

Report for Congress

Received through the CRS Web

Industry Trade Effects Related to NAFTA

Updated February 3, 2003

M. Angeles Villarreal
Analyst in Industrial Organization
Resources, Science, and Industry Division

Industry Trade Effects Related to NAFTA

Summary

The North American Free Trade Agreement (NAFTA), signed by President George Bush on December 17, 1992, has been in effect since January 1994. After eight years of implementation, the full effects of NAFTA on the U.S. economy are still unclear. There are numerous indications that NAFTA has achieved many of the trade and economic benefits that proponents claimed it would bring, although there have been adjustment costs. However, there is not enough evidence to quantify the impacts on specific U.S. industries. Some studies show that the agreement has had an overall positive effect on the U.S. economy, but that some industries have experienced losses. As the United States considers further free trade initiatives with Latin American countries, the effects of NAFTA may provide policymakers some indication of how these initiatives might affect U.S. industries and the overall U.S. economy.

Most of the trade effects related to NAFTA are due to changes in U.S. trade and investment patterns with Mexico. At the time of NAFTA implementation, the U.S.-Canada Free Trade Agreement already had been in effect for five years and some industries in the United States and Canada were already highly integrated. Since NAFTA, the automotive, textile, and apparel industries have experienced some of the more significant changes in trade flows, which may also have affected U.S. employment in these industries. U.S. trade with Mexico has increased considerably more than U.S. trade with other countries, and Mexico has become a more significant trading partner with the United States since NAFTA implementation. Consequently, Mexico's share of total U.S. trade has increased while that of other countries has decreased. Some data on U.S. imports suggest that Mexico may be supplying the U.S. market with goods that may have otherwise been supplied by Asian countries.

Not all changes in trade patterns since 1994, however, can be attributed to NAFTA because trade was also affected by other unrelated economic factors such as economic growth in the United States and Mexico, and currency fluctuations. Also, trade-related job gains and losses since NAFTA may have accelerated trends that were ongoing prior to NAFTA and may not be totally attributable to the trade agreement.

To address concerns about worker dislocations related to NAFTA, Congress included two employment adjustment assistance programs in the implementing legislation: the NAFTA Transitional Adjustment Assistance (NAFTA-TAA) Program and the U.S. Community Adjustment and Investment Program (USCAIP). The NAFTA-TAA program is now part of a new consolidated Trade Adjustment Assistance (TAA) program passed under the Trade Act of 2002 (P.L. 107-210). The NAFTA-TAA program provides assistance, such as employment services and training, to workers who have lost their jobs because of increased import competition or by production shifts. The USCAIP provides assistance to communities with significant job losses due to changes in trade patterns with Canada or Mexico. While the programs have been successful in providing assistance to communities who have had significant job losses, the overall effectiveness of the programs has been limited. This report will be updated as events warrant.

Contents

Background	1
Overall Effects of NAFTA	2
How Has NAFTA Affected U.S. Industries?	4
Industry Trade Flows	5
U.S. Exports by Country	8
U.S. Imports by Country	8
Impacts on Key Industries	8
Textiles and Apparel	10
Automotive Industry	11
Maquiladora Industry	12
Employment	14
Conclusion	17

List of Tables

Table 1. Industry Trade Flows Between the United States and NAFTA Partners: 1993-2001	6
Table 2. U.S. Exports: 1993-2001	7
Table 3. U.S. Imports: 1993-2001	9
Table 4. U.S. Trade in Textiles and Apparel: 1993 and 2001 ¹	11
Table 5. U.S. Trade in Automotive Industry: 1993 and 2001	13
Table 6. U.S. Trade in Motor Vehicles by Country: 1993 and 2001 ¹	13
Table 7. NAFTA-TAA Certification by Industry January 1994 - December 2001	15

Industry Trade Effects Related to NAFTA

Background

The North American Free Trade Agreement (NAFTA), signed by President George Bush on December 17, 1992, has been in effect since January 1994. After eight years of implementation, there is some evidence that NAFTA has achieved many of the trade and economic benefits that proponents claimed it would bring, although there have been adjustment costs at the sectoral level. Most economists, but not all, believe that trade liberalization promotes overall economic growth among trading partners although there are short-term adjustment costs.

A major trade issue in the 107th Congress was whether or not Congress would approve authority for the President to negotiate certain trade agreements and submit the agreements for approval and implementation under expedited legislative procedures. This authority was formerly called “fast-track authority” and is now called “trade promotion authority” or “TPA”. On August 6, 2002, the Trade Act of 2002, which included TPA, was signed into law by the President (P.L. 107-210).¹ As the United States considers free trade initiatives with other Latin American countries, the effects of NAFTA may provide policymakers some indication of how these initiatives might affect U.S. industries and the overall U.S. economy. In recent years, the United States has taken further steps to liberalize trade in the Western Hemisphere by entering into trade negotiations for a Free Trade Area of the Americas (FTAA) and a U.S.-Chile Free Trade Agreement (FTA). In addition, the Administration announced that it will explore a free trade agreement with the countries of Central America. The U.S.-Chile FTA is close to the final stages of negotiations and FTAA negotiations are scheduled to be completed by January 2005.

On November 20, 1993, Congress approved the NAFTA Implementation Act submitted by President Clinton (P.L. 103-182). To address concerns regarding worker dislocations, Congress included two adjustment assistance programs, designed to ease trade-related problems, in the implementing legislation for NAFTA: the NAFTA Transitional Adjustment Assistance (NAFTA-TAA) Program and the U.S. Community Adjustment and Investment Program (USCAIP). The USCAIP is administered by the North American Development Bank (NADBank). The USCAIP provides financial assistance to communities with significant job losses due to changes in trade patterns with Mexico or Canada.

The NAFTA-TAA Program was consolidated with the former Trade Adjustment Assistance (TAA) program under the Trade Act of 2002 (P.L. 107-210) and is now

¹ For more information on trade promotion, or fast-track, authority see CRS Issue Brief, IB10084, *Trade Promotion Authority (Fast-Track Authority for Trade Agreements): Background and Developments in the 107th Congress*.

part of a new reformed TAA Program. The previous NAFTA-TAA program provided assistance, including employment services and training, to workers who have lost their jobs due to import competition or production shifts to Mexico or Canada. The new reformed TAA program would expand eligibility for workers hurt by a shift in production to certain other countries, and extend benefits to workers previously ineligible such as secondary workers and downstream workers in the case of NAFTA countries.²

This report will look at the broad effect of NAFTA on the U.S. economy and the trade-related effects at the industry level. It will also describe the two main adjustment assistance programs. The report will analyze, to the extent feasible, the effectiveness of NAFTA trade-related adjustment assistance programs.

