FTAA

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Building on NAFTA's Success

COUNCIL OF The Americas

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Prepared by

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COUNCIL OF The Americas

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Contents

Executive Summary

- Trade liberalization in the Western Hemisphere, embodied in the Free Trade Area of the Americas (FTAA), could potentially yield by 2005 a trade agreement benefiting 34 countries, 800 million people, $13 trillion in output and $3.4 trillion in trade.

- The FTAA process is important for the United States because of the significant role the region already plays in the U.S. economy. Merchandise trade with FTAA countries, including Mexico and Canada, reached $784 billion in 2000. This is more than double total U.S. trade with the European Union, or all of the countries on the Asian side of the Pacific Rim.

- FTAA countries currently purchase 44 percent of total U.S. exports, and represent a growing share of those exports. While America's NAFTA partners account for a large share of these exports, non-NAFTA markets remain important as well. The bulk of U.S. merchandise exports to NAFTA and non-NAFTA countries comprises high-value machinery and equipment; as well as chemicals and steel.

- FTAA countries are also important U.S. services trading partners. The United States exported more services to the countries in the Western Hemisphere in 2000 than it did to Europe as a whole, or to Africa, the Middle East and Asia and the Pacific combined.

- Broadening trade liberalization to the whole Hemisphere will have important positive effects on the U.S. economy. An analysis of the economic effects on the United States of an FTAA that liberalizes merchandise and services trade throughout the Western Hemisphere shows that the FTAA will increase real U.S. national income by between $2.3 billion and $6.3 billion *annually*.

- The bulk of the increase in U.S. exports that is expected to be generated by the FTAA would be with non-NAFTA FTAA trading partners. Non-NAFTA trading partners account for 69 percent of the projected net increase in U.S. exports after the FTAA is partially implemented, and 99 percent of the net increase in expected exports after the FTAA is fully implemented.

- U.S. exports would increase as a result of an FTAA, by between $8.4 billion (partial implementation) and $23.6 billion (full implementation). By value, the greatest growth is likely to be experienced by U.S. exporters of machinery and equipment; motor vehicles and parts; apparel, primary food production; and chemicals, refinery products, rubber and plastics.

- An FTAA would lead real incomes of American workers to rise by between 0.04 percent and 0.13 percent. This amounts to increased earnings for American workers of up to $6 billion per year. While the net impact on U.S. jobs would be minimal assuming a full-employment economy, there will be some movement of workers into export sectors, driving this rise in earnings.

- The continually-increasing benefits of NAFTA to the U.S. economy demonstrate the wisdom of proceeding along a similar path with other FTAA countries. Total U.S. trade with NAFTA partners reached $656 billion in 2000, up 124 percent since the agreement went into effect. U.S. trade with NAFTA partners is growing more strongly than trade with the rest of the world.

Introduction

The Free Trade Area of the Americas (FTAA) is the ultimate goal of an important multilateral round of trade negotiations that portends significant benefits for the American economy. The aim is to conclude an agreement that liberalizes trade and investment among 34 countries in the Western Hemisphere. The effort builds on the North American Free Trade Agreement (NAFTA), and all three NAFTA partners are an integral part of the process.

American policymakers and the public they serve need to be fully informed about the importance to the United States of trade and investment with FTAA countries and the potential impact of an FTAA on the U.S. economy. They should also be aware of how trade and investment has changed under NAFTA — a similar agreement.

This study provides an overview of Western Hemisphere trade and investment trends over the past five years (Chapter I), an assessment of the likely economic effects on the United States of an FTAA that eliminates tariffs and other trade barriers gradually over 10 years (Chapter II), and an evaluation of the changes in those trends under NAFTA (Chapter III). An appendix describes in detail the methodology used to calculate the economic effects of an FTAA presented in Chapter II.

The FTAA will cover a combined population of about 800 million people, combined gross domestic product of $13 trillion, and $3.4 trillion in world trade.

CHAPTER **I**

Western Hemisphere Trade and Investment Trends

The United States is a leading participant in what is perhaps the world's most significant multilateral trade negotiation — the effort to establish a Free Trade Area of the Americas (FTAA). The effort involves the democratic independent nations of the Western Hemisphere (see box). The FTAA will cover a combined population of about 800 million people, combined gross domestic product of $13 trillion, and $3.4 trillion in world trade.[1]

Countries Participating in the Free Trade Area of the Americas Initiative

North America	United States	Mexico
	Canada	
South America	Argentina	Ecuador
	Bolivia	Paraguay
	Brazil	Peru
	Colombia	Uruguay
	Chile	Venezuela
Central America & the Caribbean	Antigua and Barbuda	Haiti
	Bahamas	Honduras
	Barbados	Jamaica
	Belize	Nicaragua
	Costa Rica	Panama
	Dominica	St. Kitts and Nevis
	Dominican Republic	St. Lucia
	El Salvador	St. Vincent and the Grenadines
	Grenada	Suriname
	Guatemala	Trinidad and Tobago
	Guyana	

The FTAA is intended to increase trade for U.S. companies and generate better jobs for U.S. workers by creating new export opportunities via establishing a fair and level playing field, reducing commercial transac-

FTAA Mile Posts

Launch, and Develop Structure, Scope and Organization of Negotiations, December 1994–February 1998:

- First Summit of the Americas, Miami, December 9-11, 1994 (participants agreed to eliminate progressively barriers to trade and investment)
- First Ministerial, Denver, June 30, 1995 (participants issued an initial work plan and established seven working groups)
- Second Ministerial, Cartagena, Colombia, March 21, 1996 (participants established four more working groups)
- Third Ministerial, Belo Horizonte, Brazil, May 1-16, 1997 (participants agreed to formally launch FTAA negotiations in April 1998)

Launch Negotiations, March/April 1998:

- Fourth Ministerial, San Jose, Costa Rica, March 17, 1998 (participants agreed on the structure, organization and venue for talks, and established nine negotiating groups)
- Second Summit of the Americas, Santiago, April 18-19, 1998 (participants formally launched the talks)

Prepare Outlines and Draft Text, May 1998–April 2001:

- Fifth Ministerial, Toronto, Canada, November 1999
- Sixth Ministerial, Buenos Aires, Argentina, April 7, 2001
- Third Summit of the Americas, Quebec City, Canada, April 20-22, 2001 (leaders decided to make draft texts public)

Negotiate, April 2001–December 2005:

- Complete the basic ground rules for the negotiations by April 1, 2002
- Begin product- and sector-specific market access negotiations by May 15, 2002
- Seventh Ministerial, Ecuador, October 2002 (to review second draft of Agreement)
- Conclude all elements of the negotiations by January 2005
- Countries enter Agreement into force by December 2005

Source: Department of Commerce, U.S. International Trade Commission.

tion costs, and eliminating or disciplining import and export restrictions. The FTAA will progressively eliminate barriers affecting market access, investment, government procurement, intellectual property, agriculture, and services, creating a level playing field for all countries in the Hemisphere. It will include dispute settlement procedures. It will address customs procedures and rules of origin, sanitary and phytosanitary measures; subsidies, antidumping and countervailing duty measures; the special needs of smaller economies, and competition policy. Most importantly, it will "lock in" these benefits, removing the temptation of policy makers to raise barriers to trade or investment for domestic political or economic gain.

Western Hemisphere countries launched the FTAA effort in December 1994 at the first Summit of the Americas in Miami (see box). Participants intend to complete the FTAA—and implement it—by 2005. They have also agreed to use consensus as the basis for decision-making; to ensure that the outcome constitutes a "single undertaking" (i.e., nothing is agreed to until everything is agreed to); to ensure that the final FTAA can co-exist with bilateral and sub-regional agreements to the extent that commitments in those agreements are not covered by the FTAA, or go beyond the obligations of the FTAA; to make the FTAA consistent with World Trade Organization trading disciplines; to allow countries to negotiate and join the FTAA individually or as members of a sub-regional integration group negotiating as a unit; and, to consider inputs from "civil society."

A Trade Negotiating Committee oversees the negotiations and a temporary administrative secretariat supports the negotiations. The negotiations will be wrapped up with Brazil and the United States as co-chairs beginning November 1, 2002.

Trade with the FTAA Region Is Important to the United States

U.S. merchandise (goods) trade with countries in the FTAA region is large and growing (Table I.1). In 2000, total U.S. trade with the FTAA region reached $784 billion, two-thirds greater than total trade with the region five years ago. This is more than double total U.S. trade with the European Union, or all of the countries on the Asian side of the Pacific Rim. Total FTAA trade has been growing at an average annual rate of 11 percent since 1995.

Table I.1

U.S. Merchandise Trade with FTAA Countries,* 1995–2000

(Billions)

	1995	1996	1997	1998	1999	2000
Total (Exports Plus Imports)	$469.4	$520.2	$590.3	$613.8	$672.3	$783.8
NAFTA Partners	380.0	421.2	477.3	503.3	561.9	655.6
Non-NAFTA Partners	89.4	99.0	113.0	110.5	110.5	128.2
South America	62.5	70.2	79.8	74.8	72.8	87.2
Central America & the Caribbean	26.9	28.8	33.2	35.7	37.7	40.9
Exports to FTAA Countries	$221.2	$241.8	$284.1	$296.4	$306.6	$347.7
NAFTA Partners	173.5	191.0	223.2	235.4	253.5	290.5
Non-NAFTA Partners	47.7	50.8	60.9	61.0	53.1	57.2
South America	33.0	35.5	43.1	41.9	34.1	36.7
Central America & the Caribbean	14.7	15.3	17.8	19.1	19.0	20.5
Imports from FTAA Countries	$248.2	$278.4	$306.6	$317.3	$365.8	$436.1
NAFTA Partners	206.5	230.2	254.1	267.9	308.4	365.1
Non-NAFTA Partners	41.7	48.3	52.4	49.4	57.3	71.0
South America	29.5	34.7	36.7	32.9	38.7	50.6
Central America & the Caribbean	12.2	13.5	15.7	16.6	18.7	20.4

* The data reflect exports to and imports from each of the 33 FTAA countries.

Source: U.S. Department of Commerce, Bureau of the Census. Exports are FAS value, Census basis; imports are general, customs value.

While the bulk of that trade has been with America's North American Free Trade Agreement (NAFTA) partners, trade with non-NAFTA FTAA countries is significant, reaching $128 billion in 2000, up 43 percent from 1995. And the success of NAFTA clearly shows the promise of expanded trade with the larger FTAA region. In 2000 (even without the FTAA), U.S. exports to non-NAFTA FTAA countries exceeded U.S. exports to Japan, and were four times greater than U.S. exports to China.

The FTAA countries represent an increasingly important merchandise export market for the United States, especially in comparison to other significant trading partners. FTAA countries currently purchase about 44 percent of total U.S. exports (Figure I.1). They also represent a growing share of total U.S. exports, rising steadily from 38 percent in 1995 (Figure I.2).

Figure I.1

U.S. Exports by Region, 2000

Source: U.S. Department of Commerce, Bureau of the Census.

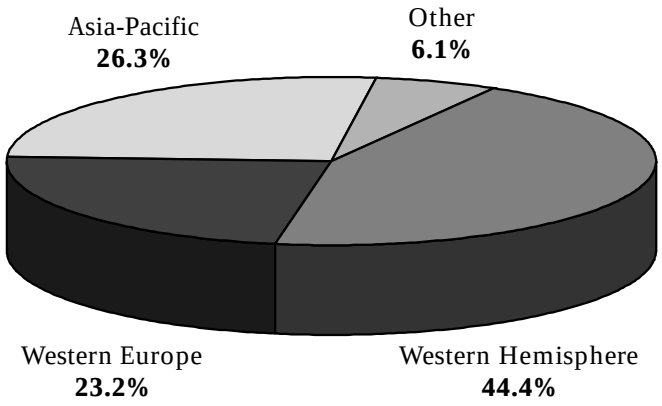
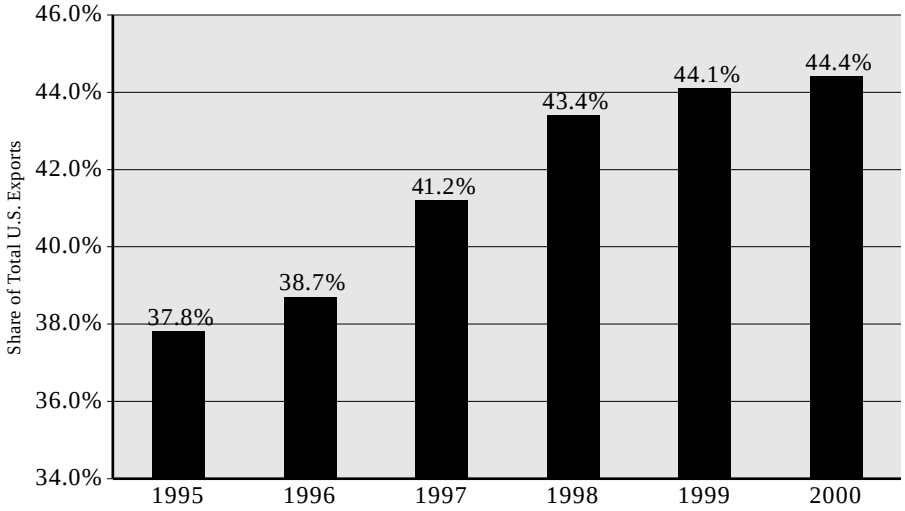


Figure I.2

U.S. Exports to FTAA Countries, 1995–2000

Source: U.S. Department of Commerce, Bureau of the Census



The United States sends a diverse array of merchandise exports to the FTAA countries. The bulk of those exports is manufactured goods, particularly high-value machinery and equipment (Table I.2). Chemicals and related products, and steel and steel products are also important.

Table I.2

U.S. Merchandise Exports by Sector to FTAA Partners,* 2000

(Billions)

	Including NAFTA	Excluding NAFTA
Total	**$347.7**	**$57.2**
Agricultural, livestock, forestry, fishery products	9.1	2.0
Mining, crude petroleum & natural gas	3.1	0.4
Manufactured goods	319.4	52.8
Electrical and electronic machinery and equipment	60.7	8.3
Transportation equipment	59.2	5.1
Non-electrical machinery	54.3	11.6
Chemicals and related products	31.0	8.0
Fabricated metal products	15.4	1.1
Scientific and professional instruments	13.6	2.8
Primary metal products	13.5	1.2
Rubber and miscellaneous plastic products	12.6	1.2
Food and related products	10.8	2.8
Paper and related products	8.6	1.5
Apparel and related products	8.4	4.1
Textile mill products	6.8	1.4
Petroleum refining and related products	6.4	1.4
Miscellaneous manufactures	4.0	0.7
Stone, clay and glass	3.7	0.4
Furniture and fixtures	3.6	0.3
Printing, publishing	2.9	0.2
Lumber and wood, excluding furniture	2.8	0.4
Leather and leather products	1.0	0.2
Tobacco manufactures	0.1	0.1
Other sectors	**16.1**	**2.6**

*Data reflect the total of exports to each of the other 33 FTAA countries.

Source: U.S. Department of Commerce, Bureau of the Census, from ITC database (FAS value; excludes goods imported from Canada and returned to Canada without having been advanced in value or improved in condition or combined with other articles).

Services Are an Important Component of U.S. Trade with Western Hemisphere Countries

Western Hemisphere countries are important purchasers of U.S. services. In 1999, services exports to FTAA countries represented 28 percent of total services trade with the world, and 27 percent of total services imports from the world. The United States exported more services to FTAA countries in 2000 than it did to Europe as a whole, or to Africa, the Middle East and Asia and the Pacific combined.

Services trade with the Western Hemisphere has been growing strongly (Table I.3). Since 1995, the annual increase in services trade with the Western Hemisphere has averaged 8 percent. Growth in services trade with non-NAFTA countries in the Western Hemisphere has been even stronger. Since 1995, total U.S. services trade with non-NAFTA trading partners in the Western Hemisphere has been increasing at an average annual rate of 10 percent.

Table I.3

U.S. Services Trade with Western Hemisphere Countries,* 1995–1999

(Billions)

	1995	1996	1997	1998	1999
Total (Exports Plus Imports)	$86.2	$94.6	$106.4	$113.8	$118.5
NAFTA Partners	45.7	50.3	54.7	55.9	58.7
Non-NAFTA Partners	40.5	44.3	51.7	57.9	59.9
Exports to FTAA Countries	$50.8	$55.2	$63.0	$66.3	$70.9
NAFTA Partners	26.6	28.9	31.3	30.9	33.7
Non-NAFTA Partners	24.2	26.3	31.7	35.4	37.3
Imports from FTAA Countries	$35.4	$39.4	$43.4	$47.5	$47.6
NAFTA Partners	19.1	21.4	23.4	25.0	25.0
Non-NAFTA Partners	16.3	18.0	20.0	22.5	22.6

*The data reflect U.S. services exports to and imports from all countries in the Western Hemisphere, a slightly broader classification of countries than the potential FTAA partners (i.e., it includes services trade with British territories, which could not be broken out from the published data).

