for public participation. The chapter sets up a Joint Committee, as well as a Subcommittee on Environmental Affairs, to discuss environmental issues and offer interested parties the opportunity for comment.



# CHAPTER 3

## Literature Review: The Effects of Bilateral Free Trade Agreements

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### Introduction

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This chapter briefly reviews the general academic literature on bilateral free trade agreements, both theoretical and empirical. The general theoretical literature includes conceptual analyses of preferential bilateral trade agreements, and simulation analyses of the likely effects of various trade agreements. The empirical literature includes studies of the free trade agreements specifically considered in this report.

The trade agreements implemented between the United States and its three partners constitute a hub and spoke arrangement. That is, the United States (the “hub”) has bilateral arrangements (“spokes”) with each of the partners through the agreements, but the agreements do not require reduced tariffs or changes in any other trade policy among the other partners; changes in trade policy between Chile and Singapore, for example, are not required by any of the agreements.

The three partner countries have relatively small economies; Singapore is about 1 percent, Chile about 1.5 percent, and Australia about 5 percent of the size of the U.S. economy. The analyses reviewed below, which consider each trade agreement in isolation from the others, are generally appropriate approaches to assessing the effects of the agreements because these economies are relatively small in size and the trade flows with the United States are relatively small, and because U.S. trade with each of them tends principally to be in products not traded with the others.<sup>1</sup>

### General Effects of Bilateral Trade Agreements

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The economic impact of trade agreements includes those effects that are felt through trade creation, trade diversion, and changes in the terms of trade. It also includes scale effects, political effects, and other effects which may not be quantifiable.

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<sup>1</sup> The simulation analysis in ch. 5 looks at the simultaneous effects of the three agreements on the U.S. economy, but the “spillover” general equilibrium effects connecting the three agreements are negligible. While, as stated, the agreements do not affect trade policy between or among the other partners, their actual bilateral trade flows may change as they adjust their output and trade patterns to the new policy environment with respect to the United States. Effects on bilateral trade between or among the other partners are beyond the scope of this report.

## *Trade Creation and Trade Diversion*

Trade liberalization can in general be undertaken in two different manners. First, it can be based on the “normal trade relations” (NTR, formerly known as MFN or “most favored nation”) principle where better market access is granted to all covered trading partners equally. The classical “gains from trade” argument asserts that such trade liberalization would help consumers to have access to more goods at lower prices, and producers to have more sources for their inputs and more markets for their products (for which they may receive higher prices). Second, it can be done in a preferential way, with better market access granted to one partner but not to others. It should be noted that better market access can result not only from bilateral tariff removal but also from other negotiated provisions in the areas of, for example, cross border trade in services, telecommunications, e-commerce, and government procurement, the effects of which are not readily quantifiable. A preferential, bilateral FTA, such as each of those between the United States and Australia, Chile, and Singapore, is an agreement in which preferential liberalization is undertaken reciprocally between participating countries.<sup>2</sup>

To the extent that FTAs are designed to liberalize trade, they are likely to engender economic gains similar to those of an NTR liberalization, which generally applies to all trading partners globally. However, given their discriminatory nature, studying the economic impact of preferential, bilateral FTAs involves additional issues that are not present in an NTR liberalization. One way to study a bilateral FTA is to decompose the FTA-induced trade expansion into trade creation and trade diversion.<sup>3</sup> Trade creation improves welfare and occurs when partner country production displaces higher cost domestic production. Trade diversion reduces welfare and occurs when partner country production displaces lower cost imports from the rest of the world that still face higher trade barriers.<sup>4</sup> The combined effect of an FTA on intra-bloc trade will then reflect trade creation as well as trade diversion. Whether the trade-creation (welfare enhancing) or the trade-diversion (welfare reducing) effects dominate depends on a variety of factors, including external trade barriers, cost differences, relative supply and demand responses, and other domestic policies. From that point of view, the overall welfare impact of an FTA is not unambiguous, making its determination an empirical issue.

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<sup>2</sup> It should be noted that, while negotiated bilaterally, some FTA provisions such as those related to customs administration or labor and environment tend to be applied in a nondiscriminatory manner to all countries, not just the partners to the agreement.

<sup>3</sup> The seminal works on this issue are J. Viner, *The Customs Union Issue* (New York: Carnegie Endowment for International Peace, 1950) and J. Meade, *The Theory of Customs Union* (Amsterdam: North Holland, 1955).

<sup>4</sup> Losses from trade diversion occur when lost tariff revenue associated with changes in the pattern of trade exceeds efficiency gains from the decline of the prices paid by consumers. These losses will be larger the higher the FTA's margin of preferences (i.e., the trade barriers facing nonmembers relative to intra-FTA barriers).

## *Terms of Trade*

The impact of an FTA on its partners also can be studied from a “terms of trade” (i.e., the price of exports relative to the price of imports) viewpoint. If the participating countries are large enough to be able to affect import and export prices of traded goods by their actions, the establishment of an FTA is likely to affect the terms of trade of a given FTA member in three different manners. First, by increasing the demand for its partner’s products, the country’s own preferential trade liberalization may increase the (pretariff) price of its imports from the partner country leading to a deterioration in its terms of trade. Second, tariff reduction by the partner country could increase the demand (and the price) for the FTA member’s exports and improve its terms of trade. Finally, the decreased demand for imports originating from nonmember countries tends to decrease their price and improve the FTA members’ terms of trade. Therefore, the impact on economic welfare will depend, in part, on whether the terms of trade have improved or deteriorated for a given partner country.

## *Scale Effects*

To the extent that FTAs integrate (and, hence, enlarge) markets, some would argue that they offer firms an opportunity to exploit economies of scale (or increasing returns to scale) and to lower costs by expanding production. Moreover, by increasing the intensity of competition, an FTA can potentially induce firms to make efficiency improvements in order to raise productivity levels.<sup>5</sup> For instance, some firms in Canada have long argued in support of trade agreements with the United States, indicating that U.S. market access enables them to exploit economies of scale, allowing them to increase their exports not only to the countries in North America, but also to the rest of the world.<sup>6</sup> Increasing returns also affect the volume of trade in inputs and intermediate goods used by increasing return industries because as firms expand production and exploit economies of scale, they need to purchase more inputs and intermediate goods. These goods may be imported from inside the FTA, or outside it to the extent permitted by the agreement’s rules of origin.

The enlarged FTA market also may attract investment, including foreign direct investment (FDI), especially investment for which market size is important.<sup>7</sup> It should be noted that the higher the FTA’s margin of preference, the more attractive it will be as an FDI destination. In the long run, changes in trade flows can lead to substantial changes in the location of production between member countries of an FTA. These relocations

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<sup>5</sup> A closely related gain comes from increased competition as firms are induced to cut prices and to expand sales, benefitting consumers as the monopolistic distortion is reduced.

<sup>6</sup> H.J. Wall, “NAFTA and the Geography of North American Trade,” *Federal Reserve Bank of St. Louis Review*, vol. 85, No. 2, Mar./Apr. 2003.

<sup>7</sup> In addition to the effects of strictly tariff liberalization, many FTAs have explicit investment provisions (such as improved and secure investment environment) that would further enhance these effects.

may be determined by comparative advantage (i.e., the removal of barriers might lead each country to produce the goods at which it is best). Alternatively, sectors with strong backward or forward linkages may all relocate to one country and take advantage of the preferential access to cater to the whole FTA market from there. These agglomeration effects are stronger in the presence of economies of scale. The impact of an FTA will depend on the increased level of economic activity within the FTA and on the distribution of the effects among members.

### ***Nonquantifiable Effects***

In addition to the generally quantifiable effects discussed so far, regional integration can provide other potential benefits that are more difficult to evaluate. A World Bank publication discusses a variety of additional effects (or classes of effects) that may result from regional integration agreements.<sup>8</sup> One such effect is enhanced economic security (either against nonmembers or between members).<sup>9</sup> Another potential benefit is that by forming a unit and pooling their bargaining power, FTA members can negotiate more efficiently in international forums. Regional integration can also be useful in “locking in” domestic (trade or other policy) reforms by raising the cost of policy reversal. Another possible gain is the increased possibilities for cooperation in environmental or technological assistance projects.

Economists tend to focus their analytical efforts on only a few of the nonquantifiable effects. By focusing attention on a selected number of FTA effects, analysts provide important insights into specific aspects of trade agreements, but it is possible that other nonquantifiable effects are notable, or even dominate.

## **Impact on the United States of Free Trade Agreements with Singapore, Chile, and Australia: Review of Earlier Findings**

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The section 2104 studies<sup>10</sup> prepared by the Commission at the conclusion of negotiations contained comprehensive reviews of economic literature analyzing the likely effects of the agreements. The Commission has not identified any studies

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<sup>8</sup> The World Bank, *Trade Blocs* (New York: Oxford University Press, 2000), p. 66.

<sup>9</sup> For more on this, see Maurice Schiff, and L. Alan Winters, “Regional Integration as Diplomacy,” *World Bank Economic Review*, 1998, 12(2): 271–96. As has been mentioned above, the impact of negotiated commitments of an FTA related to intellectual property rights and customs administration and services is not readily quantifiable.

<sup>10</sup> See USITC, *U.S.-Singapore Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-6, June 2003; *U.S.-Chile Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-5, June 2003; *U.S.-Australia Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-11, May 2004.



estimating the impact of the implemented agreements after they entered into force and since the completion of the section 2104 studies. In particular, no empirical studies have been found that provide an econometric analysis of actual trade data to see whether the data reveal statistical changes in trade, income, production, or other variables as a result of the agreements. A brief summary of reviews contained in the section 2104 studies is presented below. Simulation models rely on historical data to construct equations describing consumption of goods and services (both domestic and imported), and production of outputs for domestic consumption and for export, using both domestic and imported inputs. The models are provided with base data on tariffs and other quantifiable trade barriers. In order to generate trade policy results, the trade barrier data are altered to correspond to the desired policy, the equations are solved for the new values, and the solutions give new values for output, trade, and other variables. Differences among the models in terms of their findings can be largely attributed to differences among the underlying assumptions and data in the models. For example, the studies cited below by Gilbert and by Scollay and Gilbert use relatively conservative assumptions, similar to those used by the USITC models, and achieve generally similar results, as reported in the discussion below. On the other hand, the models used in the Brown, Deardorff, and Stern and the Brown, Kiyota, and Stern studies make substantially different assumptions (described below) and derive much greater economic effects from trade policy changes than do the USITC analyses.

### ***USITC Section 2104 Studies (Singapore, Chile, Australia)***

In the USITC study of the Singapore FTA, cited earlier, a simulation analysis was performed. The model used was the GTAP database and model of international trade.<sup>11</sup> This analysis looked only at the removal of bilateral tariffs on trade in goods between the partners. The simulation modeled the agreement as implemented in stages: Singapore implemented full elimination of its already low tariffs immediately, while the U.S. tariffs were eliminated in stages over a 12-year period. The agreement does not contain liberalizations to trade in services that could be accounted for in the general equilibrium model. Results of the simulation experiment include the findings that, after full implementation of the agreement in the year 2016, U.S. exports to Singapore could increase by 0.54 percent to 1.08 percent, and imports from Singapore could increase by 3.84 percent to 10.46 percent. Total exports, to the world as a whole, would increase by 0.02 percent to 0.04 percent, and total imports would increase by 0.02 percent to 0.05 percent.

Within the economic simulation, the most relevant and comprehensive measure of the impact that the quantifiable components of the FTA will have on the U.S. economy as a whole is the change in welfare. The change in welfare summarizes the impact of the

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<sup>11</sup> See T.W. Hertel, ed., *Global Trade Analysis: Modeling and Applications*, Cambridge: Cambridge University Press, 1997, and Betina V. Dimaranan and Robert A. McDougall, *Global Trade, Assistance, and Production: The GTAP 5 Data Base*, Center for Global Trade Analysis, Purdue University, 2002.

components of the agreement in a single value and in a manner consistent with economic theory, taking into account all of the income and expenditure changes of U.S. households. It thus summarizes the benefits to consumers of the trade agreement, as well as the effects on households in their roles as providers of labor, owners of capital, and taxpayers.<sup>12</sup> Virtually no effect on U.S. aggregate welfare was found as a result of the agreement with Singapore, ranging from a negative .002 percent to a negative .001 percent of GDP.

In the USITC study of the Chile agreement,<sup>13</sup> using essentially the same model as was used for Singapore, the Commission found that after full phase-in of tariff reductions under the U.S.-Chile FTA, U.S. exports to Chile would be about 18 percent to 52 percent higher, while U.S. imports from Chile would be about 6 percent to 14 percent higher.<sup>14</sup> Relative to total U.S. trade, these changes would be negligible, with total U.S. imports and exports increasing by 0.03 percent to 0.09 percent. At the sectoral level, the estimated impacts would be relatively large for those sectors with high initial tariffs. The impact of the tariff removals under the FTA on U.S. exports to Chile would be the largest for transportation equipment (ranging from 35 percent to 215 percent); textiles, apparel, and leather goods (29 percent to 101 percent); and coal, oil, gas and other minerals (26 percent to 72 percent). U.S. imports from Chile would increase by more than 100 percent (albeit from small bases) for dairy products (169 percent to 575 percent), textiles, apparel, and leather goods (77 percent to 372 percent), sugar (231 percent to 910 percent); and other crops (55 percent to 114 percent). The estimated impacts for U.S. imports would be driven largely by the removal of relatively high tariffs and tariff equivalents: dairy products (34.84 percent); textiles, apparel, and leather goods (13.95 percent); sugar (43.83 percent), and other crops (17.46 percent).

The full phase-in of tariff cuts under the U.S.-Chile FTA would have a minimal impact on U.S. production (no sector has an impact of more than 0.1 percent). The category of “vegetables, fruits, and nuts” is estimated to contract by 0.05 to 0.08 percent, “other crops,” is estimated to contract by 0.01 to 0.03 percent;<sup>15</sup> the textiles, apparel, and leather goods sector would shrink by less than 0.04 percent in the United States; other machinery and equipment would expand by 0.02 to 0.05 percent. With respect to services, the analysis in the report suggests that the FTA will have little impact on U.S. services trade (either exports or imports) with Chile because the United States and

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<sup>12</sup> This welfare measure is often referred to as the “equivalent variation.” The equivalent variation measures the welfare impact of a policy change in monetary terms and it is defined as the amount of income that would have to be given to (or taken away from) the economy *before* the policy change to leave the economy as well off as the economy would be *after* the policy change. A positive figure for equivalent variation implies that the policy change would improve economic welfare. (See H.R. Varian, *Intermediate Microeconomics: A Modern Approach*, Fifth ed. (New York: W. W. Norton & Company, 1999), pp. 252-253.

<sup>13</sup> USITC, *U.S.-Chile Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-5, June 2003.

<sup>14</sup> The relevant chapter in the report analyzes the U.S.-Chile FTA under alternative model assumptions and the FTA impacts are presented in ranges.

<sup>15</sup> The aggregate sector “other crops” covers all crop sectors excluding grains, sugar crops, vegetables, fruits, and nuts.

Chilean markets are relatively open and aggregate U.S. services trade with Chile is relatively small. The effect on welfare was calculated to be negligible to very small, ranging from a negative 0.0002 percent to a positive 0.003 percent of GDP.

The USITC study of the Australia agreement<sup>16</sup> models the complete liberalization of trade in all goods subject to liberalization under the FTA. The modeled results can be considered to be long-run effects of a fully implemented agreement after all adjustments related to the agreement have worked their way through the economy.<sup>17</sup> The model used in the assessment is based on the core model available in the GTAPinGAMS software developed by Rutherford and Paltsev.<sup>18</sup> The core model was modified to incorporate the updated 2005 base year, to compute and report those specific items mandated by the Trade Act of 2002, and to perform systematic sensitivity analysis over econometrically estimated trade elasticities.

As a result of the agreement, aggregate U.S. trade with the world is likely to increase as a result of improved market access for goods and services. Total U.S. imports increase by \$1.2 billion (0.07 percent) on a landed-duty paid basis and total U.S. exports increase by \$1.5 billion (0.13 percent) on an f.o.b. basis.<sup>19</sup>

U.S.-Australia trade volumes increase substantially more than aggregate global trade. U.S. imports from Australia increase by almost \$1.8 billion. The aggregate change in U.S. imports is less than \$1.2 billion, so that the simulated FTA diverts the difference of about \$700 million of trade away from other trading partners. That is, the increase in imports from Australia is offset partially by declines in imports from other sources. Similarly, the increase in Australia's imports from the U.S. (\$2.5 billion, landed duty paid) compares to a change in total U.S. exports (f.o.b.) of 1.5 billion. The model measures bilateral trade between the partners as imports, landed duty paid, and it measures U.S. exports on an f.o.b. basis, so the measures are not directly comparable; still, trade diversion in exports is also evident.

The greatest percentage increase in sectoral trade occurs in textiles, apparel, and leather products, with a 58 percent increase in imports from Australia, although this effect may be overstated.<sup>20</sup> The estimated increase in meat imports from Australia does not represent the magnitude of the net increase in U.S. imports of meat products because increased meat imports from Australia would be expected to be accompanied by declines in meat imports from other sources.

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<sup>16</sup> USITC, *U.S.-Australia Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, Investigation No. TA-2104-11, May 2004.

<sup>17</sup> If the product is a non-qualifying good under ROO, the model results may be overstated to the extent that the traded good is nonqualifying.

<sup>18</sup> Thomas F. Rutherford and Sergey V. Paltsev, *GTAPinGAMS and GTAP-EG: Global Datasets for Economic Research and Illustrative Models*, Department of Economics, University of Colorado Working Paper, Sept. 2000.

<sup>19</sup> Net capital flows are assumed not to change in the simulated FTA, requiring balance between the change in value of exports on an f.o.b. basis.

<sup>20</sup> A major factor in this increase is the elimination of tariffs on this aggregate sector, which in the USITC model are 7.76 percent. See chapter 5 for a discussion of a potential effect of adjusting duties on imports from Australia in light of survey data from CIE. A similar exercise performed in the Australian section 2104 study shows that, where the model shows a 57.6 percent increase in imports with elimination

On the U.S. export side, there are substantial increases in the motor vehicles and parts sector; other machinery and equipment; petroleum, coal, chemical, rubber, plastic products; and in the coal, oil, gas, and other minerals sector. While the model shows an increase of \$127 million in U.S. imports of vehicles and parts from Australia, U.S. exports of these goods to Australia increase by \$502 million. On the import side, most imports from Australia are diverted from other countries, leaving a net increase in imports of \$61 million. On the export side, however, the increase in exports of vehicles and parts to Australia is essentially all new trade; the increase in U.S. exports to the world would be \$501.3 million on an f.o.b. basis.

The Commission simulation of the U.S.-Australia FTA suggests that the welfare gain to the United States as a result of tariff liberalization is \$490.8 million. In other words, using 2005 as the base year, the FTA would provide consumers annual benefits worth \$490.8 million, when fully implemented.

### *Scollay and Gilbert (Singapore)*

Robert Scollay and John P. Gilbert analyze the economic impact of a number of potential free trade agreements in the Asia-Pacific region and various alternative scenarios, including the potential (at the time of the study) U.S.-Singapore agreement.<sup>21</sup> Scollay and Gilbert's analyses are based on the GTAP computable general equilibrium model and database, aggregated to include 22 countries or regions and 21 sectors. The model assumes perfect competition, constant returns to scale, and product differentiation by country of origin (i.e., the Armington assumption). Data are adjusted to incorporate full Uruguay Round and ASEAN Free Trade Area (AFTA) implementation.<sup>22</sup> However, data limitations do not allow substantive treatment of liberalization of services sectors. The authors report the welfare impact on the United States of the U.S.-Singapore FTA to be less than one hundredth of a percent of GDP.<sup>23</sup> They also report that, as a result of the agreement, U.S. exports are expected to increase by 0.17 percent in value terms, and U.S. imports

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20— *Continued*

of a 7.76 percent tariff, elimination of an adjusted fraction of that tariff (1.3 percent, or 17 percent of the 7.76 percent value, as calculated above) would thus cause imports from Australia to increase roughly by only 9.8 percent (17.0 percent of the 57.6 percent value), or about \$31 million. Small secondary effects would be observed in other sectors.

<sup>21</sup> Robert Scollay and John P. Gilbert, *New Regional Trading Arrangements in the Asia Pacific?* Washington, DC: Institute for International Economics, Policy Analyses in International Economics No. 63, May 2001, p. 62.

<sup>22</sup> AFTA includes Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam (found at <http://www.aseansec.org> on April 22, 2003). Uruguay Round implementation includes uniform reductions of 36 and 20 percent in agricultural export subsidies and output subsidies, respectively, as well as elimination of tariff equivalents of textile export quotas. The authors do not assume WTO accession by China or Taiwan, but do assume that reductions in protection by other economies are made available to these two economies on an MFN basis. AFTA implementation involves adjustments to tariffs of ASEAN economies. Scollay and Gilbert, p. 157.

<sup>23</sup> *Ibid.*, table 3.2a.

by 0.16 percent over what they would have been in the absence of the agreement.<sup>24</sup> They also assess the change in factor incomes for land, skilled labor, unskilled labor, capital, and natural resources. The only factor which experiences more than one half of one-hundredth of one-percent change from the base year is land, which is expected to have an increase of 0.01 percent in its relative return.<sup>25</sup>

### ***Brown, Deardorff, and Stern (Singapore and Chile), and Brown, Kiyota, and Stern (Australia)***

Drusilla K. Brown, Alan V. Deardorff, and Robert M. Stern (BDS) assess a variety of potential multilateral, regional, and bilateral trade agreements, including the Singapore and Chile agreements.<sup>26</sup> In a related paper, Brown, Kozo Kiyota, and Stern (BKS) look at the Australian agreement, among others.<sup>27</sup> In both papers, the authors use the Michigan Model, a computable general equilibrium model with 20 countries or regions and 18 sectors. In contrast to the GTAP model, the Michigan Model incorporates features of "New Trade Theory," including monopolistic competition, increasing returns to scale, and product variety,<sup>28</sup> which may contribute to the relatively large effects found in this analysis reported below.

In BDS, the authors incorporate full Uruguay Round implementation and ran four simulations: agricultural products liberalization, industrial products liberalization, services liberalization, and all of the above; however, only the fourth simulation is reported.<sup>29</sup> BDS also note that their computational analysis does not take into account potentially beneficial, but not easily quantifiable features of the various FTAs, such as the negotiation of specific rules for the use of capital control measures, or potentially protectionist components of FTAs, such as rules of origin.<sup>30</sup> They estimate that the welfare impact on the United States of the U.S.-Singapore FTA is 0.19 percent of GNP (\$18 billion).<sup>31</sup> The estimated welfare impact on the United States of a U.S.-Chile FTA is 0.05 percent of GNP (\$4.4 billion).<sup>32</sup>

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<sup>24</sup> Ibid., tables 3.3a and 3.4a; percent change from base.

<sup>25</sup> Ibid., table 3.5a.

<sup>26</sup> Drusilla K. Brown, Alan V. Deardorff, and Robert M. Stern, "Multilateral, Regional, and Bilateral Trade-Policy Options for the United States and Japan," Research Seminar in International Economics, Discussion Paper No. 490, available at <http://www.spp.umich.edu/rsie/workingpapers/wp.html>, Dec. 16, 2002.

<sup>27</sup> Drucilla K. Brown, Kozo Kiyota, and Robert Stern, "Computational Analysis of the U.S. Bilateral Free Trade Agreements with Central America, Australia, and Morocco," Feb. 8, 2004, found at Internet address <http://www.fordschool.umich.edu/rsie/seminar/BrownKiyotaStern.pdf>, retrieved Apr. 20, 2004.

<sup>28</sup> Ibid., p. 2.

<sup>29</sup> Uruguay Round implementation includes reductions in tariff and nontariff barriers. Ibid., pp. 5 and 10.

<sup>30</sup> Ibid., pp. 14-15.

<sup>31</sup> Ibid., table 7.

<sup>32</sup> Ibid., table 7.

In BKS, the authors estimate that the welfare effect of a U.S.-Australia FTA would result in a 0.20 percent increase in U.S. GNP, of which 0.17 percent comes from services liberalization.<sup>33</sup> Although the authors do not report the disaggregated effects of the various liberalization scenarios, key factors in their larger reported economywide welfare results, as compared to Scollay and Gilbert, include the estimates of services liberalization and the assumption of increasing returns to scale. BKS also assess the sectoral employment effects of the agreements. For the Singapore agreement, of the 18 sectors, only wearing apparel, trade and transport services, and other private services are expected to experience employment contraction in the United States, of -0.03 percent, -0.07 percent, and less than -0.01 percent, respectively. For the Chile agreement, of the 18 sectors, only 6 sectors experience employment contraction. Overall estimated employment effects of the Chile agreement are negligible as no sector experiences contraction or expansion greater than 0.03 percent of sector employment. The BKS estimates of the effects of a U.S.-Australia FTA on U.S. sectors are small, with all but one sector— leather products and footwear— experiencing changes of 0.15 percent or less in absolute value.