Overall Effects of NAFTA

The overall effect of NAFTA on the U.S. economy has been relatively small, primarily because two-way trade with Mexico amounts to less than three percent of U.S. GDP. Therefore, any changes in trade patterns with Mexico would not be expected to be significant in relation to the overall U.S. economy. In some sectors, however, trade-related effects could be expected to be more significant, especially in those industries that were more exposed to the removal of tariff and non-tariff trade barriers, such as the textile and apparel, and automotive industries.

Most of the trade-related effects of NAFTA may be attributed to changes in U.S. trade and investment patterns with Mexico. At the time of NAFTA implementation, the U.S.-Canada Free Trade Agreement already had been in effect for five years and some industries in the United States and Canada were already highly integrated. Most tariffs on products traded between the United States and Canada were zero at the time of NAFTA implementation. In contrast, Mexico had followed an aggressive import-substitution policy for many years prior to NAFTA in which it had sought to develop certain domestic industries through trade protection. One example is the Mexican automotive industry which had been regulated by a series of five decrees issued by the Mexican government between 1962 and 1989. The decrees established import tariffs as high as 25% on automotive goods and had high restrictions on foreign auto production in Mexico. Under NAFTA, Mexico agreed to eliminate these restrictive trade policies.

In 1997, President Clinton submitted a Congressionally mandated comprehensive assessment of the operation and effects of NAFTA after three years.³ The report, conducted by the International Trade Commission (ITC), analyzes the actual impact of the first three years of NAFTA on the overall U.S. economy, and on

² For more information see CRS Issue Brief IB10084, p. 10; and CRS Electronic Trade Briefing Book, *Trade Adjustment Assistance for Workers*.

³ Section 512 of the NAFTA Implementation Act required the President to provide a comprehensive assessment of the operation and effects of NAFTA to the Congress by July 1, 1997.

industries particularly affected by the agreement.⁴ The report found that NAFTA had a small positive effect on the overall U.S. economy, but that some industries experienced significant changes in the volume of bilateral trade with NAFTA partners. The report states that NAFTA's most important effects are not easily measured or observed, and the full effects of the agreement will take many years to make themselves known.⁵ The report is based on data between 1993 and 1997. Some of the findings include the following:

- Data inadequacies at the industry level make it difficult to isolate the effects of NAFTA on absolute trade flows.
- U.S. trade with NAFTA partners increased more rapidly than U.S. trade with the rest of the world.
- The share of U.S. exports in the Mexican market increased by a higher percentage than the share of total foreign imports.
- In industries such as autos, chemicals, textiles, and electronics, U.S. companies have benefitted by achieving synergies across the North American market.

Critics of NAFTA predicted that the agreement would cause industries to move their U.S. production operations to Mexico and that thousands of U.S. jobs would be lost. A recent briefing paper by the Economic Policy Institute states that NAFTA has eliminated about 766,000 existing or potential U.S. jobs in the manufacturing industry.⁶ One of the reports in the briefing paper maintains that the increasing trade deficit with Mexico since NAFTA has caused manufacturing jobs in the United States to disappear and that the threat of employers to move production to Mexico helped undercut workers' bargaining power, resulting in workers being downscaled to lower-paying, less-secure jobs.⁷ The report's findings are largely based on the assumption that the increasing U.S. trade deficit with Mexico is primarily a result of NAFTA. However, while NAFTA may have accelerated U.S.-Mexico trade since 1993, there are other important economic factors that have contributed to the increasing trade deficit with Mexico and that are not fully analyzed in the report. The expansion of the U.S. economy in the 1990s and the Mexican peso devaluation of 1995 have significantly influenced trade and investment patterns between the United States and Mexico. The report does mention the Mexican peso devaluation effects but does not fully distinguish these effects from those of NAFTA. Another aspect of trade-related impacts is the relationship of trade deficits to overall employment levels. While NAFTA may be partially responsible for the dislocation of workers in

⁴ United States International Trade Commission, *Impact of the North American Free Trade Agreement on the U.S. Economy and Industries: A Three Year Review*, Publication 3045, July 1997.

⁵ USITC Report, Executive Summary.

⁶ Economic Policy Institute Briefing Paper, *NAFTA at Seven: Its Impact on Workers in all Three Nations*, 2001.

⁷ Scott, Robert E., "NAFTA's Hidden Costs," in Economic Policy Institute Briefing Paper, *NAFTA at Seven: Its Impact on workers in all Three Nations*, 2001.

some industries, a growing trade deficit with Mexico does not necessarily indicate an increase in overall unemployment levels.⁸

A recent report published in *Industry Trade and Technology Review* provides another perspective on the effects of NAFTA and factors affecting increasing U. S.-Mexico trade.⁹ The report states that only part of the growth in U.S.-Mexico trade can be attributed directly to the actual provisions of NAFTA. The report indicates that the increase in U.S. trade with Mexico since 1994 was also affected by currency fluctuations, economic growth in the United States and Mexico, and an improved general business climate in North America. It states that the overall effect of NAFTA on employment tends to move jobs between sectors rather than to change national employment levels. Part of the report's discussion centers around the economy-wide estimates of employment effects and mentions the EPI estimate of actual and potential job losses of 766,000 as being the "most extreme" estimate of job losses in studies that have generated estimates of employment changes due to NAFTA.¹⁰ The author states that this estimate relies on an unlikely linkage between jobs and trade deficits, but even this high an estimate would account for a relatively small percent of total U.S. layoffs, and that, therefore, job "creation" or "losses" are relatively small on an economy-wide basis. The author writes that, while the negative impact on workers has been greater in some industries, the experience of workers displaced by NAFTA would be similar to that of workers displaced for reasons unrelated to trade.¹¹ The report cites a USITC¹² study which found that workers that have been unemployed as a result of trade liberalization have, in the long run, been re-employed in other sectors.

How Has NAFTA Affected U.S. Industries?