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

The Investment Picture Is Equally Impressive

U.S. foreign direct investment in FTAA countries is significant. U.S. investment in non-NAFTA partners is very nearly matched by U.S. investment in NAFTA partners (Table I.4). U.S. direct investment in Brazil alone is nine times the value of U.S. direct investment in China in 2000.

FTAA partner investment in the United States has been stable since 1995, unlike investment by NAFTA partners in the United States, which has been increasing strongly over the same period. NAFTA therefore

shows that as economies become more intertwined when barriers to trade and investment evaporate, the United States as well as its trading partners benefit from growing interest in foreign firms establishing facilities and other operations in the United States, creating new job opportunities for U.S. workers.

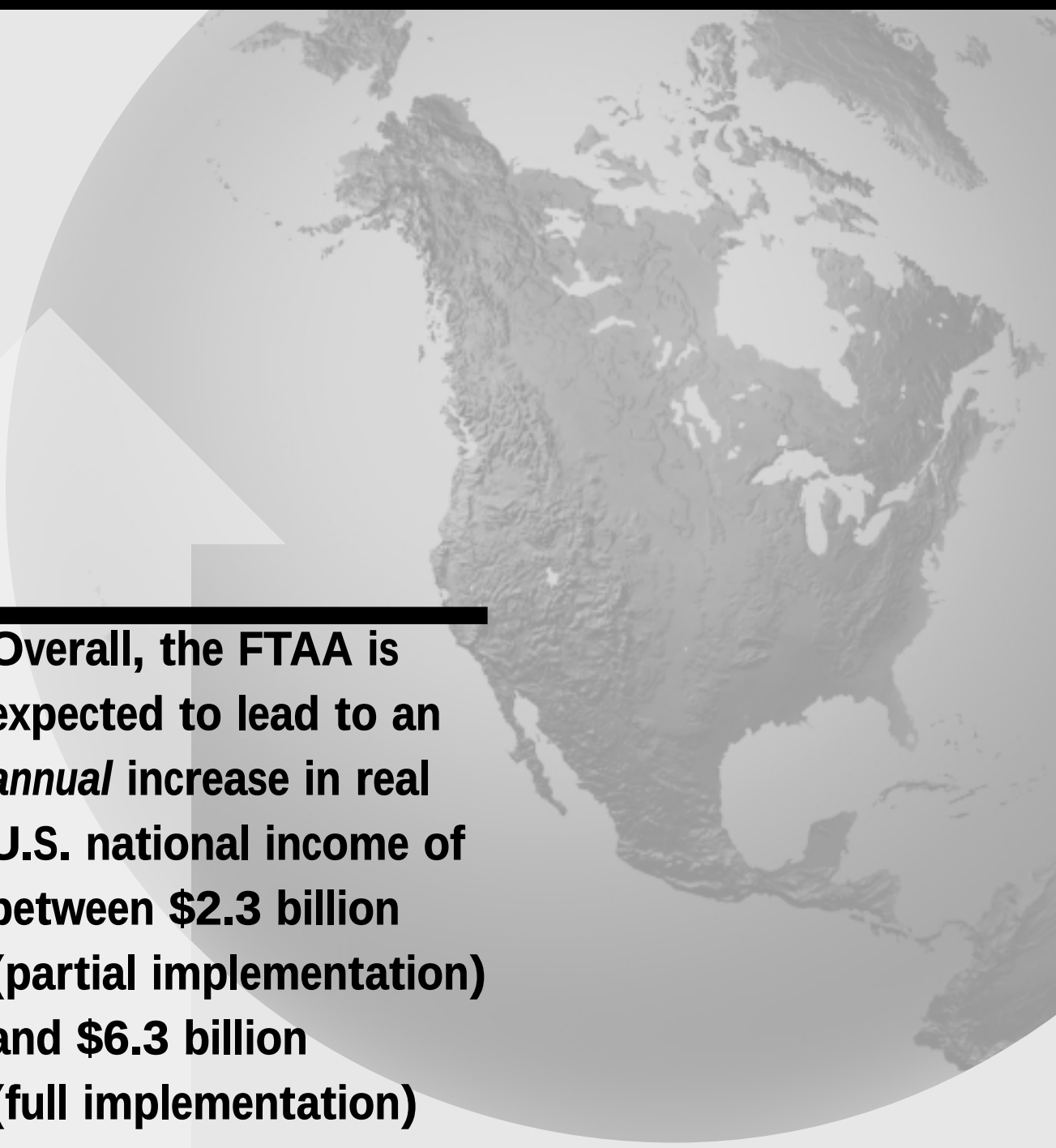
Table I.4

Direct Investment Position with FTAA Trading Partners, Historical Cost Basis, 1995–2000

(Billions)

	1995	1996	1997	1998	1999	2000
Value of U.S. Investment in:						
FTAA Countries	$171.2	$190.6	$220.8	$231.6	$261.1	$287.8
NAFTA Partners	100.4	108.9	120.7	124.9	143.3	161.8
Non-NAFTA Partners	70.8	81.6	100.1	106.8	117.8	126.0
Value of Foreign Investment in the U.S. from:						
FTAA Countries	55.6	65.8	77.1	83.7	87.8	112.6
NAFTA Partners	47.5	56.5	68.3	74.8	78.3	103.3
Non-NAFTA Partners	8.1	9.3	8.8	8.9	9.5	9.3

Source: Department of Commerce, Bureau of Economic Analysis.



Overall, the FTAA is expected to lead to an *annual* increase in real U.S. national income of between $2.3 billion (partial implementation) and $6.3 billion (full implementation)

CHAPTER **II**

Likely Impact of the FTAA on the U.S. Economy*

The FTAA is expected to have an important positive effect on the U.S. economy, benefiting U.S. companies and workers alike. While the trade and investment data already indicate that an FTAA portends benefits for the U.S. economy, a thorough analysis and quantification of the expected benefits are useful to guide the process as it goes forward.

This Chapter presents the results of a rigorous, well-documented analysis of the likely impact of the FTAA on the U.S. economy, and on U.S. states and regions. Two scenarios were explored: reduction of tariffs and other barriers to trade in the region by 50 percent ("partial implementation") and elimination of tariffs and other barriers to trade ("full implementation"). The "partial implementation" scenario gives an idea of the benefits the United States could experience after the FTAA has been in effect for five years, and the "full implementation" scenario represents the benefits after it is fully in effect.

The methodology and data used to conduct the analysis are described generally later in this Chapter, and in detail in the Technical Appendix.

The FTAA Will Expand National Income

Overall, the FTAA is expected to lead to an *annual* increase in real U.S. national income of between $2.3 billion (partial implementation) and $6.3 billion (full implementation) (Table II.1). At the same time, real labor income rises by between 0.04 percent (partial liberalization) and 0.13 percent (full implementation).

Table II.1

Summary of Estimated Macroeconomic Effects of an FTAA on the U.S. Economy

Sector	Partial FTAA Implementation	Full FTAA Implementation
National income gain (millions of dollars)	$2,339	$6,291
National income gain (percent of GDP)	0.03	0.08
Terms of trade effects	0.11	0.25
Change in exports (millions of dollars)	$8,447	$23,561
Change in exports (percent)	0.86	2.47
Change in real wages (percent)	0.04	0.13
Change in investment levels (percent)	0.01	0.03

Source: The Trade Partnership, Washington, DC.

**This chapter was prepared principally by Dr. Joseph Francois and Dr. Dean Spinanger.*

Over the longer run, national incomes in the Western Hemisphere (excluding NAFTA partners) expand by a total of $21.0 billion, a promising development for economic and political stability in the region (Table II.2). Growth in income of this magnitude also supports expectations that U.S. exporters will find markets for their goods and services in Latin America as trade and investment barriers are liberalized. Within NAFTA, the United States is the biggest winner, but also significant is the $5.3 billion expansion of Mexico's economy as a result of further regional trade integration.

Table II.2

Estimated Western Hemisphere Income Effects of an FTAA

(Millions of Dollars)

Sector	Partial FTAA Implementation	Full FTAA Implementation
United States	$2,339	$6,291
Canada	287	561
Mexico	2,046	5,271
Latin America	5,808	21,016

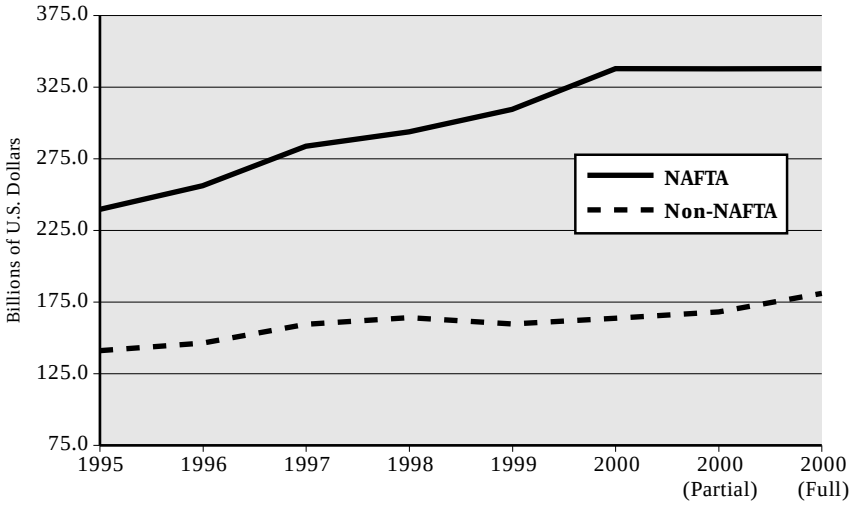
Source: The Trade Partnership, Washington, DC

The FTAA Will Indeed Expand U.S. Trade with FTAA Partners

The FTAA is expected to lead to an increase in the quantity of U.S. goods and services exports estimated to range between 0.86 percent (partial implementation) to 2.47 percent (full implementation) (Table II.1). In dollar terms, the net effect is growth in the value of U.S. exports somewhere between $8.4 billion (partial implementation) and $23.6 billion (full implementation) (Table II.1).

Figure II.1

U.S. Goods and Services Exports to Western Hemisphere Trading Partners, 1995–2000 (Actual and Estimated under FTAA)



Source: The Trade Partnership.

Notably, the bulk of the increase in U.S. exports is generated by trade liberalization with non-NAFTA FTAA trading partners (Figure II.1). Non-NAFTA trading partners account for 69 percent of the net increase

in U.S. exports after the FTAA is partially implemented (2000(Partial) in the Figure), and 99 percent of the net increase in U.S. exports after the FTAA is fully implemented (2000(Full) in the Figure).[2] (U.S. export growth to NAFTA partners actually stabilizes in preference to exports to the rest of the Hemisphere.)

The Sectoral Impact of the FTAA

U.S. goods and services sectors that are expected to increase *output* the most due to improved market access include leather goods (expanding by between 0.5 and 1.2 percent), natural fibers like cotton (expanding by between 0.4 and 1.0 percent), textiles (expanding by 0.4 and 0.9 percent), motor vehicles and parts (expanding by between 0.3 and 0.8 percent), and non-electric machinery and equipment (expanding by between 0.12 and 0.36 percent) (Table II.3).[3]

Table II.3

Estimated Changes in U.S. Output by Sector

(Percent)

Sector	Partial FTAA Implementation	Full FTAA Implementation
Leather products	0.50%	1.20%
Natural fibers (cotton etc.)	0.39	1.02
Textiles	0.39	0.88
Motor vehicles and parts	0.31	0.79
Other primary production	0.37	0.66
Non-electric machinery and equipment	0.12	0.36
Other manufactured goods	0.05	0.17
Steel refinery products	0.06	0.02
Construction	0.00	0.02
Chemicals, refinery products, rubber, plastics	-0.02	0.01
Wholesale and retail trade services	0.01	0.01
Other services (public, health, etc.)	0.00	0.01
Processed food, tobacco, and beverages	-0.01	0.00
Finance, insurance, and real estate services	0.00	-0.01
Other commercial services	-0.01	-0.03
Communications services	-0.03	-0.05
Electronic machinery and equipment	-0.06	-0.06
Wearing apparel	0.57	-0.17
Transportation services (land, water, air)	-0.08	-0.17
Wool	-0.18	-0.41
Non-ferrous metal products	-0.18	-0.64
Primary food production	-0.43	-0.99

Source: The Trade Partnership, Washington, DC.

U.S. goods and services *export* sectors with the most to gain from an FTAA include apparel (up 14.3 to 34.2 percent), and leather products (up 6.5 to 19.9 percent) (Table II.4). In terms of value, the sectors with the most to gain from the FTAA include non-electric machinery (up $1.7 billion to $4.9 billion); motor vehicles and parts (up $1.6 billion to $4.1 billion); apparel (up $1.2 billion to $2.8 billion); primary food products (up $610 million to $1.8 billion); and chemicals, refinery products, rubber and plastics (up $573 million to $1.7 billion).

Table II.4

Estimated Percent Changes in U.S. Exports by Sector

(Percent)

Sector	Partial FTAA Implementation	Full FTAA Implementation
Wearing apparel	14.31	34.16
Leather products	6.50	19.93
Textiles	3.84	11.33
Motor vehicles and parts	2.73	7.13
Processed food, tobacco, and beverages	2.17	6.16
Primary food production	1.98	5.86
Steel refinery products	1.57	4.29
Other manufactured goods	1.32	3.87
Non-electric machinery and equipment	0.82	2.38
Chemicals, refinery products, rubber, plastics	0.59	1.79
Other primary production	0.35	1.49
Natural fibers (cotton etc.)	0.47	1.34
Electronic machinery and equipment	0.28	0.88
Wool	0.24	0.84
Transportation services (land, water, air)	0.10	0.25
Other services (public, health, etc.)	0.12	0.23
Non-ferrous metal products	-0.06	0.04
Finance, insurance, and real estate services	0.00	-0.15
Wholesale and retail trade services	-0.02	-0.16
Other commercial services	-0.10	-0.29
Communications services	-0.14	-0.37
Construction	-0.21	-0.55
TOTAL	**0.01**	**0.02**

Source: The Trade Partnership, Washington, DC

Table II.5

Estimated Changes in Value of U.S. Exports by Sector

(Millions of Dollars)

Sector	Partial FTAA Implementation	Full FTAA Implementation
Non-electric machinery and equipment	$1,706.7	$4,930.6
Motor vehicles and parts	1,569.4	4,095.9
Other manufactured goods	1,246.4	3,641.6
Wearing apparel	1,171.8	2,797.7
Primary food production	610.5	1,811.7
Chemicals, refinery products, rubber, plastics	573.9	1,731.5
Processed food, tobacco, and beverages	443.2	1,256.6
Electronic machinery and equipment	378.7	1,204.1
Textiles	404.3	1,193.9
Leather products	92.6	284.3
Steel refinery products	89.7	245.3
Transportation services (land, water, air)	95.6	243.9
Other services (public, health, etc.)	92.2	186.9
Other primary production	24.7	297.4
Natural fibers (cotton etc.)	9.0	25.7
Non-ferrous metal products	-4.7	3.2
Wool	0.04	0.2
Wholesale and retail trade services	-3.9	-26.0
Communications services	-11.8	-30.9
Construction	-12.0	-31.1
Finance, insurance, and real estate services	0.3	-32.1
Other commercial services	-61.6	-186.8
TOTAL	**8,447.0**	**23,561.3**

Source: The Trade Partnership, Washington, DC

State and Regional Effects of an FTAA

The FTAA is expected to have a generally positive impact on every region of the U.S. economy. Regional income ("gross state incomes") grow, and consumers benefit from lower prices as expensive trade barriers are eliminated.

The biggest gains in income will be experienced by the South and the Midwest (Table II.6a and II.6b). Income gains (both increases in state income and improved efficiency and consumer gains) would range from $896 million a year (partial implementation) to $2.2 billion (full implementation) a year in the South, and $592 million a year to $1.7 billion a year in the Midwest. This is because the sectors expected to benefit the most from growing exports are largely located in these areas of the country.

These gains are probably underestimated to the extent that trade barriers — particularly of the non-tariff kind — are perceived by small- and medium-sized companies as being too expensive to try to overcome. Hence, as the FTAA creates greater transparency of each country's trading regime, more companies will venture out into the new markets of the FTAA economies. Such developments have been observed over the course of the integration process in Europe over the past decades.