### *CIE and Gilbert (Australia)*

In addition to the BKS and the USITC studies, there are two other studies employing simulation analysis of a U.S.-Australia FTA that directly assess the agreement's impact on the United States. As with all the other simulation studies cited, these analyses were done before the U.S.-Australia FTA negotiations were final and their assessments are for a hypothetical FTA and not the actual FTA.<sup>34</sup> The first of these considered below, prepared for the Australian Department of Foreign Affairs and Trade (DFAT) by the Centre for International Economics (CIE) in 2001,<sup>35</sup> focused exclusively on a

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<sup>33</sup> BKS, p. 15. "The services barriers are based on financial data on average (price-cost) margins constructed initially by Hoekman (Bernard Hoekman, "The Next Round of Services Negotiations: Identifying Priorities and Options," *Federal Reserve Bank of St. Louis Review*, July/August 2000, vol. 82, pp. 31-47.) and adapted for modeling purposes in Drusilla K. Brown, Alan V. Deardorff, and Robert M. Stern, "CGE Modeling and Analysis of Multilateral and Regional Negotiating Options," in Robert M. Stern (ed.), *Issues and Options for U.S.-Japan Trade Policies* (Ann Arbor: University of Michigan Press, 2002).

<sup>34</sup> Section 2104(f)(3) requires the commission to review available economic assessments regarding the agreement, to provide a description of the analyses used and conclusions drawn in such literature, and to discuss areas of consensus and divergence among reviewed literature, including those of the Commission. The Commission notes that it conducted one study, classified at the request of the USTR, concerning a potential U.S.-Australia FTA. USITC, *U.S.-Australia Free Trade Agreement: Advice Concerning the Probable Economic Effect*, Investigation Nos. TA-13-24 and TA-2104-4, June 2003. Consequently, for the purpose of this report, the Commission's discussion consists only of external economic assessments and the Commission's present study.

<sup>35</sup> Leon Berkelmans, Lee Davis, Warwick McKibbin, and Andrew Stoeckel, "Economic Impacts of an Australia-United States Free Trade Area," Centre for International Economics, Canberra and Sydney, June 2001, found at Internet address [http://www.dfat.gov.au/publications/aus\\_us\\_fta/aus\\_us\\_fta.pdf](http://www.dfat.gov.au/publications/aus_us_fta/aus_us_fta.pdf), retrieved Apr. 20, 2004.

U.S.-Australia FTA. The second, by Gilbert in 2003, considered a number of potential U.S. FTAs with minimal analytical discussion.<sup>36</sup> Another study (the ACIL study in 2003) focused exclusively on a U.S.-Australia FTA, but only reported effects for Australia.<sup>37</sup> In yet another study, in late April 2004, CIE produced an update that focused exclusively on a U.S.-Australia FTA, but also only reported effects only for Australia, except for three instances where effects on the United States are reported or can be inferred.<sup>38</sup>

In the 2001 CIE study, Berkelmans, et al., analyze the economic impacts of a hypothetical United States-Australia FTA using two models—the APG-Cubed model and the Global Trade Analysis Project (GTAP) model.<sup>39</sup> The APG-Cubed model combines aspects of computable general equilibrium models and dynamic intertemporal macroeconomic models, integrating both financial and goods markets in a dynamic framework. The APG-Cubed model uses the GTAP (version 4, 1995 base year) database, aggregated to include 18 countries/regions and 6 sectors. The authors do not specify assumptions about type of competition or returns to scale, but do specify that product differentiation by country of origin (the Armington assumption) is assumed. The authors simulate a 5-year staged removal of tariff barriers and selected nontariff barriers (NTBs) starting in 2000 as well as subsequent adjustments in the modeled economies to 2020. The authors do not specify any adjustments (such as provision for Uruguay Round liberalizations) they may have made to the data from 1995 (the base year for the GTAP version 4 database) to 2000. The services sector is “represented as a domestic cost reduction” of 0.35 percent for Australia and 0.02 percent for the United States, whereas the usual practice in CGE modeling is to remove a price wedge on imports of services.<sup>40</sup> Modeling consists of a simulated dynamic baseline (which starts in 2000) and comparisons of the FTA scenario to the baseline. The authors present welfare impacts in two ways. First, the authors report the welfare impact on the United States to be 0.02 percent higher real GDP relative to the (dynamic) baseline in 2006, when trade barriers are completely removed in their

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<sup>36</sup> John Gilbert, “CGE Simulation of U.S. Bilateral Free Trade Agreements,” Background Paper for the *Free Trade Agreements and U.S. Trade Policy* conference, Institute for International Economics, Washington, DC May 7-8, 2003. FTA partners considered include the CER (Australia and New Zealand), ASEAN, Chile, East Asia (Korea and Taiwan), and some African countries.

<sup>37</sup> ACIL Consulting, “A Bridge Too Far? An Australian Agricultural Perspective on the Australia/United States Free Trade Area Idea,” Report of the Rural Industries Research and Development Corporation, Canberra, Feb. 2003.

<sup>38</sup> CIE, “Economic Analysis of AUSFTA: Impact of the Bilateral Free Trade Agreement with the United States,” Centre for International Economics, Canberra and Sydney, Apr. 2004.

<sup>39</sup> The APG-Cubed model is a product of the McKibbin Software Group (MSG), Pty. Ltd. (Australia). “The Asia Pacific G-Cubed multicountry model is based on the theoretical approach taken in the G-Cubed model but with a focus on a country and sectoral disaggregation relevant for the Asia Pacific region.” The G-Cubed model “has been constructed to contribute to the current policy debate on environmental policy and international trade with a focus on global warming policies, but it has many features that will make it useful for answering a range of issues in environmental regulation, microeconomic and macroeconomic policy questions.” From the MSG website, found at Internet address <http://www.msgpl.com.au/wmhp/home1.htm>, retrieved Mar. 26, 2004. As indicated in ch. 3, GTAP is the modeling framework developed as part of the Global Trade Analysis Project at Purdue University.

<sup>40</sup> The authors do not explain exactly how the “domestic cost reduction” was modeled.

simulations. Second, they find real consumption (their preferred welfare measure) to be 0.016 percent higher relative to the baseline in 2006. Total U.S. exports are estimated to be 0.1 percent higher relative to the baseline in 2006, and total U.S. imports are estimated to be 0.04 percent higher relative to the baseline in 2006. Sectoral effects are generally not reported.

The second of the analyses of a U.S.-Australia FTA in the 2001 CIE study is a static analysis using the GTAP CGE model and database (version 4). In the analysis, the model is aggregated to include 16 countries/regions and 24 sectors, allowing for more detailed sectoral analysis than is possible with the APG-Cubed model. The model assumes perfect competition, constant returns to scale, and product differentiation by country of origin. Version 4 of the GTAP database, based on 1995 data, was "updated to 1998-99 so as to reflect changes that have occurred since 1995."<sup>41</sup> The three service sectors included in the GTAP simulations (utilities and other services, trade and transport, and financial, business, and recreation services) appear to be accounted for as a domestic cost reduction as in their APG-Cubed simulations. The authors report that they "doubled the Armington elasticities found in the standard GTAP model."<sup>42</sup> In a static analysis, the authors simulate a one-time removal of tariffs and selected NTBs. They report the welfare effect on the United States of a U.S.-Australia FTA to be 0.02 percent higher GDP. They report estimates of U.S. export prices being 0.03 percent lower and export volume being 0.10 percent higher, and of U.S. import prices being 0.05 percent lower and import volume being 0.12 percent higher.

Estimated effects from the GTAP analysis of the 2001 CIE study of the effects of a U.S.-Australia FTA on U.S. sectors are small, with only one sector, sugar, experiencing a reduction in output of over 1.0 percent.<sup>43</sup> The sector with the largest estimated increase in output is motor vehicles and parts. Estimated effects on U.S. imports from or exports to Australia are much larger in percentage terms, with a few sectors estimated to increase by over 100 percent, most likely because they are measured from small bases.

CIE revised its analysis in late April, 2004, taking the actual negotiated agreement into account, updating the database to GTAP version 5, and incorporating additional effects not quantified in its 2001 report. Specifically, the dynamic analysis in the 2004 CIE study includes estimates of gains from a reduction in the equity risk premium in Australia for investment and gains from dynamic productivity improvement associated with trade liberalization, in addition to the gains in allocative efficiency from trade

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<sup>41</sup> Berkelmans et al. (CIE), 2001, p. 32.

<sup>42</sup> CIE, "Australia-United States Free Trade Agreement: Comments on the ACIL report, Centre for International Economics," Canberra and Sydney, Mar. 2003, p. 5. Further, the authors say "This was done on the basis of work conducted by other researchers—including the developers of the GTAP model itself—which suggested that the Armington elasticities used in the standard GTAP model are too low and need to be doubled."

<sup>43</sup> Note that the actual FTA excludes liberalization of sugar.



liberalization that are usually estimated in CGE analyses. The updated study includes extensive reports of estimated effects of the FTA on Australia, including results of dynamic analysis using the APG-Cubed model and static, more disaggregated analysis using the GTAP model. The only reported estimates of effects on the United States are for GDP and GNP under the dynamic analysis, and U.S. national income and trade with Australia under the static analysis. The study reports that “[r]eal GDP and real GNP in the U.S. will be 0.013 and 0.014 percent higher than the baseline level ten years out” under the dynamic simulations.<sup>44</sup> U.S. net national income is estimated to be higher by \$432 million,<sup>45</sup> U.S. imports from Australia higher by \$3.3 billion,<sup>46</sup> and U.S. exports to Australia higher by \$6.5 billion<sup>47</sup> under the static simulations.

Gilbert, in a background paper prepared for a conference in May 2003 (mentioned above), presents CGE simulations of a number of potential U.S. bilateral free trade agreements.<sup>48</sup> Gilbert’s analyses are based on the GTAP CGE model and database (version 5), aggregated to include 22 countries/regions and 19 sectors. The model assumes perfect competition, constant returns to scale, and product differentiation by country of origin (i.e., the Armington assumption). The tariffs used are those in place in the base year, 1997. All import tariffs are assumed to be reduced to zero in the participating economies on a preferential basis in a static simulation. Although reporting is organized in terms of groupings of countries with which the United States might form FTAs (for example, ASEAN, Australia-New Zealand FTA) results are reported in terms of bilateral FTAs between the United States and individual countries in those groupings. Gilbert reports the welfare impact (in terms of equivalent variation) on the United States of a U.S.-Australia FTA to be an increase equivalent to 0.01 percent of GDP.<sup>49</sup> This is essentially the same value found in the USITC’s section 2104 analysis of the Australian agreement, a 0.01 percent increase in welfare. Gilbert also reports estimates of the value of total U.S. exports to be 0.15 percent higher and the value of total U.S. imports to be 0.14 percent higher.<sup>50</sup>

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<sup>44</sup> CIE, *Economic Analysis of AUSFTA*, p. 80.

<sup>45</sup> CIE, 2004, p. 83.

<sup>46</sup> CIE, 2004, p. 89. Reported as change in Australian exports to the United States. Changes in trade flows are also reported by sector.

<sup>47</sup> CIE, 2004, p. 90. Reported as change in Australian imports from the United States. Changes in trade flows are also reported by sector.

<sup>48</sup> John Gilbert, “CGE Simulation of U.S. Bilateral Free Trade Agreements,” Background Paper for the Free Trade Agreements and U.S. Trade Policy conference, Institute for International Economics, Washington, DC, May 7-8, 2003.

<sup>49</sup> Gilbert, table 3.1a, p. 30.

<sup>50</sup> *Ibid.*



# CHAPTER 4

## Sectoral Effects

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The discussion in this chapter provides a qualitative assessment of the impact of increased market access on selected sectors of the U.S. economy. Sectors were chosen based on the extent to which they are affected by the three implemented FTAs (Chile, Singapore, and Australia), as discussed below. The sectors are: agriculture–fruit, macadamia nuts, grains, meat; textiles, apparel, and footwear; pharmaceuticals; and services. In addition, as in the Potential Economywide and Selected Sectoral Effects (section 2104) studies of the individual FTAs previously prepared by the Commission, the assessments in this chapter are based on the industry knowledge and expertise of USITC industry analysts. They also have relied on previous USITC investigations regarding FTAs, recent trade data, industry sources, and the advisory committee reports on the three FTAs, as submitted to the USTR.

In general, the three trade agreements are expected to have small effects on U.S. trade in the covered products. Some increases in imports of fruits and processed (but not raw) macadamias are expected, as well as increases in imports of meat from Australia and textiles and apparel from Chile. Effects on U.S. exports are expected to be negligible or very small. As a direct result of the trade agreements, trade in services is not expected to show measurable change.

The analyses in chapters 4 and 5 of this report, while related, are not directly comparable. In some cases, commodities analyzed in this chapter correspond to sectors treated in the simulation model described in chapter 5, although the correspondence is not precise. For example, fresh and processed fruit discussed here corresponds to part of the (fresh) fruits, vegetables, and nuts sector of chapter 5, and to part of the processed food sector. Macadamia nuts, discussed here, constitute a very small part of the fruits, vegetables, and nuts sector in chapter 5. Where such correspondence exists, results from chapter 5 will be referred to in this chapter. Because this chapter and the following one differ in their analytical approaches and sectoral coverage, however, some difference in estimated outcomes will be evident. Table 4-1 provides an indication of which U.S. industry sectors are affected by trade with which FTA partner. For example, the United States imports fruit from both Australia and Chile, but not significantly from Singapore.

**Table 4-1**  
**FTA effects on U.S. trade flows, by sector and by FTA partner**

	Australia	Chile	Singapore
Fruit .....	✓	✓	
Macadamia nuts .....	✓		
Grains .....	✓	✓	
Meat .....	✓		
Textiles, apparel, footwear ....		✓	
Pharmaceuticals .....	✓	✓	✓
Services .....	✓	✓	✓

Source: USITC compilation.

## Fresh and Processed Fruit<sup>1</sup>

### *U.S. Industry*

The United States is a major world producer, trader, and consumer of fresh and processed fruit, which comprises a broad range of products, including fresh, frozen, and processed fruits and juices. At the farm level, the value of U.S. fruit production for all uses totaled \$10.2 billion in 2003.<sup>2</sup> Leading fresh fruit items produced in the United States are grapes (25 percent of the total value in 2002),<sup>3</sup> citrus (22 percent),<sup>4</sup> apples (17 percent), and strawberries (13 percent). In 2002, there were 113,000 farms in the United States with land in orchard crops; by state, California, Florida, Texas, Washington, and Georgia had the highest number of farms.<sup>5</sup> The United States possesses a relatively large amount of quality land, a variety of climates, excellent infrastructure, leading technology, and a large domestic market for fresh and processed fruit. However, U.S. producers also face high costs, mainly related to labor expenses, land values, and environmental restrictions. In 2002, the United States ranked fifth in global fruit production, by volume, or 6 percent of the total quantity grown, following China, the EU, India, and Brazil.<sup>6</sup>

<sup>1</sup> This sector includes products classified in HTS chapter 8 (excluding nuts) and chapter 20 (excluding nuts and processed vegetables). Statistics presented are for the latest available years.

<sup>2</sup> USDA, National Agricultural Statistics Service, Crop Values 2003 Summary Feb. 2004, found at <http://usda.mannlib.cornell.edu/reports/nassr/price/zcv-bb/cpv10204.pdf>. Includes citrus and noncitrus fruits, but excludes olives (which are classified in HTS chapter 7).

<sup>3</sup> The bulk of grape production is utilized for wine production.

<sup>4</sup> Most citrus fruit is processed into juice.

<sup>5</sup> USDA, 2002 Census of Agriculture.

<sup>6</sup> FAOSTAT data, last updated Feb. 2004. Data represent primary product forms before processing. Aggregate U.S. fruit production dropped 4 percent to 30.3 million metric tons between 1998 and 2002.

The processing sector is an important component of the overall U.S. fruit industry. By value, about one-half of all fruit produced in the United States is used in processing.<sup>7</sup> The United States is a leading world producer of processed fruit, particularly of prepared and preserved deciduous fruits (such as peaches, pears, and apricots) and fruit mixtures. In 2002, the total value of shipments of U.S.-produced canned fruit totaled more than \$2.2 billion.<sup>8</sup> Processed products include canned peaches and peach fruit mixtures (34 percent and 50 percent of global production in 2003, respectively),<sup>9</sup> canned pears (54 percent),<sup>10</sup> and canned and processed apricot products (about 35 percent).<sup>11</sup> Recently, according to a U.S. industry source, U.S. capacity to produce processed fruit has decreased in response to rising imports, mostly from EU member Greece and Spain, and to a static domestic market for processed fruit as consumers shift to fresh fruit.<sup>12</sup> In 2002, there were about 200 fruit-processing plants in the United States, with most facilities in California, Washington, and Michigan.<sup>13</sup>

The United States is a major world exporter of fresh fruit, including cherries (26 percent of world trade in 2003), cranberries (25 percent), plums (20 percent), oranges and grapefruit (19 percent), raspberries (18 percent), and grapes (16 percent).<sup>14</sup> The United States also accounts for a large share of world trade in processed fruit, including strawberries (13 percent of world exports in 2003), cherries (11 percent), and peaches (7 percent).<sup>15</sup> U.S. exports of fresh and processed fruit products, valued at \$4.2 billion in 2003, continue to be outpaced by U.S. imports, valued at \$5.5 billion, resulting in a trade deficit of \$1.3 billion in 2003.<sup>16</sup>

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<sup>7</sup> USDA, Economic Research Service, *Fruit and Tree Nuts Outlook* (Jan. 2003). Varies by commodity. The bulk of grape production is used to produce wine and juice; most citrus fruit is processed into juice.

<sup>8</sup> Commission estimates based on information obtained from the U.S. canned peach, pear and apricot industries.

<sup>9</sup> Commission staff communication with industry representative, California Cling Peach Board, Jan. 7, 2005.

<sup>10</sup> Commission staff communication with industry representative, Apricot Producers of California, Jan. 11, 2005.

<sup>11</sup> Commission staff communication with industry representative, Canning Pear Association, Jan. 7, 2005.

<sup>12</sup> Jim Melban, General Manager, California Cling Peach Board, submission to the Commission, *U.S.-Thailand Free Trade Agreement, Advice Concerning the Probable Economic Effect of Providing Duty-free Treatment for Imports*, Inv. Nos. TA-131-29 and TA-2104-12, Apr. 19, 2004.

<sup>13</sup> U.S. Department of Commerce, U.S. Census Bureau, *Fruit and Vegetable Canning*, 2002. EC02-311-311421, Sept. 2004. Data for NAICS 3114211, Canned fruits, except baby food.

<sup>14</sup> FAS' Global Agricultural Trade System using data from the United Nations Statistical Office.

<sup>15</sup> *Ibid.*

<sup>16</sup> Commission estimates based on official statistics of the U.S. Department of Commerce.

## *FTA Partner Industries*

Compared to the United States, the fruit industries of Chile and Australia are relatively small. Even relative to Chile and Australia, Singapore is a small fruit producer or exporter. Between 1998 and 2002, Australia's fruit production grew by 25 percent, while production in Chile grew by 8 percent.<sup>17</sup> However, together, production in these countries now accounts for less than 2 percent of world fruit production.<sup>18</sup>

The fruit industries in Chile and Australia produce many of the same fresh and processed fruits produced in the United States. Both are net exporters of fresh and processed fruit. Among fresh fruit-growing nations, Chile is a major world exporter of grapes (22 percent of world trade in 2001), plums (20 percent), apples (12 percent), and pears, peaches, and raspberries (each with 8 percent), among others.<sup>19</sup> Australia is also an important fruit producer, exporting fresh plums (3 percent of world trade in 2003), oranges (2 percent) and grapes (2 percent).<sup>20</sup> The United States ranks as Australia's fourth-largest export destination for fresh oranges. Although Australian navel oranges do not compete directly with U.S. navel oranges,<sup>21</sup> they do compete with U.S. fresh Valencia oranges.

Available information on canned fruit production indicates that fruit processing is an important component of the fruit industries in Australia and Chile. Australia is a major producer and exporter of canned deciduous fruit. Australia produces canned pears (13 percent of world production in 2003),<sup>22</sup> peaches (4 percent),<sup>23</sup> mixtures, and apricots (about 7 percent each).<sup>24</sup> It also accounts for a large share of world exports of fruit mixtures (17 percent) and canned pears (14 percent).<sup>25</sup> The Australian processed fruit industry is highly concentrated, with the largest fruit processing company accounting for about 90 percent of national output.<sup>26</sup> Chile is also an important fruit processor, accounting for about 6 percent of world canned peach production in

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<sup>17</sup> Ibid.

<sup>18</sup> FAOSTAT data, last updated Feb. 2004. Data represent primary product forms before processing.

<sup>19</sup> FAS Global Agricultural Trade System using data from the United Nations Statistical Office. Data are not available for Chile for 2002 and 2003.

<sup>20</sup> Ibid.

<sup>21</sup> The marketing season for Australian navel oranges is from July through August, whereas U.S. navel oranges are marketed from November to April.

<sup>22</sup> USDA, FAS production, supply, and distribution data, available at <http://www.fas.usda.gov/psd>, supplemented by information from Jay Grandy, Canning Pear Association (Jan. 7, 2005).

<sup>23</sup> USDA, FAS production, supply, and distribution data, available at <http://www.fas.usda.gov/psd>.

<sup>24</sup> Commission estimates based on USDA, FAS, and from the 6th World Canned Deciduous Fruit Conference. Data are for 2001 or 2002.

<sup>25</sup> Ibid.

<sup>26</sup> FAS, USDA, Australia Canned Deciduous Fruit Annual 2002, GAIN Report #AS2030, Oct. 1, 2002.

2003,<sup>27</sup> and is a major producer of canned fruit mixtures and prepared or preserved grapes. Both Chile and Australia are striving to become more competitive in export markets by lowering costs and developing innovative packaging, such as plastic cups instead of traditional metal cans.<sup>28</sup>

Fruit production in Chile and Australia is largely counter-seasonal to that of the United States, and is marketed at a time when U.S.-produced supplies are low.<sup>29</sup> Another favorable competitive factor in these countries is generally lower production costs compared to the United States. For both countries, disadvantages include relatively small domestic markets, their reliance on exports, and long distances to the U.S. market.

## ***Potential Impact on U.S. Trade Flows***

### **U.S. Imports**

The FTAs with Chile and Australia will likely contribute to a continued and measurable increase in U.S. imports of fresh and processed fruit.<sup>30</sup> Fruit production in these countries competes with certain fresh and processed fruit that are also produced in the United States and, in many cases, is lower cost but of comparable quality. These factors have contributed to rapid growth in U.S. imports of fresh and processed fruit from these countries. Duty-free access to the U.S. market under the covered FTAs could accelerate these trends for both fresh and processed fruit. As mentioned previously, Singapore is not a significant producer or exporter of fruit.

In 2004, U.S. imports of fresh and processed fruit from Chile, Australia, and Singapore reached more than \$1.0 billion, compared to U.S. exports of \$116 million.<sup>31</sup> The United States is a net importer of fresh and processed fruit from Chile. Following the implementation of the U.S.-Chile FTA in 2004, which resulted in an immediate tariff elimination for most fruit products (except canned deciduous fruits), U.S. imports of fresh and processed fruits from Chile have increased significantly, either continuing or accelerating steady growth observed in recent years (table 4-2). Within the fresh and processed fruit category, overall increases in U.S. imports from Chile in 2004 of many types of fresh and preserved berries, processed apple products, dried fruits, and jams

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<sup>27</sup> USDA, FAS production, supply, and distribution data, available at <http://www.fas.usda.gov/psd>.

<sup>28</sup> S.P.C. Limited Annual Report 2001; S.P.C. Limited, Richard Hudgins, California Cling Peach Board, Jan. 7, 2005.

<sup>29</sup> U.S. fruit production is concentrated during March-August, whereas fruit production from most of these countries is mainly during August-January.

<sup>30</sup> The California Cling Peach Board has submitted a written statement regarding the FTAs' effects on its members. The summary of the submission is found in App. C.

<sup>31</sup> Commission estimates based on official statistics of the U.S. Department of Commerce.

**Table 4-2**  
**Value of U.S. bilateral trade in fruit, by FTA partner, 2000-04**

*(1,000 dollars)*

	2000	2001	2002	2003	2004
<b>Chile</b>					
U.S. imports .....	685,359	689,033	827,661	865,055	1,008,895
U.S. exports .....	709	1,412	1,119	1,197	1,183
<b>Singapore</b>					
U.S. imports .....	1,769	1,979	1,545	1,790	917
U.S. exports .....	45,593	45,178	49,415	60,184	50,214
<b>Australia</b>					
U.S. imports .....	39,855	31,186	34,536	32,366	36,003
U.S. exports .....	27,034	29,731	35,698	46,258	64,809

Source: Compiled from official statistics of the U.S. Department of Commerce.

rose by more than 50 percent in volume compared with 2003. Similarly, imports of fresh apples, grapes, lemons, peaches and most fresh and preserved blueberries, raspberries and strawberries increased more than 20 percent.<sup>32</sup> Volume imports of fresh pears and plums from Chile rose by more than 10 percent.