U.S. trade with Mexico and Canada has grown more rapidly than total U.S. trade since 1994, but at the sectoral level, it is difficult to measure the specific effects of NAFTA on specific industries. The automotive, textile, and apparel industries have experienced the most significant changes in trade flows, which may also have affected employment levels in these industries. Not all changes in trade and

⁸ In the 1990s, the overall U.S. trade deficit increased considerably while the U.S. economy expanded and full employment levels were attained. While trade deficits in the United States have not hampered the overall creation of jobs, they do influence the types of jobs that are created because of the trade-related changes in composition of U.S. output. See CRS Report 97-985 E, *Why the Budget Deficit and the Trade Deficit Haven't Been Moving Together*; and CRS Report RL30534, *America's Growing Current Account Deficit: Its Cause and What it Means for the U.S. Economy*.

⁹ Ferrantino, Michael J. "Evidence of Trade, Income, and Employment Effects of NAFTA," *Industry Trade and Technology Review*, December 2001. *Industry Trade and Technology Review* is a publication of the USITC, but the views in this article are the author's, and not the views of the USITC as a whole or of any individual Commissioner.

¹⁰ Ibid, P. 8.

¹¹ Ibid, pp. 1 and 6.

¹² See USITC, *The Economic Effects of Significant U.S. Import Restraints: Second Update*, Investigation No. 332-325, USITC Publication 3201, May 1999.

investment patterns since 1994 can be attributed to NAFTA because the U.S. economic expansion during the 1990s and the Mexican peso devaluation of 1995 also affected trade patterns. This section discusses five major U.S. industries that have high volumes of trade with Mexico and Canada. These industries include the automotive industry, chemicals and allied products, computer equipment, textiles and apparel, and microelectronics.¹³

The expansion of the U.S. economy during the 1990s could be the most important factor to consider in evaluating the trade trends since NAFTA. As the U.S. economy expands, so does the demand for imports. Part of the growth in imports from Mexico after NAFTA implementation could have been due to economic growth in the United States, and not entirely attributable to a reduction in trade barriers. In addition, the peso devaluation of 1995 reduced the purchasing power of the Mexican people which likely reduced the demand of Mexico's imports from the United States, at least in the short term.

Industry Trade Flows

Table 1 shows the trade flows by major industry between the United States and NAFTA partners from 1993, the year before NAFTA implementation, and 2001. The U.S. industries with the highest volume of trade (imports and exports) with Mexico and Canada are the automotive industry; chemicals and allied products; computer equipment; textiles and apparel; and microelectronics. The automotive industry accounts for about 22% of total trade. Trade in all four other industry groups accounts for 16% of total trade. Overall trade between the United States and NAFTA partners increased from \$293 billion in 1993 to \$653 billion in 2000, a 123% increase. In 2001, the amount of trade among NAFTA partners dropped for the first time since NAFTA was implemented. U.S. total trade with Mexico and Canada decreased from \$653.3 in 2000 to \$613.6 in 2001. At the same time, the total annual U.S. trade deficit with NAFTA partners increased from \$9 billion in 1993 to \$83 billion in 2001.¹⁴

The automotive industry had the highest dollar increase (\$71.48 billion) in total U.S. trade. In percentage terms, the textiles and apparel industry had the highest increase (222%). The industries with the highest percentage growth in U.S. imports from Mexico and Canada were computer equipment (397%), and textiles and apparel (386%). In dollar terms, imports in the automotive industry had the highest increase (\$49.66 billion). In exports, the microelectronics industry had the highest percentage increase (268%), while the automotive industry had the highest dollar increase (\$21.82 billion).

¹³ Automotive industry category includes motor vehicles and parts and includes Standard Industrial Classification (SIC) codes 3465, 3647, 3691, 3694, 3711, 3713, and 3714; chemicals and allied products category includes SIC code 28; computer equipment category includes SIC codes 3571, 3572, 3575, and 3577; textiles and apparel category includes SIC codes 22 and 23; microelectronics category includes SIC codes 3671, 3672, 3675, 3676, 3677, 3678, and 3679.

¹⁴ All trade figures in this report are expressed in nominal U.S. dollars, which are unadjusted for inflation.

**Table 1. Industry Trade Flows Between the United States
and NAFTA Partners: 1993-2001**
(\$ Billions)¹

	1993	1995	1997	1999	2000	2001	\$Change 1993-2001 ²
Automotive							
U.S. Exports	\$30.5	\$34.7	\$43.9	\$48.7	\$52.3	\$47.9	\$17.4
U.S. Imports	\$42.6	\$56.3	\$67.1	\$85.9	\$92.3	\$86.1	\$43.5
Trade Volume ³	\$73.1	\$91.0	\$111.0	\$134.6	\$144.6	\$134.0	\$60.9
Trade Balance	(\$12.1)	(\$21.6)	(\$23.1)	(\$37.2)	(\$40.0)	(\$38.3)	(\$26.2)
Chemicals and Allied Products							
U.S. Exports	\$11.0	\$13.9	\$18.0	\$20.2	\$23.0	\$22.3	\$11.3
U.S. Imports	\$5.2	\$7.7	\$10.3	\$10.5	\$12.1	\$12.1	\$6.9
Trade Volume ³	\$16.2	\$21.5	\$28.4	\$30.7	\$35.0	\$34.4	\$18.2
Trade Balance	\$5.8	\$6.2	\$7.7	\$9.7	\$10.9	\$10.2	\$4.4
Computer Equipment							
U.S. Exports	\$6.2	\$7.9	\$10.6	\$11.0	\$13.3	\$11.9	\$5.8
U.S. Imports	\$3.1	\$5.8	\$7.9	\$10.1	\$12.4	\$12.9	\$9.8
Trade Volume ³	\$9.3	\$13.8	\$18.5	\$21.2	\$25.7	\$24.8	\$15.5
Trade Balance	\$3.0	\$2.1	\$2.7	\$0.9	\$0.9	(\$0.9)	(\$4.0)
Textiles and Apparel							
U.S. Exports	\$3.7	\$5.0	\$7.0	\$8.9	\$9.7	\$8.9	\$5.1
U.S. Imports	\$3.7	\$5.7	\$9.5	\$12.8	\$14.2	\$13.2	\$9.6
Trade Volume ³	\$7.4	\$10.7	\$16.5	\$21.7	\$23.9	\$22.1	\$14.7
Trade Balance	\$0.1	(\$0.8)	(\$2.5)	(\$4.0)	(\$4.5)	(\$4.3)	(\$4.4)
Microelectronics							
U.S. Exports	\$3.4	\$5.7	\$7.4	\$9.1	\$12.6	\$10.3	\$6.9
U.S. Imports	\$2.6	\$3.4	\$4.4	\$4.8	\$6.1	\$5.1	\$2.5
Trade Volume ³	\$6.0	\$9.1	\$11.7	\$13.9	\$18.6	\$15.4	\$9.4
Trade Balance	\$0.8	\$2.2	\$3.0	\$4.4	\$6.5	\$5.2	\$4.4
Total Trade							
U.S. Exports	\$141.8	\$172.3	\$221.5	\$251.0	\$288.2	\$265.2	\$123.4
U.S. Imports	\$150.9	\$206.8	\$253.9	\$308.0	\$365.1	\$348.4	\$197.6
Trade Volume ³	\$292.7	\$379.2	\$475.4	\$559.0	\$653.3	\$613.6	\$321.0
Trade Balance	(\$9.0)	(\$34.5)	(\$32.4)	(\$57.1)	(\$77.0)	(\$83.2)	(\$74.2)