Table II.6a

Estimated Value of National Income Effects by Region

(Millions of Constant 2000 Dollars)

	Total income effects		**Changes in Gross State Product at constant prices**		**Efficiency and consumer gains***	
Regions	Partial FTAA	Full FTAA	Partial FTAA	Full FTAA	Partial FTAA	Full FTAA
Northeast	**$419**	**$1,173**	**$121**	**$463**	**$298**	**$710**
New England[a]	128	370	50	182	79	188
Middle Atlantic[b]	291	803	72	281	219	522
Midwest	**592**	**1,691**	**280**	**948**	**312**	**743**
East North Central[c]	506	1,411	286	886	221	525
West North Central[d]	86	280	-6	62	92	218
South	**896**	**2,244**	**441**	**1,163**	**455**	**1,082**
South Atlantic[e]	317	871	78	302	239	569
East South Central[f]	155	404	85	238	70	166
West South Central[g]	424	970	279	623	146	347
West	**432**	**1,183**	**120**	**442**	**312**	**741**
Mountain[h]	135	343	54	152	80	191
Pacific[i]	297	840	66	290	232	551
Total USA	**2,339**	**6,291**	**963**	**3,016**	**1,377**	**3,275**

[a]CT, MA, ME, NH, RI, VT; [b]NJ, NY, PA; [c]IL, IN, MI, OH, WI; [d]IA, KS, MN, MO, ND, NE, SD, VA; [e]DC, DE, FL, GA, MD, NC, SC, WV; [f]AL, KY, MS, TN; [g]AR, LA, OK, TX; [h]AZ, CO, ID, MT, NM, NV, UT, WY; [I]AK, CA, HI, OR, WA

* These are gains that result from the more efficient allocation of economic resources that flow from barrier-free trade and investment and the gains to consumers from lower prices that result from the elimination of trade and investment barriers.

Source: The Trade Partnership, Washington, DC

Gains to the motor vehicle and parts industries, non-electronic machinery, and the "other" manufactured goods sector drive the gains in the Midwest (Table II.8). Similar gains are estimated to be experienced in these sectors in the South, but also important are gains to mining.

At the state level (Tables II.7 and II.9), the largest gains are expected to accrue to: California ($212 million to $613 million in benefits), Illinois ($86 million to $255 million), Indiana ($76 million to $210 mil-

Table II.6b

Estimated Shares of National Income Effects by Region

(Share of U.S. Total)

Regions	Total income effects		Changes in Gross State Product at constant prices		Efficiency and consumer gains*	
Northeast	**17.93%**	**18.64%**	**12.58%**	**15.36%**	**21.67%**	**21.67%**
New England[a]	5.49	5.88	5.15	6.03	5.73	5.73
Middle Atlantic[b]	12.44	12.77	7.43	9.33	15.94	15.94
Midwest	**25.30**	**26.87**	**29.06**	**31.43**	**22.68**	**22.68**
East North Central[c]	21.65	22.42	29.69	29.38	16.02	16.02
West North Central[d]	3.66	4.45	-0.64	2.05	6.66	6.66
South	**38.31**	**35.68**	**45.87**	**38.56**	**33.02**	**33.02**
South Atlantic[e]	13.56	13.85	8.10	10.01	17.38	17.38
East South Central[f]	6.61	6.42	8.82	7.90	5.06	5.06
West South Central[g]	18.14	15.41	28.95	20.65	10.59	10.59
West	**18.46**	**18.81**	**12.49**	**14.65**	**22.63**	**22.63**
Mountain[h]	5.75	5.45	5.66	5.05	5.82	5.82
Pacific[i]	12.71	13.36	6.83	9.60	16.82	16.82

[a]CT, MA, ME, NH, RI, VT; [b]NJ, NY, PA; [c]IL, IN, MI, OH, WI; [d]IA, KS, MN, MO, ND, NE, SD, VA; [e]DC, DE, FL, GA, MD, NC, SC, WV; [f]AL, KY, MS, TN; [g]AR, LA, OK, TX; [h]AZ, CO, ID, MT, NM, NV, UT, WY; [I]AK, CA, HI, OR, WA

* These are gains that result from the more efficient allocation of economic resources that flow from barrier-free trade and investment and the gains to consumers from lower prices that result from the elimination of trade and investment barriers.

Source: The Trade Partnership, Washington, DC.

lion), Louisiana ($90 million to $195 million), Michigan ($168 million to $451 million), New York ($140 million to $377 million), Ohio ($131 million to $361 million), Pennsylvania ($94 million to $262 million), and Texas ($291 million to $666 million).

About the Model

The results presented in this Chapter were obtained by applying a computer-based economic model (known as a "computable general equilibrium" or CGE model). CGE models are the tool of choice for assessment of the economic impact of regional and multilateral trade agreements. They allow for the assessment of liberalization across broad sectors of the economy, including interactions between sectors that may result. The estimated effects from the CGE model at the national level are also matched, based on the structure of production and employment at the state level, to the impact on individual states.

The model links industries in a chain from primary goods to continuously higher stages of intermediate processing, to the final assembling of goods and services for consumption. Linkages between sectors are

Table II.7

Estimated Changes in State Income

(Millions of 2000 Dollars)

	Total Income Effects		**Changes in Gross State Product at Constant Prices**		**Efficiency and Consumer Gains**	
	A=C+E	**B=D+F**	**C**	**D**	**E**	**F**
	Implementation		Implementation		Implementation	
	Partial	Full	Partial	Full	Partial	Full
Alabama	$37	$92	$20	$51	$17	$42
Alaska	32	60	27	50	4	11
Arizona	29	84	9	35	20	49
Arkansas	7	22	-3	-2	10	24
California	212	613	37	196	175	416
Colorado	31	82	9	30	22	52
Connecticut	39	113	16	59	23	54
Delaware	8	23	3	10	5	12
Dist. of Col.	8	20	0	0	8	20
Florida	59	165	-7	10	65	155
Georgia	58	158	19	64	39	94
Hawaii	4	12	-2	-4	6	15
Idaho	1	7	-4	-4	5	12
Illinois	86	255	19	96	67	159
Indiana	76	210	49	145	27	65
Iowa	-2	10	-16	-23	14	33
Kansas	16	47	4	18	12	29
Kentucky	51	130	34	89	17	40
Louisiana	90	195	70	145	21	49
Maine	8	23	3	11	5	12
Maryland	26	72	0	10	26	62
Massachusetts	55	159	18	70	37	89
Michigan	168	451	122	339	47	111
Minnesota	34	102	8	41	25	61
Mississippi	14	39	4	15	10	23
Missouri	41	121	15	59	26	62
Montana	3	8	0	0	3	8
Nebraska	-5	-5	-13	-25	8	20
Nevada	14	33	5	10	10	24
New Hampshire	16	44	9	30	6	15
New Jersey	57	164	7	45	50	119

New Mexico	$21	$52	$13	$33	$8	$19
New York	140	377	29	112	111	264
North Carolina	57	168	20	79	37	88
North Dakota	2	6	0	-1	3	6
Ohio	131	361	76	231	55	130
Oklahoma	36	87	23	55	13	32
Oregon	16	59	0	20	16	39
Pennsylvania	94	262	36	124	58	138
Rhode Island	8	21	3	10	5	12
South Carolina	40	108	24	70	16	38
South Dakota	-1	0	-4	-8	3	8
Tennessee	53	143	28	83	25	60
Texas	291	666	189	423	102	242
Utah	18	44	8	22	9	22
Vermont	3	9	0	2	3	6
Virginia	40	112	5	27	36	84
Washington	33	97	4	27	29	70
West Virginia	20	46	14	31	6	15
Wisconsin	44	133	20	74	25	59
Wyoming	17	33	15	27	3	6
Total U.S.	**2,339**	**6,291**	**963**	**3,016**	**1,377**	**3,275**

Note: Total real income effects involve a combination of factors: changes in the composition of output, and effects related to relative price changes. State GSP changes are based on mapping of state GSP, by sector, to model projections by sector. These correspond to columns C and D. Efficiency/consumption gains (from price changes) are the difference between fixed price income and total welfare gains, based on model estimates. These correspond to columns E and F. The total effect is then the sum of the corresponding fixed price and efficiency/ consumption gains. This amount is reported in Columns A and B. Parts may not sum to total due to interaction (for example columns A and B may not sum to column C).

Source: The Trade Partnership.

both direct (like the input of steel in the production of automobiles) and indirect (like use of mining inputs into steel, which feed indirectly into automobiles). The most important aspects of the model can be summarized as follows: (i) it covers all world trade and production; (ii) it includes intermediate linkages between sectors; and (iii) it allows for trade to affect capital stocks through investment effects. The last point means we model medium to long-run investment effects.

In the last two decades, the use of CGE models to estimate the impact of trade liberalization has moved from academic settings to the policy institutions dealing specifically with trade policies.[4] While the results of these exercises are hampered both by the assumptions and the quality of the data available, their relevance in estimating the possible overall pattern of impact — i.e. both of direct and indirect nature — has proved to be helpful in policy formulation and the assessment of existing economic policies.

Table II.8a
Estimated Changes in Northeast Regional Gross State Products (GSP)
(Millions of Constant 2000 Dollars)

Sector	Northeast as a Whole		New England[a]		Middle Atlantic[b]	
	Implementation		Implementation		Implementation	
	Partial FTAA	Full FTAA	Partial FTAA	Full FTAA	Partial FTAA	Full FTAA
Other manufactured goods	156.7	473.0	46.5	140.3	110.2	332.7
Other machinery	66.8	209.6	28.1	88.2	38.7	121.4
Motor vehicles and parts	18.7	47.6	3.6	9.2	15.1	38.4
Wholesale and retail trade services	15.7	41.6	4.3	11.4	11.4	30.2
Mining	11.9	21.5	1.0	1.9	10.9	19.6
Leather products	9.4	22.5	5.6	13.4	3.8	9.1
Textiles	9.0	20.3	3.4	7.6	5.6	12.6
Other services (public, health, etc.)	8.7	25.0	1.8	5.2	6.9	19.8
Wearing apparel	7.6	-2.3	0.9	-0.3	6.7	-2.0
Construction	3.1	13.1	0.9	3.8	2.2	9.3
Primary metals	-3.2	-21.6	-0.7	-4.6	-2.5	-17.0
Transportation	-4.7	-9.8	-1.2	-2.5	-3.5	-7.3
Chemicals, refinery products, rubber, plastics	-9.3	6.5	-1.5	1.0	-7.8	5.5
Communications	-14.2	-29.6	-2.6	-5.4	-11.6	-24.3
Electronic equipment	-19.3	-21.3	-8.7	-9.6	-10.5	-11.6
Agriculture	-19.9	-45.3	-5.0	-11.3	-15.0	-34.0
Finance, insurance, and real estate services	-25.1	-61.4	-6.2	-15.3	-18.8	-46.1
Other commercial services	-42.3	-100.9	-11.7	-28.0	-30.5	-72.9
Processed Foods	-48.7	-125.1	-9.0	-23.1	-39.8	-102.1
TOTAL	121.1	463.2	49.6	181.9	71.5	281.3

[a]CT, MA, ME, NH, RI, VT. [b]NJ, NY, PA

Source: The Trade Partnership, Washington, DC

Table II.8b
Estimated Changes in Midwest Regional Gross State Products (GSP)
(Millions of Constant 2000 Dollars)

Sector	Midwest as a Whole		East North Central[a]		West North Central[b]	
	Implementation		Implementation		Implementation	
	Partial FTAA	Full FTAA	Partial FTAA	Full FTAA	Partial FTAA	Full FTAA
Other manufactured goods	259.1	782.2	195.5	590.2	63.6	192.0
Motor vehicles and parts	207.7	527.8	179.4	455.8	28.3	72.0
Other machinery	97.2	304.6	67.7	212.2	29.5	92.4
Mining	31.2	56.2	17.4	31.4	13.8	24.8
Wholesale and retail trade services	18.5	48.9	12.9	34.0	5.6	14.9
Leather products	6.4	15.3	4.4	10.5	2.0	4.8
Wearing apparel	4.2	-1.3	3.2	-1.0	1.1	-0.3
Construction	4.2	17.6	3.0	12.4	1.2	5.1
Other services (public, health, etc.)	3.8	10.8	1.4	4.1	2.3	6.7
Textiles	1.8	4.2	1.5	3.4	0.3	0.7
Transportation	-5.2	-10.9	-3.9	-8.1	-1.3	-2.8
Primary metals	-8.8	-59.5	-7.9	-53.7	-0.8	-5.8
Communications	-11.3	-23.5	-7.2	-15.0	-4.1	-8.5
Chemicals, refinery products, rubber, plastics	-11.9	8.3	-9.1	6.4	-2.7	1.9
Finance, insurance, and real estate services	-16.3	-40.0	-11.7	-28.6	-4.7	-11.4
Electronic equipment	-22.7	-25.0	-16.5	-18.2	-6.1	-6.8
Other commercial services	-36.6	-87.3	-26.2	-62.4	-10.4	-24.9
Processed Foods	-105.4	-270.7	-64.4	-165.4	-41.0	-105.3
Agriculture	-136.3	-309.8	-53.7	-121.9	-82.7	-187.9
TOTAL	279.7	947.8	285.8	886.1	-6.1	61.8

[a]IL, IN, MI, OH, WI [b]IA, KS, MN, MO, ND, NE, SD, VA

Source: The Trade Partnership, Washington, DC

Table II.8c
Estimated Changes in Southern Regional Gross State Products (GSP)
(Millions of Constant 2000 Dollars)

Sector	South as a Whole		South Atlantic[a]		East South Central[b]		West South Central[c]	
	Implementation		Implementation		Implementation		Implementation	
	Partial FTAA	Full FTAA	Partial FTAA	Full FTAA	Partial FTAA	Full FTAA	Partial FTAA	Full FTAA
Mining	309.1	555.6	24.4	42.9	20.7	37.3	264.0	475.4
Other manufactured goods	268.7	811.3	126.6	382.2	57.9	174.7	84.3	254.5
Motor vehicles and parts	88.0	223.5	31.2	79.3	45.9	116.5	10.9	27.7
Other machinery	80.0	250.8	35.4	111.0	12.1	37.8	32.5	101.9
Textiles	54.1	122.1	43.8	98.8	8.2	18.4	2.2	4.9
Wholesale and retail trade services	26.8	71.0	14.0	37.1	4.3	11.3	8.5	22.6
Other services (public, health, etc.)	15.2	43.9	9.3	26.8	2.0	5.6	4.0	11.5
Wearing apparel	12.9	-3.9	5.5	-1.7	4.3	-1.3	3.2	-1.0
Construction	6.3	26.4	3.5	14.5	0.9	3.9	1.9	8.0
Leather products	6.1	14.7	2.6	6.1	1.0	2.4	2.6	6.2
Primary metals	-5.2	-35.6	-2.0	-13.6	-2.0	-13.8	-1.2	-8.2
Transportation	-8.3	-17.4	-3.8	-8.0	-0.6	-1.3	-3.8	-8.1
Chemicals, refinery products, rubber, plastics	-16.9	11.9	-7.2	5.1	-2.7	1.9	-7.0	4.9
Communications	-21.6	-45.2	-11.8	-24.6	-2.4	-5.0	-7.5	-15.6
Finance, insurance, and real estate services	-23.7	-58.1	-14.2	-34.8	-2.9	-7.1	-6.6	-16.2
Electronic equipment	-28.5	-31.4	-12.4	-13.7	-4.0	-4.5	-12.0	-13.2
Other commercial services	-58.3	-139.0	-33.3	-79.4	-7.0	-16.6	-18.0	-43.0
Agriculture	-130.0	-295.5	-56.8	-129.2	-25.9	-58.8	-47.3	-107.5
Processed Foods	-133.3	-342.2	-76.6	-196.8	-24.7	-63.3	-32.0	-82.2
TOTAL	441.5	1162.8	78.0	301.9	84.9	238.1	278.6	622.8

[a]DC, DE, FL, GA, MD, NC, SC, WV [b]AL, KY, MS, TN [c]AR, LA, OK, TX *Source: The Trade Partnership, Washington, DC*

Table II.8d
Estimated Changes in Western Regional Gross State Products (GSP)
(Millions of Constant 2000 Dollars)

Sector	West as a Whole		Mountain[a]		Pacific[b]	
	Implementation		Implementation		Implementation	
	Partial FTAA	Full FTAA	Partial FTAA	Full FTAA	Partial FTAA	Full FTAA
Other manufactured goods	156.0	470.9	37.0	111.8	118.9	359.1
Mining	123.4	222.3	62.0	111.7	61.4	110.5
Other machinery	85.8	269.2	16.4	51.3	69.5	217.9
Motor vehicles and parts	19.7	50.1	5.1	13.0	14.6	37.1
Wholesale and retail trade services	18.1	47.8	4.6	12.2	13.4	35.6
Other services (public, health, etc.)	7.8	22.4	2.9	8.3	4.9	14.1
Wearing apparel	6.5	-2.0	0.5	-0.1	6.0	-1.8
Construction	4.3	17.8	1.5	6.2	2.8	11.6
Textiles	2.9	6.6	0.4	0.9	2.5	5.7
Leather products	2.4	5.7	1.0	2.4	1.4	3.3
Primary metals	-2.2	-15.1	-0.7	-4.8	-1.5	-10.3
Chemicals, refinery products, rubber, plastics	-4.6	3.2	-1.0	0.7	-3.6	2.6
Transportation	-5.8	-12.2	-0.9	-2.0	-4.9	-10.2
Communications	-13.6	-28.4	-4.0	-8.3	-9.6	-20.1
Finance, insurance, and real estate services	-19.9	-48.9	-4.3	-10.5	-15.6	-38.4
Electronic equipment	-40.9	-45.1	-12.8	-14.2	-28.0	-30.9
Other commercial services	-51.1	-122.0	-12.1	-28.8	-39.1	-93.3
Processed Foods	-59.7	-153.2	-13.4	-34.3	-46.3	-118.9
Agriculture	-108.8	-247.2	-27.8	-63.2	-80.9	-184.0
TOTAL	120.2	441.9	54.4	152.3	65.8	289.5

