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HEADING SOUTH U.S.-Mexico trade and job displacement after NAFTA

BY ROBERT E. SCOTT

As of 2010, U.S. trade deficits with Mexico totaling \$97.2 billion had displaced 682,900 U.S. jobs. Of those jobs, 116,400 are likely economy-wide job losses because they were displaced between 2007 and 2010, when the U.S. labor market was severely depressed.

Prominent economists and U.S. government officials predicted that the North American Free Trade Agreement (NAFTA) would lead to growing trade surpluses with Mexico and that hundreds of thousands of jobs would be gained (Hufbauer and Schott 1993; President Clinton 1993). The evidence shows that the predicted surpluses in the wake of NAFTA's enactment in 1994 did not materialize, for reasons outlined in this briefing paper. However, congressional leaders and administration officials now make nearly identical claims about export growth and job creation under the proposed U.S.-Korea Free Trade Agreement (KORUS FTA).

Abstract promises about increased jobs and exports misrepresent the real overall effects of trade on the U.S. economy. Trade both creates and destroys jobs. While exports tend to support domestic employment, imports lead to job displacement: As imports are substituted for domestically produced goods, production that supports domestic jobs falls, displacing existing jobs and preventing new job creation.

Growing trade deficits almost always result in growing trade-related job displacement. Like NAFTA, the KORUS FTA will likely result in growing trade deficits and hence U.S. job displacement, not economy-wide job growth.

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Key findings of this report include the following:

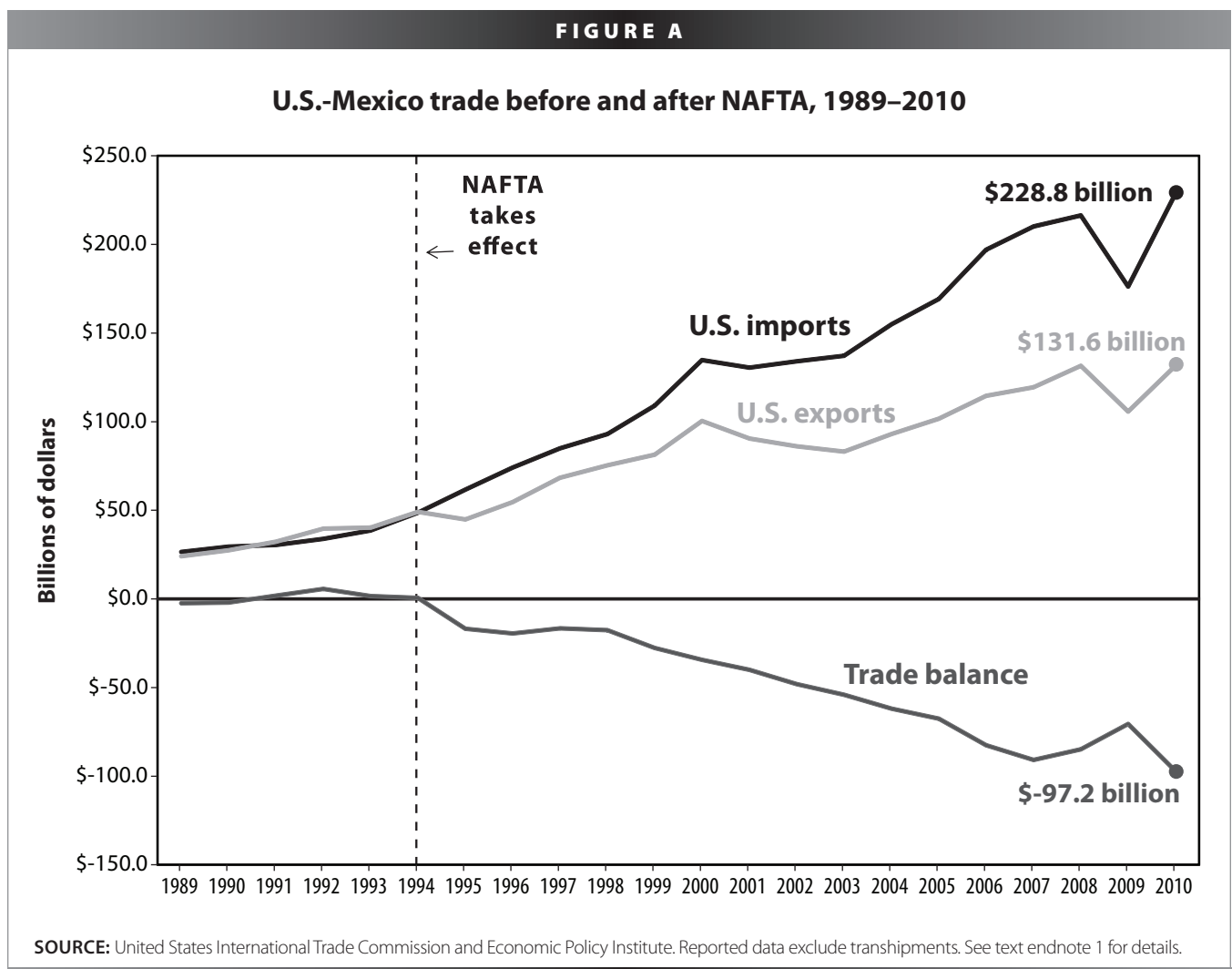
- The United States had a small (\$1.6 billion) trade surplus with Mexico (supporting 29,400 jobs) in 1993, the year before NAFTA took effect.
- U.S. trade deficits with Mexico as of 2010 displaced production that could have supported 682,900 U.S. jobs; given the pre-NAFTA trade surplus, all of those jobs have been lost or displaced since NAFTA. This estimate of 682,900 net jobs displaced takes into account the additional jobs created by exports to Mexico.
- Rapidly growing trade deficits and job displacement happened as a surge of foreign direct investment (FDI) poured into Mexico from private investors (NAFTA made it attractive to companies all over the world to invest in Mexico to gain duty free access to the U.S. market). FDI tripled as a share of Mexico's gross domestic product in the post-NAFTA period and fueled the outsourcing of jobs and production to Mexico.
- Most of the jobs displaced by trade with Mexico as of 2010 were in manufacturing industries (415,000 jobs; 60.8% of the total jobs displaced).
- Computer and electronic parts (150,300 jobs, 22% of the 682,900 displaced jobs) and motor vehicles and parts (108,000 jobs; 15.8% of the total) were the manufacturing industries hardest hit by growing bilateral trade deficits.
- More jobs were created in Mexico (30,400) by the growth of net exports of autos and auto parts to the United States in 2010 than were created in the entire U.S. auto industry in the same period, which added only 25,700 jobs between December 2009 and December 2010. The 30,400 jobs displaced in autos and parts in 2010 explains more than one-quarter of all jobs displaced by the growth of trade deficits with Mexico between 2007 and 2010 (116,400 jobs).
- The 682,900 jobs displaced as of 2010 were distributed across all 50 states, the District of Columbia, and Puerto Rico. The 10 hardest-hit states (i.e., jobs displaced as a share of total state employment) were Michigan (43,600 jobs lost, 1.0%), Indiana (24,400, 0.8%), Kentucky (12,100, 0.6%), Ohio (34,900, 0.6%), Tennessee (16,400, 0.6%), New Hampshire (4,000, 0.6%), Illinois (34,700, 0.6%), Alabama (11,100, 0.6%), Massachusetts (17,100, 0.5%), and Texas (55,600, 0.5%).
- The states with the most jobs displaced were California (86,500 jobs), Texas (55,600), Michigan (43,600), Ohio (34,900), Illinois (34,700), New York (34,300), Florida (28,800), Pennsylvania (26,300), Indiana (24,400), and North Carolina (18,900).
- The hardest-hit congressional districts, as a share of total employment, had large numbers of workers displaced by manufacturing trade, especially in autos, auto bodies, and parts, and in computer and electronic parts production. Half of the top 20 hardest-hit districts were in Michigan, followed by four in California, three in Indiana, two in Ohio, and one in Texas.
- U.S. trade with South Korea is similar to that with Mexico. This past decade, the United States has had significant trade deficits with South Korea that were dominated by trade in computer and electronic parts, and in motor vehicles and parts.
- Based on analyses of U.S. trade with both Mexico and South Korea and of the revisions to the U.S.-Korea Free Trade Agreement made in December 2010, KORUS FTA is likely to increase U.S. trade deficits and job displacement, especially in the motor vehicles and parts and the computer and electronics parts industries.