¹ Nominal U.S. dollars.

² Figures may not add up due to rounding.

³ Trade volume denotes exports plus imports.

Source: United States International Trade Commission, Interactive Tariff and Trade Data Web
[<http://dataweb.usitc.gov>]. Compiled by CRS.

Table 2. U.S. Exports: 1993-2001
(\$ Billions¹)

U.S. Exports Industry/Country	1993		2001		1993-2001 %Change
	\$Amount	% Industry Total	\$Amount	% Industry Total	
Automotive Industry					
Mexico	\$3.04	7%	\$7.46	12%	145%
Canada	\$7.98	17%	\$14.82	23%	86%
Other Countries	\$34.99	76%	\$42.24	65%	21%
Total	\$46.01	100%	\$64.52	100%	40%
Chemicals and Allied Products					
Mexico	\$3.04	7%	\$7.46	10%	145%
Canada	\$7.98	18%	\$14.82	19%	86%
Other Countries	\$32.47	75%	\$54.35	71%	67%
Total	\$43.49	100%	\$76.63	100%	76%
Computer Equipment					
Mexico	\$1.34	5%	\$4.25	9%	217%
Canada	\$4.81	17%	\$7.70	16%	60%
Other Countries	\$23.00	79%	\$34.73	74%	51%
Total	\$29.15	100%	\$46.68	100%	60%
Textiles and Apparel					
Mexico	\$1.81	17%	\$5.62	33%	210%
Canada	\$1.93	19%	\$3.26	19%	69%
Other Countries	\$6.67	64%	\$8.25	48%	24%
Total	\$10.41	100%	\$17.13	100%	65%
Microelectronics					
Mexico	\$2.00	26%	\$7.35	39%	268%
Canada	\$1.41	19%	\$2.96	16%	110%
Other Countries	\$4.15	55%	\$8.55	45%	106%
Total	\$7.56	100%	\$18.86	100%	149%
Total U.S. Exports					
Mexico	\$41.64	9%	\$101.51	14%	144%
Canada	\$100.19	22%	\$163.72	22%	63%
Other Countries	\$323.00	69%	\$465.80	64%	44%
Total	\$464.86	100%	\$731.03	100%	57%

¹ Nominal U.S. dollars.

Source: United States International Trade Commission, Interactive Tariff and Trade Data Web
[http://dataweb.usitc.gov]. Compiled by CRS.

The trade data shown in Table 1 reflect U.S. trade with both Canada and Mexico, however most of the changes in U.S. trade patterns occurred with Mexico. The U.S.-Canada FTA had been in effect for a number of years at the time of NAFTA implementation, and most of the trade barrier reductions affecting the United States were those with Mexico. Between 1993 and 2001, the value of U.S. trade with Mexico grew at considerably higher rates than trade with Canada and the rest of the world.

U.S. Exports by Country. Since 1993, the value of total U.S. exports to Mexico increased by a much higher rate than exports to Canada or to the rest of the world. Between 1993 and 2001, U.S. exports to Mexico increased 144%, while exports to Canada increased 63% (see Table 2). In comparison, total U.S. exports to all countries increased 57%. Microelectronics exports from the United States increased faster than U.S. exports from other industries. U.S. exports in microelectronics to Mexico increased by a higher percentage (268%) than U.S. exports to Canada (110%), or total U.S. exports in this industry (149%). In the textiles and apparel industry, Mexico became a more significant export market during this time period. In 2001, exports to Mexico accounted for 33% of all U.S. exports in textiles and apparel, up from 17% in 1993. In comparison, in 1993, U.S. textile and apparel exports to countries other than Mexico or Canada accounted for 64% of all exports, dropping to 48% in 2001.

Although U.S. exports to Mexico have increased significantly since NAFTA, so have U.S. imports, and it not known how much of all U.S. exports actually stay in Mexico. Some U.S. exports are destined for manufacturing industries in Mexico (see section on maquiladoras below) where they are processed and exported back to the United States and/or other countries as finished or semi-finished products. In the textiles and apparel industry, for example, U.S. exports increased considerably, but so did U.S. imports. This probably indicates that part of the increase in U.S. exports may not have resulted from a higher demand for U.S. products in Mexico, but because production of goods for U.S. consumption shifted to Mexico, either from the United States or other regions such as Asia.

U.S. Imports by Country. The value of U.S. imports from Mexico increased faster than total U.S. imports since NAFTA implementation. Between 1993 and 2001, U.S. imports from Mexico increased by 229%, while imports from Canada increased by 96% and total U.S. imports increased by 97% (see Table 3). The most significant increase occurred in the computer equipment industry, in which U.S. imports from Mexico increased from less than \$1 billion in 1993 to \$10.12 billion (1077% increase) in 2001. U.S. imports in computer equipment from Mexico increased from 2% to 14% between 1993 and 2001, while imports from Canada decreased by 2% and imports from non-NAFTA countries decreased by 10% during the same time period. The value of U.S. imports from Mexico in the automotive industry increased 294%, while U.S. imports in the textiles and apparel industry increased 283%.