Under the U.S.-Chile FTA, canned peaches, nectarines, pears, apricots, and fruit mixtures are subject to a 12-year tariff reduction,<sup>33</sup> along with agricultural safeguard provisions.<sup>34</sup> Tariff reductions for most processed fruits have not yet begun under the FTA. However, U.S. volume imports of processed fruit from Chile have continued to increase, particularly for canned peaches and fruit mixtures. This increase is mostly attributable to ongoing development and market expansion of Chile's fruit industry, as well as year-to-year fluctuations and displacement among global fruit industry suppliers. Current U.S. tariffs for processed fruit from Chile are either duty-free or have tariffs ranging from 4.5 percent to 29.8 percent. Once the phase-in of tariff reductions for processed fruit begins in year 5 of the agreement, processed fruit imports from Chile are likely to increase further.

In recent years U.S. fruit imports from Australia have been increasing, particularly imports of oranges, lemons, and tangerines, and also preserved fruits and jams.<sup>35</sup> Under the U.S.-Australia FTA, tariffs for certain processed and dried fruits will be reduced over the next 4 to 18 years. As these tariffs are reduced from their current levels, U.S. imports of these products will likely increase further.

<sup>32</sup> Ibid.

<sup>33</sup> Under the tariff formula, there is no change in the tariff for the first 4 years. During the next four year period, tariffs are reduced by one-third, followed by a two-thirds reduction over the last 4-year period. An 8-year tariff reduction period applies for certain dried fruits.

<sup>34</sup> The safeguards allow the imposition of higher specified rates when a specified trigger price is exceeded. The provisions cover canned peaches, pears, apricots, and fruit mixtures, and also most citrus juice.

<sup>35</sup> Commission estimates based on official statistics of the U.S. Department of Commerce.



The model simulation results reported in chapter 5 show increases in U.S. imports of all fresh fruits, vegetables, and nuts from the partner countries to the FTA. The model results in tables 5-5, 5-6, and 5-7 indicate increases of 7.52 percent by value from Australia, 2.12 percent from Chile, and 2.17 percent from Singapore<sup>36</sup> due to the agreements. The sector used in the model simulation differs from the sector described in the analysis in this section in that the model sector includes additional fresh produce (vegetables and nuts) and does not include processed fruit.<sup>37</sup> The average tariffs in the model sector are quite low (between 1 percent and 3 percent) while the actual U.S. tariff on certain processed fruit imports (not included in the model sector) is almost 30 percent. Therefore, while the model simulation shows a modest increase in imports from Chile as a result of the FTA, processed fruit shipments from Chile are actually likely to increase at a higher rate.

### U.S. Exports

The FTAs are unlikely to result in a measurable increase in U.S. fresh and processed fruit exports to Chile, Singapore, and Australia. Both Chile and Australia have competitive domestic supplies and small domestic markets. Singapore lacks significant production of its own, but U.S. fruit exports to Singapore will be limited because of its small domestic market and distance from the United States. In addition, the existing import duties for most fruit products in these countries are low. Therefore, these countries represent limited market opportunities for U.S. fruit exports. Generally, U.S. fruit exports are destined for larger markets, such as Canada, the EU, Japan, and Mexico. Owing to the lack of concordance between the model sector and the fruit sector described in this section, the USITC simulation model results reported in chapter 5 differ from the above analysis. Model results show an estimated increase in the value of U.S. exports of all fresh fruits and fresh vegetables to Chile of 16.10 percent, to Australia of 2.56 percent, and to Singapore of 0.14 percent, above baseline trade levels. These percentage increases are from a very small base of U.S. exports in this category (fresh fruit, vegetables, and nuts) and would most likely be the result of increases in exports of vegetables and nuts rather than fresh fruit because of the relatively low import duties that U.S. fresh fruit exports previously faced.

The continued presence of various non-tariff barriers, such as restrictive sanitary and phytosanitary measures (SPS),<sup>38</sup> may hamper any potential impact of tariff reductions in the three FTAs and could continue to limit U.S. exports of certain fresh fruit. Australia has historically limited U.S. agricultural products because of SPS measures. U.S. fruit exporters have reported concerns ranging from slow handling and inspection and customs processing to burdensome information tracking requirements, an expansive

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<sup>36</sup> Singapore is not a significant producer or exporter of fruits and vegetables. This increase in U.S. imports is from a very small base.

<sup>37</sup> Processed fruits and vegetables are aggregated in the model with "other foods," which, as a group, also shows increased imports.

<sup>38</sup> SPS regulations are measures designed to protect human, animal, and plant health.

quarantine policy for inbound fresh fruit shipments, bans and restrictions for certain fresh fruit due to phytosanitary and pest concerns, and a lack of in-country fumigation options for imported product.<sup>39</sup> Affected products have included citrus, table grapes, apples, and stone fruit.<sup>40</sup> In Chile, there have been some reported cases where cleared U.S. citrus exports have been rejected at the marketplace because of allegations that the fruit was diseased, without verifiable evidence of any SPS violations.<sup>41</sup>

## Macadamia Nuts<sup>42</sup>

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### *U.S. Industry*

The United States is the second-largest producer of macadamia nuts in the world, accounting for approximately 23 percent of global macadamia nut production during 2003-04.<sup>43</sup> The U.S. macadamia nut industry is concentrated in Hawaii, where the 2003-04 harvest yielded 53 million pounds of nuts (wet in-shell basis), valued at \$32.3 million.<sup>44</sup> Most of Hawaii's macadamia acreage is mature; therefore future production is not expected to increase significantly. U.S. macadamia nut production has fallen over the last 5 years due to adverse weather, reduced acreage being harvested and fewer plantings, and reduced cultural care (i.e., pruning and fertilization) due to low returns.<sup>45</sup>

Hawaiian costs of production such as labor, materials, and land are generally higher than costs in other countries, and increasing lower-priced, and often lower quality, imports have put downward pressure on prices received by Hawaiian growers. The U.S. industry has invested heavily in the promotion of its high-quality macadamia nuts,

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<sup>39</sup> USDA, FAS, "U.S.-Australia Horticultural Trade" (Apr. 2004). Includes peaches, nectarines, plums, and prunes.

<sup>40</sup> USDA, FAS, "FAS Quarterly Reference Guide to World Horticulture Trade" (FHORT 4-03, Mar. 2004); Comments submitted to the Commission by the California Table Grape Commission (Mar. 1999) and the Sunkist Growers (Sept. 3, 2004).

<sup>41</sup> Commission staff communication with industry representatives, Sept. 3, 2004.

<sup>42</sup> In-shell and shelled macadamia nuts are classified in the 8-digit HTS subheadings 0802.90.80 and 0802.90.98, respectively, while prepared or preserved macadamia nuts are classified in the 8-digit HTS subheading 2008.19.90.

<sup>43</sup> USDA FAS, *Macadamia Situation and Outlook in Selected Countries*, Apr. 2004, found at <http://www.fas.usda.gov/hfp/circular/2004/04-02-04.pdf>, retrieved Mar. 30, 2004.

<sup>44</sup> Hawaii Department of Agriculture, *Hawaii Macadamia Nuts: Final Season Estimates*, National Agricultural Statistics Service, July 12, 2004.

<sup>45</sup> David Rietow, President, Hawaiian Macadamia Nut Association, Apr. 15, 2004. U.S. industry representatives contend that lower priced imports have driven down U.S. prices for macadamia nuts.

linking itself to the tourist industry in developing a unique position for Hawaiian macadamia nuts. National brand and private label producers of snack nut mixes, the fastest growing segment of the U.S. nut market, have become very active in the market for macadamia nuts and generally buy lower priced, imported kernels.<sup>46</sup>

The United States is the world's largest consumer of macadamia nuts.<sup>47</sup> Rising consumer income and awareness of the health benefits of certain nuts continue to spur U.S. consumer demand for nuts in general and macadamia nuts in particular. U.S. food processors have increasingly turned to imported bulk kernels to supplement their U.S. purchases and assure a steady year-round supply. While other major macadamia-nut-producing countries exported over 75 percent of their production in 2003-04, the United States exported only 20 percent of its domestic production in the same period.<sup>48</sup>

### ***FTA Partner Industries***

Of the countries with which the United States has entered into FTAs since 2002, only Australia produces macadamia nuts commercially (see table 4-3). Australia is currently the world's largest producer of macadamia nuts, which are native to the continent. In crop-year (CY) 2003-04, Australian production of macadamia nuts was 65.5 million pounds, valued at \$59.8 million. Australian production is expected to increase steadily with more trees coming into production, and is forecast to reach 110 million to 150 million pounds by 2010.<sup>49</sup> In 2003, Australia accounted for 26 percent of total U.S. imports of macadamia nuts.

### ***Potential Impact on U.S. Trade Flows***

#### **U.S. Imports**

The impact of the U.S.-Australia FTA on U.S. imports of macadamia nuts depends on which specific macadamia product is considered. The U.S. general tariff rates on raw shelled and in-shell macadamia nuts (0.3 percent and 0.6 percent AVE, respectively) are low, and therefore their immediate removal is not likely to contribute to a measurable rise in U.S. imports. However, the agreement will likely result in a

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<sup>46</sup> Commission staff communication with U.S. industry representatives, Apr. 1, 2003.

<sup>47</sup> USDA FAS, *Situation and Outlook for Macadamia Nuts*, U.S. Department of Agriculture, Foreign Agricultural Service, Apr. 2002, found at <http://www.fas.usda.gov/http/circular/2002/02-04/Mac.htm>, retrieved Mar. 30, 2004.

<sup>48</sup> USDA FAS, *Macadamia Situation and Outlook in Selected Countries*, U.S. Department of Agriculture, Foreign Agricultural Service, Apr. 2004.

<sup>49</sup> Brad Hinton, *The Australian Macadamia Industry*, Industry Note 062-2002, Rabobank International, June 2002, p. 2.

**Table 4-3**  
**Value of U.S. bilateral trade in macadamia nuts, by FTA partner, 2000-04**  
*(1,000 dollars)*

	2000	2001	2002	2003	2004
<b>Chile</b>					
U.S. imports .....	0	0	0	0	0
U.S. exports .....	12	38	19	65	0
<b>Singapore</b>					
U.S. imports .....	0	0	7	0	0
U.S. exports .....	244	340	82	859	91
<b>Australia</b>					
U.S. imports .....	19,747	12,966	8,901	13,781	27,997
U.S. exports .....	0	0	444	535	115

Source: Compiled from official statistics of the U.S. Department of Commerce.

measurable increase in U.S. imports of prepared/preserved macadamia nuts from Australia because the 17.9 percent ad valorem tariff on these nuts (which will be phased out for Australia in equal annual stages through year 4 of the agreement) has generally been prohibitive. The tariff has effectively prevented exports to the United States because roasting can be done in the United States as competitively as in Australia.<sup>50</sup> The removal of the duty allows Australian processors to expand prepared/preserved production and take advantage of economies of scale. Reportedly, some Australian processors have already made plans to expand existing capacity in anticipation of production growth.<sup>51</sup>

Owing to new plantings, the Australian industry has the potential to experience a threefold increase in its crop in the next 5 years. This will likely result in increased Australian exports of both raw and prepared or preserved macadamia nuts. At the same time, Australian exporters may view the decreased production in Hawaii (due to uncompetitive production costs) as an opportunity to sell more product into the United States.<sup>52</sup> In light of the fact that U.S. production does not currently meet U.S. demand, U.S. purchasers have been willing to accept imported nuts, even at lower quality.<sup>53</sup>

### U.S. Exports

The United States is not an important exporter of macadamia nuts. However, given that under the terms of the free trade agreement, duties on U.S. exports of prepared/preserved macadamia nuts to Australia will be immediately reduced from 5 percent to free, U.S. exports of these nuts may increase, though not measurably. U.S.

<sup>50</sup> The costs involved in growing macadamia nuts do not differ significantly between the two countries.

<sup>51</sup> Brad Hinton, *The Australian Macadamia Industry*, p. 6.

<sup>52</sup> Hinton, *The Australian Macadamia Industry*, p. 2.

<sup>53</sup> Although high quality kernels are produced in Australia, the overall quality of Australian nuts has been described as inconsistent. Commission staff communication with U.S. industry representatives, Apr. 1, 2003, and Hinton, p. 6.

exports of all forms of macadamia nuts to Singapore were not subject to duties prior to the FTA and are therefore not likely to increase. The FTA with Chile reduces duties on all forms of U.S. macadamia nuts from 6 percent to free. Although U.S. exports of the nuts to Chile may increase as a result of duty elimination, the absolute volume increase is not likely to be measurable considering the very small volume of current U.S. exports to Chile.

## Grain (Wheat, Corn, and Rice)<sup>54</sup>

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### *U.S. Industry*

The United States, with its \$12.6 billion of exports in 2004, has been the leading grain exporter in the world, accounting for about one-third of world wheat exports, two-thirds of world corn exports, and one-eighth of world rice exports in 2003/04.<sup>55</sup> The value of U.S. grain production at the farm level was about \$29 billion in 2003, with an estimated 220,000 grain farmers producing wheat, corn, sorghum, barley and rice.<sup>56</sup> The U.S. milled rice industry shipped \$1.8 billion in 2002, and employed 3,800 persons domestically.<sup>57</sup>

According to official data of the U.S. Department of Commerce, U.S. grain exports to Chile, Singapore, and Australia totaled \$23 million in 2004, with Singapore and Chile accounting for nearly all exports. (See table 4-4). In 2004, U.S. exports to Singapore, Chile, and Australia totaled \$12 million, \$8 million, and \$3 million, respectively. The value of U.S. grain exports to the three countries fell nearly half in value (a drop of \$24 million), and by about three-quarters in volume during 2000-04, mostly because Chile sharply reduced its imports of U.S. wheat and corn.<sup>58</sup> Chilean grain production fell in crop years 1998/99 and 1999/2000, boosting imports, and then increased into 2004, diminishing imports.<sup>59</sup> U.S. grain exports to all countries rose by 21 percent in

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<sup>54</sup> Includes HTS headings 1001, 1005, and 1006, unmilled wheat and corn, and milled and unmilled rice.

<sup>55</sup> Marketing year 2003/04; source: USDA, FAS, *Grain: World Markets and Trade*, Nov. 2004, pp. 9, 15, and 24, [http://www.fas.usda.gov/grain\\_arc.html](http://www.fas.usda.gov/grain_arc.html).

<sup>56</sup> USITC, *Shifts in U.S. Merchandise Trade*, Investigation No. 332-345, July 2004, table AG-4, sector AG030 (cereals), <http://www.usitc.gov/tradeshifts/agricultural.htm>.

<sup>57</sup> U.S. Census Bureau, *2002 Economic Census*, Sept. 2004, [www.census.gov/econ/census02/index.htm1](http://www.census.gov/econ/census02/index.htm1).

<sup>58</sup> U.S. grain exports to Chile during 2000-04 fell by \$24 million; U.S. exports to the three countries fell by exactly the same amount.

<sup>59</sup> USDA FAS, *Chile Grain and Feed Annual 2004*, GAIN Report No. CI4022, Aug. 18, 2004; and *Chile Grain and Feed Annual, 2000*, GAIN Report No. CI0035, Sept. 15, 2000; and *Chile Grain and Feed Wheat Update 1999*, GAIN Report No. CI9007, Feb. 4, 1999. [www.fas.usda.gov/scripts/attacherep/default.asp](http://www.fas.usda.gov/scripts/attacherep/default.asp).

**Table 4-4**  
**Value of U.S. bilateral trade in grains, by FTA partner, 2000-04**

(1,000 dollars)

	2000	2001	2002	2003	2004
<b>Chile</b>					
U.S. imports .....	0	5	0	0	0
U.S. exports .....	32,405	5,906	27,002	41,277	8,333
<b>Singapore</b>					
U.S. imports .....	4	25	52	44	10
U.S. exports .....	13,308	12,554	10,840	11,650	12,382
<b>Australia</b>					
U.S. imports .....	18	9,149	12,293	10	0
U.S. exports .....	1,762	2,154	7,575	1,907	2,755

Source: Compiled from official statistics of the U.S. Department of Commerce.

value to \$12.6 billion, but were unchanged in volume at 83 million metric tons during 2000-2004. Japan, Mexico, Taiwan, Korea, Egypt, and China were the six leading U.S. grain markets in 2004, with a 58- percent share of the \$12.6 billion total. Chile, Australia, and Singapore represented a negligible portion of global U.S. grain exports in 2004.

### *FTA Partner Industries*

Chile has substantial wheat production and consumption, relying on imports to supply at least one quarter of its domestic consumption. Chile is a relative high cost wheat producer, and must import higher graded wheat to mix with domestically produced wheat to make adequate wheat flour. Wheat and corn production in Chile fluctuated annually, depending on crop conditions, but rose very slightly during 2000-04.<sup>60</sup> Argentina and Canada have been the principal wheat suppliers to Chile. Chile supplies about half its own corn consumption, which has been rising because of the expanding hog and poultry industry, with most imports coming from Argentina. Chile consumes relatively little rice.

Australia is one of the leading grain producers and exporters in the world, and primarily competes with the United States for sales in third-country markets. Australia imports little or no grain. Singapore does not produce significant amounts of grain, and relies on imports for most of its food supply. Singapore imposes few tariffs or barriers on grain and food products, and U.S. competition in that market comes mainly from Asian grain exporters such as Australia and China that have significant freight advantages.

<sup>60</sup> Chilean wheat production rose from 1.8 million metric tons (MMT) to 1.9 MMT, and corn production from 778 thousand metric tons (TMT) to 850 TMT during 2000-04. Source: USDA, FAS, *Grain and Feed 2002*, and *Grain and Feed 2004*.

## *Potential Impact on U.S. Trade Flows*

### **U.S. Imports**

The FTAs with Chile and Singapore are not likely to have a measurable effect on U.S. imports of grain because these countries export little, each being a relatively high cost producer of grain. Furthermore, general U.S. duties on these products are already low.<sup>61</sup> U.S. imports of grain from Chile and Singapore totaled \$10,000 in 2004. Although Australia is a leading global grain exporter, its FTA with the United States is not likely to have a measurable impact on U.S. imports of grain from that country. Australia is primarily a competitor to U.S. grain exports in third-country markets, and with the relatively high costs of maritime freight between the two countries, bilateral grain trade has been minimal.<sup>62</sup> The simulation model sector for grains closely matches the grains sector in the above analysis. Model results show an increase in U.S. imports from Australia of 21.6 percent, but on a very small base. The estimated value of increased imports is negligible (less than \$50,000).

### **U.S. Exports**

The FTAs with Singapore and Australia are not likely to have a measurable impact on U.S. exports of grain. Grain trade was not an important consideration in the preferential trade agreement with Australia, already a leading grain exporter and competitor to the United States, or with Singapore, which, although a significant market, is a relatively unimpeded market for U.S. grain.

The FTA with Chile may allow the United States to recover in the short term part of the share in the Chilean wheat market lost to Canada and Argentina owing to their more favorable access to the Chilean market. In the long run (after a term of 12 years), as the 31.5-percent wheat duty under the Chile price band system is ended, U.S. exports of non-durum wheat to Chile may double to 70,000 metric tons (valued at \$10 to \$15 million). U.S. corn exports to Chile may increase modestly as Argentine corn loses its 4.8-percent, preferential duty advantage in the Chilean market over U.S. corn.<sup>63</sup>

The simulation model in chapter 5 shows Chile increasing its imports of U.S. grain by 30.66 percent, or about \$13 million.

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<sup>61</sup> For example, the general (NTR) rate of duty on U.S. non-durum wheat is 0.35 cents per kilogram, which in 2005 is equivalent to about 2.5 percent AVE at 2005 prices. Wheat imports are eligible for duty-free entry under the GSP.

<sup>62</sup> In 2003, U.S. grain exports to Australia totaled \$2 million; U.S. grain imports from Australia were \$10,000 in that same year, according to data of U.S. Department of Commerce.

<sup>63</sup> Argentine corn into Chile is dutiable at 1.2 percent AVE, while U.S. corn exports is dutiable at 6.0 percent. USDA, FAS, *Chile Grain and Feed Annual, 2004*, p. 5. The Chilean price bands do not apply to corn.

### *U.S. Industry*

An abundant resource base that provides low-cost feedstuffs and a large domestic market that allows processors to take advantage of economies of size and scope help make the U.S. meat and livestock sector among the most productive and competitive in the world. Federally inspected meat production totaled nearly 20.8 million metric tons in 2003, of which 57 percent was beef and veal,<sup>65</sup> while 43 percent was pork.<sup>66</sup> Meat production for 2004 and 2005 is forecast at 20.4 and 20.7 million metric tons, respectively, with pork increasing its share to 46 percent of the total.<sup>67</sup> In 2003, the United States ranked first in world beef production, was the world's largest beef importer, and second-largest beef exporter.<sup>68</sup> In 2003, the United States was the third-largest pork producer, the third-largest pork importer, and the third-largest pork exporter.<sup>69</sup>

USDA's Food Safety and Inspection Service lists 2,195 small (11-499 employees) and 2,928 very small (10 or fewer employees) Federally inspected meat processing plants in the United States.<sup>70</sup> Nonetheless, U.S. livestock slaughter and meat production is concentrated in the hands of a few large multinational firms, many of which process meat from multiple types of animals. For example, Tyson's Foods, the largest U.S. beef processor, is also the largest poultry processor and among the largest pork processors.<sup>71</sup> Smithfield Foods, the largest pork processor, is among the largest beef

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<sup>64</sup> This discussion addresses fresh, chilled, and frozen, beef, veal, and pork classified in HTS headings 0201, 0202, and 0203. The modeling results reported elsewhere in this report also include lamb and mutton, classified in HTS heading 0204. Although lamb and mutton are generally considered red meat, they are not included in this discussion because lamb and mutton represent less than 1 percent of total U.S. red meat production. Where appropriate, this sectoral writeup also discusses the live animals from which these products are derived: cattle and swine, which are classified in HTS heading 0102 and 0103.

<sup>65</sup> Veal represents less than 1 percent of total bovine meat production, therefore, references hereafter will generally refer to beef production unless otherwise indicated.

<sup>66</sup> USDA, Economic Research Service, *Livestock, Dairy, and Poultry Outlook*, Nov. 23, 2004, found at <http://www.ers.usda.gov/publications/ldp/Nov04/LDPM125F.pdf>, retrieved on Dec. 8, 2004, p. 14.

<sup>67</sup> *Ibid.*

<sup>68</sup> USDA, FAS, *Livestock and Poultry: World Markets and Trade*, Nov. 2004, found at: <http://www.fas.usda.gov/dlp/circular/2004/04-10LP/toc.htm>, retrieved Dec. 8, 2004 pp 10-11.

<sup>69</sup> *Ibid.*, pp 17-18.

<sup>70</sup> USDA, Food Safety and Inspection Service, Plants under federal inspection, found at: <http://www.fsis.usda.gov/OFO/FAIM/faimmain.htm>, retrieved Dec. 10, 2004.

<sup>71</sup> Anonymous, "Front Runners — The 2003 Top 150," *The National Provisioner*, Vol. 217, No. 5, May 2003.



processors.<sup>72</sup> The four largest firms slaughtered nearly 69 percent of all U.S. cattle in 2003; however, this four-firm concentration exceeded 80 percent for steer and heifer slaughter, which accounted for 80 percent of all U.S. cattle slaughter.<sup>73</sup> Four-firm concentration for hog slaughter was greater than 64 percent in 2003. The U.S. meat slaughter and processing sectors employed nearly 273,000 persons in 2003.<sup>74</sup>

Concentration among U.S. live cattle and swine producers has increased over time; however, livestock production is much less concentrated than livestock slaughter and meat production. Of the more than 1 million operations with cattle, 63 percent had fewer than 50 animals in 2003. Furthermore, operations with less than 1,000 animals held 72 percent of all cattle inventories.<sup>75</sup> Feedlots, however, are more concentrated than other cattle operations; 2,205 feedlots with capacity of 1,000 or more animals represented less than 3 percent of all feedlot operations, but marketed 85 percent of fed cattle in 2003.<sup>76</sup> The swine industry is more concentrated than the cattle industry. Of 65,130 total swine operations, 44,080 operations (68 percent) with less than 100 animals in inventory held only 1 percent of total inventory in 2003. The 100 largest operations, those with 50,000 or more animals in inventory, held 50 percent of the total inventory in 2003.

### ***FTA Partner Industries***

With the exception of Australia, the countries that implemented FTAs with the United States since 2002 are not among the world's leading livestock or meat producers, exporters, or importers. (See table 4-5). In 2003, Australia ranked eighth in beef production and second in beef exports, and though not a top pork producer, Australia ranked sixth in pork exports.<sup>77</sup> Beef production in the covered FTA countries is, for the most part, grass-fed, contrasting with the mostly grain-fed production in the United States. Grass-fed beef imported into the United States is considered a lower quality product that is primarily used for processed foods; therefore, these U.S. imports primarily compete with U.S. nongrain fed beef derived primarily from cull cows. Meanwhile, grain-fed beef typically exported by the United States is primarily considered a high-quality product, is used for fresh consumption, and in many cases is served in tourist-oriented hotels and restaurants. Australia supplied nearly 376,000 metric tons of beef to the U.S. market, representing 42 percent of total U.S. beef imports.