The NAFTA model: Economic integration and deregulation hurt workers in Canada, Mexico, and the United States

The North American Free Trade Agreement eliminated or phased out most tariffs and non-tariff trade barriers between Canada, Mexico, and the United States. NAFTA was a 2,000-page treaty covering trade and regulation in a wide range of industries, and became, in effect, the economic constitution of North America.

Contrary to official predictions, NAFTA led to growing U.S. trade deficits with Canada and Mexico, not trade surpluses. The United States had a small trade surplus with Mexico in 1993, the year before NAFTA took effect. As shown in **Figure A**, by 2010, U.S. exports to Mexico totaled \$131.6 billion, but imports were \$228.8 billion, resulting in a \$97.2 billion U.S. trade deficit with Mexico in that year.¹

In NAFTA's first decade, the United States developed large trade deficits with Canada, especially in manufactured goods, which at their peak in 2004 displaced hundreds of thousands of U.S. jobs (Scott 2006). However, since 2002, the Canadian dollar has risen significantly against the U.S. dollar (as have other freely floating currencies, such as the Euro). As a result, the U.S. trade deficit with Canada in non-oil (primarily manufactured) goods largely disappeared, falling to less than \$1 billion in 2010. Therefore, U.S. trade with Canada in non-oil goods is no longer a significant source of job displacement for the United States.²



In addition to shifting trade balances, NAFTA altered the landscape for Mexican and Canadian workers. For example, prior to the implementation of NAFTA, Mexico had relatively high tariffs on industrial goods and agricultural commodities. It also maintained a “developmental state” which supported domestic development through an extensive set of regulatory policies that included local content regulations, requirements that foreign firms employ local managers, and other restrictions on the operations of multinational companies. Mexico also had a wide social safety net that included a public health insurance system and a system of rural property rights that supported subsistence farming and prevented agribusinesses from converting small plots to “industrial farms.”