[a]AZ, CO, ID, MT, NM, NV, UT, WY [b]AK, CA, HI, OR, WA *Source: The Trade Partnership, Washington, DC*

Table II.9
Estimated Changes in Gross State Product (GSP) by State
(Millions of Dollars)

Sector	Alabama (AL)		Alaska (AK)		Arizona (AZ)		Arkansas (AR)		California (CA)	
	FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation	
	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full
Mining	6.4	11.5	27.8	50.1	6.3	11.4	2.2	4.0	31.5	56.8
Processed foods	-2.5	-6.4	-1.0	-2.6	-1.9	-4.9	-6.4	-16.4	-34.6	-88.9
Textiles	4.4	9.8	0.0	0.0	0.1	0.3	0.3	0.8	2.2	5.0
Wearing apparel	1.2	-0.4	0.0	0.0	0.1	0.0	0.2	-0.1	5.5	-1.7
Leather products	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.8	1.2	2.9
Chemicals, refinery products, rubber, plastics	-0.6	0.4	-0.1	0.0	-0.2	0.2	-0.3	0.2	-3.1	2.2
Primary metals	-0.8	-5.5	0.0	0.0	-0.2	-1.6	-0.4	-2.5	-0.9	-6.1
Motor vehicles and parts	3.9	10.0	0.0	0.0	1.7	4.4	2.3	5.9	9.8	24.9
Electronic equipment	-0.8	-0.9	0.0	0.0	-5.4	-5.9	-0.7	-0.8	-19.6	-21.6
Other machinery	2.7	8.6	0.0	0.1	4.8	15.1	1.9	6.0	55.5	174.1
Other manufactured goods	13.3	40.0	0.7	2.0	11.0	33.2	8.4	25.3	89.7	270.9
Agriculture	-6.4	-14.5	-0.1	-0.3	-4.8	-10.8	-10.6	-24.1	-60.4	-137.2
Wholesale and retail trade services	1.1	2.8	0.1	0.4	1.3	3.4	0.6	1.6	10.2	26.9
Transportation	-0.1	-0.3	-0.1	-0.2	-0.2	-0.5	-0.1	-0.1	-3.7	-7.7
Communications	-0.8	-1.6	-0.1	-0.3	-0.7	-1.5	-0.4	-0.9	-7.4	-15.5
Construction	0.2	1.0	0.1	0.2	0.3	1.4	0.1	0.6	1.9	7.9
Finance, insurance, and real estate services	-0.8	-1.9	-0.1	-0.3	-1.3	-3.1	-0.4	-0.9	-12.5	-30.7
Other commercial services	-1.6	-3.9	-0.3	-0.8	-2.9	-7.0	-0.8	-1.8	-30.8	-73.6
Other services (public, health, etc.)	0.7	2.1	0.4	1.2	0.5	1.4	0.3	0.9	2.7	7.9
TOTAL	19.5	50.9	27.3	49.7	8.6	35.5	-3.2	-1.5	37.3	196.4

Sector	Colorado (CO)		Connecticut (CT)		Delaware (DE)		Dist. of Col. (DC)		Florida (FL)	
	FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation	
	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full
Mining	9.7	17.4	0.4	0.6	0.0	0.0	0.1	0.2	2.9	5.2
Processed foods	-5.6	-14.3	-2.5	-6.4	-1.4	-3.6	0.0	-0.1	-8.9	-23.0
Textiles	0.0	0.1	0.3	0.6	0.4	0.8	0.0	0.0	0.4	0.9
Wearing apparel	0.1	0.0	0.3	-0.1	0.0	0.0	0.0	0.0	0.8	-0.2
Leather products	0.7	1.8	0.3	0.7	0.0	0.0	0.0	0.0	1.0	2.4
Chemicals, refinery products, rubber, plastics	-0.2	0.2	-0.6	0.4	-0.5	0.3	0.0	0.0	-0.7	0.5
Primary metals	0.0	-0.3	-0.2	-1.5	0.0	-0.3	0.0	0.0	-0.2	-1.1
Motor vehicles and parts	0.7	1.7	1.7	4.4	2.5	6.5	0.0	0.1	1.5	3.9
Electronic equipment	-0.8	-0.9	-1.9	-2.1	0.0	0.0	-0.1	-0.1	-3.2	-3.5
Other machinery	6.9	21.6	10.8	33.8	0.3	1.1	0.1	0.2	8.7	27.4
Other manufactured goods	9.0	27.2	14.0	42.3	3.1	9.5	0.7	2.1	18.2	54.9
Agriculture	-6.0	-13.7	-1.2	-2.8	-0.7	-1.7	0.0	0.0	-16.8	-38.2
Wholesale and retail trade services	1.3	3.4	1.2	3.1	0.2	0.5	0.1	0.3	4.4	11.8
Transportation	-0.3	-0.7	-0.5	-1.0	0.0	-0.1	-0.1	-0.2	-1.4	-2.9
Communications	-2.2	-4.5	-0.8	-1.7	-0.1	-0.2	-0.5	-1.0	-3.0	-6.3
Construction	0.4	1.5	0.2	0.9	0.1	0.3	0.0	0.1	1.0	4.1
Finance, insurance, and real estate services	-1.2	-2.9	-2.1	-5.0	-0.7	-1.6	-0.4	-0.9	-4.6	-11.3
Other commercial services	-3.8	-9.0	-3.2	-7.5	-0.5	-1.1	-1.7	-4.1	-10.1	-24.0
Other services (public, health, etc.)	0.7	1.9	0.3	0.7	0.0	0.1	1.3	3.6	3.4	9.8
TOTAL	9.2	30.2	16.4	59.4	2.8	10.5	-0.5	0.2	-6.5	10.2

Source: The Trade Partnership, Washington, DC

Table II.9
Estimated Changes in Gross State Product (GSP) by State
(Millions of Dollars)

Sector	Georgia (GA)		Hawaii (HI)		Idaho (ID)		Illinois (IL)		Indiana (IN)	
	FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation	
	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full
Mining	4.3	7.7	0.2	0.3	0.7	1.3	4.3	7.8	2.7	4.9
Processed foods	-17.7	-45.4	-0.8	-2.2	-2.4	-6.1	-21.2	-54.5	-6.5	-16.6
Textiles	13.4	30.2	0.0	0.0	0.0	0.0	0.3	0.7	0.1	0.3
Wearing apparel	1.3	-0.4	0.1	0.0	0.0	0.0	0.5	-0.1	0.3	-0.1
Leather products	0.1	0.2	0.0	0.0	0.0	0.1	0.8	1.8	0.5	1.1
Chemicals, refinery products, rubber, plastics	-0.8	0.6	0.0	0.0	-0.1	0.0	-2.3	1.6	-1.6	1.1
Primary metals	-0.3	-2.3	0.0	0.0	0.0	0.0	-1.1	-7.5	-2.1	-14.0
Motor vehicles and parts	7.6	19.3	0.0	0.0	0.2	0.6	11.2	28.5	30.4	77.2
Electronic equipment	-1.8	-2.0	0.0	0.0	-1.4	-1.6	-5.6	-6.1	-2.4	-2.6
Other machinery	6.7	21.0	0.1	0.2	1.3	4.2	17.6	55.1	9.7	30.3
Other manufactured goods	24.9	75.2	0.6	2.0	3.6	11.0	43.4	131.1	30.1	90.9
Agriculture	-11.6	-26.3	-1.3	-2.9	-5.9	-13.3	-15.5	-35.2	-9.7	-22.0
Wholesale and retail trade services	2.6	6.9	0.4	0.9	0.3	0.8	3.8	10.2	1.5	4.0
Transportation	-0.9	-1.8	-0.3	-0.6	0.0	-0.1	-1.8	-3.8	-0.2	-0.5
Communications	-3.0	-6.4	-0.3	-0.6	-0.1	-0.3	-2.9	-6.0	-0.6	-1.3
Construction	0.6	2.3	0.1	0.4	0.1	0.4	0.9	3.7	0.4	1.8
Finance, insurance, and real estate services	-2.0	-4.9	-0.5	-1.2	-0.2	-0.5	-4.3	-10.6	-1.2	-2.9
Other commercial services	-5.4	-12.8	-0.8	-2.0	-0.5	-1.2	-10.1	-24.1	-2.4	-5.6
Other services (public, health, etc.)	0.9	2.6	0.6	1.8	0.1	0.4	1.1	3.3	-0.1	-0.4
TOTAL	18.8	63.7	-2.0	-3.8	-4.0	-4.2	19.2	95.9	48.9	145.4

Sector	Colorado (CO)		Connecticut (CT)		Delaware (DE)		Dist. of Col. (DC)		Florida (FL)	
	FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation	
	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full
Mining	9.7	17.4	0.4	0.6	0.0	0.0	0.1	0.2	2.9	5.2
Processed foods	-5.6	-14.3	-2.5	-6.4	-1.4	-3.6	0.0	-0.1	-8.9	-23.0
Textiles	0.0	0.1	0.3	0.6	0.4	0.8	0.0	0.0	0.4	0.9
Wearing apparel	0.1	0.0	0.3	-0.1	0.0	0.0	0.0	0.0	0.8	-0.2
Leather products	0.7	1.8	0.3	0.7	0.0	0.0	0.0	0.0	1.0	2.4
Chemicals, refinery products, rubber, plastics	-0.2	0.2	-0.6	0.4	-0.5	0.3	0.0	0.0	-0.7	0.5
Primary metals	0.0	-0.3	-0.2	-1.5	0.0	-0.3	0.0	0.0	-0.2	-1.1
Motor vehicles and parts	0.7	1.7	1.7	4.4	2.5	6.5	0.0	0.1	1.5	3.9
Electronic equipment	-0.8	-0.9	-1.9	-2.1	0.0	0.0	-0.1	-0.1	-3.2	-3.5
Other machinery	6.9	21.6	10.8	33.8	0.3	1.1	0.1	0.2	8.7	27.4
Other manufactured goods	9.0	27.2	14.0	42.3	3.1	9.5	0.7	2.1	18.2	54.9
Agriculture	-6.0	-13.7	-1.2	-2.8	-0.7	-1.7	0.0	0.0	-16.8	-38.2
Wholesale and retail trade services	1.3	3.4	1.2	3.1	0.2	0.5	0.1	0.3	4.4	11.8
Transportation	-0.3	-0.7	-0.5	-1.0	0.0	-0.1	-0.1	-0.2	-1.4	-2.9
Communications	-2.2	-4.5	-0.8	-1.7	-0.1	-0.2	-0.5	-1.0	-3.0	-6.3
Construction	0.4	1.5	0.2	0.9	0.1	0.3	0.0	0.1	1.0	4.1
Finance, insurance, and real estate services	-1.2	-2.9	-2.1	-5.0	-0.7	-1.6	-0.4	-0.9	-4.6	-11.3
Other commercial services	-3.8	-9.0	-3.2	-7.5	-0.5	-1.1	-1.7	-4.1	-10.1	-24.0
Other services (public, health, etc.)	0.7	1.9	0.3	0.7	0.0	0.1	1.3	3.6	3.4	9.8
TOTAL	9.2	30.2	16.4	59.4	2.8	10.5	-0.5	0.2	-6.5	10.2

Source: The Trade Partnership, Washington, DC

Table II.9
Estimated Changes in Gross State Product (GSP) by State
(Millions of Dollars)

Sector	Iowa (IO)		Kansas (KS)		Kentucky (KY)		Louisiana (LA)		Maine (ME)	
	FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation	
	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full
Mining	0.8	1.4	5.5	9.9	9.6	17.2	64.2	115.6	0.0	0.0
Processed foods	-10.6	-27.3	-3.1	-8.0	-11.1	-28.5	-4.3	-11.0	-1.0	-2.6
Textiles	0.1	0.2	0.0	0.0	1.2	2.6	1.4	3.1	0.4	1.0
Wearing apparel	0.1	0.0	0.1	0.0	1.0	-0.3	0.2	-0.1	0.1	0.0
Leather products	0.2	0.5	0.0	0.1	0.4	0.9	0.0	0.0	1.2	2.9
Chemicals, refinery products, rubber, plastics	-0.6	0.4	-0.3	0.2	-0.7	0.5	-2.0	1.4	-0.1	0.0
Primary metals	-0.3	-1.8	-0.1	-0.4	-0.6	-4.1	-0.1	-0.5	0.0	-0.1
Motor vehicles and parts	2.8	7.2	2.5	6.5	24.4	61.9	0.9	2.4	0.1	0.2
Electronic equipment	-1.8	-2.0	-0.3	-0.3	-1.0	-1.1	-0.3	-0.3	-0.3	-0.3
Other machinery	5.2	16.2	5.4	16.9	3.1	9.9	2.8	8.8	1.0	3.3
Other manufactured goods	12.4	37.3	7.8	23.6	17.0	51.3	12.7	38.2	3.1	9.3
Agriculture	-22.9	-52.1	-12.3	-27.9	-8.5	-19.3	-4.1	-9.3	-0.9	-2.1
Wholesale and retail trade services	0.8	2.0	0.8	2.1	0.9	2.5	1.1	2.8	0.3	0.9
Transportation	-0.1	-0.2	-0.2	-0.4	-0.2	-0.3	-0.2	-0.4	0.0	-0.1
Communications	-0.4	-0.9	-0.8	-1.7	-0.4	-0.9	-0.7	-1.4	-0.2	-0.4
Construction	0.2	0.7	0.2	0.7	0.2	1.0	0.3	1.2	0.1	0.3
Finance, insurance, and real estate services	-0.6	-1.6	-0.5	-1.2	-0.6	-1.5	-0.9	-2.1	-0.3	-0.8
Other commercial services	-1.2	-2.8	-1.3	-3.0	-1.4	-3.3	-2.0	-4.7	-0.5	-1.2
Other services (public, health, etc.)	0.1	0.2	0.4	1.3	0.2	0.5	0.6	1.7	0.3	0.9
TOTAL	-16.0	-22.7	3.9	18.2	33.6	89.1	69.6	145.4	3.3	11.1

Sector	Maryland (MD)		Massachusetts (MA)		Michigan (MI)		Minnesota (MN)		Mississippi (MS)	
	FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation	
	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full
Mining	0.6	1.1	0.3	0.6	3.8	6.8	2.6	4.8	2.8	5.1
Processed foods	-5.4	-13.8	-3.6	-9.2	-9.0	-23.0	-8.2	-21.0	-3.1	-8.0
Textiles	0.2	0.5	1.3	2.9	0.1	0.2	0.1	0.3	0.7	1.5
Wearing apparel	0.2	-0.1	0.5	-0.1	1.5	-0.5	0.1	0.0	0.8	-0.2
Leather products	0.7	1.6	1.3	3.0	1.1	2.6	0.8	1.9	0.1	0.1
Chemicals, refinery products, rubber, plastics	-0.4	0.3	-0.6	0.4	-1.9	1.3	-0.5	0.3	-0.4	0.3
Primary metals	-0.3	-2.2	-0.2	-1.5	-1.2	-8.3	-0.2	-1.2	-0.1	-0.7
Motor vehicles and parts	0.9	2.2	0.4	1.0	83.8	212.9	5.3	13.4	1.5	3.8
Electronic equipment	-0.8	-0.9	-4.2	-4.7	-1.5	-1.7	-1.8	-2.0	-0.8	-0.8
Other machinery	3.3	10.3	11.9	37.3	12.9	40.4	9.0	28.2	1.9	6.0
Other manufactured goods	8.0	24.1	19.7	59.4	45.8	138.1	17.2	51.8	7.7	23.2
Agriculture	-2.4	-5.4	-1.4	-3.1	-6.9	-15.6	-12.5	-28.4	-6.3	-14.3
Wholesale and retail trade services	1.4	3.8	2.0	5.4	2.8	7.5	1.6	4.2	0.6	1.5
Transportation	-0.3	-0.7	-0.6	-1.2	-0.9	-1.9	-0.5	-1.0	0.0	-0.1
Communications	-1.2	-2.4	-1.1	-2.3	-1.3	-2.7	-0.8	-1.6	-0.4	-0.8
Construction	0.4	1.7	0.4	1.9	0.6	2.7	0.4	1.5	0.1	0.6
Finance, insurance, and real estate services	-1.8	-4.4	-2.9	-7.1	-2.2	-5.4	-1.6	-3.8	-0.4	-0.9
Other commercial services	-4.1	-9.9	-6.5	-15.5	-5.7	-13.6	-3.4	-8.0	-0.9	-2.1
Other services (public, health, etc.)	1.5	4.4	0.9	2.6	-0.2	-0.5	0.6	1.7	0.5	1.3
TOTAL	0.5	10.3	17.6	69.8	121.7	339.4	8.3	41.0	4.2	15.3