Impacts on Key Industries

Some industries that had higher trade restrictions were more sensitive to the removal of tariff and non-tariff barriers, and have experienced increasing trade

Table 3. U.S. Imports: 1993-2001
(\$ Billions¹)

U.S. Imports Industry/Country	1993		2001		1993-2001 %Change
	\$Amount	% Industry Total	\$Amount	% Industry Total	
Automotive Industry					
Mexico	\$8.34	9%	\$32.83	19%	294%
Canada	\$34.26	37%	\$53.30	31%	56%
Other Countries	\$48.92	53%	\$85.76	50%	75%
Total	\$91.52	100%	\$171.89	100%	88%
Chemicals and Allied Products					
Mexico	\$0.78	3%	\$1.98	3%	154%
Canada	\$5.17	19%	\$10.69	14%	107%
Other Countries	\$21.97	79%	\$62.07	83%	183%
Total	\$27.92	100%	\$74.74	100%	168%
Computer Equipment					
Mexico	\$0.86	2%	\$10.12	14%	1077%
Canada	\$2.26	6%	\$2.75	4%	22%
Other Countries	\$33.96	92%	\$59.47	82%	75%
Total	\$37.08	100%	\$72.34	100%	95%
Textiles and Apparel					
Mexico	\$2.57	6%	\$9.84	13%	283%
Canada	\$1.11	3%	\$3.39	4%	205%
Other Countries	\$38.21	91%	\$63.27	83%	66%
Total	\$41.89	100%	\$76.50	100%	83%
Microelectronics					
Mexico	\$1.89	18%	\$3.88	21%	105%
Canada	\$0.73	7%	\$1.20	7%	64%
Other Countries	\$6.91	67%	\$13.24	72%	92%
Total	\$10.32	100%	\$18.32	100%	78%
Total U.S. Imports					
Mexico	\$39.93	7%	\$131.43	12%	229%
Canada	\$110.92	19%	\$216.97	19%	96%
Other Countries	\$429.62	74%	\$793.50	69%	85%
Total	\$580.47	100%	\$1,141.	100%	97%

¹ Nominal U.S. dollars.

Source: United States International Trade Commission, Interactive Tariff and Trade Data Web [http://dataweb.usitc.gov]. Compiled by CRS.

deficits since NAFTA was passed. Based on the percentage change in trade patterns and the number of workers applying for TAA certification (see section below), two of the more highly impacted industries are the textiles and apparel industry and the automotive industry. The trade impacts in these industries are discussed below. In addition, Mexico's maquiladora industry, which is closely linked to U.S. manufacturing industries, is also discussed.

Textiles and Apparel. The main NAFTA provisions related to textiles and apparel were the elimination of tariffs and quotas for goods coming from Mexico and eliminating Mexican tariffs on U.S. textile and apparel products. To benefit from the free trade provision, goods were required to meet the rules of origin provision which assured that apparel products that were traded among the three NAFTA partners were made of yarn and fabric made within the free trade area. The strict rules of origin provisions were meant to ensure that U.S. textiles producers would continue to supply U.S. apparel companies that moved to Mexico. Without a rules of origin provision, apparel companies would have been able to import low-cost fabrics from Asia and export the final product to the United States under the free trade provisions.

The average U.S. tariffs in textiles and apparel decreased from 9.1% in 1992 to 1.3% in 1996 (a 7.8 percentage point decrease), while Mexican average tariffs declined from 16% in 1992 to 5.3% in 1996 (a 10.7 percentage point decrease). In comparison, average U.S. tariffs on all Mexican products decreased from 2.07% in 1992 to 0.65% in 1996 (a 1.42 percentage point decrease), while average Mexican tariffs on all U.S. products decreased from 10% in 1993 to 2.9% in 1996 (a 7.1 percentage point decrease).¹⁵ The elimination of non-tariff barriers, such as U.S. import quotas on North American-origin textiles and apparel likely contributed to the increasing trade deficit in this sector because of the increase in U.S. imports.

Total U.S. trade with Mexico in textiles and apparel increased 250%, while the trade deficit increased 455% (see Table 4). In comparison, total U.S. trade in textiles and apparel increased by less than 80%, while the total trade deficit in this industry increased by 89%. Although the high increase in U.S. imports from Mexico may have displaced some U.S. workers in this industry, the USTR study suggested that NAFTA may have helped the U.S. textile industry by shifting production from Asian countries to North America. The study reports that U.S. imports from NAFTA countries tend to have a higher U.S. content than imports from outside the region, such as China, Hong Kong, and Taiwan.¹⁶ The data in Table 4 shows that total trade with Mexico in textiles and apparel increased considerably more than trade with Asia or the world. These numbers could suggest that Mexico may be supplying the U.S. market with goods that would have otherwise been supplied by Asian countries.

¹⁵ USITC Report, pp. ii and 32.

¹⁶ USTR study, p. 82.

**Table 4. U.S. Trade in Textiles and Apparel:
1993 and 2001¹**

Country	1993			2001			% Change 1993-2001	
	Total Trade (\$Bill.)	% World Share	Trade Bal. (\$Bill.)	Total Trade (\$Bill.)	% World Share	Trade Bal. (\$Bill.)	Total Trade	Trade Bal.
Mexico	\$4.4	8%	(\$0.76)	\$15.4	16%	(\$4.2)	250%	455%
Asia	\$29.0	55%	(\$25.78)	\$42.5	45%	(\$39.5)	47%	53%
Total	\$52.3	--	(\$31.48)	\$93.6	--	(\$59.4)	79%	89%

¹ Dollar figures in this table are in nominal U.S. dollars.

Source: United States International Trade Commission, Interactive Tariff and Trade Data Web [<http://dataweb.usitc.gov>]. Compiled by CRS.

Automotive Industry. Under NAFTA, the United States, Canada, and Mexico agreed to eliminate or reduce most barriers to trade and investment in the automotive industry. The NAFTA provisions related to the auto industry include the phased elimination of tariffs, gradual removal of many non-tariff barriers to trade, rules of origin provisions, enhanced protection of intellectual property rights, less restrictive government procurement practices, and the elimination of performance requirements on investors from other NAFTA countries. Because the United States and Canada were already highly integrated following the U.S.-Canada Free Trade Agreement and a U.S.-Canada Auto Pact in 1965, most of the impacts of NAFTA relate to trade liberalization with Mexico. Between 1962 and 1989, Mexico had a series of five decrees in the automotive sector which maintained a policy of import substitution by reserving the domestic automobile market for domestically produced parts and vehicles. The 1989 decree significantly relaxed restrictions on foreign auto producers operating in Mexico but still maintained a number of restrictive measures on Mexican auto trade and foreign production in Mexico.