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<sup>72</sup> Ibid.

<sup>73</sup> USDA, Grain Inspection, Packers and Stockyards Administration, *Packers and Stockyards Statistical Report, 2002 Reporting Year*, Sept. 2004, found at <http://www.usda.gov/gipsa/pubs/psp-stat-reports.htm>, retrieved on Dec. 8, 2004.

<sup>74</sup> U.S. Dept. of Labor, Bureau of Labor Statistics, Bureau of Labor Statistics Data, found at <http://www.bls.gov/data/home.htm>, retrieved Dec. 8, 2004.

<sup>75</sup> USDA, National Agricultural Statistics Service, *Livestock Operations, 2003 Summary*, Apr. 2004, p. 2.

<sup>76</sup> USDA, National Agricultural Statistics Service, *Cattle on Feed*, Feb. 2004, p. 22.

<sup>77</sup> USDA FAS, *Livestock and Poultry: World Markets and Trade*, Nov. 2004, found at: <http://www.fas.usda.gov/dlp/circular/2004/04-10LP/toc.htm>, retrieved Dec. 8, 2004.

**Table 4-5**  
**Value of U.S. bilateral trade in meat, by FTA partner, 2000-04**

(1,000 dollars)

	2000	2001	2002	2003	2004
<b>Chile</b>					
U.S. imports .....	29	0	66	0	0
U.S. exports .....	86	308	319	384	113
<b>Singapore</b>					
U.S. imports .....	0	0	0	0	0
U.S. exports .....	6,553	6,915	5,452	6,642	1,122
<b>Australia</b>					
U.S. imports .....	667,329	848,183	880,296	896,551	1,109,643
U.S. exports .....	2,948	265	1,510	107	3,349

Source: Compiled from official statistics of the U.S. Department of Commerce.

### *Potential Impact on U.S. Trade Flows*

The primary impact of the covered FTAs on the U.S. meat and livestock industry will relate to increased U.S. beef imports, particularly owing to FTA provisions with Australia. Under the U.S.-Australia FTA, Australian beef was granted immediate duty-free access for within quota imports and increasing duty-free TRQ quantities over an 18-year phase-in period, after which all Australian beef imports will enjoy duty-free access to the U.S. market.<sup>78</sup> Chile and Singapore also received duty-free access for within-quota beef, along with phased-in duty-free TRQ quantity increases. However, while increased U.S. beef imports from these countries may be large relative to the domestic industries of the exporting countries, the increase in U.S. beef imports is not expected to provide a measurable impact relative to total U.S. production and total U.S. beef imports. Although lower tariffs and increased in-quota access to FTA markets is expected to result in increased U.S. beef and pork exports, these quantities are expected to be small relative to total U.S. meat production and exports, therefore having a limited impact on the U.S. industry.

Measuring the effects of the covered FTA agreements on U.S. meat trade is complicated by the market disruption and displacement resulting from the discovery of Bovine Spongiform Encephalopathy (BSE) in an imported Canadian cow in Washington State in December 2003, and the subsequent ban of U.S. beef exports to most major meat importing countries, including Japan.<sup>79</sup> Changes in Japanese demand for U.S. beef and pork alone exceed the impact expected from these FTAs.

<sup>78</sup> U.S. beef imports are currently subject to country specific tariff-rate quotas with a general duty rate of 4.4 cents per kilogram for in-quota imports and a 26.4 percent *ad valorem* duty for over-quota imports.

<sup>79</sup> USDA, Economic Research Service, *Livestock, Dairy, and Poultry Outlook*, Nov. 23, 2004, found at <http://www.ers.usda.gov/publications/ldp/Nov04/LDPM125F.pdf>, retrieved on Dec. 8, 2004, pp. 1 and 5.

Total U.S. beef and veal exports for 2004 were only slightly more than 200,000 metric tons, down from more than 1.1 million metric tons in 2003.<sup>80</sup> To supply Japanese beef demand, Australian exporters have diverted beef from other markets, including the U.S. market. In addition, U.S. pork exports to Japan increased from less than 360,000 metric tons in 2003 to more than 417,500 metric tons in 2004.<sup>81</sup>

Model results in chapter 5 show an increase in U.S. imports of meat and meat products from Australia of 32.65 percent, or about \$447 million, attributable to the FTAs. As mentioned earlier, the three partners are estimated to increase their imports from the United States by 15.7 percent (Australia), 52.27 percent (Chile), and 2.22 percent (Singapore). In value (landed duty-paid) the increases are, respectively, \$1.9 million, \$2.3 million, and \$0.6 million. These increases are not large relative to total U.S. production and exports of meat and therefore, as stated in the analysis above, not likely to have a measurable impact on the U.S. industry.

## Textiles, Apparel, and Footwear<sup>82</sup>

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### *U.S. Industry*

The United States is the world's largest importer of textiles and apparel, with an estimated 23 percent of world imports, based on United Nations data for 2003.<sup>83</sup> Imports supply about two-thirds of the U.S. market for apparel, which in turn was 80 percent of total U.S. textile and apparel imports, by value, in 2003. Competition in the U.S. market has intensified as a result of the removal of import quotas on textiles and apparel on January 1, 2005.<sup>84</sup> Faced with the prospect of increased import competition in a post-quota market, the U.S. textile and apparel sector has undergone extensive consolidation. From 1999 to 2003, the sector posted a decline of 14 percent in shipments, to \$128 billion, and a decline of 36 percent in employment, to 752,800 workers.<sup>85</sup>

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<sup>80</sup> USDA, Economic Research Service, *U.S. meat and livestock trade, 2002-2004*, found at <http://www.ers.usda.gov/news/BSECoverage.htm>, retrieved on May 25, 2005.

<sup>81</sup> USDA, Economic Research Service, *U.S. meat and livestock trade, 2002-2004*, found at <http://www.ers.usda.gov/news/BSECoverage.htm>, retrieved on May 25, 2005.

<sup>82</sup> This sector includes all textiles and apparel of textile materials classified in chapters 50-63 of the Harmonized Tariff Schedule of the United States (HTS), except raw wool and cotton. Footwear, classified in chapter 64, is not a major trade sector for the subject countries and, therefore, will only be addressed in this section when applicable.

<sup>83</sup> Data obtained from the WITS, UN COMTRADE database, retrieved Jan. 2005.

<sup>84</sup> The WTO Agreement on Textiles and Clothing (ATC) obligated the United States, the European Union, and Canada to phase out their import quotas on textiles and apparel from WTO countries over 10 years ending on Jan. 1, 2005. Previously the United States applied quotas on goods from 39 WTO countries.

<sup>85</sup> Data on U.S. industry shipments (from the U.S. Census Bureau) and employment (U.S. Bureau of Labor Statistics) are for textiles (NAICS 313), textile products (314), and apparel (315).

## *FTA Partner Industries*

The textile and apparel sectors in Chile, Singapore, and Australia are relatively small. In Chile, the sector has declined in size during the past decade, and reportedly now has about one-third the capacity of the 1990s. Chile's exports of textiles and apparel to the United States accounted for less than 1 percent of total Chilean exports in 2003.<sup>86</sup> The textile and apparel sector in Singapore generated only 0.2 percent of its industrial output, 0.5 percent of manufacturing employment, and 2 percent of total exports in 2003.<sup>87</sup> Australia's textile and apparel sector is facing competitive challenges similar to those faced by its U.S. counterpart, particularly rising competition from lower cost exporting countries both at home and in export markets. Australian apparel producers have shifted production of basic, high-volume garments to lower cost countries, particularly China, and now focus on producing high-fashion, seasonal apparel in Australia.<sup>88</sup>

## *Potential Impact on U.S. Trade Flows*

The U.S.-Chile FTA is likely to result in a measurable increase in U.S. imports from Chile, but is expected to have no measurable effect on U.S. exports, the U.S. industry, or the U.S. economy, as Chile supplies a fraction of U.S. textile and apparel imports and is not a major market for U.S. sector goods. (See table 4-6). U.S. imports of sector goods from Chile increased substantially following implementation of the U.S.-Chile FTA, albeit from a very low level, while U.S. exports of such goods to Chile declined. From 2003 to 2004, imports of sector goods from Chile rose by 129 percent to \$29 million, while exports of such goods to Chile fell by 3 percent to \$37 million. Aided by preferential access under FTAs with the United States and the EU, Chilean textile and apparel firms reportedly are seeking to expand exports to these markets.<sup>89</sup>

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<sup>86</sup> Information on Chile is from the U.S. & Foreign Commercial Service and U.S. Department of State, "Chile - Apparel: Industry Sector Analysis," Sept. 30, 2004, and "Chile - Textile Machinery: Industry Sector Analysis," Dec. 22, 2003, found at <http://www.stat-usa.gov>, retrieved Jan. 3, 2005; "Chilean Industry Smiling over New FTA with the U.S.," Dialog Global Reporter, Feb. 9, 2004; and COMTRADE, "Comtrade Explorer - Snapshot of Chilean Trade in Textiles and Apparel in 2003," United Nations Statistics Division, retrieved Nov. 30, 2004.

<sup>87</sup> Information on Singapore is from U.S. Department of State telegram 1372, "Textile Trade Without Quotas - Singapore," Apr. 29, 2002, and telegram 2753, "Singapore - Tracking Changes in Textiles and Apparel Employment and Production After Quota Elimination," Sept. 20, 2004.

<sup>88</sup> U.S. Department of State telegram 437, "New Efforts to End the Exploitation of Clothing Homeworkers in Australia," prepared by U.S. Embassy, Canberra, Feb. 27, 2003.

<sup>89</sup> U.S. & Foreign Commercial Service and U.S. Department of State, "Chile - Apparel: Industry Sector Analysis," Sept. 30, 2004, and "Chile - Textile Machinery: Industry Sector Analysis," Dec. 22, 2003, found at <http://www.stat-usa.gov>, retrieved Jan. 3, 2005; and "Chilean Industry Smiling over New FTA with the U.S.," Dialog Global Reporter, Feb. 9, 2004.

**Table 4-6**  
**Value of U.S. bilateral trade in textiles, apparel, and footwear, by FTA partner, 2000-04**

(1,000 dollars)

	2000	2001	2002	2003	2004
<b>Chile</b>					
U.S. imports .....	9,586	14,180	11,915	12,797	29,319
U.S. exports .....	87,693	55,850	32,720	38,691	37,426
<b>Singapore</b>					
U.S. imports .....	361,127	302,155	289,348	271,271	244,962
U.S. exports .....	82,377	62,708	57,762	53,279	62,871
<b>Australia</b>					
U.S. imports .....	230,346	274,079	281,844	247,889	253,489
U.S. exports .....	143,300	113,221	106,633	114,110	129,859

Source: Compiled from official statistics of the U.S. Department of Commerce.

The Singapore FTA is not likely to have a measurable impact on U.S. sector trade, U.S. industry, and the U.S. economy. The FTA grants immediate duty-free and quota-free treatment to imports of textiles and apparel made in Singapore from yarns and fabrics produced in either Singapore or the United States. However, Singapore has limited capacity to make yarns and fabrics for apparel, and it is unlikely that Singapore firms will import U.S. yarns and fabrics because of the time and cost associated with shipping these products from the United States to Singapore.<sup>90</sup> Singapore will likely still see its market share decline because the FTA preferences may not be enough to enable it to compete with lower cost Asian producers.

The U.S.-Australia FTA will also likely have no measurable impact on bilateral trade in textiles and apparel, because both the United States and Australia are small suppliers to each other's markets. In 2003, Australia accounted for less than 1 percent of total U.S. imports of sector goods,<sup>91</sup> while the United States accounted for only 4 percent of total Australian imports of such goods. From 2003 to 2004, U.S. imports of sector goods from Australia grew by 2 percent to nearly \$253 million, and U.S. exports of such goods to Australia rose by 14 percent to nearly \$130 million. U.S. textile industry representatives contend that the lengthy shipping distance between the United States and Australia in a time-sensitive industry and the relatively high cost of production in Australia limit trade between the two countries for textiles and apparel.<sup>92</sup> Further,

<sup>90</sup> In 2004, Singapore made limited use of the FTA tariff preference level (TPL) that grants tariff preferences to specified quantities of apparel made from third-country yarn and fabric. The TPL provides for a total of 25 million square meters equivalent (SMEs) for cotton and manmade-fiber apparel in the first year of the FTA, which is reduced by 3.125 million SMEs each year thereafter, reaching zero in the ninth year after implementation (so that all goods must originate under FTA rules to get a benefit). U.S. duty rates on goods entered under the TPL are being reduced to free in equal increments over a 5-year period, thus limiting the time apparel producers have to use the TPL.

<sup>91</sup> U.S. Department of Commerce, Office of Textiles and Apparel, found at <http://otexa.ita.doc.gov>, retrieved Jan. 5, 2005.

<sup>92</sup> Industry Sector Advisor Committee on Textiles and Apparel (ISAC-15), "The U.S.-Australia Free Trade Agreement (FTA)," Mar. 2004, p. 2.

because of limited Australian capacity to make yarn and fabric for apparel, Australian producers may not be able to satisfy the “yarn-forward” rule of origin of the FTA, unless they are willing or able to use U.S.-made materials, which reportedly cost about 30 percent more than inputs from Asia and have higher transportation costs.<sup>93</sup>

The model results reported in chapter 5 attribute changes in bilateral trade to the FTAs. Australia, Chile, and Singapore are estimated to increase their imports of U.S. textiles, apparel, and footwear by about \$145 million, \$50 million, and \$73 million, respectively. The overall change in U.S. imports from all countries is expected to be \$159 million, reflecting that increased imports from the partners are largely offset by decreases in imports from other countries. U.S. imports from Australia, Chile, and Singapore are expected to increase by \$219 million, \$18 million, and \$418 million, respectively. These results do not reflect limitations on imports from Australia and Singapore owing to the restrictive rules of origin described above. An alternate scenario reflecting the rules of origin for textiles in the FTAs is presented in chapter 5.

## Pharmaceuticals: Intellectual Property and Price/Reimbursement

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### *U.S. Industry*

U.S. pharmaceutical companies reported domestic sales of \$163.3 billion in 2004, along with \$80.6 billion in overseas sales, together an increase of over 11 percent from 2003.<sup>94</sup> U.S. producers also led the world in research & development expenditures, having accounted for approximately 53 percent of expenditures among the five largest pharmaceutical-producing nations (United States, Japan, France, Germany, and Australia) in 2000.<sup>95</sup> Domestic R&D expenditures in 2004 were estimated to have increased by an estimated 43 percent since 2000, to \$30.6 billion, while overseas expenditures by U.S. affiliates amounted to another \$8.2 billion.<sup>96</sup>

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<sup>93</sup> Centre for International Economics, Canberra & Sydney, “Economic Analysis of AUSFTA-Impact of the Bilateral Free Trade Agreement with the United States,” Apr. 2004.

<sup>94</sup> Pharmaceutical Research and Manufacturers of America (PhRMA), *Pharmaceutical Industry Profile 2005*, (Washington, DC: PhRMA, 2005), p. 39, found at [www.phrma.org](http://www.phrma.org), retrieved May 4, 2005.

<sup>95</sup> OECD, *R&D Expenditures in the Pharmaceutical Industry as a Percentage of GDP and BERD5, 2001 OECD*, ANBERD database, June 2003 (taken from publication of the PhRMA: *Pharmaceutical Industry Profile 2004*, p. 5).

<sup>96</sup> Pharmaceutical Research and Manufacturers of America (PhRMA), *Pharmaceutical Industry Profile 2005* (Washington, DC: PhRMA, 2005), p. 34, found at [www.phrma.org](http://www.phrma.org), retrieved May 4, 2005.

## *FTA Partner Industries*

Of the countries addressed in this study, the Australian pharmaceutical market is the largest. The Australian market totaled approximately \$5.5 billion in 2002, and accounted for about 1 percent of the world pharmaceutical market. International trade is an important component of the country's pharmaceutical industry; Australia's imports amounted to approximately \$3.2 billion, and exports about \$1.2 billion.<sup>97</sup> In 1999-2000, Asian markets accounted for 42 percent of Australian pharmaceutical exports; the primary Asian markets were Hong Kong (15 percent of total exports); Taiwan (7 percent); and the Philippines, Malaysia, Thailand, Singapore, and Japan (together 15 percent). European markets accounted for another 23 percent of Australia's exports, New Zealand and Pacific nations (21 percent), and North American markets (9 percent).<sup>98</sup> Australia's primary source of imports was the EU (primarily the United Kingdom, Germany and Switzerland), which accounted for approximately 75 percent of total pharmaceutical imports,<sup>99</sup> while North America accounted for approximately 15 percent.<sup>100</sup>

The pharmaceutical markets of the other countries covered by the FTAs were of less importance globally. Singapore's pharmaceutical market was valued at approximately \$460 million<sup>101</sup> in 2002. Although recent data are not available, the consumption of pharmaceuticals in Chile is believed to have been small in recent years.<sup>102</sup>

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<sup>97</sup> International Business Strategies, "Pharmaceutical Industry in Australia," Oct. 2003, pp. 1-3, found at <http://www.internationalbusinessstrategies.com>, retrieved June 5, 2004.

<sup>98</sup> Australian Pharmaceutical Manufacturers Association, Inc. (APMA), *1999-2000 APMA Facts Book: Pharmaceutical and Health Industry Information, 2002*, pp. 9-12.

<sup>99</sup> *Ibid.*

<sup>100</sup> Based on Department of Commerce statistics for 2004, Australia exported some \$162 million of pharmaceuticals to the United States and imported approximately \$528 million of these products from the United States.

<sup>101</sup> *Healthcare & Medical Market in Singapore*, extracted from *UK Trade & Investment* retrieved from

<http://www.trade.uktradeinvest.gov.uk/healthcare/singapore/profile/overview.html> on Jan. 5, 2005; and Market Intelligence Reports: Singapore retrieved from [http://www.epsicom.com/web.nsf/structure/ph\\_bkmsmsing?OpenDocument](http://www.epsicom.com/web.nsf/structure/ph_bkmsmsing?OpenDocument) on Jan. 6, 2005.

<sup>102</sup> Market Research Centre and the Canadian Trade Commissioner Service, *The Biotechnology Market in Chile*, Aug. 2000, retrieved from <http://atn-riac.agr.ca/latin/e3346.htm>.

## ***Potential Impact of Intellectual Property Provisions<sup>103</sup>***

Although trade flows of pharmaceutical products and services are presented in table 4-7, changes in the trade attributable to the three FTAs discussed in this report are difficult to assess. The interpretation of changes in trade flows are complex because most large pharmaceutical companies are multinational in scope and produce their products in the particular location that affords the best cost advantage.<sup>104</sup> However, the intellectual property provisions in the three FTAs, as they apply to the pharmaceutical industry and others, are likely to yield benefits for U.S. companies.<sup>105</sup>

Intellectual property provisions of the three FTAs that most apply to the pharmaceutical industry include strengthened patent and data protection requirements. For instance, patents are to be extended in certain cases beyond the 20-year term required by TRIPs to compensate for up-front administrative or regulatory delays in granting the original patent. Patent term extension (or restoration) may also be made by right holders to offset delays in the marketing approval process for pharmaceuticals. The FTAs also contain provisions to ensure that government product approval agencies deny market approval to patent infringing products. Further, FTA provisions require patent owners to be notified of requests by other persons for marketing approval of products claimed in patents. This is to make it easier for patent holders to challenge the entry of potential infringing products. Meanwhile, clinical test data submitted by a pharmaceutical company for marketing approval purposes are protected against disclosure for a period of 5 years from the date of approval. Further, no other firms are permitted to market the same or a similar product based on the use of such data.

## ***Potential Impact on U.S. Trade Flows***

The U.S. pharmaceutical industry should benefit to a limited extent from the improved intellectual property provisions of the three FTAs. Full implementation of the patent and data protection provisions of the FTAs likely would result in increased revenues for U.S. firms whose sales of patented pharmaceuticals should increase in each of the countries

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<sup>103</sup> Information summarized in this section is based on numerous sources cited in chapters and sections on intellectual property rights in USITC Invs. No. TA 2104-5, TA 2104-6, and TA 2104-11, which were published in 2003 and 2004, and covered the three FTAs in this report.

<sup>104</sup> IDA Ireland, *Industry Profile - Pharmaceuticals*. (IDA Ireland is an autonomous Irish Government agency with responsibility for securing new investment from overseas in manufacturing and internationally trade services sectors. It also encourages existing investors to expand and develop their businesses. It was funded by the Irish Government under the National Development Plan 2000-2006.) Found at <http://www.idaireland.com/home/index.aspx?id=64> and <http://www.idaireland.asp?id=25>, retrieved Jan. 3, 2005.

<sup>105</sup> The Generic Pharmaceutical Association (GPhA) has submitted a statement questioning the value of the agreements for its members. The summary of the GPhA's written submission is found in App. C.



**Table 4-7**  
**Value of U.S. bilateral trade in pharmaceuticals, by FTA partner, 2000-04**

(1,000 dollars)

	2000	2001	2002	2003	2004
<b>Chile</b>					
U.S. imports .....	89	475	923	541	139
U.S. exports .....	18,707	21,514	19,585	23,240	21,592
<b>Singapore</b>					
U.S. imports .....	5,859	4,896	151,991	1,087,193	1,323,810
U.S. exports .....	32,223	46,407	36,394	49,469	28,240
<b>Australia</b>					
U.S. imports .....	58,226	161,736	135,683	143,540	161,837
U.S. exports .....	279,107	274,303	361,820	432,140	527,523

Source: Compiled from official statistics of the U.S. Department of Commerce.

covered by the FTAs due to reduced competition from patent infringing products. However, any such increases are not likely to be measurable owing to the relatively small share of the global market for pharmaceuticals represented by each of the countries. Furthermore, there would be little, if any, effect on U.S. industries or the U.S. economy based on implementation of its FTA obligations because the United States already meets the relatively high standard of IPR protection and enforcement included in these agreements.

### ***Pharmaceutical Annex (U.S.-Australia FTA)***

The U.S.-Australia FTA is the only FTA of the three to include specific provisions addressing pharmaceutical pricing and reimbursement issues. These are detailed in a separate annex on pharmaceuticals<sup>106</sup> that includes requirements for transparency and accountability<sup>107</sup> in the listing<sup>108</sup> and pricing of pharmaceuticals under Australia's Pharmaceutical Benefit Scheme (PBS),<sup>109</sup> including requirements providing

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<sup>106</sup> FTA Annex 2-C (Pharmaceuticals).

<sup>107</sup> The transparency requirements include basic process procedures, such as disclosing rules, ensuring that consideration for listing proposals are completed in a timely way, and that applicants are given timely opportunities to provide comments.

<sup>108</sup> Pharmaceuticals may not receive reimbursement under Australia's Pharmaceutical Benefit Scheme (PBS) unless a determination is made to list them.

<sup>109</sup> U.S.-Australia FTA Annex 2-C (Pharmaceuticals) transparency and reimbursement requirements apply to federal healthcare authorities of both the United States and Australia to the extent that they operate or maintain procedures for listing new pharmaceuticals or indications for reimbursement purposes, or for setting the amount of reimbursement for pharmaceuticals, under their healthcare programs. Although the United States believes that the FTA's transparency obligations could apply to certain reimbursement decisions under the U.S. Medicare Part B program, current Medicare practice in this regard is already consistent with the Annex 2-C provisions. Therefore, this discussion focuses on Australia's Pharmaceutical

for an independent review process.<sup>110</sup> The Australian PBS has a process to determine the specific drugs it will cover under its national healthcare program and the amount it will reimburse for these drugs. The new provisions are intended to ensure that more consideration is given to valuing innovation, in addition to cost, in decisions related to whether a drug may be listed by the PBS and the amount of reimbursement to which it is entitled. This should provide greater market access to the pharmaceuticals of research-based pharmaceutical companies, including those of the U.S. industry, whose products sometimes face difficulties in gaining favorable decisions under the PBS.

The U.S. pharmaceutical industry generally has viewed the pharmaceutical annex of the U.S.-Australia FTA favorably. However, it objected when the Australian Parliament added provisions to its FTA implementing language in August 2004 that, according to U.S. industry representatives, undermined FTA provisions that were agreed upon in negotiations.<sup>111</sup> These amendments reportedly were added to the implementing legislation by Labor members of the Parliament who believed that the pharmaceutical annex provisions, along with certain IPR provisions of the FTA, would together favor more expensive patented drugs over lower priced generic drugs in the PBS.<sup>112</sup> After discussions of the disputed issues by the United States and Australia, the United States Trade Representative announced on November 17, 2004, that Australia had committed to address the U.S. concerns by promising to review these matters in light of Australia's international legal obligations.<sup>113</sup>

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<sup>109</sup>—*Continued*

Benefits Scheme since that is the only Federal program in the two countries whose reimbursement and listing process will likely be substantively affected by the provisions of Annex 2-C. United States Trade Representative (USTR), "U.S.-Australia Free Trade Agreement – Questions and Answers About Pharmaceuticals," *Press Release*, July 8, 2004, pp. 1-3, found at <http://www.phrma.org>, retrieved Jan. 12, 2005.