Source: The Trade Partnership, Washington, DC

Table II.9
Estimated Changes in Gross State Product (GSP) by State
(Millions of Dollars)

Sector	Missouri (MO)		Montana (MT)		Nebraska (NE)		Nevada (NV)		New Hampshire (NH)	
	FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation	
	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full
Mining	1.5	2.8	2.9	5.3	0.3	0.6	5.8	10.5	0.1	0.2
Processed foods	-13.0	-33.3	-0.3	-0.7	-4.1	-10.6	-0.6	-1.6	-0.9	-2.2
Textiles	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.6	1.3
Wearing apparel	0.5	-0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Leather products	0.7	1.8	0.0	0.0	0.2	0.6	0.1	0.1	2.6	6.1
Chemicals, refinery products, rubber, plastics	-1.2	0.8	-0.1	0.0	-0.1	0.1	0.0	0.0	-0.1	0.1
Primary metals	-0.3	-1.9	0.0	-0.2	-0.1	-0.4	0.0	-0.3	-0.1	-0.9
Motor vehicles and parts	15.9	40.5	0.0	0.1	0.9	2.4	0.1	0.2	1.1	2.8
Electronic equipment	-1.4	-1.6	0.0	0.0	-0.6	-0.7	-0.1	-0.1	-1.4	-1.5
Other machinery	6.3	19.7	0.1	0.3	1.6	5.2	0.4	1.2	3.3	10.4
Other manufactured goods	19.7	59.5	0.9	2.6	4.1	12.5	1.6	4.7	5.3	16.1
Agriculture	-9.7	-22.1	-3.3	-7.6	-14.5	-32.9	-0.6	-1.4	-0.3	-0.8
Wholesale and retail trade services	1.6	4.2	0.2	0.5	0.5	1.3	0.5	1.4	0.4	1.0
Transportation	-0.4	-0.9	0.0	-0.1	-0.1	-0.2	-0.1	-0.3	0.0	-0.1
Communications	-1.5	-3.2	-0.1	-0.2	-0.3	-0.7	-0.3	-0.6	-0.2	-0.3
Construction	0.4	1.5	0.1	0.2	0.1	0.4	0.3	1.3	0.1	0.3
Finance, insurance, and real estate services	-1.2	-3.0	-0.1	-0.3	-0.4	-1.0	-0.6	-1.4	-0.4	-1.1
Other commercial services	-3.1	-7.4	-0.3	-0.8	-1.0	-2.5	-2.3	-5.5	-0.7	-1.8
Other services (public, health, etc.)	0.5	1.4	0.3	0.8	0.4	1.1	0.5	1.4	0.0	-0.1
TOTAL	15.3	58.7	0.2	0.1	-12.9	-24.7	4.5	9.6	9.3	29.5

Sector	New Jersey (NJ)		New Mexico (NM)		New York (NY)		North Carolina (NC)		North Dakota (ND)	
	FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation	
	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full
Mining	0.9	1.6	15.9	28.7	2.1	3.8	1.9	3.5	2.5	4.4
Processed foods	-7.8	-20.1	-0.7	-1.8	-17.1	-44.0	-23.4	-60.1	-0.9	-2.3
Textiles	1.2	2.7	0.2	0.4	2.1	4.7	17.6	39.7	0.0	0.0
Wearing apparel	1.0	-0.3	0.1	0.0	4.1	-1.2	1.7	-0.5	0.0	0.0
Leather products	0.9	2.2	0.0	0.1	1.9	4.5	0.5	1.3	0.0	0.0
Chemicals, refinery products, rubber, plastics	-3.3	2.3	0.0	0.0	-1.6	1.1	-2.2	1.5	0.0	0.0
Primary metals	-0.3	-2.2	0.0	-0.3	-0.4	-3.0	-0.4	-2.6	0.0	0.0
Motor vehicles and parts	0.8	2.2	0.5	1.2	9.5	24.1	6.8	17.3	0.3	0.9
Electronic equipment	-1.5	-1.6	-4.8	-5.3	-4.8	-5.2	-3.8	-4.2	0.0	0.0
Other machinery	4.6	14.5	0.6	1.8	19.3	60.5	8.0	25.0	0.6	1.9
Other manufactured goods	24.0	72.4	5.6	16.9	43.6	131.5	34.9	105.5	0.8	2.5
Agriculture	-2.0	-4.6	-3.4	-7.8	-5.2	-11.9	-16.9	-38.3	-3.7	-8.4
Wholesale and retail trade services	3.0	8.1	0.4	1.0	5.2	13.8	2.1	5.5	0.2	0.5
Transportation	-1.1	-2.3	0.0	-0.1	-1.7	-3.5	-0.5	-1.0	0.0	-0.1
Communications	-3.3	-6.8	-0.2	-0.4	-6.2	-12.9	-1.2	-2.5	-0.1	-0.2
Construction	0.6	2.4	0.1	0.4	1.0	4.0	0.6	2.3	0.0	0.2
Finance, insurance, and real estate services	-3.7	-9.2	-0.3	-0.8	-11.5	-28.3	-1.8	-4.5	-0.1	-0.3
Other commercial services	-8.2	-19.5	-0.8	-2.0	-15.6	-37.3	-3.8	-9.0	-0.2	-0.5
Other services (public, health, etc.)	1.1	3.3	0.2	0.5	4.1	11.7	0.1	0.3	0.2	0.6
TOTAL	7.0	44.9	13.1	32.5	28.6	112.4	20.4	79.2	-0.4	-0.8

Source: The Trade Partnership, Washington, DC

Table II.9
Estimated Changes in Gross State Product (GSP) by State
(Millions of Dollars)

Sector	Ohio (OH)		Oklahoma (OK)		Oregon (OR)		Pennsylvania (PA)		Rhode Island (RI)	
	FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation	
	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full
Mining	5.6	10.2	19.9	35.9	0.5	0.9	8.0	14.3	0.1	0.1
Processed foods	-16.6	-42.7	-2.3	-5.9	-3.4	-8.7	-14.8	-38.0	-0.4	-1.1
Textiles	0.6	1.3	0.0	0.1	0.2	0.4	2.3	5.2	0.8	1.8
Wearing apparel	0.6	-0.2	0.2	0.0	0.1	0.0	1.6	-0.5	0.0	0.0
Leather products	0.8	1.9	0.1	0.3	0.1	0.2	1.0	2.3	0.3	0.7
Chemicals, refinery products, rubber, plastics	-2.6	1.8	-0.6	0.4	-0.1	0.1	-2.9	2.0	-0.1	0.1
Primary metals	-3.0	-20.3	-0.1	-0.7	-0.3	-2.1	-1.7	-11.8	-0.1	-0.5
Motor vehicles and parts	45.2	114.8	4.0	10.2	2.3	5.8	4.8	12.2	0.2	0.4
Electronic equipment	-4.2	-4.7	-1.0	-1.1	-7.6	-8.4	-4.3	-4.8	-0.3	-0.3
Other machinery	16.5	51.9	3.3	10.2	3.3	10.5	14.8	46.4	0.7	2.1
Other manufactured goods	51.8	156.4	8.2	24.8	14.3	43.2	42.6	128.7	2.6	7.9
Agriculture	-11.7	-26.5	-7.4	-16.8	-7.8	-17.8	-7.7	-17.5	-0.1	-0.3
Wholesale and retail trade services	3.3	8.7	0.8	2.0	1.0	2.6	3.2	8.4	0.2	0.6
Transportation	-0.7	-1.4	-0.2	-0.4	-0.2	-0.5	-0.7	-1.5	0.0	-0.1
Communications	-1.7	-3.6	-0.6	-1.3	-0.4	-0.9	-2.2	-4.6	-0.2	-0.4
Construction	0.7	2.9	0.1	0.6	0.3	1.2	0.7	3.0	0.1	0.3
Finance, insurance, and real estate services	-2.7	-6.6	-0.5	-1.3	-0.8	-1.9	-3.5	-8.6	-0.4	-1.0
Other commercial services	-5.7	-13.6	-1.4	-3.3	-1.9	-4.5	-6.7	-16.1	-0.5	-1.3
Other services (public, health, etc.)	0.3	0.8	0.6	1.6	0.1	0.3	1.7	4.8	0.2	0.7
TOTAL	76.4	231.1	23.1	55.5	-0.5	20.2	36.0	124.1	2.9	9.6

Sector	South Carolina (SC)		South Dakota (SD)		Tennessee (TN)		Texas (TX)		Utah (UT)	
	FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation	
	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full
Mining	0.7	1.2	0.6	1.0	1.9	3.4	177.6	319.9	4.7	8.4
Processed foods	-2.0	-5.2	-1.1	-2.7	-8.0	-20.4	-19.0	-48.8	-1.7	-4.4
Textiles	8.4	18.9	0.0	0.0	2.0	4.4	0.4	0.9	0.0	0.1
Wearing apparel	0.9	-0.3	0.1	0.0	1.3	-0.4	2.6	-0.8	0.1	0.0
Leather products	0.0	0.0	0.0	0.0	0.5	1.3	2.1	5.0	0.0	0.1
Chemicals, refinery products, rubber, plastics	-1.1	0.8	0.0	0.0	-1.1	0.7	-4.1	2.9	-0.2	0.1
Primary metals	-0.2	-1.3	0.0	-0.1	-0.5	-3.5	-0.7	-4.6	-0.3	-2.0
Motor vehicles and parts	5.1	13.0	0.5	1.2	16.1	40.8	3.6	9.3	1.9	4.8
Electronic equipment	-0.9	-1.0	-0.1	-0.1	-1.5	-1.7	-10.0	-11.0	-0.3	-0.3
Other machinery	3.4	10.5	1.4	4.3	4.3	13.4	24.5	76.9	2.2	7.0
Other manufactured goods	14.3	43.0	1.6	4.8	19.9	60.1	55.1	166.2	4.7	14.3
Agriculture	-3.3	-7.6	-7.1	-16.1	-4.7	-10.7	-25.2	-57.3	-2.0	-4.4
Wholesale and retail trade services	1.0	2.6	0.2	0.5	1.7	4.5	6.1	16.1	0.6	1.5
Transportation	-0.2	-0.4	0.0	0.0	-0.3	-0.6	-3.4	-7.1	-0.1	-0.2
Communications	-0.5	-1.0	-0.1	-0.2	-0.8	-1.6	-5.8	-12.1	-0.3	-0.6
Construction	0.3	1.2	0.0	0.2	0.3	1.4	1.4	5.6	0.2	0.7
Finance, insurance, and real estate services	-0.7	-1.7	-0.2	-0.5	-1.2	-2.8	-4.8	-11.8	-0.5	-1.2
Other commercial services	-1.6	-3.8	-0.3	-0.6	-3.0	-7.3	-13.9	-33.1	-1.2	-2.9
Other services (public, health, etc.)	0.3	0.7	0.2	0.5	0.6	1.7	2.5	7.2	0.4	1.2
TOTAL	23.6	69.6	-4.4	-8.0	27.5	82.8	189.1	423.4	8.3	22.1

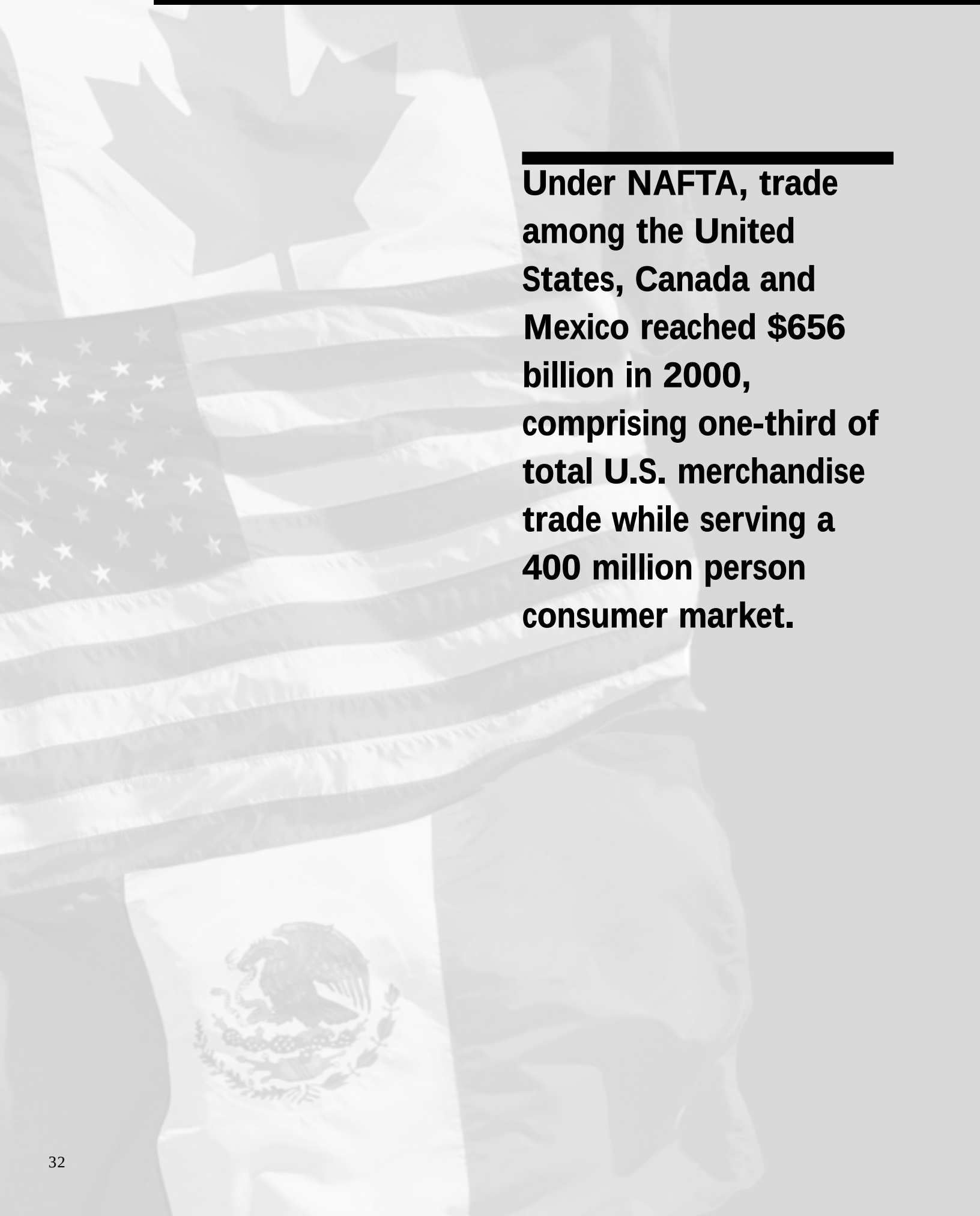
Source: The Trade Partnership, Washington, DC

Table II.9
Estimated Changes in Gross State Product (GSP) by State
(Millions of Dollars)

	Vermont (VT)		Virginia (VA)		Washington (WA)		West Virginia (WV)		Wisconsin (WI)	
	FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation		FTAA Implementation	
Sector	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full
Mining	0.2	0.3	4.0	7.3	1.3	2.4	11.3	20.4	1.0	1.8
Processed foods	-0.5	-1.4	-18.8	-48.2	-6.5	-16.6	-0.4	-1.1	-11.1	-28.6
Textiles	0.1	0.1	3.3	7.5	0.2	0.4	0.1	0.3	0.4	0.9
Wearing apparel	0.0	0.0	0.5	-0.2	0.3	-0.1	0.0	0.0	0.3	-0.1
Leather products	0.0	0.0	0.1	0.3	0.1	0.2	0.1	0.2	1.3	3.0
Chemicals, refinery products, rubber, plastics	0.0	0.0	-0.9	0.7	-0.3	0.2	-0.5	0.4	-0.7	0.5
Primary metals	0.0	-0.2	-0.2	-1.5	-0.3	-2.0	-0.3	-2.3	-0.5	-3.6
Motor vehicles and parts	0.1	0.3	6.6	16.8	2.6	6.5	0.1	0.2	8.8	22.3
Electronic equipment	-0.6	-0.7	-1.7	-1.9	-0.7	-0.8	-0.1	-0.1	-2.8	-3.1
Other machinery	0.4	1.3	4.3	13.6	10.5	33.0	0.6	2.0	11.0	34.5
Other manufactured goods	1.7	5.3	18.5	55.9	13.5	40.9	4.0	12.0	24.4	73.8
Agriculture	-1.0	-2.2	-4.5	-10.3	-11.3	-25.8	-0.6	-1.4	-10.0	-22.7
Wholesale and retail trade services	0.1	0.4	1.8	4.8	1.8	4.8	0.3	0.9	1.4	3.7
Transportation	0.0	-0.1	-0.5	-1.0	-0.6	-1.3	0.0	-0.1	-0.3	-0.5
Communications	-0.1	-0.2	-2.1	-4.3	-1.3	-2.8	-0.2	-0.5	-0.7	-1.4
Construction	0.0	0.1	0.5	2.1	0.4	1.9	0.1	0.4	0.3	1.4
Finance, insurance, and real estate services	-0.1	-0.4	-2.0	-4.9	-1.7	-4.2	-0.2	-0.6	-1.3	-3.1
Other commercial services	-0.3	-0.7	-5.7	-13.6	-5.2	-12.3	-0.5	-1.2	-2.3	-5.6
Other services (public, health, etc.)	0.1	0.3	1.4	4.2	1.0	2.8	0.4	1.1	0.3	1.0
TOTAL	0.1	2.5	4.9	27.4	3.7	27.1	14.1	30.6	19.6	74.3

	Wyoming (WY)	
	FTAA Implementation	
Sector	Partial	Full
Mining	15.9	28.7
Processed foods	-0.2	-0.5
Textiles	0.0	0.0
Wearing apparel	0.0	0.0
Leather products	0.0	0.0
Chemicals, refinery products, rubber, plastics	-0.1	0.1
Primary metals	0.0	-0.1
Motor vehicles and parts	0.0	0.0
Electronic equipment	0.0	0.0
Other machinery	0.1	0.2
Other manufactured goods	0.6	1.9
Agriculture	-1.8	-4.1
Wholesale and retail trade services	0.1	0.3
Transportation	0.0	0.0
Communications	-0.1	-0.1
Construction	0.0	0.2
Finance, insurance, and real estate services	-0.1	-0.3
Other commercial services	-0.2	-0.4
Other services (public, health, etc.)	0.2	0.6
TOTAL	14.5	26.5

Source: The Trade Partnership, Washington, DC



Under NAFTA, trade among the United States, Canada and Mexico reached $656 billion in 2000, comprising one-third of total U.S. merchandise trade while serving a 400 million person consumer market.