NAFTA established the removal of Mexico's restrictive trade and investment policies. Mexican tariffs on all types of motor vehicles and parts, which were as high as 20% for some goods, were reduced by half in 1999, and are scheduled to be completely phased out by 2003. In addition, Mexican investment restrictions in the automotive sector were lowered or removed entirely, which provided an incentive to increase U.S. investment in Mexico. Mexico lowered its 20% tariff on U.S. light trucks to 10% in 1994 and phased it out by 1998. Mexico will completely phase out tariffs on other trucks by 2003.

On motor vehicles, the United States eliminated the 2.5% tariff on Mexican products in 1994. U.S. tariffs on Mexican light trucks were cut from 25% to 10% in 1994 and completely eliminated by 1998. U.S. tariffs on other Mexican trucks of 25% are scheduled to be phased out by 2003. In auto parts, the United States phased out tariffs on most Mexican auto parts in 1994. Most remaining tariffs on auto parts were phased out in 1998, with the remaining one percent to be eliminated by 2003.

Table 5 shows U.S. exports and imports in motor vehicles and auto parts in 1993 and 2001 for NAFTA partners and the world.¹⁷ While U.S. automotive imports from all countries during this time period increased considerably, imports from Mexico increased at a much higher rate. U.S. motor vehicle imports from Mexico increased 475% between 1993 and 2001. In comparison, motor vehicle imports from Canada increased by 70%, while motor vehicle imports from other countries increased by 98%. In auto parts, U.S. imports from Mexico also increased more rapidly than imports from other countries. This rapid increase caused a sharp increase in the U.S. trade deficit with Mexico in automotive products since 1993. The trade deficit with Mexico in auto parts increased from \$0.1 billion in 1993 to \$6.2 billion in 2001.

Since NAFTA, Mexico's importance in the U.S. motor vehicle market has increased in significance. Mexico's share in U.S. total trade in motor vehicles increased from 5% to 17%, while the share from Canada and other countries decreased (see Table 6). Total U.S. trade from non-NAFTA trading partners decreased from 53% to 47%, which could suggest that motor vehicle imports from Mexico are replacing those from other countries. Although motor vehicle imports from Mexico have increased significantly since NAFTA, those from other countries may have increased at a slower rate than they would have in the absence of NAFTA.

Maquiladora Industry. Mexico's maquiladora industry¹⁸ is closely linked to U.S.-Mexico trade in various labor-intensive industries such as textiles and apparel, auto parts, and electronic goods. NAFTA affected the maquiladora industry in a very significant way. Beginning in 2001, the North American rules of origin determine the duty-free status for a given import, replacing the previous special tariff provisions that applied only to maquiladora operations. The initial program has ceased to exist and the same trade rules now apply to all assembly operations in Mexico.¹⁹

Mexico's maquiladora industry has expanded rapidly since NAFTA implementation. The number of plants grew from 1,789 at the end of 1990, to 2,143 in 1993 (just before NAFTA) and to 3,703 in 2000.²⁰ Some observers have concluded that the correlation is directly due to NAFTA, but in reality it is unclear that maquiladora growth is directly related to trade liberalization. Although some provisions in the agreement may have encouraged maquiladora growth in certain sectors, maquiladora activity is also influenced by the strength of the U.S. economy

¹⁷ The automotive trade figures in Table 5 differ from those listed in previous tables because they come from different data sources. Table 5 breaks automotive products into two major categories, motor vehicles and auto parts, and, for this reason was compiled from a different data source.

¹⁸ Mexico's maquiladora program was established in the 1960s by the Mexican government, allowing foreign-owned businesses to set up assembly plants in Mexico to produce for export. Maquiladoras could import intermediate materials duty-free with the condition that a percentage of the final product be exported.

¹⁹ Lucinda Vargas, "NAFTA, the U.S. Economy, and Maquiladoras," *El Paso Business Frontier*, 2001.

²⁰ Gruben, William C. and Sherry L. Kiser, *NAFTA and Maquiladoras*, Federal Reserve Bank of Dallas, June 2001.

Table 5. U.S. Trade in Automotive Industry: 1993 and 2001
(\$ Billions¹)

Country/ Category	1993			2001			%Change in Trade Deficit
	Exports	Imports	Balance	Export	Imports	Balance	
Canada							
Motor Vehicles	\$8.2	\$26.7	(\$18.5)	\$14.9	\$45.4	(\$30.5)	65%
Auto Parts	\$18.2	\$10.3	\$7.9	\$26.4	\$15.8	\$10.6	--
Total	\$26.4	\$37.0	(\$10.6)	\$41.3	\$61.2	(\$19.9)	88%
Mexico							
Motor Vehicles	\$0.2	\$3.7	(\$3.6)	\$3.9	\$21.3	(\$17.4)	389%
Auto Parts	\$7.3	\$7.4	(\$0.1)	\$12.0	\$18.2	(\$6.2)	6100%
Total	\$7.5	\$11.1	(\$3.6)	\$15.9	\$39.5	(\$23.6)	557%
All Countries							
Motor Vehicles	\$18.9	\$63.0	(\$44.1)	\$24.3	\$124.7	(\$100.4)	128%
Auto Parts	\$33.4	\$38.3	(\$4.9)	\$49.8	\$62.7	(\$12.9)	163%
Total	\$52.3	\$101.3	(\$49.0)	\$74.1	\$187.4	(\$113.3)	131%

¹ Nominal U.S. dollars.

Note: Motor Vehicles includes cars, minivans, sport-utilities, light and heavy trucks, other types of motor vehicles designed for the transport of persons, and special purpose vehicles not elsewhere classified.

Source: U.S. Census Bureau using U.S. Department of Commerce Office of Automotive Affairs Product Groups.

Table 6. U.S. Trade in Motor Vehicles by Country:
1993 and 2001¹

Country	1993			2001			%Change 1993-2001	
	Total Trade (\$Bill.)	% World Share	Trade Bal. (\$Bill.)	Total Trade (\$Bill.)	% World Share	Trade Bal. (\$Bill.)	Total Trade	Trade Deficit
Canada	\$34.9	43%	(\$18.5)	\$54.1	36%	(\$27.6)	55%	49%
Mexico	\$3.9	5%	(\$3.6)	\$25.2	17%	(\$17.4)	546%	383%
Other	\$43.1	53%	(\$22.0)	\$69.6	47%	(\$54.4)	61%	147%
Total	\$81.9	--	(\$44.1)	\$148.9	--	(\$100.4)	82%	128%

¹ Dollar figures in this table are nominal U.S. dollars.