<sup>110</sup> Annex 2-C requires the Federal authority of each party to "make available an independent review process that may be invoked at the request of an applicant directly affected by a recommendation or determination." The two countries also agreed to establish a Medicines Working Group to promote discussion and understanding of pharmaceutical issues.

<sup>111</sup> Pharmaceutical Research and Manufacturers of America (PhRMA), "Statement on the Australian FTA Certification," press release, p. 1, found at <http://www.phrma.org>, retrieved Jan. 10, 2004.

<sup>112</sup> Matt Wade, "House Passes Free Trade Law, Senate Vote on Hold," *Sydney Morning Herald*, June 25, 2004, p. 1; Louise Dodson, "US Concerns Over Revised Trade Deal," *Sydney Morning Herald*, p. 1, Aug. 21, 2004; Bob Burton, "Australia Amends Its Free Trade Deal with US to Lessen Effect on Drug Costs," *bmj.com*, Aug. 21, 2004, pp. 1-2, found at <http://www.bmj.bmjournals.com>, retrieved Jan. 13, 2004; and Bob Burton, "US Threatens Australia Over Plan to Block Extensions to Drug Patents," *bmj.com*, found at <http://www.bmj.bmjournals.com>, retrieved Jan. 13, 2004.

<sup>113</sup> United States Trade Representative (USTR), "U.S. and Australia Address FTA Implementation Issues: FTA to Take Effect January 1, as Planned," *USTR Press Release*, Nov. 17, 2004, p.1, found at <http://www.ustr.gov>, retrieved Nov. 16, 2004, p.1, and letter dated Nov. 17 from Robert B. Zoellick, United States Trade Representative, to Honorable Mark Vaile MP, Minister for Trade, Australia, found at <http://www.ustr.gov>, retrieved Jan. 5, 2005.

The U.S. pharmaceutical industry should benefit from the improved transparency, accountability, and other provisions of the pharmaceutical annex of the U.S.-Australia FTA, which should improve market access for U.S. research-based drugs in Australia. Full implementation of the annex provisions likely would result in slightly increased revenues for U.S. firms as more of its drugs become eligible for reimbursement under the PBS. However, any such increases would not likely be measurable owing to the relatively small share of the global market for pharmaceuticals represented by Australia and the difficulty in measuring trade flows in this industry. Furthermore, there would be little, if any, effect on U.S. industries or the U.S. economy based on implementation of its FTA obligations because the United States already meets the transparency, accountability, and other provisions of the pharmaceutical annex.

## Services

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The covered FTAs are not expected to have a measurable impact on either overall U.S. exports or overall U.S. imports of services. While all of the FTAs provide new market access and other benefits to U.S. service providers, the value of those new benefits will be moderated by the small size of the FTA partner economies. The FTA partner with the largest economy, Australia, is already substantially open to U.S. service exports, so the FTA is not expected to generate a significant change in U.S. exports to Australia. Note that trade data for services are available and reported in tables 4-8 through 4-12 only for years through 2003, before the implementation of any of the three trade agreements. The trade data reported in these tables show historical volumes and variability.

Services often serve a supporting role for both trade and investment in manufactured and agricultural goods, so increases in cross-border trade and direct investment in services are expected as a secondary result of the increased trade in goods resulting from the covered FTAs. In particular, trade in freight transport, express delivery, port services, and wholesale trade services stem in large measure from cross-border trade in goods. This indirect relationship holds true for financial services and telecommunications as well. Banks and insurance carriers are likely to see some increase in their trade-related business with U.S.-based manufacturers and agricultural firms, as they are called upon to finance or insure an increasing amount of goods trade between the United States and its FTA partners. Cross-border trade in telecommunication services may also increase, as firms from all economic sectors increase communications with counterparts in FTA partner countries. Because of the supporting role that various services play in international trade and investment, various service industries are discussed here.

For services, the most important feature of the covered FTAs is the “negative list” format, under which all service industries are covered by the FTA, other than those specifically carved out as exceptions in the FTA annexes. This type of approach tends to yield significantly greater coverage than the “positive list” approach employed by the

**Table 4-8**  
**Value of U.S. cross-border trade in total services, by FTA partner, 1999-2003**

*(Million dollars)*

	1999	2000	2001	2002	2003
<b>Chile</b>					
U.S. imports .....	824	887	857	740	650
U.S. exports .....	1,551	1,435	1,296	1,177	1,032
<b>Singapore</b>					
U.S. imports .....	2,353	2,356	1,895	2,056	2,303
U.S. exports .....	5,148	6,060	5,861	5,879	6,912
<b>Australia</b>					
U.S. imports .....	3,325	3,486	3,647	2,994	3,158
U.S. exports .....	5,202	5,565	4,857	5,218	5,833

Source: USDOC, BEA, *Survey of Current Business*, Oct. 2004, pp. 46-47.

General Agreement on Trade in Services (GATS).<sup>114</sup> Under a positive-list approach, countries must schedule commitments to specific industries in order to guarantee market access and national treatment. One far-reaching benefit of negative listing is that agreed trade disciplines are automatically extended to services that have yet to be created or brought to market. Such automatic coverage of new services is especially important to industries where market developments, technological advancement, and other innovations continuously result in new service offerings and means of delivery, which is particularly true for the express delivery, financial, and computer-related services. Under a positive-list approach, the extension of trade disciplines to new services would have to be negotiated individually.

Another benefit for U.S. service providers is the commitment to regulatory transparency found in all of the covered FTAs.<sup>115</sup> Regulatory transparency is an important precursor to robust services trade and investment because many services are heavily regulated due to public health, consumer welfare, and safety concerns. The transparency chapter in each FTA promotes the transparency of both particular regulations and the rule-making process itself, by requiring designation of contact points for inquiries about regulation, prompt publication of adopted regulations, advance publication of regulations under consideration, and reasonable notice of proceedings held to adopt or modify regulations. In addition to the chapter on transparency, the chapters on cross-border services, financial services, and investment include provisions that further promote regulatory transparency.

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<sup>114</sup> The WTO's General Agreement on Trade in Services (GATS) was signed in 1994 at the end of the Uruguay Round of WTO negotiations. It is the first multilateral trade treaty to include rules for trade in services.

<sup>115</sup> In actuality, the economies of the three FTA partners are characterized by different levels of regulatory transparency. The important benefit of the FTAs is that each FTA partner country has committed to maintaining a certain level of transparency, as discussed in the text of each FTA.

## ***Insurance Services***

None of the covered FTAs is expected to have a measurable impact on U.S. insurance imports, reported in table 4-9. The FTAs are expected to increase market opportunities for U.S. insurers within the United States, as the agreements generate additional goods trade between the United States and its trading partners, and this additional cargo needs to be insured.

All of the covered FTAs bind rules permitting the cross-border provision of marine, aviation, and transportation (MAT) insurance and related services,<sup>116</sup> which liberalize this market segment and serve as precedents for future trade agreements. U.S. insurers expect the majority of gains from the covered FTAs to reflect increased sales of policies related to MAT, professional liability, and plant, property, and equipment owned by foreign investors, as the FTA generates more trade and investment in noninsurance businesses.

## ***Audiovisual Services***

The FTAs covered in this report are not expected to yield large gains in U.S. exports or imports of audiovisual services, reported in table 4-10. However, the U.S.-Australia FTA includes provisions that set important precedents for future trade agreements, which may lead to modest increases in U.S. exports of such services. Under the negative list approach, Australia offers full market access to those segments of the audiovisual services sector not expressly excluded under the annexes of non-conforming measures. The Australia FTA also contains market access-related benefits for audiovisual service suppliers. Under its bilateral FTA, Australia agreed not to increase its existing 55 percent local programming quota in the future or apply it to any new media technologies. This FTA marks the first time that Australia has made commitments on audiovisual services in any trade agreement. The resulting regulatory transparency will likely result in modest increases in exports by U.S. firms.

## ***Express Delivery***

The covered FTAs are groundbreaking in their coverage of express delivery services. Sector coverage is largely the result of the negative listing methodology, which assures that all service sectors are covered unless explicitly stated otherwise. This contrasts with express delivery coverage under the GATS, where countries typically schedule express delivery commitments as “courier” services. Because express delivery services have evolved to encompass a range of services beyond courier services, such as freight

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<sup>116</sup> Marine, aviation, and transportation (MAT) insurance includes insurance of goods in transit.

**Table 4-9**  
**Value of U.S. cross-border trade in insurance services, by FTA partner, 1999-2003**

(Million dollars)

	1999	2000	2001	2002	2003
<b>Chile</b>					
U.S. imports .....	0	1	7	2	2
U.S. exports .....	19	19	27	37	36
<b>Singapore</b>					
U.S. imports .....	1	1	1	4	7
U.S. exports .....	11	7	19	33	37
<b>Australia</b>					
U.S. imports .....	43	16	12	11	11
U.S. exports .....	55	82	72	86	81

Note.—Export data reflect cross-border premium receipts net of claims paid. Import data reflect cross-border premium payments net of claims received.

Source: USDOC, BEA, *Survey of Current Business*, Oct. 2004, pp. 46-47, 57-59; Oct. 2003, pp. 94-95; Oct. 2002, pp. 102-103.

**Table 4-10**  
**Value of U.S. cross-border trade in audiovisual services, by FTA partner, 1999-2003**

(Million dollars)

	1999	2000	2001	2002	2003
<b>Chile</b>					
U.S. imports .....	0	0	0	0	0
U.S. exports .....	27	29	31	25	20
<b>Singapore</b>					
U.S. imports .....	2	0	0	0	0
U.S. exports .....	43	31	41	44	42
<b>Australia</b>					
U.S. imports .....	3	1	(D)	(D)	40
U.S. exports .....	310	288	283	325	350

Note.—Data for audiovisual services reflect cross-border receipts (U.S. exports) and payments (U.S. imports) for film and television tape rentals. (D): Data suppressed to avoid disclosure of data of individual companies.

Source: USDOC, BEA, *Survey of Current Business*, Oct. 2004, pp. 46-47, 57-59; Oct. 2003, pp. 94-95; Oct. 2002, pp. 102-103.

transportation, storage and warehousing, and cargo handling services, the FTAs' negative listing provisions ensure that all related services are covered. Despite such coverage, the covered FTAs will have little impact on U.S. express delivery services trade, largely due to the relatively small size and existing openness to foreign suppliers of the FTA partner countries. However, industry representatives are encouraged by the customs facilitating provisions of the covered FTAs, which improve treatment and processing times for express shipments.<sup>117</sup>

### ***Telecommunication Services***

The covered FTAs will likely have no measurable impact on U.S. exports or imports of telecommunication services (table 4-11), largely due to the existing level of openness in the United States and other markets as a result of the 1997 Agreement on Basic Telecommunication Services.<sup>118</sup>

### ***Banking and Securities Services***

The covered and pending FTAs are not likely to have a measurable impact on U.S. imports of banking and securities services (table 4-12), because the U.S. banking and securities<sup>119</sup> markets are effectively open, and similar sectors in most of the FTA partner countries are small.<sup>120</sup> Future growth in this industry segment will likely be the result of increased trade in goods between the United States and FTA member countries, rather than the result of financial sector liberalization. The U.S.-Singapore FTA is the only one of the covered FTAs that is likely to have a measurable impact on U.S. exports of banking and securities services. The FTA removed Singapore's ban on new bank licenses, both at the retail and the wholesale levels, and allowed U.S. banks increased access to the Singapore market.<sup>121</sup> In all three FTAs, U.S. asset management firms gained an important new commitment which permits the provision of investment advice and portfolio management services from outside the host country, a move that

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<sup>117</sup> *The U.S.-Australia Free Trade Agreement: Report of the Industry Sector Advisory Committee on Services for Trade Policy Matters*, Mar. 12, 2004; *The U.S.-Chile Free Trade Agreement: Report of the Industry Sector Advisory Committee on Services for Trade Policy Matters*, Feb. 28, 2003; and *The U.S.-Singapore Free Trade Agreement: Report of the Industry Sector Advisory Committee on Services for Trade Policy Matters*, Feb. 28, 2003.

<sup>118</sup> WTO, *Fourth Protocol to the General Agreement on Trade in Services*, S/L/20, Apr. 30, 1996, entered into force Feb. 5, 1998.

<sup>119</sup> For the purposes of this discussion, the banking and securities sector comprises companies involved in the provision of banking, securities, and asset management services.

<sup>120</sup> In Australia, which has a well developed financial services industry, there are few existing market access or national treatment barriers.

<sup>121</sup> For further detail, see USITC, *U.S.-Singapore Free Trade Agreement: Potential Economywide and Selected Sectoral Effects*, publication 3603, June 2003, pp. 78-82.

the U.S. asset management industry has cited as an important way for their members to reduce costs and enhance their competitiveness with local firms in foreign markets.<sup>122</sup>

**Table 4-11**  
**Value of U.S. cross-border trade in telecommunication services, by FTA partner, 1999-2003**

(Million dollars)

	1999	2000	2001	2002	2003
<b>Chile</b>					
U.S. imports .....	34	38	43	36	39
U.S. exports .....	34	39	47	49	49
<b>Singapore</b>					
U.S. imports .....	39	31	25	21	23
U.S. exports .....	57	91	104	100	104
<b>Australia</b>					
U.S. imports .....	115	163	70	57	57
U.S. exports .....	116	205	179	185	196

Source: USDOC, BEA, *Survey of Current Business*, Oct. 2004, pp. 46-47, 57-59; Oct. 2003, pp. 94-95; Oct. 2002, pp. 102-103.

**Table 4-12**  
**Value of US cross-border trade in banking and securities services, by FTA partner, 1999-2003**

(Million dollars)

	1999	2000	2001	2002	2003
<b>Chile</b>					
U.S. imports .....	12	5	7	6	8
U.S. exports .....	90	83	70	67	75
<b>Singapore</b>					
U.S. imports .....	87	86	102	98	56
U.S. exports .....	210	276	296	366	253
<b>Australia</b>					
U.S. imports .....	53	60	64	48	110
U.S. exports .....	212	290	283	278	418

Note.—Data reflect fee-based activities, and do not include deposit-taking and lending services.

Source: USDOC, BEA, *Survey of Current Business*, Oct. 2004, pp. 46-47, 57-59; Oct. 2003, pp. 94-95; Oct. 2002, pp. 102-103.

<sup>122</sup> *The U.S.-Australia Free Trade Agreement: Report of the Industry Sector Advisory Committee on Services for Trade Policy Matters*, Mar. 12, 2004; *The U.S.-Chile Free Trade Agreement: Report of the Industry Sector Advisory Committee on Services for Trade Policy Matters*, Feb. 28, 2003; and *The U.S.-Singapore Free Trade Agreement: Report of the Industry Sector Advisory Committee on Services for Trade Policy Matters*, Feb. 28, 2003.



# CHAPTER 5

## Simulated Impact of the U.S. Free Trade Agreements With Singapore, Chile, and Australia

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This chapter provides a quantitative assessment of the likely impact of those provisions of the implemented free trade agreements that provide increased access for U.S. goods and services in the Singapore, Chile, and Australian markets and for partner country goods in the U.S. market. The method chosen for quantitative analysis is a global model which includes the social accounts and trade patterns for multiple countries and regions of the world economy and for multiple products produced in those regional economies. Employing this model simulation to assess the impact of the three implemented FTAs on the U.S. economy and sectors permits the Commission to quantify the probable impact of specific components of the negotiated agreements on individual sectors, labor markets, and exports and imports.

Unlike the assessment conducted in chapter 4, where the impact of market access provisions of the FTAs is examined only for selected commodities, the analysis in this chapter considers the impact of market access provisions of the FTAs on all sectors in the U.S. economy, at a generally higher level of sectoral aggregation. This analysis also considers the relative economic importance of these sectors, and provides an estimate of the effect on the U.S. economy as a whole.

This simulation liberalizes trade completely in all goods subject to liberalization under the free trade agreements.<sup>1</sup> There is no implicit or explicit time elapsing in the model. This means, first, that all provisions of the agreements are assumed to be fully phased in immediately, rather than over any phase-in period embodied in the agreements. Second, it means that all effects of the agreements are felt immediately, without an adjustment period. The modeled results can be considered to be long-run effects of fully implemented agreements in an economy otherwise identical to the baseline 2004 economy, after all adjustments related to the agreements have worked their way through the economy. The qualitative assessment of the likely effects of the FTAs on selected sectors in chapter 4 considers the short to medium run effects, as well as long run effects, as they are expected to be phased in over an extended period.

A full list of the initial measured trade barriers in the model is shown in table 5-1. These barriers essentially constitute price gaps, or wedges, between existing “world prices” and “domestic prices,” which include the tariffs and other barriers. As tabulated, they

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<sup>1</sup> Barriers to U.S. imports of sugar from Australia were not removed in the U.S.-Australia FTA, so no removal of these barriers was modeled.

**Table 5-1  
Benchmark (2004) tariffs**

(Percent)

Commodity	Australia	Chile	Singapore
<b>Benchmark U.S (2004) tariff on imports from partners</b>			
Vegetables, fruits, and nuts .....	3.00	1.00	1.00
Other crops .....	3.00	0.95	0.95
Cattle and horses .....	0	0	0
Grains .....	4.00	0	1.00
Animal products n.e.c. ....	0.32	1.00	0
Coal, oil, gas, other mineral .....	0	0	0
Meat products .....	4.99	2.36	1.69
Dairy products .....	10.00	25.00	17.00
Sugar .....	( <sup>1</sup> )	17.00	21.00
Other processed food and tobacco products .....	4.68	1.73	2.25
Textile, apparel, and leather products .....	9.35	13.45	13.42
Wood products .....	1.00	1.00	2.00
Petroleum, chemicals, rubber, plastic .....	2.13	2.84	3.68
Ferrous metals .....	1.22	1.00	1.77
Metals n.e.c. and metal products .....	1.00	1.00	1.00
Motor vehicles and parts .....	4.50	2.00	2.00
Transport equipment n.e.c. ....	0	0	0
Electronic equipment .....	0	0	0
Other machinery and equipment .....	1.00	1.00	1.00
Other manufactures .....	0.74	0.46	0.58
Services .....	0	0	0
<b>Benchmark partner tariff on imports from United States</b>			
Vegetables, fruits, and nuts .....	1.00	6.00	0
Other crops .....	0	6.00	0
Cattle and horses .....	0	6.00	0
Grains .....	0	6.00	0
Animal products n.e.c. ....	0	6.00	0
Coal, oil, gas, other mineral .....	0.19	6.00	0
Meat products .....	2.08	6.00	0
Dairy products .....	1.00	6.00	0
Sugar .....	1.00	6.00	0
Other processed food and tobacco products .....	4.37	6.00	0.37
Textile, apparel, and leather products .....	10.98	6.00	0
Wood products .....	5.00	6.00	0
Petroleum, chemicals, rubber, plastic .....	3.07	6.00	0
Ferrous metals .....	5.85	6.00	0
Metals n.e.c. and metal products .....	1.00	6.00	0
Motor vehicles and parts .....	9.50	6.00	0
Transport equipment n.e.c. ....	0	6.00	0
Electronic equipment .....	0	6.00	0
Other machinery and equipment .....	3.00	6.00	0
Other manufactures .....	3.37	6.00	0

<sup>1</sup> To conform to the FTAs, the simulation reported in this study does not remove the tariff on sugar from Australia. See text.

Source: GTAP release candidate version 6 data and Commission calculations.

consist of tariffs and the portion of tariff rate quotas (TROs) collected as duties, measured in the Global Trade Analysis Project (GTAP) data base as ad valorem equivalent tariffs. The proposed tariff cuts in the FTAs are to be phased in over a transitional period, but for the purposes of the modeling in this chapter they are assumed to enter into force all at once, on January 1, 2004.<sup>2</sup> A qualitative assessment of the effects of the FTA on the services sector is provided in chapter 4. As the table shows, Singapore has almost no duties on imports, whereas Chile's tariffs are set at a uniform level. Tariffs on imports to the United States and Australia vary substantially. Other barriers to trade exist that are not explicitly modeled here. In particular, services are subject to a variety of nontariff barriers, such as licensing requirements, restrictions on the movement of natural persons, and restrictions on investment levels in certain sectors.

An important feature of the agreements, as discussed in chapter 2, is the rules of origin (ROOs) that determine the eligibility of goods for the tariff reductions of the agreements. These have particular impact on imports of textiles and apparel, as discussed below. The main simulation reported in this chapter does not explicitly account for rules of origin. However, alternative simulations attempt to account for rules of origin as they affect imports of textiles and apparel from Singapore and Australia. If the product is a nonqualifying good under ROO, the model results may be overstated to the extent that the traded good is nonqualifying.

The primary data source is the final release candidate of the GTAP version 6 database, a snapshot of the world economy for 2001. To the extent feasible, the GTAP data are updated to 2004, the year of the earliest implementation of any of the agreements. Importantly, the 2004 benchmark incorporates the scheduled removal of textile and apparel quotas (under the Agreement on Textiles and Clothing). The model also incorporates tariff reductions implemented under NAFTA, the Uruguay Round and U.S. free trade agreements with Israel and Jordan, insofar as they are reflected in trade data projected through 2005,<sup>3</sup> for the most part, final stages of duty reductions under those agreements have been reached.

The model used in the assessment is based on the core model available in the GTAPinGAMS software developed by Rutherford and Paltsev.<sup>4</sup> The core model has been modified to incorporate the updated 2004 base year. A more detailed description of the model, database, and simulation design is presented in appendix D.

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<sup>2</sup> Implementation of the agreements is scheduled to be staged over 10 to 18 years, depending on the agreement. See chapter 2 for a discussion of the staging.

<sup>3</sup> The model has also been modified to take account of provisions of Australia's free-trade agreement with Thailand pertaining to trade in motor vehicles and parts, as data allow.

<sup>4</sup> Thomas F. Rutherford and Sergey V. Paltsev, *GTAPinGAMS and GTAP-EG: Global Datasets for Economic Research and Illustrative Models*, University of Colorado, Department of Economics, Working Paper, Sept. 2000.

## Simulation Design

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The analysis employs a comparative static framework in which a baseline equilibrium depiction of the U.S. economy, as of January 1, 2004, is derived through a set of balanced accounts of trade, production, consumption, and taxes. Once this baseline has been created, policy shocks are imposed on the balanced model. A policy shock simply means a change in policy, typically a tariff removal or reduction, which is imposed on the model in order to measure its effect. In this analysis, the policy shocks consist of the reduction or elimination of tariffs agreed to in the FTAs and listed in table 5-1. A tariff for sugar from Australia is not listed, because the removal of this tariff is not modeled; sugar was not included in the FTA with Australia. Note that the sectors listed in this table, and their corresponding shocks or trade barriers, represent aggregates. The meat products sector, for example, includes not only beef, but pork, lamb, and other meats as well, and the "other crops" category includes such items as coffee, tea, oilseeds, cotton, spices, and tobacco. As a result, the listed trade barriers are averages of the specific trade barriers faced by the individual commodities composing the aggregates. The tariffs listed here include the tariff-rate quotas imposed on certain agricultural products. The release candidate version of the GTAP version 6 database,<sup>5</sup> which provides the data used in this model, also includes measures of export tax equivalents, primarily measuring domestic taxes or subsidies on exports. These export measures are in general not affected by the FTAs, and are not removed in the model. Further, the tariffs modified are only those bilaterally in place between the United States and each of the other three countries. In particular, tariffs between, for example, Australia and Chile are not affected.

The simulation involves reducing the tariffs in table 5-1 to zero (except as noted for sugar) in both directions between the United States and Australia, the United States and Chile, and the United States and Singapore. As mentioned above, barriers among Australia, Chile, and Singapore are not affected. The model is rebalanced, and new values for trade flows, outputs, employment, welfare, GDP, and other values

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<sup>5</sup> Version 6 of the GTAP data has not been published or publicly released at the time of this writing. Version 5 is described in Dimaranan, Betina V. and Robert A. McDougall (2002). *Global Trade, Assistance, and Production: The GTAP 5 Data Base*, Center for Global Trade Analysis, Purdue University. Also see the web site, [www.agecon.purdue.edu/gtap](http://www.agecon.purdue.edu/gtap). There are several advantages to using the release candidate version of the GTAP data base rather than the most recently published version. For one thing, trade flows and national economic data have been updated to a 2001 base year from 1997 (although for this study the Commission has further updated the data to 2004). More importantly, much work has been done to improve the protection data in the data base. Rather than relying for the most part on WTO bound tariffs, the new data reflect a strong effort to incorporate actual applied tariffs (generally smaller than bound rates); for this reason, apparent duties on some commodities have declined from those in previous versions of the data set. This is aside from the fact that further implementation of the Uruguay Round and other trade agreements has actually reduced duties. Also, this new version of the data base reflects work that is in progress to develop appropriate methods to quantify tariff rate quotas and nontariff measures. Work remains to be done in these areas, but the current release candidate of version 6 of the GTAP data base appears to provide the best available basis for the analyses of current trade policy with accurate measures of trade flows and trade barriers.

are generated to show the effects of tariff removal. The difference between the baseline values of these variables and their new values is interpreted as the estimated impact of tariff removal under the trade agreements. It is expected that those sectors which face relatively high trade restrictions will show large effects from the implementation of the FTAs.