CHAPTER **III**

NAFTA at Seven: An Even Bigger Success

Implemented in 1994, the North American Free Trade Agreement (NAFTA) has produced tremendous growth in trade and related benefits for the United States and its two partners, Canada and Mexico. It clearly demonstrates the mutual benefits of trade and investment liberalization, particularly as policy makers consider such liberalization within the context of the Free Trade Area of the Americas (FTAA).

Under NAFTA, trade among the United States, Canada and Mexico reached $656 billion in 2000, comprising one-third of total U.S. merchandise trade (exports plus imports) while serving a 400 million person consumer market. It also bolstered trilateral services trade and investment. As a result of the agreement, virtually all trade between the United States and Canada is now duty-free, and three-quarters of U.S.-Mexico trade is duty-free. When NAFTA is fully implemented in 2008, all tariffs imposed on trade between the three countries will be eliminated.

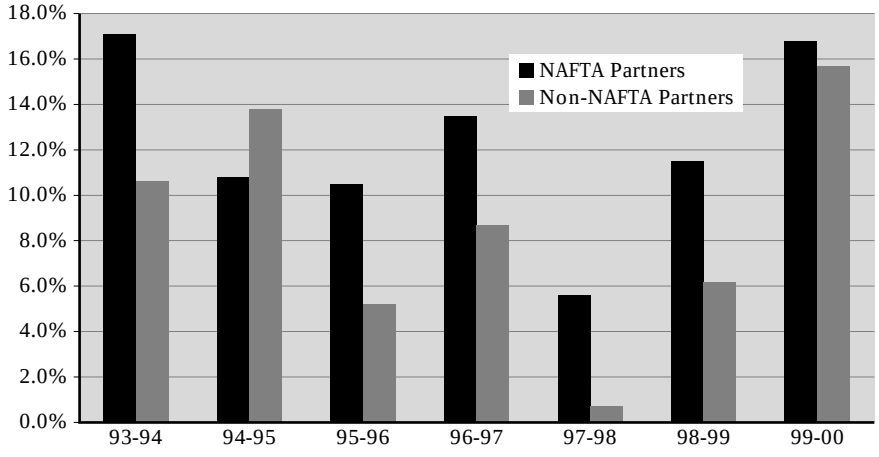
NAFTA's Tariff and Non-tariff Barriers Declined Dramatically, and Merchandise Trade Between the United States and Canada and Mexico Has More than Doubled

Overall, total trade with our NAFTA partners reached $656 billion in 2000. It totaled $408 billion with Canada, and $248 billion with Mexico. Thanks to NAFTA, since 1993 total U.S. merchandise trade (agricultural, mining, manufacturing and other product trade) is up 93 percent with Canada and 204 percent with Mexico (Table III.1). During this period, barriers to merchandise trade between the United States and Canada have been eliminated, and between the United States and Mexico reduced substantially.

NAFTA trade consistently grows faster than U.S. trade with the rest of the world (Figure III.1). Between 1993 and 2000, total U.S. merchandise trade with its NAFTA partners grew by 124 percent. In contrast, merchandise trade with the rest of the world grew by 78 percent over this period.

Figure III.1

Comparison of NAFTA and non-NAFTA Trade Growth, 1993–2000



Source: U.S. Department of Commerce, Bureau of the Census. Exports are FAS value, Census basis; imports are general, customs value.

Table III.1

U.S. Merchandise Trade with Mexico and Canada, 1993–2000

(Millions and Percent)

	1993	2000	1993-00 Change
Total Trade (Exports Plus Imports)	**$293,158**	**$655,627**	**+123.6%**
Canada	211,660	407,995	+92.8
Mexico	81,498	247,632	+203.9
Exports to NAFTA Partners	**142,025**	**290,507**	**+104.5**
Canada	100,444	178,786	+78.0
Mexico	41,581	111,721	+168.7
Imports from NAFTA Partners	**151,133**	**365,120**	**+141.6**
Canada	111,216	229,209	+106.1
Mexico	39,917	135,911	+240.5

Source: U.S. Department of Commerce, Bureau of the Census. Exports are FAS value, Census basis; imports are general, customs value.

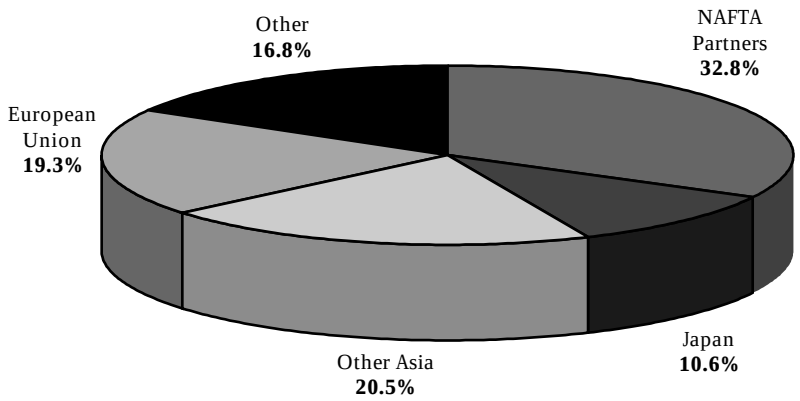
Trade with our NAFTA partners accounts for one-third of all U.S. merchandise trade and exceeds trade with Japan and the European Union combined. Canada remains the largest export market for U.S. merchandise. Since NAFTA went into effect, Mexico has replaced Japan as the second-largest U.S. export market. In 2000, Mexico — still considered a developing country — accounted for 29 percent of total U.S. export growth, more than the European Union as a whole, or China, Japan, Hong Kong, Korea, Singapore and Taiwan combined.

Figure III.2

U.S. Merchandise Trade* by Market, 2000

**Exports plus imports.*

Source: U.S. Department of Commerce, Bureau of the Census. Exports are FAS value, Census basis; imports are customs value, general basis.



U.S. Exports under NAFTA Are Concentrated in High-Value Manufactured Goods

In 2000, more than 60 percent of U.S. manufactured exports to its NAFTA partners was concentrated in such sectors as transportation equipment, machinery and electronic equipment, chemicals and related products (including pharmaceuticals), fabricated metal products, primary metal products (including steel), and rubber and plastic products (e.g., auto parts) (Table III.2). These exports are supporting high-wage jobs in the United States.

Table III.2

U.S. Exports by Sector to NAFTA Partners, 1993–2000

(Millions and Percent)

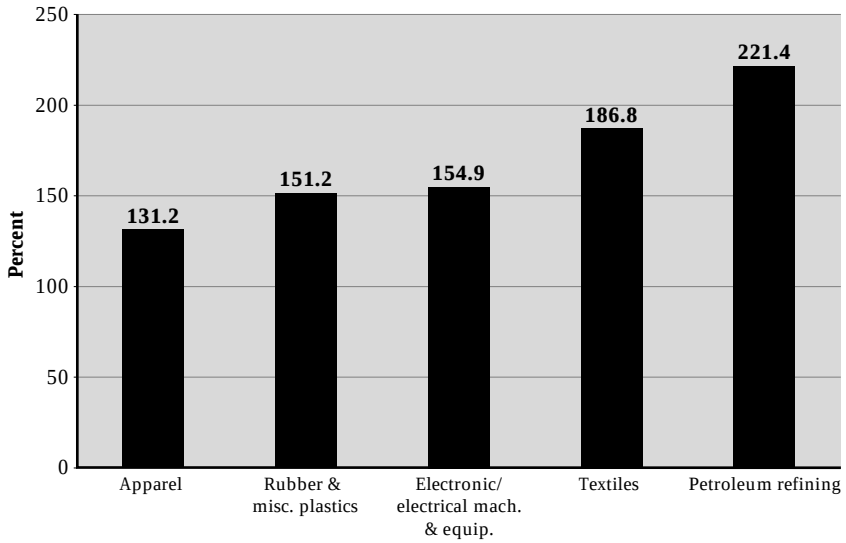
	1993	2000	Change, 1993-00
Total	**$142,025**	**$290,507**	**123.6%**
Agricultural, livestock, forestry, fishery products	*$4,626*	*$7,149*	*+54.5%*
Mining, crude petroleum & natural gas	*1,354*	*2,719*	*+100.8*
Manufactured goods	*129,056*	*267,067*	*+101.5*
Transportation equipment	29,471	54,054	+83.4
Electrical and electronic machinery and equipment	20,560	52,414	+154.9
Non-electrical machinery	21,248	42,795	+101.4
Chemicals & related products	11,013	22,945	+108.4
Fabricated metal products	6,887	14,252	+106.9
Primary metal products	5,724	12,231	+113.7
Rubber & misc. plastic products	4,505	11,316	+151.2
Scientific & professional instruments	5,825	10,726	+84.1
Food & related products	5,458	8,726	+59.9
Paper & related products	3,312	7,094	+114.2
Textile mill products	1,896	5,439	+186.8
Petroleum refining & related products	1,547	4,973	+221.4
Apparel & related products	1,843	4,263	+131.2
Furniture and fixtures	1,962	3,361	+71.3
Miscellaneous manufactures	1,868	3,258	+74.5
Stone, clay & glass	1,790	3,240	+81.0
Printing, publishing	2,052	2,695	+31.3
Lumber & wood, exc. furniture	1,648	2,434	+47.7
Leather & leather products	414	817	+97.4
Tobacco manufactures	33	35	+5.8
Other sectors	*6,989*	*13,572*	*+94.2*

Source: U.S. Department of Commerce, Bureau of the Census, from ITC database (FAS value; excludes goods imported from Canada and returned to Canada without having been advanced in value or improved in condition or combined with other articles).

Figure III.3

U.S. Sectors Experiencing Strong Export Growth under NAFTA, 1993–2000

Source: Table III.2.



Most sectors of the U.S. economy have seen quite strong growth in exports under NAFTA. Most impressive have been petroleum refining, textiles, electronic and electrical machinery and equipment, rubber and plastic products, and apparel (Figure III.3). Notes Chuck Hayes, chairman of Guilford Mills of Greensboro, North Carolina and president of the American Textile Manufacturers Institute, "NAFTA has been the salvation of the U.S., Mexican and Canadian textile industries."[5]

U.S. products now enjoy dominant shares of both the Canadian and Mexican import markets. In 2000, U.S. goods accounted for 74 percent of all Canadian imports and 73 percent of all Mexican imports.[6]

While it is true that the United States has a trade deficit with Mexico, the bulk of that deficit is due to transportation goods trade. Pulling transportation trade out of the equation, the United States would have recorded a $3 billion manufactured goods trade surplus with Mexico in 2000. It is noteworthy that a huge contributor to the overall U.S. trade deficit with Mexico is oil imports; pulling them out of the balance cuts the overall trade deficit with Mexico in half.

U.S. Agricultural Exports Have Also Benefited from NAFTA in 2000

U.S. agricultural exports to Mexico and Canada have grown significantly under NAFTA. Canada is the second largest market for U.S. agricultural exports, purchasing $8 billion in 2000.[7] Key export products included fresh vegetables, fresh fruits, snack foods, poultry meat, live animals, pet foods, dairy foods, vegetable oils, planting seeds, breakfast cereals, tree nuts, nursery products, and red meats.

Since 1993, U.S. agricultural exports to Mexico have nearly doubled. According to the U.S. Department of Agriculture, Mexico was the third-largest U.S. market for agricultural products in 2000, measuring $7 billion. Major products included red meats, processed fruits and vegetables, poultry meat, snack foods, fresh fruits and vegetables, juices, tree nuts, pet foods, feeds and fodder, and rice.

NAFTA Has Helped Meet the Demands of a Strong U.S. Economy

Imports under NAFTA contribute importantly to the U.S. economy. In 2000, Canada and Mexico were the first and third-largest sources of U.S. imports, with $229 billion and $136 billion of imports, respectively. These imports have benefited U.S. manufacturers and American consumers. The sectors accounting for the largest increases in U.S. imports from Mexico include textile mill products (used to produce apparel and

other made-ups in the United States, up 643 percent between 1993 and 2000), non-electrical machinery (up 561 percent) and transportation equipment (up 335 percent). The sectors accounting for the largest increases in U.S. imports from Canada were electrical machinery and equipment (up 242 percent between 1993 and 2000), furniture and fixtures (up 199 percent), and fabricated metal products (up 177 percent).

NAFTA has delivered significant duty savings to American consumers, be they families or American manufacturers, since it went into effect in 1994. Virtually all imports from Canada are now duty-free. In 1993, importers paid, and added to their costs, $404 million in duties on imports from Canada. Similarly, 97.5 percent of U.S. imports from Mexico are now duty-free. In 1993, importers paid $800 million in duties on imports from Mexico.

Thanks to Services Trade Liberalization, NAFTA Has Increased Services Trade Between the NAFTA Partners

Since NAFTA went into effect, total U.S. services trade—exports and imports combined—is up 39 percent with Canada and up 25 percent with Mexico (Table III.3). Overall, total services trade has increased 33 percent since NAFTA went into effect, reaching $59 billion in 1999 (the most recent year for which data are available). The United States has a net trade surplus in this trade of $9 billion.

Most services trade with both Canada and Mexico was for travel (both passenger and cargo delivery) and private services (education; financial services; insurance; telecommunications; and business, professional and technical services). In 1999, travel represented 39 percent of total services trade with Canada and Mexico, and other private services (e.g., business, professional and technical services; telecommunication services; education; and financial services), 36 percent.

Table III.3

U.S. Services Trade with Canada and Mexico, 1993–1999

(Millions and Percent)

	1993	1999	Change, 1993-99
Total Trade (Exports Plus Imports)	**$44,044**	**$58,683**	**+33.2%**
Canada	26,194	36,356	+38.8
Mexico	17,850	22,327	+25.1
U.S. Exports to NAFTA Partners	**27,411**	**33,678**	**+22.9**
Canada	16,971	21,134	+24.5
Mexico	10,440	12,544	+20.2
U.S. Imports from NAFTA Partners	**16,633**	**25,005**	**+50.3**
Canada	9,223	15,222	+65.0
Mexico	7,410	9,783	+32.0

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Table III.4

Business, Professional and Technical Services Trade with NAFTA Partners, 1999

(Millions)

	Canada		Mexico	
	Imports	**Exports**	**Imports**	**Exports**
Total	**$1,204**	**$2,223**	**$151**	**$947**
Advertising	34	90	19	7
Computer and data processing services	67	244	1	51
Data base and other information services	21	181	*	70
Research, development & testing	86	116	3	13
Management, consulting & public relations	173	170	28	40
Legal services	44	184	19	39
Construction, engineering, architectural and mining services	86	144	4	116
Industrial engineering	29	194	2	78
Installation, maintenance and repair of equipment	102	331	7	246
Other	561	569	67	286

"Exports" are U.S. receipts for services provided by U.S. companies or individuals to Canadian or Mexican companies or individuals; "imports" are U.S. payments for services provided by Canadian or Mexican firms or individuals to U.S. firms or individuals.