Note: Motor Vehicles includes cars, minivans, sport-utilities, light and heavy trucks, other types of motor vehicles designed for the transport of persons, and special purpose vehicles not elsewhere classified.

Source: Compiled by CRS with data from the U.S. Census Bureau using U.S. Department of Commerce Office of Automotive Affairs Product Groups.

and relative wages in Mexico. Maquiladora operations usually increase during periods of economic expansion in the United States. A drop in Mexican wages may be an incentive for U.S. companies to shift production to Mexico.²¹ Between 1993 and 1996, relative wages in Mexico decreased considerably due to the peso devaluation. Since 1997, however, Mexican labor costs have risen 54%.²² As a result of the higher labor costs, some manufacturers have closed their Mexican plants and shifted production to Asian countries. In 2001, maquiladora employment levels fell for the first time since 1982. Approximately 250,000 jobs were lost and 253 maquiladoras were shut down, partially as a result of higher labor costs, but also because of the slowdown in the U.S. economy.²³

In textiles and apparel, the maquiladora industry's second largest employer, NAFTA's market opening measures could have been a factor in increased maquiladora operations.²⁴ The agreement eliminated U.S. quotas on textiles which may have given U.S. textile firms an incentive to construct maquiladora operations in Mexico.

Employment

While some U.S. industries may have benefitted from increased demand for U.S. products in Mexico or Canada, creating new jobs, other industries have experienced job losses. As mentioned previously, data on the effects of NAFTA is very limited and the effect on specific U.S. industries is difficult to quantify. Trade-related job gains and losses since NAFTA may have accelerated trends that were ongoing prior to NAFTA and may not be totally attributable to the trade agreement.²⁵ Quantifying these effects is not easy because of the other economic factors that influence trade and employment levels. The devaluation of the Mexican peso in 1995 resulted in relatively lower Mexican wages, which may have provided an incentive for U.S. companies to move to lower their production costs. Trade-related employment effects following NAFTA could have also resulted from the lowering of trade barriers, and from the economic conditions in Mexico and the United States influencing investment decisions and the demand for goods.

The TAA program provides assistance to workers who have lost their jobs because of trade-related impacts (see section below on NAFTA assistance programs). Workers who are eligible to receive TAA benefits receive certification from the U.S. Department of Labor. One aspect of the previous NAFTA-TAA program is that it provided data on the estimated number of workers covered by certification. The number of certified workers is not the same as the number of jobs lost due to

²¹ Ibid.

²² Moody, John, "Mexico's Rising Labor Costs Drive Canon, Other Companies Away," *Bloomberg News* (on-line), April 2001.

²³ Ibid.

²⁴ Vargas, p. 4.

²⁵ CRS Report 98-783 E. *NAFTA: Estimates of Job Effects and Industry Trade Trends after 5 1/2 Years*.

NAFTA, but it provides some indication of the adjustment costs of NAFTA.²⁶ Table 2 presents the number of workers certified by the NAFTA-TAA Program between January 1994 and December 2001. The industry with the highest number of NAFTA-TAA certified jobs is textiles and apparel with 34% of total NAFTA-TAA certification, followed by the automotive industry with 6% of NAFTA-TAA total certification. NAFTA-TAA certification figures may overestimate job losses among certified workers because not all certified workers may have actually lost their jobs. Data from the Department of Labor suggest that as few as 20 - 30% of certified workers actually collect NAFTA-TAA benefits. Certified workers may not have actually lost their jobs, may have found another job, or may not have collected benefits for other reasons.²⁷

**Table 7. NAFTA-TAA Certification by Industry
January 1994 - December 2001**

Industry	Affected Workers	% of Total
Textiles and Apparel	139,298	34%
Automotive Industry	26,840	6%
Microelectronics	16,806	4%
Electrical Equipment	12,680	3%
Chemicals and Allied Products	6,086	1%
Computer Equipment	6,159	1%
All Industries	415,371	100%

Note: Textiles and apparel category includes SIC codes 22 and 23; automotive industry category includes SIC codes 3465, 3647, 3691, 3694, 3711, 3713, and 3714; microelectronics category includes SIC codes 3671, 3672, 3675, 3676, 3677, 3678, and 3679; electrical equipment category includes SIC codes 3511, 3612, 3613, 3621, and 3625; chemicals and allied products category includes SIC code 28; and computer equipment category includes SIC codes 3571, 3572, 3575, and 3577.

Source: U.S. Department of Labor Office of Trade Adjustment Assistance. Compiled by CRS.

The number of certified workers under the NAFTA-TAA program (330,062 workers) is considerably lower than the estimated number of job losses cited by the Economic Policy Institute (EPI) study discussed earlier in this report. The EPI study estimates about 766,000 “existing or potential” job losses as a result of NAFTA. As discussed earlier, however, the EPI estimate is largely based on the increasing U.S. trade deficit with Mexico and does not take into account other economic factors affecting trade and employment. Therefore, the actual number of job losses due to NAFTA is probably lower than the EPI estimate and may lie in a range between the number of NAFTA-TAA certifications and the EPI figure.

²⁶ CRS Report RS20229, p. 6.

²⁷ CRS Report 98-782 E, *NAFTA: Estimated U.S. Job “Gains” and “Losses” by State Over 5 ½ Years*, pp. 2-3.

NAFTA Adjustment Assistance Programs

The NAFTA-TAA program provided assistance to workers who have lost their jobs because of increased import competition from Mexico or Canada or because of production shifts to Mexico or Canada. Workers receiving benefits had to be certified by the U.S. Secretary of the Labor as having lost their jobs, or have been threatened with job loss due to import competition or production shifts to Mexico or Canada.²⁸ In the 107th Congress, legislation was passed to authorize TAA as a single program without the separate NAFTA-TAA program through FY2007. President Bush proposed in his FY2003 budget to extend the TAA and NAFTA-TAA programs and to include total funding of \$462 million for both programs, representing an increase of \$46 million over FY2002 funding levels of \$416 million.²⁹

From the program's inception in January 1994 through December 2001, 415,371 workers were covered by certification. The NAFTA-TAA worker assistance includes employment services, training, trade readjustment allowances, and job search and relocation allowances. The benefits are administered by the state employment security agencies under contract with the Department of Labor. As part of the employment services, certified workers can receive counseling, testing and placement services, and supportive services. Another form of assistance is cash allowances. Certified workers may be eligible to receive cash benefits, called trade readjustment allowances (TRA).