### ***Model Treatment of Sugar***

Treatment of sugar and sugar-containing products under the three agreements varies somewhat, but all three agreements put substantial limits on the potential increase of imports from the partner countries, or in the case of Australia, excludes such products. In light of the ratified agreements and of the imports observed to date, the Commission has chosen to model the sugar-manufacturing sector as remaining with a fixed quota for each of the three trading partners, as currently exists in the United States. Quotas are modeled as quantitative restrictions on trade, which are maintained for the three countries while tariffs are removed for Chile and Singapore (but not Australia). The U.S.-Australia agreement does not include any liberalization for sugar imports into the United States.

The Chilean agreement foresees a quantity expansion in duty-free imports enumerated in U.S. Note 12(b) to subchapter XI of chapter 99 of the Harmonized Tariff Schedule. Imports under HTS heading 9911.17.05 are set at the lesser of Chile's trade surplus as defined in note 12(a) of HTS chapter 99 or: 2,000 metric tons for 2004, 2,100 metric tons for 2005, and growing to 3,258 metric tons in 2014, the last year for which this quantitative restriction obtains. The agreement provides that Chile must be in a trade surplus position with respect to sugar, sugar-containing products, and high-fructose corn syrup before it is permitted to take advantage of any additional quantities. As part of the agreement, the United States Trade Representative must make a determination as to whether Chile finds itself in such a position. The most recent such determination (FR Vol. 69, No. 147, p. 46199, Monday, August 2, 2004) indicates that Chile is not in a surplus position and therefore may not benefit from additional duty-free treatment of the subject lines. Similarly, no imports have been observed under heading 9911.17.05 to date (January 2004 through February 2005). According to the USDA's *Sugar and Sweeteners Outlook* (January 31, 2003, p. 13) Chile's sugar beet production ". . . has provided about 66 percent of domestic consumption needs. . . . USDA data show no Chilean sugar exports since 1984, and ISO data show exports of less than 250 MTRV [metric tons raw value] in 1999 and 2000." The latest annual data available from USDA's *Sugar and Sweetener Yearbook* (2005, Table 1) indicate that Chile's production satisfied about 71 percent of domestic demand during the 2001/2002 crop year. Because of the structure of the agreement, the size of Chile's domestic sugar industry relative to its domestic demand, and the heretofore lack of duty-free imports, the model maintains a fixed quota for U.S. sugar imports from Chile.

The Singaporean agreement also foresees a quantity expansion in duty-free imports enumerated in U.S. Note 10 to subchapter X of chapter 99 of the Harmonized Tariff Schedule. Imports under HTS heading 9910.17.05 are limited to 15,000 kg for 2004, 15,570 kg for 2005, and grow to 22,162 kg in 2012, the last year for which this quantitative restriction remains in force. Unlike the U.S.-Chile agreement, there is no provision in the U.S.-Singapore FTA that requires Singapore to achieve a surplus trade position in the subject products before Singapore can take advantage of duty-free treatment under HTS heading 9910.17.05. Nonetheless, no imports from Singapore have been observed under the heading during the period January 2004 - February 2005. Because of the lack of observed imports under the heading, as well as the agricultural situation within Singapore,<sup>6</sup> the model of the sugar-manufacturing sector for Singapore maintains a fixed quota for U.S. imports from Singapore.

## Simulated Change in Welfare

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Within the economic simulation, the most relevant and comprehensive measure of the impact that the quantifiable components of the three FTAs will have on the U.S. economy as a whole is the change in welfare.<sup>7</sup> The change in welfare summarizes the impact of the components of the agreements in a single value and in a manner consistent with economic theory, taking into account all of the income and expenditure changes of U.S. households. It thus summarizes the benefits to consumers of the three trade agreements, as well as the effects on households in their roles as providers of labor, owners of capital, and taxpayers. The Commission simulation of these components of the three trade agreements suggests that the welfare value to the United States of the tariff liberalization under the agreements is \$464.2 million. This means that, when fully implemented, the FTAs would provide annual benefits to consumers worth \$464.2 million, in the economy of 2004. Table 5-2 presents the simulated welfare impact of the FTAs, as well as the simulated impact on gross domestic product (GDP).

The change in gross domestic product is decomposed into specific changes in payments to primary factors of production (land, unskilled labor, skilled labor, and capital) and a change in the net transfer from households to the government. Note that labor and capital income increase as a result of the FTAs, but payments to land decline

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<sup>6</sup> Little data are available on Singapore's agricultural sector, however, all indications are that it is small and unlikely to increase substantially. The city-state's population density of 6,343 people per square kilometer leaves little room for agriculture (World Bank Development Indicators 2003). According to the Agri-Food and Veterinary Authority of Singapore, 268 farms covering 815 hectares (about 6,100 acres) comprise the entire farming sector (found at <http://www.ava.gov.sg/JAVASCRIPT/m7-option2.htm>). Similarly, the GTAP database indicates that Singaporean production of raw cane and beet sugar in 2001 totaled \$194,000. Singapore's agricultural needs are mainly satisfied by other countries.

<sup>7</sup> Welfare is measured as the "equivalent variation" of the policy changes considered in the analysis. This is defined as the overall increase in consumer income, in the initial state of the economy as it existed before the policy change, that would provide the same welfare benefit as the policy change.

**Table 5-2**  
**Summary report on the impact of three FTAs on welfare and GDP<sup>1</sup>**

<b>Item</b>	<b>Million dollars</b>	<b>Percent</b>
Welfare .....	464.2	0.01
<b>Decomposition of GDP:</b>		
Land .....	-24.1	-0.04
Unskilled Labor .....	301.7	0.01
Skilled Labor .....	268.4	0.01
Capital .....	330.0	0.01
Balance for Lost Tariff Revenue <sup>2</sup> .....	-432.3	NA
<b>Total GDP .....</b>	<b>443.8</b>	<b>0.00</b>

<sup>1</sup> Unlike the change in welfare, measures of changes to GDP include both price and quantity changes. The general equilibrium model only determines relative prices, however, so a unit of measure for real values must be chosen. Throughout the analysis in this chapter and the next the Commission uses the true-cost-of-living index, as measured by the unit U.S.-household expenditure function, to deflate all nominal results. In this case using the true-cost-of-living index to deflate GDP yields a measure that is a close proxy for welfare changes. In a simple model without government expenditure and other distortions they would be the same.

<sup>2</sup> This transfer compensates the government for lost tariff revenue in order to hold government expenditure and borrowing constant. Holding fixed the government budget position (and by extension government purchases) is necessary for welfare analysis.

Source: USITC calculations.

slightly, due largely to increased imports in agricultural products. The transfer from households to the government compensates for the loss of tariff revenue to the government.<sup>8</sup>

## Simulated Changes in Trade Volumes

Aggregate U.S. trade with the world is likely to increase as a result of the increased market access due to the three FTAs. Table 5-3 reports the simulated changes in U.S. trade volumes. Total imports increase by \$1.31 billion (0.08 percent) on a landed-duty paid basis and total exports increase by \$1.76 billion (0.15 percent) on an f.o.b. basis.<sup>9</sup>

<sup>8</sup> Without making up for the government's lost tariff revenue, real government spending and net government indebtedness could not be maintained, and national welfare could not be compared between the benchmark and the counterfactual simulation.

<sup>9</sup> Net capital flows are assumed not to change in the simulated FTAs, requiring balance between the change in the value of imports on a c.i.f. basis and the change in value of exports on an f.o.b. basis. The smaller change in imports reported in table 5-2 is due to the lost tariff revenue that is included in imports measured on a landed-duty-paid basis.

**Table 5-3**  
**Simulated changes in aggregate U.S. trade volume**

Flow	Million dollars	Percent change
Imports (landed duty paid) .....	1,308.9	0.08
Exports (free on board) .....	1,763.6	0.15

Source: USITC calculations. See text.

Trade volumes with the three FTA partners collectively increase substantially more than U.S. aggregate trade, reflecting trade diverted from non-FTA members, as shown below. Table 5-4 reports the simulated changes in trade between the United States and the three other countries considered collectively. Table 5-5, 5-6, and 5-7 report trade between the United States and each country individually. Note that all of the tables report results from the same policy experiment of implementing three FTAs at the same time. For example, the U.S.- Australia numbers reported in table 5-5 show the effects on U.S.-Australia trade of implementing all three agreements, not just the U.S.-Australia FTA.

The numbers are reported on a landed-duty paid basis, and thus reflect changes in the value of trade including tariff payments. U.S. imports from the partners increase by \$2.24 billion, with increases of \$1.08 billion, \$0.26 billion, and \$0.91 billion from Australia, Chile, and Singapore respectively. Comparing these findings to the aggregate change in U.S. imports of about \$1.31 billion, the simulated FTAs divert the difference of about \$930 million of trade away from countries other than the three FTA partners. That is, the increase in imports from the partners is offset partially by declines in imports from other sources.

Table 5-4 through 5-7 include a decomposition of the bilateral trade equilibrium by commodity. In general, the sectors facing the greatest trade barriers are the ones experiencing the greatest effects of eliminating the trade barriers. U.S. imports of goods in five categories—meat products<sup>10</sup> (which includes beef); other processed foods and tobacco; textiles, apparel, and leather products; petroleum, chemicals, rubber, and plastic products; and other machinery and equipment—increase substantially, accounting for \$2.01 billion of the total increase in imports.

The greatest percentage increase in sectoral trade occurs in textiles, apparel, and leather products, with a 104 percent increase in imports from the three partner countries combined, although this effect may be overstated, as discussed below. The 104-percent increase in imports of textiles, apparel, and leather products from the partners represents a 72-percent increase from Australia (table 5-5), a 124-percent increase from Chile (table 5-6), and a 135-percent increase from Singapore (table 5-7).

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<sup>10</sup> It should be noted that the assessment of the impact of the FTAs in this section is not based on a staged implementation of the agreements, but on an immediate full implementation of the agreements on Jan. 1, 2004.



**Table 5-4**  
**U.S. trade equilibrium: Imports from all FTA partners (landed-duty paid)**

Sector	U.S. imports from all FTA partners			All FTA partners' imports from U.S.		
	Base value	Change of value	Percentage change	Base value	Change of value	Percentage change
	<i>Million dollars</i>			<i>Million dollars</i>		
Meat products <sup>1</sup> .....	1,395.1	453.8	32.53	43.5	4.8	11.03
Other processed food and tobacco products .....	2,137.7	172.9	8.09	597.6	53.3	8.92
Textile, apparel, and leather products .....	627.2	655.0	104.43	268.3	161.6	60.23
Petroleum, chemicals, rubber, plastic .....	3,425.9	584.3	17.06	6,008.4	557.2	9.27
Motor vehicles and parts .....	447.9	92.4	20.63	1,473.8	515.3	34.96
Metals nec and metal products .....	1,242.9	88.1	7.09	195.9	12.2	6.23
Other machinery and equipment .....	2,189.0	144.7	6.61	8,944.8	941.0	10.52
Ferrous metals .....	372.9	25.5	6.84	744.0	104.6	14.06
Other manufactures .....	466.4	15.4	3.30	1,034.6	158.9	15.36
Transport equipment n.e.c. ....	437.5	-0.9	-0.21	5,691.7	47.5	0.83
Dairy products .....	96.1	11.7	12.17	17.7	1.3	7.34
Electronic equipment .....	10,136.5	-36.3	-0.36	6,541.2	139.0	2.13
Other crops .....	87.1	5.8	6.66	58.6	5.0	8.53
Vegetables, fruits, and nuts ....	1,100.6	26.0	2.36	129.6	2.5	1.93
Wood products .....	778.3	42.8	5.50	119.8	28.2	23.54
Animal products n.e.c. ....	138.2	1.7	1.23	30.3	0.7	2.31
Cattle and horses .....	14.4	0.0	0.00	104.3	3.9	3.74
Grains .....	108.7	-0.5	-0.46	57.9	13.1	22.63
Sugar .....	52.9	0.0	0.00	3.6	0.3	8.33
Coal, oil, gas, other mineral ....	769.9	-3.5	-0.45	50.9	12.0	23.58
Services .....	7,768.2	-34.4	-0.44	9,744.0	31.6	0.32
Total .....	33,793.3	2,244.4	6.64	41,860.7	2,794.4	6.68

<sup>1</sup> Meat products include beef, pork, lamb, and other meat products. See text.

Source: GTAP release candidate version 6 data and USITC calculations.

**Table 5-5**  
**U.S.-Australia trade equilibrium: Imports from partner (landed-duty paid)**

Sector	U.S. imports from Australia			Australia imports from U.S.		
	Base value	Change of value	Percentage change	Base value	Change of value	Percentage change
	<i>Million dollars</i>			<i>Million dollars</i>		
Meat products <sup>1</sup> .....	1,387.6	453.0	32.65	12.1	1.9	15.70
Other processed food and tobacco products .....	955.9	120.5	12.61	340.1	39.1	11.50
Textile, apparel, and leather products .....	302.5	219.2	72.46	145.4	137.6	94.64
Petroleum, chemicals, rubber, plastic .....	770.4	83.2	10.80	2,547.7	356.3	13.99
Motor vehicles and parts .....	396.4	88.3	22.28	1,121.0	469.1	41.85
Metals n.e.c. and metal products .....	409.7	28.3	6.91	98.6	7.0	7.10
Other machinery and equipment .....	777.2	53.3	6.86	4,095.7	641.2	15.66
Ferrous metals .....	288.5	19.0	6.59	238.9	82.8	34.66
Other manufactures .....	242.6	9.5	3.92	636.9	119.8	18.81
Transport equipment n.e.c. ....	239.7	0.6	0.25	2,189.0	-2.2	-0.10
Dairy products .....	94.7	8.1	8.55	6.5	0.4	6.15
Electronic equipment .....	117.7	0.0	0.00	1,258.1	-1.6	-0.13
Other crops .....	22.0	3.2	14.55	33.3	0.2	0.60
Vegetables, fruits, and nuts ....	50.8	3.8	7.48	66.0	1.7	2.58
Wood products .....	42.3	2.3	5.44	77.2	23.7	30.70
Animal products n.e.c. ....	55.1	0.3	0.54	16.0	0.1	0.63
Cattle and horses .....	6.6	0.0	0.00	103.9	3.9	3.75
Grains .....	0.1	0.0	0.00	3.7	0.0	0.00
Sugar .....	52.2	0.0	0.00	0.6	0.0	0.00
Coal, oil, gas, other mineral ....	652.0	-3.7	-0.57	33.1	0.7	2.11
Services .....	3,718.9	-12.8	-0.34	6,969.9	16.6	0.24
Total .....	10,582.8	1,076.0	10.17	19,993.8	1,898.5	9.50

<sup>1</sup> Meat products include beef, pork, lamb, and other meat products. See text.

Source: GTAP release candidate version 6 data and USITC calculations.

**Table 5-6**  
**U.S.-Chile trade equilibrium: Imports from partner (landed-duty paid)**

Sector	U.S. imports from Chile			Chile imports from U.S.		
	Base value	Change of value	Percentage change	Base value	Change of value	Percentage change
	<i>Million dollars</i>			<i>Million dollars</i>		
Meat products <sup>1</sup> .....	3.7	0.5	13.51	4.4	2.3	52.27
Other processed food and tobacco products .....	1,080.7	46.7	4.32	76.1	12.1	15.90
Textile, apparel, and leather products .....	14.7	18.2	123.81	49.7	22.3	44.87
Petroleum, chemicals, rubber, plastic .....	471.4	69.2	14.68	614.3	179.1	29.16
Motor vehicles and parts .....	12.2	0.6	4.92	192.0	46.4	24.17
Metals n.e.c. and metal products .....	811.4	58.3	7.19	11.1	5.5	49.55
Other machinery and equipment .....	26.8	1.8	6.72	888.6	310.5	34.94
Ferrous metals .....	40.0	2.2	5.50	62.4	22.3	35.74
Other manufactures .....	34.9	0.9	2.58	110.3	38.6	35.00
Transport equipment n.e.c. ....	1.1	0.1	9.09	111.1	51.5	46.35
Dairy products .....	0.9	2.8	311.11	2.0	0.9	42.38
Electronic equipment .....	4.1	0.0	0.00	514.7	160.8	31.24
Other crops .....	43.8	1.7	3.88	15.7	4.8	30.57
Vegetables, fruits, and nuts ....	1,049.1	22.2	2.12	4.2	0.7	16.67
Wood products .....	711.8	37.7	5.30	12.0	4.6	38.33
Animal products n.e.c. ....	63.0	1.5	2.38	4.0	0.6	15.00
Cattle and horses .....	7.8	0.0	0.00	0.3	0.0	0.00
Grains .....	108.6	-0.5	-0.46	42.4	13.0	30.66
Sugar .....	0.4	0.0	0.00	0.9	0.3	33.33
Coal, oil, gas, other mineral ....	117.6	0.2	0.17	10.9	11.2	102.75
Services .....	558.7	-1.1	-0.20	566.5	0.3	0.05
Total .....	5,162.8	263.1	5.10	3,293.7	887.7	26.95

<sup>1</sup> Meat products include beef, pork, lamb, and other meat products. See text.

Source: GTAP release candidate version 6 data and USITC calculations.

**Table 5-7**  
**U.S.-Singapore trade equilibrium: Imports from partner (landed-duty paid)**

Sector	U.S. imports from Singapore			Singapore imports from U.S.		
	Base value	Change of value	Percentage change	Base value	Change of value	Percentage change
	<i>Million dollars</i>			<i>Million dollars</i>		
Meat products <sup>1</sup> .....	3.8	0.3	7.89	27.0	0.6	2.22
Other processed food and tobacco products .....	101.1	5.7	5.64	181.4	2.1	1.16
Textile, apparel, and leather products .....	310.0	417.6	134.71	73.2	1.7	2.32
Petroleum, chemicals, rubber, plastic .....	2,184.1	431.9	19.77	2,846.4	21.8	0.77
Motor vehicles and parts ...	39.3	3.5	8.91	160.8	-0.2	-0.12
Metals n.e.c. and metal products .....	21.8	1.5	6.88	86.2	-0.3	-0.35
Other machinery and equipment .....	1,385.0	89.6	6.47	3,960.5	-10.7	-0.27
Ferrous metals .....	44.4	4.3	9.68	442.7	-0.5	-0.11
Other manufactures .....	188.9	5.0	2.65	287.4	0.5	0.17
Transport equipment n.e.c. .	196.7	-1.6	-0.81	3,391.6	-1.8	-0.05
Dairy products .....	0.5	0.8	160.00	9.2	0.0	0.00
Electronic equipment .....	10,014.7	-36.3	-0.36	4,768.4	-20.2	-0.42
Other crops .....	21.3	0.9	4.23	9.6	0.0	0.00
Vegetables, fruits, and nuts .....	0.7	0.0	0.00	59.4	0.1	0.17
Wood products .....	24.2	2.8	11.57	30.6	-0.1	-0.33
Animal products n.e.c. ....	20.1	-0.1	-0.50	10.3	0.0	0.00
Cattle and horses .....	0.0	0.0	N/A	0.1	0.0	0.00
Grains .....	0.0	0.0	N/A	11.8	0.1	0.85
Sugar .....	0.3	0.0	0.00	2.1	0.0	0.00
Coal, oil, gas, other mineral .....	0.3	0.0	0.00	6.9	0.1	1.45
Services .....	3,490.6	-20.5	-0.59	2,207.6	14.7	0.67
Total .....	18,047.7	905.3	5.02	18,573.2	8.1	0.04

<sup>1</sup> Meat products include beef, pork, lamb, and other meat products. See text.

Source: GTAP release candidate version 6 data and USITC calculations.

These increases are from a small base; combined imports from the three countries constitute about 1 percent of U.S. imports of these products. A major factor in the increase is the elimination of tariffs on this aggregate sector, which in the USITC model are 9 to 13 percent (table 5-1). The scope of the actual expansion of imports of textiles and apparel, particularly from Singapore and Australia, would be limited by the rules of origin for textile and apparel products embodied in the trade agreements, and determined by the availability of intermediate inputs meeting these rules of origin. In order to evaluate the possible impact of the rules of origin in limiting increases in imports from Singapore and Australia, two exercises were performed as described below.

Table 5-8 puts the information of tables 5-4 through 5-7 into the broader context of the overall effects of the three FTAs on U.S. trade with the world at large. Note, for example, that under the FTAs, U.S. imports of textiles, apparel, and leather products from the three FTA partners increase by \$655.0 million (table 5-4), or 104.4 percent, whereas U.S. total imports of these goods increase by only \$159.3 million, or 0.11 percent (table 5-8). Thus, most of the increase in the imports from the three partners is diverted from imports formerly supplied by other countries.

On the U.S. export side, there are substantial increases in the motor vehicles and parts sector; other machinery and equipment; petroleum, chemical, rubber, plastic products; and in the coal, oil, gas, and other minerals sector.

### ***Alternative Simulations for Textiles and Apparel***

For Singapore, the production of textile and apparel products to meet the demand for increased exports to the United States might require more imported intermediate inputs, possibly violating the FTA rules of origin. To address this issue, the Commission simulated the FTA with restrictive rules of origin. This is approximated by assuming only a partial liberalization of textile and apparel imports from Singapore. In particular, the Commission simulated the U.S.-Singapore FTA with only a 50-percent cut in the textile and apparel tariff. That is, instead of removing the 13.42 percent tariff on these imports from Singapore, the tariff is reduced to 6.71 percent. Other tariffs, from Singapore and from Chile and Australia, were eliminated as before. Results of this alternative scenario show that, rather than growing by 134.7 percent (\$417.6 million), imports of textiles and apparel from Singapore would grow by only 55.7 percent (\$172.5 million). Under this alternative, returns to factors of production are lower than under the full liberalization (by \$0.1 million for land, \$9.3 million for unskilled labor, \$13.2 million for skilled labor, and \$17.7 million for capital). Because more tariffs are collected (the tariff reduction is smaller), the lump-sum transfer to compensate for revenue goes down by \$49.23 million, resulting in an increase of \$17.6 million in the welfare gain under the alternative scenario (\$481.8 million compared to \$464.2 million). As a percentage of the base values, the changes in welfare and returns to factors under the alternative scenario do not differ significantly from those of the principal scenario. The simulated impact on other variables did not change significantly.

For Australia, a recent study by CIE<sup>11</sup> finds that the bulk of Australian exports to the United States at the present time (in the absence of the FTA and its rules of origin) would not qualify for tariff elimination under the rules of origin of the FTA, because most Australian exports in this category are made from inputs imported from other countries. CIE states that on average over the past 5 years, 8.8 percent of Australian

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<sup>11</sup> Centre for International Economics, Canberra and Sidney, Economic Analysis of AUSFTA—Impact of the Bilateral Free Trade Agreement with the United States, Apr. 2004, pp. 53-54.