*Less than $500,000.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

As the business relationships with Canada and Mexico have broadened and deepened since NAFTA went into effect, new categories of services trade have become more important. In 1999, the United States exported more than $3 billion of business, professional and technical services to Canada and Mexico. This included $577 million of equipment installation, maintenance and repair services; $295 million in computer and data processing services; $272 million in construction, engineering, architectural and mining services; and $260 million in legal services. Needless to say, these exports supported high-paying, highly-skilled jobs in the United States.

Thanks to Investment Liberalization, Investment Flows Have Increased, Particularly to Sectors that Were Once Closed to U.S. Investors

Trilateral investment has increased under NAFTA (Table III.5). U.S. investment in Canada has grown, despite that country's higher labor and social costs, demonstrating that investment flows are about much more than just low wages. And although U.S. investment in Mexico has increased under NAFTA, in 2000 it was still less than half the value of U.S. direct investment in Canada when NAFTA first went into effect. So despite lower labor costs, U.S. investment in Mexico is still out-paced by U.S. investment in Canada.

Table III.5

Direct Investment Position, Historical Cost Basis, 1994–2000

(Millions and Percent)

	1994	2000	Change, 1994-00
U.S. Investment in Canada	$74,221	$126,421	+70.3
U.S. Investment in Mexico	16,968	35,414	+108.7
Canadian Investment in the U.S.	41,219	100,822	+144.6
Mexican Investment in the U.S.	2,069	2,471	+19.4

Source: Department of Commerce, Bureau of Economic Analysis.

Although investment in manufacturing sectors is important, other key sectors drawing U.S. investment to Canada include finance, insurance and real estate — 25 percent of total U.S. direct investment in Canada; and petroleum — 14 percent. Other important sectors in Mexico include finance, insurance and real estate — 22 percent.

While the direct investment position of the United States in Canada and Mexico has increased since NAFTA went into effect, the position of Canada, in particular in the United States has shown remarkable improvement. Between 1994 and 2000, Canadian investment in the United States increased 145 percent. Mexican investment in the United States has been generally stable over the period. This investment of course supports U.S. jobs. Indeed, perhaps as many as 1 million workers owe their employment to Mexican and Canadian investment in the United States.

Conclusion

The United States has an important opportunity through the FTAA process to build economic growth and stability and, with it, political stability in the Western Hemisphere. Many countries in the Western Hemisphere face difficult problems: drugs, economic stagnation or even recession, poverty, and democratic instability. Such problems often result in political pressure to adopt restrictive trade and economic policies that ultimately have negative impacts. Expanded trade with the United States will help to alleviate some of those problems, even eliminate many. One lesson of NAFTA is that a trade agreement that mandates trade barrier liberalization can help to forestall pressures toward protectionism. NAFTA has also been a contributor to the political transformation of Mexico.

An FTAA would also be good for the U.S. economy. In a domestic economic slowdown, exports become even more important to U.S. farmers and manufacturers. Exports mean jobs, and imports mean lower costs for producers and consumers alike. The lesson of NAFTA is that freer trade works for both the United States and its trading partnership — developing and developed alike.

The United States will clearly benefit from having economically strong neighbors in the Western Hemisphere. As others have correctly noted, healthy, growing, stable democratic neighbors do not export illegal immigrants, environmental damage, crime, narcotics and violence. If our neighbors are made stronger by trade liberalization and integration, the United States will be freer to pursue larger objectives, both in the Western Hemisphere and beyond.

Technical Appendix: An Overview of the Computational Model

Introduction

This Appendix provides an overview of the basic structure of the global computable general equilibrium (CGE) model employed for assessment of World Trade Organization (WTO) based multilateral trade liberalization. The model is a standard multi-region CGE model.[8] The model is solved as an explicit non-linear system of equations, through techniques described by Harrison and Pearson (1994).[9] Social accounting data are based on Version 5 of the Global Trade Analysis Project (GTAP) data set (GTAP 2001), with an update to reflect post-Uruguay Round protection as discussed later in this Appendix. The full set of model files are available from The Trade Partnership upon request.

The national accounts data have been organized to 23 sectors and 25 regions. (Note that we have included some detail on the value added chain linking fibers into textiles and clothing production, to better capture the initial impact of implementing the Agreement on Textiles and Clothing (ATC) on the base scenario.) The sectors and regions for this 23x25 aggregation of the data are detailed in Table TA.1.

State level results are generally reported at a less disaggregated level, but are based on a mapping of the 23 sector nomenclature to less aggregate nomenclatures for state employment and Gross State Product estimates. We have estimated the impact of the FTAA on the states and the individual sectors in the states by turning to procedures already used in a similar exercise for the impact on the individual European Union members of EU enlargement to the Eastern European countries (see Baldwin, Francois and Portes, 1997). By connecting up the sectoral structure of the individual states to the structure of the model it is relatively easy to calculate how expected changes in the prices for imports and exports work their way into the various states and sectors.

The data come from a number of sources. Data on production and trade are based on national accounting data linked through trade flows and drawn directly from the GTAP version 5 data set. (GTAP 2001). (See Reinert and Roland-Holst 1997 for a discussion of the organization of such data for CGE models). The GTAP version 5 data set is benchmarked to 1997, and includes detailed national input-output, trade, and final demand structures. Significant modifications have been made to the basic GTAP database. The basic social accounting and trade data are supplemented with trade policy data, including additional data on tariffs and non-tariff barriers. We updated the data set to better reflect actual import protection for goods and services. (The basic GTAP database includes no information at all on trade barriers for services). We also moved the database forward to reflect the most recent set of complete national accounts, re-benchmarking the analysis to economic data for the year 2000.

Basic data on current tariff rates come from the United Nations Conference on Trade and Development (UNCTAD) and World Trade Organization (WTO) data on applied and bound tariff rates. These are integrated into the core GTAP database and supplemented with data from the Office of the U.S. Trade

Table TA.1

Model Parameters

Description	Elasticity of Substitution in Value Added	Armington Elasticity
Wool	0.24	4.4
Natural fibers (cotton etc.)	0.24	4.4
Primary food production	0.23	4.61
Other primary production	0.20	5.6
Processed food, tobacco, and beverages	1.12	4.72
Textiles	1.26	4.4
Wearing apparel	1.26	8.8
Leather products	1.26	8.8
Chemicals, refinery products, rubber, plastics	1.26	3.8
Steel refinery products	1.26	5.6
Non-ferrous metal products	1.26	5.6
Motor vehicles and parts	1.26	10.4
Electronic machinery and equipment	1.26	5.6
Other machinery and equipment	1.26	6.25
Other manufactured goods	1.26	5.16
Wholesale and retail trade services	1.68	3.8
Transportation services (land, water, air)	1.68	3.8
Communications services	1.26	3.8
Construction	1.40	3.8
Finance, insurance, and real estate services	1.26	3.8
Other commercial services	1.26	3.8
Other services (public, health, etc.)	1.26	4.06

Representative and the U.S. International Trade Commission on regional preference schemes in the Western Hemisphere. For agriculture, protection is based on Organization for Economic Cooperation and Development (OECD) and U.S. Department of Agriculture estimates of agricultural protection, as integrated into the GTAP core database. Tariff and non-tariff barrier estimates are further adjusted to reflect remaining Uruguay Round commitments, including the phase-out of remaining textile and clothing quotas under the ATC. Here, calculations were drawn from work by Francois and Spinanger (2001). Data on post-Uruguay Round tariffs are taken from recent estimates reported by Francois and Strutt (1999), which were derived primarily from the WTO's integrated database with supplemental information from the World Bank's recent assessment of detailed pre- and post-Uruguay Round tariff schedules. All of this tariff information has been concorded to the model sectors. Services trade barriers are based on the estimates described later in the Technical Appendix.

The data set we work with for actual experiments is therefore a representation of a notional world economy (with values in 2000 dollars) wherein we have full Uruguay Round implementation.

Table TA.2

Model Sectors and Regions

Model Regions

Abbreviations	*Description*
Australia	Australia
NewZealand	New Zealand
China	Mainland China
HongKong	Hong Kong
Japan	Japan
Korea	Korea
Taiwan	Chinese Taipei (Taiwan)
ASEAN5	ASEAN5 member states*
Vietnam	Vietnam
Bangladesh	Bangladesh
India	India
SouthAsia	South Asia
Canada	Canada
Mexico	Mexico
USA	United States of America
CBI	Caribbean Basin Initiative countries
ATP	Andean Trade Pact countries
Brazil	Brazil
MERCOSUR	MERCOSUR**
Chile	Chile
OtherLatAm	Other Latin America
EuropUnion	European Union
Turkey	Turkey
AfricaME	Africa and the Middle East
ROW	Rest of World

Model Sectors

Abbreviations	*Description*
Wool	Wool
NatFibers	Natural fibers (cotton etc.)
PrimFood	Primary food production
OthPrimary	Other primary production
ProcFood	Processed food, tobacco, and beverages
Textiles	Textiles
Clothing	Wearing apparel
Leather	Leather products
ChemRef	Chemicals, refinery products, rubber, plastics
Steel	Steel refinery products
Nfmetals	Non-ferrous metal products
MotorVehs	Motor vehicles and parts
Electronics	Electronic machinery and equipment
OthrMach	Other machinery and equipment
MnfcsNEC	Other manufactured goods
Trade	Wholesale and retail trade services
Transport	Transportation services (land, water, air)
Communic	Communications services
Construction	Construction
FIRE	Finance, insurance, and real estate services
CommServ	Other commercial services
OtherServ	Other services (public, health, etc.)

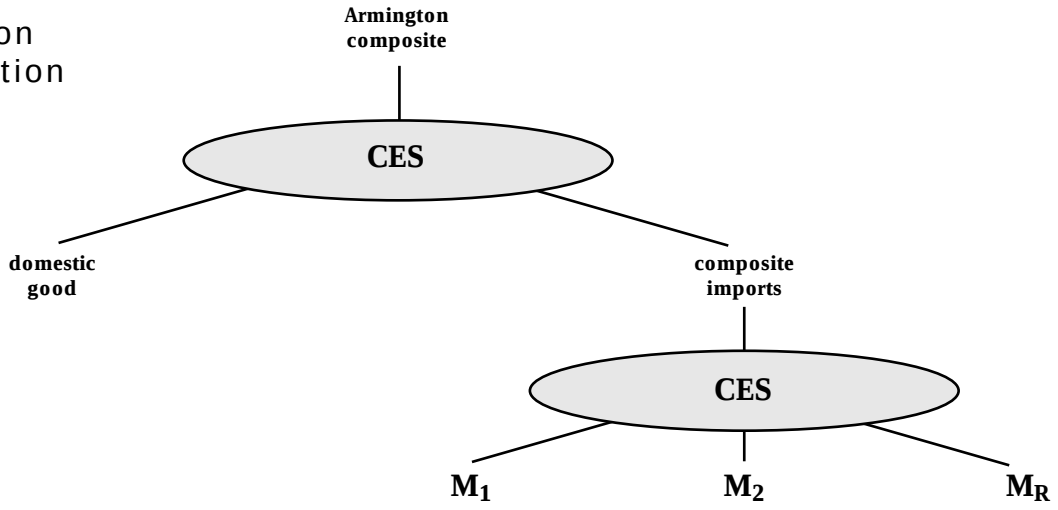
*ASEAN5 includes Philippines, Thailand, Indonesia, Singapore, and Malaysia

**MERCOSUR includes Argentina, Paraguay, and Uruguay. Brazil is represented separately.

General Structure

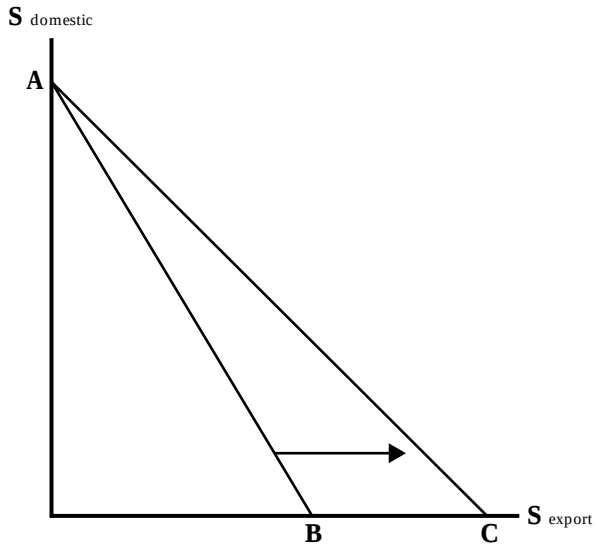
The general conceptual structure of a regional economy in the model is represented in Figure A.1. Within each region, firms produce output, employing land, labor, and capital, and combining these with intermediate inputs. Firm output is purchased by consumers, government, the investment sector, and by other firms. Firm output can also be sold for export. Land is only employed in the agricultural sectors, while capital and labor (both skilled and unskilled) are mobile between all production sectors. Capital is fully mobile within regions. However, capital movements between regions are not modeled, but rather are held fixed in all simulations. Labor mobility is discussed below.

Figure A.1
Armington Aggregation Nest



All demand sources combine imports with domestic goods to produce a composite good, as indicated in Figure A.2. In constant returns sectors, these are Armington composites. In increasing returns sectors, these are composites of firm-differentiated goods. Trade elasticities are also presented in Table TA.1.

Figure A.2
Trading costs in the service sector



Dynamics

An important feature of the model involves a dynamic link, whereby the static or direct income effects of trade liberalization induce shifts in the regional pattern of savings and investment. These effects have been explored extensively in the trade literature, including Baldwin and Francois (1999), Smith (1976, 1977), and Srinivasan and Bhagwati (1980). Several studies of the Uruguay Round have also incorporated variations on this mechanism. Such effects compound initial output welfare effects over the medium-run, and can magnify income gains or losses. How much these "accumulation effects" will supplement static effects depends on a number of factors, including the marginal product of capital and underlying savings behavior. In the present application, we work with a classical savings-investment mechanism (discussed in Francois et al 1997). This means we model medium- to long-run linkages between changes in income, sav-

ings, and investment. The results reported here therefore include changes in the capital stock, and the medium- to long-run implications of such changes.

Taxes and Policy Variables

Taxes are included in the theory of the model at several levels. Production taxes are placed on intermediate or primary inputs, or on output. Some trade taxes are modeled at the border. Additional internal taxes can be placed on domestic or imported intermediate inputs, and may be applied at differential rates that discriminate against imports. Where relevant, taxes are also placed on exports, and on primary factor income. Finally, where relevant (as indicated by social accounting data) taxes are placed on final consumption, and can be applied differentially to consumption of domestic and imported goods.

Trade policy instruments are represented as import or export taxes/subsidies. This includes applied most-favored nation (MFN) tariffs, antidumping duties, countervailing duties, price undertakings, export quotas, and other trade restrictions. The one exception is service-sector trading costs, which are discussed in the next section.