Another program connected with the passage of NAFTA that provides assistance to communities with significant job losses due to changes in trade patterns with Canada or Mexico is the USCAIP, which is administered for the United States government by the Los Angeles Office of the NADBank. The NADBank, and its sister organization, the Border Environment Cooperation Commission (BECC), were created under a binational side agreement to NAFTA to address environmental infrastructure problems along the U.S.-Mexico border. The USCAIP is administered by the NADBank for the U.S. government. As of September 2001, the program had made three direct loans totaling \$2.18 million and helped fund 563 loans worth \$377.6 million through the Federal Agency Program.³⁰ The program works primarily through the loan programs of the Small Business Administration and the U.S. Department of Agriculture, but also has a grants office that provides community grants on a competitive basis. It may provide direct financing in cases where conventional sources of financing are not available. The program offers credit to new or expanded businesses in communities for commercial projects that create new private sector jobs. The program combines efforts of the NADBank with certain

²⁸ See CRS Report RS21078, *Trade Adjustment Assistance for Workers: Legislation in the 107th Congress*.

²⁹ See CRS Electronic Trade Briefing Book, *Trade Adjustment Assistance for Workers*.

³⁰ Border Environment Cooperation Commission and North American Development Bank. *Joint Status Report*. September 30, 2001. p. 10.

Federal agencies, local financial institutions, and financial intermediaries to help communities meet financing needs for business opportunities.³¹

The USCAIP reports that assistance loans have accounted for the creation or retention of 12,779 jobs.³² However, the actual effect of the program may not be known. According to a U.S. General Accounting Office (GAO) report, the USCAIP does not have a monitoring system in place to measure the program outcomes. The report states that the data in the records maintained by the USCAIP are based on projections by businesses when applying for program financing and are not verified. GAO stated that federal financing programs similar to the USCAIP that assist specific sectors or firms largely shift employment among sectors in the economy rather than raise the overall level of employment.³³

Although the overall effects of NAFTA have been small but positive, some communities have had economic difficulties due to local plant closures. A number of communities have experienced a high number of trade-related layoffs and, while some have had time to absorb the losses, others have not. The NAFTA-TAA program provided assistance for these communities, but there have been implementation challenges. A GAO study on community adjustment assistance reported the experiences of six trade-impacted communities. The study found that the trade adjustment assistance was limited and that all the communities had reported structural problems that impeded effective service delivery. Low educational levels among unemployed workers was a major factor in being able to implement effective training benefits. Another problem was the lack of data on program outcomes to evaluate efficacy. The study stated that there were no simple answers to community recovery, even when assistance funds were available.³⁴

Conclusion

After eight years of implementation, the full effects of NAFTA on the U.S. economy are still unclear. Proponents of NAFTA claim that the agreement has increased U.S. trade with Mexico and Canada, and benefitted the U.S. economy. They believe that NAFTA has had a positive impact on U.S. trade and investment with Canada and Mexico, and that NAFTA has increased U.S. exports to Canada and Mexico.³⁵ Critics of NAFTA argue that hundreds of thousands of U.S. jobs have been lost because of the agreement. NAFTA critics generally base their arguments

³¹ For more information, see the USCAIP website: [<http://www.nadbank-caip.org>].

³² Border Environment Cooperation Commission and North American Development Bank, p. 10.

³³ U.S. General Accounting Office, *Trade Adjustment Assistance: Opportunities to Improve the Community Adjustment and Investment Program*, September 2000.

³⁴ U.S. General Accounting Office, *Trade Adjustment Assistance: Experiences of Six Trade-Impacted Communities*, August 2001.

³⁵ See Council of the Americas and the U.S. Council of the Mexico-U.S. Business Committee, *NAFTA at Five Years*, prepared by the Trade Partnership, Washington, D.C., January 1999.

on the increasing trade deficit with Mexico, stating that increasing U.S. imports from Mexico have caused plant closures and job losses in the United States.

An examination of available data and studies related to NAFTA shows that the effects of NAFTA are not clear-cut. First, it is difficult to isolate the effects of NAFTA because of other variables affecting trade and investment such as economic growth and exchange rates, both of which affect consumer spending and the demand for imports, foreign investment, employment levels, and relative wages. Second, some of the market opening measures in Mexico that resulted from NAFTA were already taking place prior to the agreement and NAFTA may have only accelerated the process. Although the effects of NAFTA may not be easily measured, the trade trends following the agreement may give some overall indication of how the market responded to the new trade rules. Trade between the United States and Mexico expanded considerably after NAFTA. While trade expansion has benefitted the overall U.S. economy in terms of improved production processes, and the increased availability of better goods and services for U.S. consumers at lower cost, there also have been job losses associated with NAFTA. The two U.S. workforce sectors that have been adversely affected are the textiles and apparel industry and the automotive industry.

The trade effects of NAFTA are of significance because of the possibilities of a U.S. trade agreements with Chile and also the Free Trade Area of the Americas initiative. NAFTA may provide an indication of how further trade integration in the Western Hemisphere would affect U.S. industries. One of the key concerns facing policymakers in developing trade policy initiatives is the labor issue and how to address the problem of worker dislocation in industries adversely affected by trade.³⁶ Two NAFTA-related programs that were created to provide assistance to workers and communities affected by trade with Mexico or Canada, the NAFTA-TAA program and the USCAIP program, have been beneficial but also have limitations. According to one GAO study, NAFTA-TAA training assistance has not always been effective, especially in cases of workers with low educational levels. The study found that there were no simple answers to community recovery even when assistance was available. Another GAO report stated that the effectiveness of the USCAIP program is not known because of the lack of a measuring mechanism to evaluate program outcomes.

³⁶ For more information on and labor issues and trade adjustment assistance for firms see CRS Report RL31178, *Trade Promotion Authority (Fast-Track): Labor Issues (Including H.R. 3005 and H.R. 3019)*; and CRS Report RS20210, *Trade Adjustment Assistance for Firms: Economic, Program, and Policy Issues*.