**Table 5-8**  
**U.S. trade equilibrium: Imports (landed duty paid) and exports (fob) with the world**

Products	Imports			Exports		
	Base value	Change of value	Percentage change	Base value	Change of value	Percentage change
	<i>Million dollars</i>			<i>Million dollars</i>		
Meat Products . . . . .	6,722.7	230.5	3.43	11,747.0	4.1	0.03
Other processed food and tobacco products . . . . .	33,515.2	58.5	0.17	26,172.7	47.8	0.18
Textile, apparel, and leather products . . . . .	142,070.0	159.3	0.11	27,855.7	119.6	0.43
Petroleum, chemicals, rubber, plastic . . . . .	173,646.8	240.0	0.14	160,972.0	427.4	0.27
Motor vehicles and parts . . .	183,472.6	54.6	0.03	73,267.8	508.6	0.69
Metals n.e.c. and metal products . . . . .	29,344.9	43.0	0.15	16,161.6	2.1	0.01
Other machinery and equipment . . . . .	259,183.6	135.6	0.05	222,585.0	713.9	0.32
Ferrous metals . . . . .	52,820.4	44.7	0.08	29,755.1	75.7	0.25
Other manufactures . . . . .	105,684.9	45.1	0.04	46,862.9	104.3	0.22
Transport equipment n.e.c. . .	49,663.7	20.0	0.04	71,400.3	-12.7	-0.02
Dairy products . . . . .	1,968.4	6.1	0.31	1,261.3	0.1	0.01
Electronic equipment . . . . .	203,719.7	51.6	0.03	153,951.3	4.8	0.00
Other crops . . . . .	9,483.5	3.4	0.04	16,511.6	-5.7	-0.03
Vegetables, fruits, and nuts . . . . .	8,826.7	6.6	0.07	7,137.8	0.1	0.00
Wood products . . . . .	50,061.6	32.5	0.06	11,567.2	16.5	0.14
Animal products n.e.c. . . . .	3,313.6	-1.6	-0.05	4,491.9	-1.3	-0.03
Cattle and horses . . . . .	2,580.7	-4.3	-0.17	1,018.5	2.3	0.23
Grains . . . . .	1,117.1	-0.7	-0.06	13,399.9	7.7	0.06
Sugar crops . . . . .	8.5	0.0	0.01	2.7	0.0	-0.07
Sugar . . . . .	1,402.3	0.5	0.04	497.6	0.0	0.00
Coal, oil, gas, other mineral . . . . .	104,602.1	54.3	0.05	6,172.0	-3.0	-0.05
Services . . . . .	244,282.9	129.1	0.05	290,526.3	-248.7	-0.09
<b>Total</b>	<b>1,667,491.7</b>	<b>1,308.9</b>	<b>0.08</b>	<b>1,193,318.1</b>	<b>1,763.6</b>	<b>0.15</b>

Source: GTAP version 6 release candidate data and USITC calculations.

exports to the United States could be determined to have satisfied the yarn-forward rules of origin for textiles and apparel. CIE notes that it was not able to survey completely the Australian industry, and there may be more exports that in fact qualify under the rules. It further notes that under the FTA there would be an incentive for Australian producers to change the source of their inputs, either to domestic Australian sources or to U.S. sources. Nevertheless, it is likely that some large fraction of Australian textile and apparel exports to the United States would not qualify for duty-free treatment, as compliance with the rules of origin might be more costly than the savings to be realized from the preferential tariff treatment. Applying the CIE estimates, the Commission estimates can be adjusted to reflect the effect of this treatment of rules of origin.

In the USITC model, textiles and apparel are combined with leather products in a larger aggregate sector, in which leather accounts for 9 percent of imports. Assuming leather products satisfy the rules of origin, and assuming that only 8.8 percent of textiles and apparel do (even after Australian producers had adjusted their sources in response to the FTA and its incentives), then 17.0 percent of the larger aggregate sector in the USITC model would qualify for duty-free entry. Therefore, the model's tariff of 9.35 percent might be reduced by 1.6 percentage points (9.35 times 0.17). An alternative but equivalent way of looking at this is that, while the tariff is 9.35 percent for textile, apparel, and leather products from Australia, only 17 percent of it (1.6 percentage points) can be liberalized. This limited tariff reduction for textile, apparel, and leather products from Australia was applied as an alternative modeling scenario.

Elimination of a 1.6-percent tariff (17 percent of the 9.35 percent value, as calculated above) causes textile, apparel, and leather imports from Australia to increase by only 9.21 percent, rather than by 72.46 percent value, or about \$27.9 million compared to \$219.2 million. Returns to factors of production, as in the Singapore case above, are again lower than they would be under full liberalization (by \$1.2 million for land, \$7.5 million for unskilled labor, \$9.2 million for skilled labor, \$13.2 million for capital). Because more tariffs are collected, the lump sum transfer to compensate for them drops by \$39 million. Under this alternative scenario, with lower returns to factors of production but higher tariff revenue, welfare increases by \$14 million more than under the principal scenario (\$478.3 million compared to \$464.2 million, as reported above and in table 5-2).

## **U.S. Gross Output and Employment Effects**

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The three FTAs are likely to result in expansion of industries that experience increased export demand due to the removal of partner tariffs. In addition, the reallocation of resources and direct competition from imported goods that are given preferential import treatment into the United States likely will cause some U.S. industries to decline. Table 5-9 reports the simulated percent changes in output, revenue, and employment by industry. For example, the model indicates that output in the services sector declines by a small percentage, as resources are allocated to other sectors. Price increases for the output of this sector imply that even though its output quantity declines, its revenue increases slightly. Changes in gross output should be interpreted as pure quantity changes. Changes in revenues by industry incorporate both the quantity and producer price changes generated in the simulated FTAs.

Generally, those industries with the largest increases in export demand expand the most, and those industries that face significant import competition contract the most. The sector experiencing the greatest expansion under full liberalization is the motor vehicle and parts industry. This finding is consistent with the relatively high rates of protection on both exports and imports and the substantial vertical linkages within the

**Table 5-9**  
**Changes in output and employment in the United States**

	Output <sup>1</sup>		Labor quantity impact
	Quantity impact	Revenue impact	
		<i>Percent</i>	
Services .....	-0.003	0.003	-0.004
Capital goods .....	0.000	-0.001	0.000
Petroleum, chemicals, rubber, plastic .....	0.012	0.011	0.012
Other machinery and equipment .....	0.068	0.071	0.069
Other processed food and tobacco products .....	-0.011	-0.011	-0.011
Motor vehicles and parts .....	0.106	0.103	0.107
Other manufactures .....	0.009	0.012	0.009
Ferrous metals .....	0.032	0.034	0.032
Electronic equipment .....	-0.017	-0.015	-0.017
Textile, apparel, and leather products .....	-0.027	-0.041	-0.026
Wood products .....	-0.014	-0.014	-0.015
Transport equipment n.e.c. ....	-0.022	-0.021	-0.022
Meat products .....	-0.179	-0.192	-0.179
Metals n.e.c. and metal products .....	-0.030	-0.034	-0.030
Coal, oil, gas, other mineral .....	-0.014	-0.014	-0.014
Cattle and horses .....	-0.065	-0.061	-0.065
Dairy products .....	-0.022	-0.025	-0.034
Grains .....	-0.069	-0.076	-0.082
Other crops .....	-0.168	-0.173	-0.182
Animal products n.e.c. ....	-0.019	-0.024	-0.033
Vegetables, fruits, nuts .....	-0.010	-0.006	-0.010
Sugar .....	-0.034	-0.038	-0.047
Sugar crops .....	-0.010	-0.016	-0.024

<sup>1</sup> The revenue impact reflects changes in the prices as well as the output quantities of the listed sectors.

Source: USITC calculations and GTAP release candidate version 6 data.



motor vehicle sector. The pattern of employment impacts across the sectors is generally consistent with the changes in output, because the FTAs have little impact on the relative prices of the primary factors of production.

The simulation model abstracts from a great deal of labor market detail in order to characterize the world trade equilibrium. The simulation model does not consider changes in total labor supply nor does it consider potential unemployment impacts; labor supply in the model is assumed to be fixed, and the labor market clears in equilibrium, as do all other simulated markets either for other factors or for goods or services. The model serves to indicate the ways in which a fixed labor supply would be reallocated among sectors in response to trade policy changes. In order to gain insight on how the overall labor supply and employment level may respond to policy, other information can be applied in addition to the model results. The model provides an estimated proportional change in the wage rate across the economy. The simulated FTAs increase the average wage in the United States by 0.01 percent. Assuming a labor-supply elasticity of 0.1, this translates into a 0.001-percent increase in labor supply. With a U.S. labor force of 150 million, the simulation results imply an equilibrium increase in the labor market of roughly 1,500 full-time equivalent jobs. Thus, although employment may fall in contracting industries, the overall small net increase in demand for labor is likely to decrease the economywide unemployment rate.



# CHAPTER 6

## Cross-Sectoral Effects

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This chapter addresses several provisions of the three FTAs which apply to trade in a variety of sectors, including investment, transparency, intellectual property rules, and trade facilitation measures including customs procedures, technical barriers to trade (TBTs), and sanitary and phytosanitary measures (SPSs). The provisions in the FTAs that promote increased transparency of investment rules, remove barriers to investment, and provide for a dispute settlement process to address disputes will likely benefit investors in economic sectors as diverse as services, manufacturing, mining, and agriculture. More transparent regulations and stronger enforcement of intellectual property measures will likely benefit industries as diverse as film and television distribution, pharmaceuticals, computer software manufacturers, distributors of designer retail goods, and manufacturers with proprietary industrial processes. Trade facilitation measures relating to improved customs processing and increased transparency regarding trade rules should reduce costs for manufacturers and commodities producers alike. Industry representatives have stated that the wide-ranging application of the FTA provisions addressed in these chapters makes such provisions important in reducing barriers to trade and investment with the U.S. FTA partners. In addition, they also emphasize that these FTA provisions serve as important precedents for future bilateral and multilateral trade agreements, most likely with larger economies.<sup>1</sup>

### Trade Facilitation

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The three FTAs contain provisions designed to facilitate the movement of goods and the provision of services between the parties.<sup>2</sup> Although it is not possible to quantify the effect of these provisions on trade performance, U.S.-based firms will likely benefit from the application of trade facilitation disciplines found in the agreements, because they promote improvements in regulatory transparency, reduce technical barriers to trade, improve customs processing, and reduce impediments to agricultural products and e-commerce. Transparency provisions related to customs procedures and other

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<sup>1</sup> See, for example, "The U.S.-Australia Free Trade Agreement (FTA): The Intellectual Property Provisions," Report of the Industry Functional Advisory Committee on Intellectual Property Rights for Trade Policy Matters (IFAC-3), Mar. 12, 2004. In addition, interviews with service industry representatives confirm that these FTAs are seen as important precedents for future trade negotiations.

<sup>2</sup> Provisions related to trade facilitation in the covered FTAs are drawn from the chapters related to electronic commerce, sanitary and phytosanitary measures, transparency, technical barriers to trade, and customs administration. The text of the agreements is available on the USTR website, at [http://www.ustr.gov/Trade\\_Agreements/Bilateral/Section\\_Index.html](http://www.ustr.gov/Trade_Agreements/Bilateral/Section_Index.html), retrieved Jan. 11, 2005.

trade facilitation issues are particularly relevant in developing countries such as Chile, where regulatory procedures can be ambiguous and possibly inconsistently applied. U.S.-based firms can expect moderate improvements in customs processing in markets covered by the three FTAs, although improvements may not be as pronounced in Singapore, where customs reform has largely taken place. Provisions on technical trade barriers create greater regulatory certainty regarding technical standards and conformity assessment, likely improving conditions for U.S.-based investment in the FTA partner countries covered here. U.S.-based agricultural firms will likely benefit from provisions on sanitary and phytosanitary measures that seek to reduce impediments in this area. Similarly, U.S.-based e-commerce firms will benefit from the application of trade disciplines such as market access and national treatment.

## Transparency

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U.S. firms and their affiliates in FTA partner countries are likely to benefit from improved regulatory transparency and market access as a result of the covered FTAs. Regulatory transparency is particularly important to cross-border trade in services and the establishment of a commercial presence in the service industries, because many services are heavily regulated owing to their influence on public health, consumer welfare, and safety. The FTA chapters on transparency promote the availability and clarity of laws and regulations. The chapters require designation of contact points for inquiries about regulation, prompt publication of adopted legal measures and regulations, advance publication of regulations under consideration, and reasonable notice of proceedings held to adopt or modify regulations. In addition to the chapters in the trade agreements specifically devoted to transparency, the chapters on cross-border services and financial services include provisions that promote regulatory transparency.

## Investment

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The investment provisions of the covered FTAs are not expected to yield large changes in total foreign direct investment between the United States and its FTA partners. In Chile, Singapore, and Australia, there are few existing impediments to U.S. foreign direct investment. Table 6-1 illustrates the extent of the existing investment relationship between the United States and the three FTA partners. In specific sectors, however, the covered FTAs may generate new outbound U.S. investment. In addition, changes to domestic legislation by FTA partners may also provide new opportunities for increased U.S. investment. For example, Singapore passed its Competition Act 2004 which, upon its entry into force, will expand Singapore's existing antitrust regime.<sup>3</sup> The investment

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<sup>3</sup> Competition Act 2004 (Act 46 of 2004), passed on October 19, 2004, cited in e-mail communication to USITC by Singapore industry representative, Feb. 23, 2005.

**Table 6-1**  
**Value of U.S. inbound and outbound direct investment, by FTA partner, 1999-2003**

(Million dollars)

	1999	2000	2001	2002	2003
<b>Chile</b>					
Outbound investment flows . . .	428	197	2,746	-1,196	-246
Outbound investment stock . . .	10,177	10,052	10,526	9,991	9,986
Inbound investment flows . . . . .	(*)	-19	-204	154	80
Inbound investment stock . . . . .	42	24	-186	-27	63
<b>Singapore</b>					
Outbound investment flows . . .	3,863	3,688	5,593	4,377	5,699
Outbound investment stock . . .	20,665	24,133	40,764	52,449	57,589
Inbound investment flows . . . . .	-560	5,911	-1,451	-514	-809
Inbound investment stock . . . . .	1,365	5,087	1,221	650	-162
<b>Australia</b>					
Outbound investment flows . . .	4,868	890	-751	5,139	3,881
Outbound investment stock . . .	35,386	34,838	27,778	34,409	40,985
Inbound investment flows . . . . .	4,193	4,935	6,490	6,081	4,382
Inbound investment stock . . . . .	15,616	18,775	19,465	23,136	24,652

\* Less than \$500,000.

Source: USDOC, BEA, "U.S. Direct Investment Abroad: Country Detail for Selected Items," found at <http://www.bea.gov/bea/di/usdctry/longctry.xls>, retrieved Feb. 14, 2005; and "Foreign Direct Investment in the United States: Selected Items by Detailed Country," found at <http://www.bea.gov/bea/di/fdilongcty.xls>, retrieved Feb. 14, 2005.

provisions of the FTAs also offer significant new guarantees to U.S. investors, which serve as precedents for future bilateral and multilateral agreements.

The provisions contained in the investment chapters of the three bilateral FTAs are generally patterned after those of the NAFTA and U.S. bilateral investment treaties (BITs). These provisions extend well beyond those contained in any of the multilateral agreements to which both the United States and its FTA partners are parties, and therefore the FTAs as a group represent a significant expansion of bilateral investment obligations. In general, the investment chapter of each FTA guarantees to U.S. investors legal treatment equivalent to that of domestic investors, with provisions prohibiting the following: expropriation of assets without prompt and adequate compensation, requirements for senior managers and directors of a particular nationality, and performance requirements such as domestic content rules or technology transfer to the host country. The agreement also requires both parties to permit all financial transfers related to covered investments to take place freely and without delay.

As is the case for cross-border services trade, all investments are covered by the FTA disciplines unless they are specifically exempted in an annex to the agreement. Exemptions, or nonconforming measures, may specify existing measures in the laws of a party that do not conform to the provisions of the agreement, or may reserve the right for a party to enact future nonconforming measures in a specific area. The specific nonconforming measures found in the annexes of each FTA vary widely by country.

An important aspect of the investment chapter in the Chile and Singapore FTAs is a dispute settlement provision that permits foreign investors to bring claims directly against the host government through international arbitration, and to receive direct monetary compensation, if warranted. This “investor-state” dispute settlement process differs from the approach used for disputes arising in relation to other chapters of the agreement, and in most other international investment agreements.<sup>4</sup> Under the standard process, claims against the host government must be brought by the government of the affected party, and no direct awards may be received by individual investors. The investor-state dispute settlement procedures call for an initial period of consultation and negotiation prior to submitting a claim to arbitration. Such a claim must allege a breach of the agreement and that loss or damage was incurred as a result of that breach.

## Intellectual Property Rights<sup>5</sup>

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The United States promoted four primary trade objectives regarding intellectual property rights (IPR) in the three covered FTAs.<sup>6</sup> First, the United States sought strengthened IPR standards to be applied by its FTA partners, building on the foundations of the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs). Second, it wanted its partners to update their copyright laws to take into account new technological developments, including Internet piracy and other digital piracy. Third, the United States expected the covered FTAs to require levels of protection and practices more in line with U.S. laws and practices in areas such as trademark, patent, and trade secret protection, including the protection of test data. Finally, it sought strengthened IPR enforcement procedures from its partners.

The IPR regimes of Australia and Singapore are relatively advanced. Although Chile’s IPR regime is less advanced, it has made at least some improvements in its IPR laws, administrative procedures, and enforcement efforts in recent years. Nevertheless, some problems remain in Chile, in the areas of copyright, trademark, patent, and trade secret protection; and IPR enforcement.<sup>7</sup>

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<sup>4</sup> There is no “investor-state” dispute settlement provision included in the U.S.-Australia FTA.

<sup>5</sup> Information summarized in this section is based on numerous sources cited in chapters and sections on intellectual property rights in USITC Investigation Nos. TA 2104-5, TA 2104-6, TA 2104-11, TA 2104-13, TA 2104-14, and TA 2104-15, which were published in 2003 and 2004, and covered the FTAs in this report.

<sup>6</sup> Industrial Functional Advisory Committee and Industry Trade Advisory Committee reports on the intellectual property provisions of each of the six agreements covered in this study found at <http://www.ustr.gov>.

<sup>7</sup> Such problems are particularly significant in Chile, Costa Rica, and the Dominican Republic, United States Trade Representative (USTR), 2004 Special 301 Report, Mar. 31, 2004, found at <http://www.ustr.gov>, retrieved Jan. 3, 2004.

The IPR provisions of the three covered FTAs address the most significant concerns of U.S. industry and trade officials.<sup>8</sup> For instance, the FTAs require each country to ratify two World Intellectual Property Organization (WIPO) treaties that address Internet and other digital piracy issues not dealt with in TRIPs.<sup>9</sup> In addition, minimum copyright terms are extended from 50 to 70 years. The FTAs also extend trademark, patent, and trade secret protections beyond TRIPs requirements. Important achievements include FTA provisions for patent term restoration<sup>10</sup> and increased levels of protection for clinical test data submitted to government agencies for marketing approval purposes. IPR enforcement provisions are strengthened as well, by making it easier to calculate civil penalties for copyright and trademark infringement, requiring the use of criminal procedures and penalties in certain cases, and providing police and border officials with more authority to pursue criminal IPR violations on their own initiative.

Full implementation and enforcement of the IPR provisions of the three covered FTAs will likely increase the level of protection currently afforded to IPR holders and will likely result in increased revenues for U.S. industries dependent on copyrights, patents, trademarks, and trade secrets. However, due to the small size of the countries covered under these FTAs, any increases in revenues for U.S. industries would likely have a limited effect on the U.S. economy as a whole. Furthermore, there would be little, if any, impact on the U.S. economy due to U.S. implementation of its FTA obligations because the United States already meets the relatively high standard of IPR protection and enforcement included in these agreements.

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<sup>8</sup>The United States expressed concerns to Australia that FTA implementing legislation passed by that country's Parliament in August 2004 did not fully address a number of its IPR commitments in the agreement. The issues of concern were of particular interest to the U.S. pharmaceutical and copyright-based industries. Discussions by the two countries were reportedly held up in an attempt to resolve the IPR issues before the intended January 1, 2005 entry into force date of the FTA. On November 17, 2004, the USTR announced that Australia had committed to address the IPR concerns brought up by the United States and that the FTA would go into effect on January 1 as previously planned. USTR, "U.S. and Australia Address FTA Implementation Issues: FTA to Take Effect January 1, as Planned," USTR press release, Nov. 17, 2004, p.1, found at <http://www.ustr.gov>, retrieved Nov. 16, 2004, p.1, and letter dated Nov. 17 from Robert B. Zoellick, United States Trade Representative, to Honorable Mark Vaile, MP, Minister for Trade, Australia, found at <http://www.ustr.gov>, retrieved Jan. 5, 2004.

<sup>9</sup>The two treaties, the World Intellectual Property Organization (WIPO) Copyright Treaty and the WIPO Performances and Phonograms Treaty, are together referred to as the WIPO Internet Treaties. Both treaties entered into force in 2002.

<sup>10</sup>Patent term restoration provisions in the six covered FTAs allow patent terms to be extended beyond the 20-year term required by TRIPs to compensate for upfront administrative or regulatory delays in granting the original patent or in providing marketing approval to regulated products such as pharmaceuticals and agricultural chemicals.

Among the industries that would potentially benefit most from the improved digital technology and other copyright features of the covered FTAs are the motion picture, sound recording, business software applications, entertainment software, and book publishing industries. Industries that should benefit from the improved patent and trade secret protections, including the protection of clinical test data, are the pharmaceutical and agricultural chemicals industries. A broad range of U.S. industries should benefit from strengthened trademark, enforcement, and other IPR provisions found in these FTAs.



**APPENDIX A**  
**Request Letter**

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

March 30, 2005

The Honorable Stephen Koplan  
Chairman  
U.S. International Trade Commission  
500 E Street, SW  
Washington, DC 20436

Dear Mr. Chairman:

In accordance with Section 2103(c)(3) of the Trade Act of 2002, I wish to inform you that the President has decided to submit to the Congress under Section 2103(c)(2) of that act a report requesting the extension of trade authorities procedures. I have enclosed a copy of the report with this letter.

Please let me know if you or other Commissioners have any questions regarding the report that the Commission is required under Section 2103(c)(3)(B) of the act to submit to the Congress by no later than June 1, 2005.

Sincerely,



Peter F. Allgeier  
Acting

Encl.



# APPENDIX B

## Federal Register Notice

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information concerning the Commission may also be obtained by accessing its Internet server (<http://www.usitc.gov>). The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

**SUPPLEMENTARY INFORMATION:** This patent-based section 337 investigation was instituted by the Commission on January 7, 2004, based on a complaint filed by Eaton Corporation ("Eaton") of Cleveland, Ohio. 69 FR 937 (January 7, 2004). The complaint, as supplemented, alleged violations of section 337 of the Tariff Act of 1930 in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain automated mechanical transmission systems for medium-duty and heavy-duty trucks, and components thereof, by reason of infringement of claim 15 of U.S. Patent No. 4,899,279 ("the '279 patent"); claims 1-20 of U.S. Patent No. 5,335,566 ("the '566 patent"); claims 2-4 and 6-16 of U.S. Patent No. 5,272,939 ("the '939 patent"); claims 1-13 of U.S. Patent No. 5,624,350 ("the '350 patent"); claims 1, 3, 4, 6-9, 11, 13, 14, 16 and 17 of U.S. Patent No. 6,149,545 ("the '545 patent"); and claims 1-16 of U.S. Patent No. 6,066,071 ("the '071 patent").

The complaint and notice of investigation named three respondents ZF Meritor, LLC of Maxton, North Carolina, ZF Friedrichshafen AG of Friedrichshafen, Germany, and ArvinMeritor, Inc. ("ArvinMeritor") of Troy, Michigan.

On July 21, 2004, the Commission issued a notice that it had determined not to review the ALJ's initial determination ("ID") (Order No. 20) terminating the investigation as to the '071 patent and as to claims 2, 3, and 5-20 of the '566 patent, claims 4, 7, and 12 of the '350 patent, and claims 4, 8-9, and 14 of the '545 patent.

On August 11, 2004, the Commission issued a notice that it had determined not to review the ALJ's ID (Order No. 31) terminating the investigation as to the '939 patent and as to claims 10, 11, and 13 of the '350 patent.

On August 16, 2004, the Commission issued a notice that it had determined not to review the ALJ's ID (Order No. 28) that Eaton has satisfied the economic prong of the domestic industry requirement as to certain articles it alleges practice the patents at issue in this investigation.

On August 23, 2004, the Commission issued a notice that it had determined not to review the ALJ's ID (Order No. 30) that Eaton did not meet the technical prong of the domestic industry requirement as to the remaining claims, claims 1-3, 5, 6, 8, and 9, of the '350 patent, thus terminating the investigation as to that patent.

On September 17, 2004, the Commission issued a notice that it had determined not to review the ALJ's ID (Order No. 38) granting Eaton's partial summary determination that the importation requirement has been met.

On September 23, 2004, the Commission issued a notice that it had determined not to review the ALJ's ID (Order No. 45) granting Eaton's motion for summary determination that it satisfies the economic prong of the domestic industry requirement of section 337 as to its medium-duty automated transmissions. The Commission also issued a notice on September 23, 2004, that it had determined not to review ALJ's ID (Order No. 55) granting Eaton's motion for partial termination of the investigation as to claim 1 of the "566 patent.

On January 7, 2005, the ALJ issued his final ID on violation and his recommended determination on remedy and bonding. The ALJ found a violation of section 337 by reason of infringement of claim 15 of the '279 patent by respondents. He found no violation of section 337 regarding the '566 and the '545 patents. Petitions for review were filed by Eaton, the respondents, and the Commission investigative attorney on January 21, 2005. All parties filed responses to the petitions on January 28, 2005.

On February 24, 2005, the Commission issued a notice indicating that it had determined not to review the ALJ's final ID on violation, thereby, finding a violation of section 337. The Commission also invited the parties to file written submissions regarding the issues of remedy, the public interest and bonding, and provided a schedule for filing such submissions.

Having reviewed the record in this investigation, including the parties' written submissions and responses thereto, the Commission determined that the appropriate form of relief in this investigation is a limited exclusion order prohibiting the unlicensed entry of automated mechanical transmission systems for medium-duty and heavy-duty trucks, and components thereof covered by claim 15 of the '279 patent. The order covers automated mechanical transmission systems for medium-duty and heavy-duty trucks, and components

thereof that are manufactured abroad by or on behalf of, or imported by or on behalf of the respondents, or any of their affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns. The limited exclusion order does not cover parts necessary to service infringing automated mechanical transmission systems installed on trucks prior to the issuance of the order.