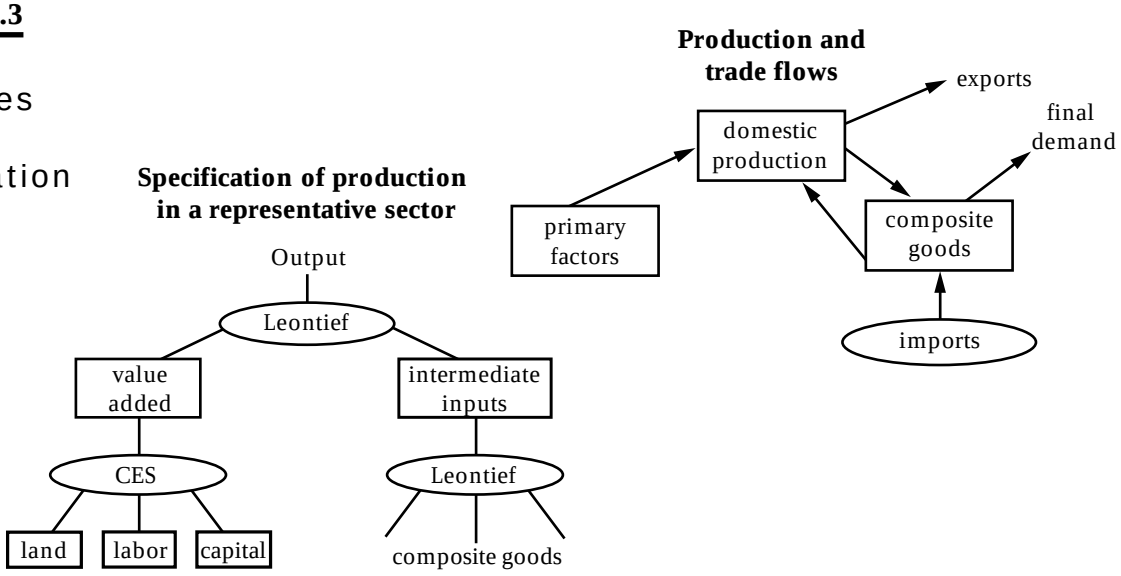
Basic data on current tariff rates come from the UNCTAD and WTO data on applied and bound tariff rates. These are integrated into the core GTAP database. These are supplemented with data from USTR and USITC on regional preference schemes in the Western Hemisphere. For agriculture, protection is based on OECD and USDA estimates of agricultural protection, as integrated into the GTAP core database. Tariff and non-tariff barrier estimates are further adjusted to reflect remaining Uruguay Round commitments, including the phase-out of remaining textile and clothing quotas under the ATC. Data on post-Uruguay Round tariffs are taken from recent estimates reported by Francois and Strutt (1999). These are taken primarily from the WTO's integrated database, with supplemental information from the World Bank's recent assessment of detailed pre- and post-Uruguay Round tariff schedules. All of this tariff information has been concorded to our model sectors. Services trade barriers are based on the estimates described below.

Trade and Transportation Costs

International trade is modeled as a process that explicitly involves trading costs, which include both trade and transportation services. These trading costs reflect the transaction costs involved in international trade, as well as the physical activity of transportation itself. Those trading costs related to international movement of goods and related logistic services are met by composite services purchased from a global trade services sector, where the composite "international trade services" activity is produced as a Cobb-Douglas composite of regional exports of trade and transport service exports. Trade-cost margins are based on reconciled f.o.b. and c.i.f. trade data, as reported in version 4 of the GTAP data set.

A second form of trade costs is known in the literature as frictional trading costs. These are implemented in the service sector. They represent real resource costs associated with producing a service for sale in an export market instead of the domestic market. Conceptually, we have implemented a linear transformation technology between domestic and export services. This technology is represented in Figure A.2. The straight line AB indicates, given the resources necessary to produce a unit of services for the domestic market, the feasible amount that can instead be produced for export using those same resources. If there are not frictional barriers to trade in services, this line has slope -1. This free-trade case is represented by the line AC. As we reduce trading costs, the linear transformation line converges on the free trade line, as indicated in the figure.

Figure A.3
Basic features of the simulation model



Production Structure

The basic structure of production is depicted in Figure A.3. Intermediate inputs are combined, and this composite intermediate is in turn combined in fixed proportions with value added. This yields sectoral output Z. The value-added substitution elasticities (between capital and labor) are presented in Table TA.1.

Composite Household and Final Demand Structure

Final demand is determined by an upper-tier Cobb-Douglas preference function, which allocates income in fixed shares to current consumption, investment, and government services. This yields a fixed savings rate. Government services are produced by a Leontief technology, with household/government transfers being endogenous. The lower-tier nest for current consumption is also specified as a Cobb-Douglas. The regional capital markets adjust so that changes in savings match changes in regional investment expenditures. (Note that the Cobb-Douglas demand function is a special case of the CDE demand function employed in the model code. It is implemented through GEMPACK parameter files.)

Labor Markets

Our default closure involves modeling labor markets as clearing with flexible wages. However, in implementation the mobility of labor between sectors is slightly "sluggish" in the sense that there is not a perfectly linear transform technology for movement of labor between sectors. This represents the assumption that for institutional reasons (and because some skills are sector specific), labor is not fully flexible in its application across sectors. We view this as a reasonable representation of labor markets. To the extent that wage rigidities are important, the direction of aggregate employment effects may be inferred from wage effects. (Hertel 1996 refers to this as "sluggish" factor movements). Theoretical discussion of factor mobility, along the lines developed in Hertel and employed here, can be found in Casas (1984). It should be noted that in practice the transformation elasticities are set very high (-25.0) but not infinitely so. This effectively allows for "essentially" full mobility. (It also speeds up finding numeric solutions without changing the substantive results.) Values for these parameters can be found in Table TA.1, which provides a summary of several relevant elasticities.

Services Barriers

The gravity equations are estimated using ordinary least squares with the following variables:

$$(1)\quad X_i = a_1 \cdot 1n(POP_i) + a_2 \cdot 1n(PCGDP)_i + a_3 \cdot 1n(PCGDP)^2_i + \varepsilon_i$$

where X_i represents imports from the world, *POP* represents population, and *PCGDP* per-capita income in the importing country.

In the regressions, we break out Hong Kong as a free trade "benchmark" in the regressions. Deviations from predicted imports, relative to this free trade benchmark, are taken as an indication of barriers to trade. These tariff equivalent rates are then backed out from a constant elasticity import demand function as follows:

$$(2)\quad \frac{T_1}{T_0} = \left[\frac{M_1}{M_0}\right]^{\frac{1}{e}}$$

Here, T_1 is the power of the tariff equivalent $(1+t_1)$ such that in free trade $T_0 = 1$, and $[M_1/M_0]$ is the ratio of actual to predicted imports (normalized relative to the free trade benchmark ratio for Hong Kong, as discussed above). This is a reduced form, where actual prices and constant terms drop out because we take ratios. The term e is the demand elasticity (taken to be —3.9 as suggested by the substitution elasticities in Table TA.1).

Relevant estimates of tariff equivalents for the model sectors and regions are reported in the main text.

The Policy Experiments

To estimate the likely impacts of an FTAA on the United States, two scenarios were examined: a partial implementation of the FTAA, and a full implementation (see Table TA.3). The partial implementation corresponds to the likely mid-point of FTAA implementation, with 50 percent reductions in tariff barriers, a partial lifting of non-tariff barriers (modeled as a 50 percent reduction in the import tax equivalent of non-tariff barriers), and partial liberalization of services trade (modeled as a 50 percent reduction in the trading costs associated with services barriers.)

To place these experiments into perspective, Tables TA.4 and TA.5 provide an overview of regional protection faced by U.S. exporters. This gives a sense of the potential market access improvement that can be expected from FTAA implementation. Table TA.4 compares U.S. merchandise exports to Latin America (including the tariff barriers those exports face) to U.S. merchandise exports to other regions (including of course NAFTA, but also the European Union, Japan and Korea, and Mainland China). The NAFTA partners of the United States account for the greatest share of U.S. exports in Table TA.4 (over 30 percent divided between Canada and Mexico). In terms of remaining trade, the most important partners are actually the OECD economies of Japan, Korea, and the European Union. Together, Japan and Korea account for 14 percent of U.S. merchandise exports, while the European Union accounts for 22 percent of U.S. merchandise exports. The critical difference is that the OECD markets impose relatively low tariffs on major U.S. export categories (with the notable exception of agriculture). Reflecting the tariff initiatives targeting information technology products, as well as zero tariffs in some chemicals and related products, the tariffs faced by U.S. exporters of chemicals rubber and plastics, electrical machinery and equipment, and other machinery and equipment are in the relatively low range of between 2.0 and 4.2 percent. In Latin America, these same products are subject to tariffs averaging in the range of between 9.1 and 10.5 percent. Overall, the tariffs on

Table TA.3

FTAA Experiment Definitions

Experiment Component		Description
	Partial FTAA Implementation	
A	**A.1**	50% tariff reduction in merchandise tariffs for all FTAA members.
	A.2	Partial liberalization of agricultural quotas, leading to a 50% drop in the trade-tax equivalent of all quantitative measures.
B	**B.1**	Partial liberalization of cross-border services trade, equivalent to a 50% drop in the trade-cost equivalent of services trade barriers. Trade-cost equivalents are discussed in the appendix.
C		Partial liberalization experiment, equal to the combined effects of A.1, A.2, and B.1 as discussed above.
	Full FTAA Implementation	
D	**D.1**	100% tariff reduction in merchandise tariffs for all FTAA members.
	D.2	Full liberalization of agricultural quotas, leading to a 100% drop in the trade-tax equivalent of all quantitative measures.
E	**E.1**	Full liberalization of cross-border services trade, equivalent to a 100% drop in the trade-cost equivalent of services trade barriers. Trade-cost equivalents are discussed in the appendix.
F	**F.1**	Trade facilitation measures, represented as a 2% reduction in the cost of trade. This cost-savings is discussed in the text.
G		Full regional liberalization, equal to the combined effects of D.1, D.2, E.1, F.1 as discussed above.

U.S. manufacturing exports to Latin America are relatively high. The pattern of protection points to a relative shift in favor of U.S. machinery and equipment exports as part of an FTAA.

Table TA.5 provides a measure of regional barriers to exports of services to Latin America. Some caution is called for when viewing these estimates. Services trade includes both cross-border trade, and establishment-based (i.e. foreign direct investment-based) trade. In general, the most complete data we have are on cross-border trade. Even for cross-border trade, there is a great deal of uncertainty beneath the data that are available. The barriers reported in the table are based on an analysis of cross-border trade, as discussed in the Technical Appendix. The barriers can be viewed as the increase in the cost of selling services across borders because of trade barriers. In this sense, they are analogous to a tax on services trade. Critically, barriers related to local establishment are not reflected in these estimates. Because local establishment, while often the most economical means of services delivery, is often subject to foreign investment restrictions, it is likely that the barriers in the table understate the extent to which U.S. services exports to the region, including establishment-based trade, are impeded.

Table TA.4

Barriers to U.S. Merchandise Exports

		NAFTA		Latin America		European Union		Japan and Korea		Mainland China[3]	
	2000 U.S. exports (millions of of dollars)	Canadian share of U.S. exports	Mexican share of U.S. exports	ad valorem barriers on U.S. exports	share of total U.S. exports by sector	ad valorem barriers on U.S. exports	share of total U.S. exports by sector	ad valorem barriers exports U.S. exports	share of total U.S. exports by sector	ad valorem barriers exports U.S. exports	share of total U.S. exports by sector
Wool	19	0.01	0.00	25.00	0.01	0.00	0.78	*	*	16.67	0.01
Natural fibers (cotton etc.)	1925	0.03	0.15	7.54	0.10	0.00	0.04	0.95	0.17	3.00	0.23
Primary food production	30890	0.08	0.09	9.51	0.08	10.38	0.17	73.57	0.26	73.62	0.04
Other primary production	7019	0.23	0.03	1.99	0.06	0.21	0.24	0.60	0.31	0.92	0.02
Sugar	158	0.15	0.12	18.70	0.39	76.41	0.15	88.58	0.04	27.27	0.01
Processed food, tobacco, and beverages	20406	0.13	0.07	17.13	0.08	21.65	0.14	44.37	0.28	37.47	0.04
Textiles	10534	0.22	0.18	18.03	0.18	7.99	0.16	8.73	0.07	17.85	0.03
Wearing apparel	8191	0.10	0.37	19.36	0.05	11.36	0.22	11.89	0.08	28.78	0.01
Leather products	1426	0.08	0.14	19.08	0.12	6.18	0.16	13.81	0.19	13.18	0.10
Chemicals, refinery products, rubber, and plastics	96860	0.18	0.12	9.06	0.11	4.20	0.23	3.46	0.12	10.32	0.04
Steel refinery products	5715	0.38	0.18	10.79	0.09	3.65	0.08	2.74	0.11	8.34	0.02
Non-ferrous metal products	7553	0.27	0.09	9.25	0.05	1.91	0.29	2.18	0.11	6.66	0.04
Motor vehicles and parts	57421	0.54	0.14	21.78	0.05	6.79	0.11	1.39	0.07	24.05	0.00
Electronic machinery and equipment	136512	0.11	0.11	10.52	0.08	3.87	0.24	2.81	0.14	10.62	0.03
Other machinery and equipment	207507	0.17	0.08	10.37	0.08	2.50	0.25	2.04	0.13	10.87	0.03
Other manu-factured goods	94175	0.24	0.12	12.11	0.09	2.89	0.21	2.17	0.13	13.25	0.03
TOTAL MERCHANDISE	686311	0.20	0.10	11.53	0.08	4.24	0.22	12.91	0.14	15.97	0.03

[1]Excludes Mexico
[2]Excludes U.S. exports and re-imports under offshore assembly provisions of the CBI
[3]Does not include WTO accession rates

Source: U.S. Department of Commerce, U.S.Department of Agriculture, GTAP consortium database.

Table TA.5

Estimated Barriers to Service Exports to Latin America

(import tax-equivalent for cross-border trade)

Sector	Tax-Equivalent
Trade (wholesale and retail)	6.05%
Transport	3.89
Communications	2.97
Construction	8.77
Finance, Insurance, and Real Estate	5.99
Commercial Services	4.23
Other Services	4.42

Source: The Trade Partnership based on regression estimates, as discussed in the Technical Appendix

A final perspective on trade barriers is offered in Table TA.6. With the reduction in traditional trade barriers that has followed GATT/WTO Rounds, attention in the regional and multilateral trade arenas has shifted to trade facilitation measures. These include customs procedures, product standards and conformance certifications, licensing requirements, and related administrative sources of trading costs. The recent literature has emphasized that reduction in such barriers could reduce the cost of trade substantially. In the context of the EC single market program, elimination of internal customs procedures and related administrative streamlining were projected to reduce trading costs by up to 2 percent of the value of trade within the EC (EC 1988). Globally, UNCTAD (1994) has noted that trading costs represent 7 to 10 percent of the cost of delivered goods. Like the EC, UNCTAD also estimates that simple trade facilitation measures could reduce these costs by 2 percent of the value of trade. The Australian Industry Commission (1995) has estimated potentially higher savings in the context of APEC, ranging from 5 to 10 percent of the value of trade. Under more modest facilitation initiatives, the Japanese Economic Planning Agency again estimates such savings at 2 percent in an APEC context. On the basis of these, we assume in our estimates that full FTAA implementation includes modest trade facilitation measures. In line with existing estimates, these are assumed to lead to a reduction in the cost of trade equaling 2 percent of the value of trade. More ambitious efforts could of course lead to greater cost savings.

Table TA.6

Estimated Cost Savings from Trade Facilitation

European Commission (1992)	In the context of the Single Market program, savings may amount to 1.6 percent to 1.7 percent of the value of trade due to savings on administrative costs.
UNCTAD (1994)	Costs of transactions represent 7 to 10% of the value of trade. Trade facilitation could reduce this to 5% to 8%.
Australian Industry Commission (1995)	Trade facilitation may save 5% to 10% of the total value of trade, through reduced transaction costs, in the APEC context.
Japan EPA (1997)	A “modest” APEC initiative may lead to 2% savings (as a share of the value of trade) due to reduced transaction costs.
Francois and Baldwin (1999)	Trade facilitation is treated as leading to a 2 percent savings in a hypothetical U.S.-EU free trade agreement.

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Endnotes

1 General Accounting Office, "Free Trade Area of the Americas: Negotiations at Key Juncture on Eve of April Meetings," GAO-01-552, March 2001, p. 3.

2 The export changes were estimated off the base year 2000. In other words, the analysis answers these questions: what would U.S. exports have been in 2000 if the FTAA were half-implemented at that time, and what would U.S. exports be if the FTAA were fully implemented at that time.

3 Sectors projected to experience losses do so for a variety of reasons. In many cases, the reduction and eventual elimination of trade and investment barriers causes U.S. economic resources to shift from those sectors that are not as competitive internationally to those that are. As resources (labor, investment, capital spending, etc.) move from less competitive sectors to more competitive sectors, the ability of the less competitive sectors to export declines. In other instances, elimination of foreign direct investment barriers causes production to shift within the Western Hemisphere, and sectors that might otherwise export goods or services produce them instead from new locations abroad.

4 See the discussions by Francois 2000; Francois et al 1996; and Francois and Shiells 1994

5 Chuck Hayes, President, American Textile Manufacturers Institute, remarks before the Congressional Textile Caucus, June 6, 2001.

6 Statistics Canada, SECOFI and Banco de Mexico.

7 U.S. Department of Agriculture, Foreign Agricultural Service, FASonline, "FAS Backgrounder: Benefits of NAFTA," July 2001, http://www.fas.usda.gov/itp/Policy/NAFTA/nafta_backgrounder.htm07/26/2001

8 See Hertel (1996: http://www.agecon.purdue.edu/gtap/model/Chap2.pdf) for a detailed discussion of the basic algebraic model structure represented by the GEMPACK code. The capital accumulation mechanisms are described in Francois et al (1996: http://www.agecon.purdue.edu/gtap/techpapr/tp-7.htm). The model is implemented in GEMPACK — a software package designed for solving large applied general equilibrium models.

9 More information can be obtained at the following Internet site: http://www.monash.edu.au/policy/gempack.htm.

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