The Commission also determined to issue a cease and desist order prohibiting ArvinMeritor from importing, selling, marketing, advertising, distributing, offering for sale, transferring (except for exportation), and soliciting U.S. agents or distributors for automated mechanical transmission systems for medium-duty and heavy-duty trucks, and components thereof covered by claim 15 of the '279 patent.

The Commission further determined that the public interest factors enumerated in sections 337(d)(1) and (f)(1), 19 U.S.C. 1337(d)(1) and (f)(1), do not preclude issuance of either the limited exclusion order or the cease and desist order. In addition, the Commission determined that the amount of bond to permit temporary importation during the Presidential review period shall be in the amount of 100 percent of the entered value of the imported articles. Finally, the Commission determined to deny both the complainant's motion to strike and the respondents' motion for leave to file a surreply. The Commission's orders and opinion in support thereof were delivered to the President on the day of their issuance.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and in section 210.50 of the Commission's Rules of Practice and Procedure (19 CFR 210.50).

Issued: April 7, 2005.

By order of the Commission.

Marilyn R. Abbott,

Secretary to the Commission.

[FR Doc. 05-7298 Filed 4-11-05; 8:45 am]

BILLING CODE 7020-02-P

## INTERNATIONAL TRADE COMMISSION

[Investigation No. TA-2103-1]

### The Impact of Trade Agreements Implemented Under Trade Promotion Authority

AGENCY: United States International Trade Commission.

**ACTION:** Institution of investigation and scheduling of public hearing.

**SUMMARY:** Following receipt on March 31, 2005 of notification from the United States Trade Representative (USTR) on behalf of the President under section 2103(c)(3)(B) of the Trade Act of 2002 (19 U.S.C. 3803(c)(3)(B)), the Commission instituted investigation No. TA-2103-1, The Impact of Trade Agreements Implemented Under Trade Promotion Authority.

**Background:** As required in section 2103(c)(3)(B) of the Trade Act of 2002 (19 U.S.C. 3803(c)(3)(B)), the Commission must submit a report to the Congress not later than June 1, 2005, that contains a review and analysis of the economic impact on the United States of all trade agreements implemented between the date of enactment of this Act and the date on which the President decides to seek an extension requested under paragraph (2) of section 2103(c).

The only agreements implemented within this time period are free trade agreements with Chile, Singapore, and Australia.

As required by the statute, the Commission will provide its report not later than June 1, 2005.

**DATES:** *Effective Date:* March 31, 2005.

**FOR FURTHER INFORMATION CONTACT:** Project Manager, Kyle Johnson ((202) 205-3229 or [kyle.johnson@usitc.gov](mailto:kyle.johnson@usitc.gov)), or Deputy Project Manager, Alan Fox ((202) 205-3267 or [alan.fox@usitc.gov](mailto:alan.fox@usitc.gov)). For information on the legal aspects of this investigation, contact William Gearhart of the Office of the General Counsel ((202) 205-3091 or [william.gearhart@usitc.gov](mailto:william.gearhart@usitc.gov)). For media information, contact Peg O'Laughlin ((202) 205-1819). Hearing impaired individuals are advised that information on this matter can be obtained by contacting the TDD terminal on ((202) 205-1810).

**Public Hearing:** A public hearing in connection with the investigation will be held at the U.S. International Trade Commission Building, 500 E Street, SW., Washington, DC, beginning at 9:30 a.m. on April 27, 2005. Requests to appear at the public hearing should be filed with the Secretary, no later than 5:15 p.m., April 20, 2005 in accordance with the requirements in the "Submissions" section below. In the event that, as of the close of business on April 20, 2005, 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 ((202) 205-2000) after April

20, 2005, 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 the investigation. All written submissions, including requests to appear at the hearing, statements, and briefs should be addressed to the Secretary, United States International Trade Commission, 500 E Street, SW., Washington, DC 20436. Any prehearing briefs or statements should be filed not later than 5:15 p.m., April 20, 2005; the deadline for filing post-hearing briefs or statements is 5:15 p.m., May 2, 2005.

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); 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 201.8 of the rules require 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. The Commission's rules do not authorize filing submissions with the Secretary by facsimile or electronic means, except to the extent permitted by section 201.8 of the Commission's Rules (19 CFR 201.8) (see Handbook for Electronic Filing Procedures, [ftp://ftp.usitc.gov/pub/reports/electronic\\_filing\\_handbook.pdf](ftp://ftp.usitc.gov/pub/reports/electronic_filing_handbook.pdf)).

Any submissions that contain CBI must also conform with the requirements of section 201.6 of the Commission's rules (19 CFR 201.6). Section 201.6 of the rules requires that the cover of the document and the individual pages clearly be marked as to whether they are the "confidential" or "nonconfidential" version, and that the CBI be clearly identified by means of brackets. All written submissions, except for CBI, will be made available for inspection by interested parties.

The Commission plans to publish only a public report in this investigation. The Commission will not publish confidential business information in a manner that would reveal the operations of the firm supplying the information.

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.

Issued: April 6, 2005.

By order of the Commission.

Marilyn R. Abbott,

Secretary to the Commission.

[FR Doc. 05-7289 Filed 4-11-05; 8:45 am]

BILLING CODE 7020-02-P

## INTERNATIONAL TRADE COMMISSION

[Investigation No. 332-467]

### Advice Concerning Possible Modifications to the U.S. Generalized System of Preferences, 2004 Special Review

**AGENCY:** International Trade Commission.

**ACTION:** Institution of investigation and request for public comment

**SUMMARY:** Following receipt on April 1, 2005 of a request from the United States Trade Representative (USTR) under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)), the Commission instituted investigation No. 332-467, Advice Concerning Possible Modifications to the U.S. Generalized System of Preferences, 2004 Special Review.

**Background:** As requested by the USTR, under section 332(g) of the Tariff Act of 1930 and in accordance with section 503(d)(1)(A) of the Trade Act of 1974 (19 U.S.C. 2463(d)(1)(A)), the Commission will provide advice on whether any industry in the United States is likely to be adversely affected by a waiver of the competitive need limits specified in section 503(c)(2)(A) of the 1974 Act for Indonesia for HTS subheadings 4412.13.40, and 9001.30.00; and for Thailand for HTS subheadings 7113.11.50 and 9009.12.00.

With respect to the competitive need limit in section 503(c)(2)(A)(i)(I) of the 1974 Act, the Commission, as requested, will use the dollar value limit of \$115,000,000.

As requested by the USTR, the Commission will seek to provide its advice not later than May 31, 2005.

**DATES:** *Effective Date:* April 6, 2005.

**FOR FURTHER INFORMATION CONTACT:** Project Leader, Cynthia B. Foreso (202-205-3348 or [cynthia.foreso@usitc.gov](mailto:cynthia.foreso@usitc.gov)).

The above person is in the Commission's Office of Industries. For information on legal aspects of the investigation, contact William Gearhart of the Commission's Office of the General Counsel at 202-205-3091 or [william.gearhart@usitc.gov](mailto:william.gearhart@usitc.gov).

**Written Submissions:** The Commission does not plan to hold a public hearing in this investigation.



# APPENDIX C

## Statements of Interested Parties

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# Generic Pharmaceutical Association<sup>1</sup>

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The Generic Pharmaceutical Association (GPhA) represents the manufacturers and distributors of finished generic pharmaceutical products, manufacturers and distributors of bulk active pharmaceutical chemicals, and suppliers of other goods and services to the generic pharmaceutical industry. According to GPhA, its members manufacture more than 90 percent of all generic pharmaceuticals dispensed in the United States. GPhA is concerned that several provisions in recent U.S. FTAs, particularly those with Australia, Chile, and Singapore, will undermine an important achievement in the U.S. healthcare system of balancing the need for pharmaceutical innovation with access to less expensive drugs. GPhA believes that such provisions could hinder U.S. exports of generic drugs, significantly delay the availability of affordable pharmaceuticals in the territories of its FTA partners, and delay generic competition in the United States. Specifically, GPhA is concerned about provisions in the FTAs pertaining to (1) pharmaceutical patent extensions, (2) market exclusivity, (3) patent disclosure requirements, (4) generic drug linkage, (5) and marketing of the same or similar pharmaceutical products.

With regard to patent extensions, GPhA states that provisions in the FTAs appear to go beyond what is permitted under U.S. law. The FTAs require parties to provide for patent term restoration when the effective term of a patent has been shortened due to delays in the marketing approval process. However, according to GPhA, the FTA provisions fail to take into account limitations on extensions contained in U.S. law, such as caps on the total length of the restoration period.

Concerning market exclusivity, GPhA states that the FTAs prohibit marketing approval for third parties that rely on clinical test data submitted by another party for at least five years from the time approval is granted to the other party in its own market. Further, in the Australia and Singapore FTAs, marketing may be delayed for at least five years after approval of a drug in a party's own market or approval in the other party's market, whichever is later. GPhA asserts that the practical effect of such provisions is that they would allow brand name companies to deny access to innovative pharmaceuticals for approximately seven years and block the marketing of "affordable generics" in the affected countries for a period of about 12 years. According to GPhA, because "U.S. law provides for a total of five years of exclusivity for products containing \$new chemical entities," and five years appears to be an international standard, "[a]nything more than that [would be] injurious to the U.S. economy and [would] drive up what are already escalating health care costs [in the United States] and abroad."

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<sup>1</sup> Kathleen Jaeger, President and Chief Executive Officer, Generic Pharmaceutical Association (GPhA).

GPhA also points out that the patent disclosure requirements of the FTAs require less disclosure than required in the United States. In the United States, the monopoly afforded by a patent is given in consideration of full disclosure of the invention, including disclosure of the “best mode of practicing the invention known to the inventor.” However, the FTAs do not require full disclosure of the best mode of practicing the invention.

GPhA acknowledges that the FTAs negotiated by the United States require a generic approval process almost identical to the U.S. process, in which generic approvals are linked with the expiration of brand patents. However, it points out that the provisions give protection to the patent owner while failing to provide for corresponding access to generic drugs. GPhA argues that, in the absence of mandatory generic access measures to ensure patent dispute resolution, brand name pharmaceutical companies will enjoy *de facto* patent extensions in the United States and in the markets of its FTA partners. According to GPhA, linkage without generic access provisions will block competition indefinitely.

Finally, GPhA states that the U.S.-Australia and the U.S.-Singapore FTAs provide for overly broad protection of brand name pharmaceuticals by preventing the marketing of the same or similar product for a period of three years, rather than narrowing the three-year protection to “new uses” of products. The association believes that such overly broad provisions will reduce access to lower-cost generic drugs.

## California Cling Peach Board<sup>2</sup>

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The California Cling Peach Board (CCPB) is a quasi-governmental association that represents 700 cling peach growers and four cling peach processors in California. The CCPB is involved with promotion, advertising, consumer education, production and marketing research, establishment of grades and standards, and the compilation of industry statistics regarding cling peach products.

The CCPB states that the effect of the U.S.-Chile and the U.S.-Australia FTAs have not yet resulted in reduced sales of U.S.-produced canned fruit since U.S. tariffs have not yet been reduced in the U.S.-Chile FTA and tariffs have been reduced by only 1/18th in the U.S.-Australia FTA. However, it anticipates that the U.S.-Chile FTA and the U.S.-Australia FTA will raise imports of canned peaches, fruit mixtures or frozen peaches into an already oversupplied U.S. market. It states that this increase in imports will displace U.S.-produced processed peaches and fruit mixtures, which will further financially strain U.S. growers and processors.

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<sup>2</sup> Sarb Johl, Chairman, California Cling Peach Board; and Jim Melban, General Manager, California Cling Peach Board.

The CCCB notes that in the U.S.-Chile FTA and the U.S.-Australia FTA, the U.S. cling peach industry requested, and received, maximum import-sensitive treatment for U.S. tariffs on canned peaches, canned fruit mixtures, and frozen peaches. It further states that the CCPB is seeking maximum import-sensitive tariff treatment and exemptions for cling peach products in all future FTAs involving canned peach producing countries, including SACU countries (South Africa) and Thailand, and in the WTO Doha Development Agenda negotiations. Principal cling peach products of concern include: (1) prepared or preserved peaches (H.S. 2008.70.20, includes canned peaches, peaches packed in plastic cups, and peach pulp concentrate); (2) prepared or preserved fruit mixtures (H.S. 2008.92.90, includes canned fruit mixtures and mixtures packed in plastic cups); and (3) frozen peaches (H.S. 0811.90.80).

The CCPB asserts that without import-sensitive tariff treatment, imports of processed peaches and fruit mixtures from Chile and Australia would be above current levels and U.S. growers and processors would lose sales beyond what they are able to sustain. It states that U.S. tariffs on these products are necessary for U.S.-origin canned fruit to remain competitive in the U.S. market with subsidized EU canned fruit and with lower-cost suppliers from Chile, South Africa, and elsewhere where there is a competitive advantage because of lower labor and less onerous government regulations compared with the United States. The CCPB also states that without these tariffs U.S. sales of domestically produced canned fruit will decrease because quality differences among global producers of canned fruit have narrowed; also a majority of product is sold to the institutional sectors who purchase first on price, not brand loyalty.

The CCPB asserts a reduction in U.S. tariffs under the U.S.-Chile and U.S.-Australia FTAs will give Chilean and Australian producers a greater price advantage and raise imports of processed peaches and fruit mixtures from these countries. The CCPB states that Chile is a competitive producer of quality canned peaches and competes with U.S.-origin canned peaches in both the U.S. market and in Mexico. The CCPB also states that during the FTA negotiations, Chilean producers indicated that with preferential tariff or duty-free access they would export more canned peaches to the U.S. market. The CCPB acknowledges Australia's long-standing and competitive canned peach and fruit mixture industry, noting its recent innovation in plastic cup packaging for peaches and fruit mixtures. The CCPB further points out that several of Australia's traditional export markets, including Japan, are beginning to import more low-priced Chinese canned peaches, resulting in Australian exporters seeking new, expanded markets, including greater access to the U.S. market.

The CCPB anticipates that increased competition from rising imports of Chilean and Australian processed peaches and fruit mixtures will displace U.S.-produced product and erode domestic market opportunities for the U.S. growers and processors. It asserts this situation will be further compounded by anticipated reduction or elimination of U.S. tariffs on canned peaches, canned fruit mixtures, and frozen peaches, in future FTAs, or in the context of the multilateral Doha round.



**APPENDIX D**  
**Technical Appendix**

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The general equilibrium modeling system employed to simulate the U.S. FTAs with Chile, Singapore and Australia is built around the GTAPinGAMS software developed by Rutherford and Paltsev.<sup>1</sup> The GTAPinGAMS data system was modified to accommodate the most recent version of the GTAP data base, the version 6 release candidate. In addition, the actual GTAPinGAMS multiregion comparative-static simulation model was expanded to include appropriate behavioral structures and to report elements relevant to the study. This appendix outlines the important methodological and structural assumptions of the model.

There are several advantages to using the release candidate of the GTAP data base rather than the most recently published version 5. First, trade flows and national economic data have been updated in the new data to a 2001 base year from 1997 (although for this study the Commission has further updated the data to reflect the state of the economy in 2004). More importantly, much work has been done to improve the quality of the protection data in the data base. Rather than relying for the most part on WTO bound tariffs, the new data reflect a strong effort to collect data on actual applied tariffs (generally smaller than bound rates); for this reason, apparent duties on some commodities have declined from those in previous versions of the data set, beyond those declines that have taken place since earlier versions of the data set due to further implementation of the Uruguay Round and other agreements. Also, this new version of the data base reflects work that is in progress to develop appropriate methods to quantify tariff rate quotas and nontariff measures. Work remains to be done in these areas, but the current release candidate of the GTAP data base appears to provide the best available basis for the analyses of current trade policy with appropriate measures of trade and trade policy.

## Model Scope

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The simulation model represents the world trade equilibrium, and the production and consumption structures of the world economy. The trade equilibrium is defined by the bilateral trade flows between 17 regional economies over 23 aggregate commodities, listed below. These regions and commodities are aggregated out of the regions and commodities available in the release candidate of the GTAP version 6 database. The commodity and regional aggregations were driven by the Commission's intention to include the most relevant sectoral detail considering the policy shocks included in the FTAs and the benchmarking to the 2004 base year.

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<sup>1</sup> Thomas F. Rutherford and Sergey V. Paltsev, *GTAPinGAMS and GTAP-EG: Global Datasets for Economic Research and Illustrative Models*, University of Colorado, Department of Economics, Working Paper, September 2000.

Regions	
Australia	Rest of Asia
Canada and Mexico	New Zealand
Chile	European Union 15
Mercosur	Morocco
Central America	Southern African Customs Union
Rest of Free Trade Area of the Americas	Rest of Subsaharan Africa
Rest of the Americas	United States
Singapore	Other Countries
East Asia	

Commodities	
Grains	Wood products
Sugar crops	Petroleum, chemicals, rubber, and plastic products
Vegetables, fruits, and nuts	Ferrous metals
Other crops	Metals n.e.c. and metal products
Cattle and horses	Motor vehicles and parts
Animal products n.e.c.	Transport equipment n.e.c.
Coal, oil, gas, and other minerals	Electronic equipment
Meat products	Other machinery and equipment
Dairy products	Other manufactures
Sugar	Services
Other processed food and tobacco products	Capital goods
Textiles, apparel, and leather products	

## Structure of the Regional Economies

Each region of the model is characterized by three components. First, primary factor endowments determine the overall capacity of the economy. Primary factors include land, labor, and capital. Households earn net of tax income from the primary factors and are assumed not to change the total supply of primary factors across the simulation.

Second, a region is characterized by its production technologies. These production technologies determine the ability of the economy to transform primary factors and intermediate inputs into valuable output. The model employs a nested constant-elasticity-of-substitution production structure. Primary factors are combined in a Cobb-Douglas nest. The primary factors aggregate is then combined with intermediate inputs in a Leontief nest. The resulting production function exhibits constant returns to scale and firms are assumed to be competitive such that marginal cost equals the output price.

Third, a region is characterized by its preferences for commodities. The model is static, and thus abstracts from changes in the aggregate mix of final demand on investment and government spending. Households do react to policy-induced price changes, however, by changing the mix of goods and services consumed. Household welfare is assumed to be Cobb-Douglas and maximized subject to market prices and income earned from ownership of primary factors.

## Trade Equilibrium

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Consistent with the objectives of the Commission analysis, substantial detail is built into the mechanisms by which the different regions interact through international trade. Goods and services that are traded are assumed to be differentiated by their respective region of origin. Each region has a set of technologies for combining these differentiated goods and services into a composite that may be consumed or used as an intermediate input. The technology is a nested constant-elasticity-of-substitution aggregation; imports from different sources are combined in a lower nest, then the import aggregate and the domestic variety is combined to produce the composite. This is a standard structure adopted by most contemporary trade simulation models. Table D-1 reports the substitution elasticities between import varieties. These elasticities are the trade-weighted averages from disaggregate (GTAP level) econometric estimates presented by Hertel, Hummels, Ivanic, and Keeny.<sup>2</sup>

**Table D-1**  
**Elasticities of Substitution between Import Varieties**

<b>Sectors</b>	<b>Elasticity</b>
Grains .....	6.327
Sugar crops .....	7.000
Vegetables, fruit, and nuts .....	3.700
Other crops .....	5.830
Cattle and horses .....	4.000
Other animal products .....	3.912
Coal oil, gas, and other minerals .....	12.281
Meat products .....	8.382
Dairy products .....	7.300
Sugar .....	5.400
Other processed food and tobacco products .....	3.788
Textiles apparel and leather products .....	7.567
Wood products .....	6.800
Petroleum, chemicals, rubber .....	6.266
Ferrous metals .....	6.676
Metals n.e.c. and metal products .....	8.400
Motor vehicles and parts .....	5.600
Transport equipment n.e.c. ....	8.600
Electronic equipment .....	8.800
Other machinery and equipment .....	8.100
Other manufactures .....	6.757
Services .....	7.000
Capital goods .....	7.000

Source: Thomas Hertel, 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, 2003, available at <http://www.gtap.agecon.purdue.edu/resources/>.

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<sup>2</sup> Thomas Hertel, 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, 2003, available at [http://www.gtap.agecon.purdue.edu/resources/working\\_papers.asp](http://www.gtap.agecon.purdue.edu/resources/working_papers.asp).

The policy instruments that are relevant for the trade equilibrium include import tariffs and export taxes. The benchmark trade policy between the United States and the FTA partner countries are listed in table 5-1. The benchmark policies include those distortions in version 6 of the GTAP database and modified to include relevant policy changes between 2001 and 2004.

## Updating the Database

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The release candidate of Version 6 of the GTAP database has a benchmark year of 2001. In order to better reflect the world economy as of the time of implementation of the FTA, the database was updated to reflect the 2004 economy. This was done by imposing on the database additional data and projections on trade and macroeconomic variables from the U.S. Department of Commerce, the World Bank, the IMF, and the OECD. In addition, trade flows and barriers were updated to reflect full implementation of the Uruguay Round Agreement on Textiles and Clothing, and other Uruguay Round provisions insofar as these are reflected in the trade data.

## Solution Technique

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In comparative static experiments, such as the one conducted in this report, trade is liberalized completely in all goods subject to liberalization under the FTAs. There is no implicit or explicit time elapsing in the model. This means, first, that all provisions of the FTA are assumed to be fully phased in immediately, rather than over the period foreseen by the agreements. And second, it means that all effects of the FTAs are felt immediately, without an adjustment period. The modeled results can be considered to be long-run effects of a fully implemented FTA, in an economy otherwise identical to the baseline 2004 economy.

The analysis of the economywide impact of the FTA employs a comparative static framework in which a baseline equilibrium depiction of the U.S. economy, as of 2004, is derived through a set of balanced accounts of trade, production, consumption, and taxes. Once this baseline has been created, policy shocks are imposed on the balanced model. These policy shocks consist of the reduction or elimination of tariffs, TRQs and quotas agreed to in the FTA.

Because sugar is not subject to significant liberalization under the three agreements surveyed, we hold in place the benchmark quantitative restrictions on U.S. imports of sugar manufacturing. Any variation of sugar imports in the simulation results is purely the result of changes in the price of sugar due to changing market conditions. While the Agreement on Textiles and Clothing did not expire until January 1, 2005, the effects of its expiration were incorporated into the benchmark economy for 2004. Therefore,

the results of the policy simulation should be understood to reflect a world in which ATC liberalization has already taken place. Any tariff removal in textiles and apparel as a result of the three modeled agreements should be thought of as above and beyond any results of ATC elimination.

Having executed the policy shock by imposing the new levels of the tariffs and tax equivalents of the trade distortions, the model is rebalanced, and new values for trade flows, outputs, employment, welfare, GDP, and other values are generated. The difference between the baseline values of these variables and their new values is interpreted as the estimated impact of the tariff removal under the FTA.

## Model Limitations

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Economic models attempt to capture the most important factors for the question under consideration. However, they are limited in their ability to reflect the degree of complexity evident in the real world. One source of possible bias in virtually any quantitative analysis of economic data arises from data aggregation. International trade occurs in thousands of different products and services. The United States collects trade data under about 17,000 statistical categories and over 10,000 tariff rate lines. For most general equilibrium analysis, these groupings represent far too much detail to be tractable computationally, or to be linked with more aggregate data on production and consumption processes. The aggregation into broader categories introduces two general sources of bias into a modeling exercise.

One source of bias involves the calculation of tariffs for aggregated product categories. In this study, trade-weighted average tariffs were calculated, using the value of imports in a tariff line to weight the tariff in that line. This procedure tends to mask the importance of those products within the aggregate that have particularly high tariffs, and which therefore face a greater barrier to imports than would be the case if all goods within the aggregation had the same average tariff. The relationship between the effect of an import-weighted average tariff and the effects of the individual tariffs of goods within the group depends on the correlation between the level of these tariffs and the price responsiveness of final demand. The effect of a high tariff in a highly price-responsive good will be understated because the high tariff itself will cause less of the good to be imported, giving it a small weight in the trade-weighted average tariff of the aggregate.

Another source of aggregation bias is due to the fact that goods within an aggregate may not be close substitutes for one another. In particular, imported goods of a particular category may be quite dissimilar to the domestically produced product in that category, due among other things to a different mix of the individual goods in the aggregate. Thus a model may overstate the responsiveness of domestic production in response to a given tariff reduction.<sup>3</sup>

Despite these limitations, model simulations such as those performed here can be useful in providing insights on the effects of an FTA on measures of the economy. They present a unified and consistent framework within which to assess the policy.

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<sup>3</sup> Empirical trade models such as the one used here often apply the Armington assumption, which treats commodities produced in different countries as imperfect substitutes, with the degree of substitution described by the Armington substitution elasticity. This can reduce this type of bias.