NAFTA did much more than eliminate tariffs between both countries: It required Mexico (and Canada) to dismantle key components of their developmental states and also exerted great pressure on Mexico to pare back or privatize large parts of its safety net, as well as the national banking system. NAFTA included rules on trade in goods, technical barriers to trade, government procurement, investment, services, intellectual property rights, and administrative provisions, which included a “dispute settlement” process in the chapter on “Investment” (NAFTA Secretariat 2011, Chapter 11) that, for the first time, allowed corporations to sue governments for “takings” or the loss of potential profits as a result of new government regulations. The dispute settlement process has had a number of unintended consequences, and has resulted in at least 88 suits and \$327 million of settlements paid to foreign investors by governments in the region (Public Citizen 2010). These suits have also had a chilling effect on regulations in all three countries.³

NAFTA proponents claimed that the trade agreement would generate a growing middle class in Mexico. But their claims proved incorrect:

Contrary to NAFTA’s stated objectives, the Mexican economy has failed in its promised to create good quality jobs and to address the erratic and feeble growth of workers income. ... Employment has become increasingly precarious overall, the agricultural sector has suffered a large and steady loss of employment, and real salaries remain below the levels of the early 1990s, as Mexico’s dependence on global imports grows. (Salas 2006, 33)

In fact, NAFTA had devastating consequences for the Mexican economy (Salas 2006 and Faux 2006). Mexico experienced a peso crisis in 1994 that pitched the economy into a steep recession. At least one expert has argued that this crisis was caused, in part, by a wave of speculative foreign investment in Mexico in advance of the signing of the agreement (Blecker 1997). Millions of jobs were lost in the wake of the peso crisis (and the ensuing International Monetary Fund stabilization plan, which required massive, contractionary cutbacks in government spending).

NAFTA also provided convenient cover for conservative governments in all three nations to undertake economic reforms in order to gain economic “competitiveness” in the treaty’s wake. For example, Mexico also lost 1.3 million jobs in the agricultural sector as a result of the flood of cheap, subsidized corn from the United States after corn tariffs were liberalized, shortly after the agreement took effect (Papademetriou, Audley, Polaski, and Vaughan 2003, 1-23).⁴ Further, workers in Canada suffered as a result of massive cutbacks in government spending at the provincial and national levels that arose when conservative Canadian governments touting the need to maintain “competitiveness” used North American economic integration to begin a race to the bottom in government spending and taxation (Campbell 2006).

The effects of NAFTA on U.S. trade

NAFTA proponents, such as President Bill Clinton (1993) and Gary Hufbauer and Jeffrey Schott of the Institute for International Economics (1993) argued that the most important economic effects of the treaty would result from its tariff reductions, which would increase trade flows between member countries. These authors claimed that because tariff barriers were higher in Mexico than in the United States prior to NAFTA, U.S. exports to Mexico would grow much more rapidly than U.S. imports from Mexico after the agreement took effect. In this model, since U.S. tariff barriers were already quite low, the United States was giving away relatively little in trade concessions in exchange for access to a supposedly large and rapidly growing economic market, especially in Mexico. When NAFTA took effect, U.S.-Canada

economic integration was already established under the 1989 U.S.-Canada Free Trade Agreement and earlier trade agreements between the two countries.

Hufbauer and Schott (1993, 14-15) estimated that NAFTA would “create about 170,000 net new U.S. jobs in the foreseeable future...” based on projections of “a U.S. merchandise trade surplus with Mexico of \$7 billion to \$9 billion annually throughout the 1990s and perhaps \$9 billion to \$12 billion annually in the following decade.” Their estimates were relative to base-year trade in 1990, when the United States had a \$2 billion trade deficit with Mexico. A quick comparison of their forecast with the actual trade data shown in Figure A shows that these projections missed both the direction of trade flows (large U.S. trade deficits with Mexico, not surpluses, were the result), as well as their scale. The U.S. trade deficit in 2010 was nearly \$100 billion, roughly 10 times larger than the surplus predicted by Hufbauer and Schott in 1993.

As Figure A shows, the U.S. developed a trade deficit with Mexico shortly after NAFTA went into effect which continued to grow albeit with a temporary reversal from 2007, when the U.S. economy edged into recession, as demand for imports fell faster than demand for exports, to 2009, when U.S. imports from and exports to Mexico essentially collapsed as the U.S. economy fell into the worst recession in 75 years. The resulting decline in the U.S. trade deficit with Mexico (and other countries) between 2007 and 2009 helped cushion the impact of the recession on the U.S. economy, and transmitted part of the shock to Mexico and our other trading partners. In fact, Mexico’s economy contracted sharply in 2009, the peak year of the U.S. crisis, as real GDP declined by 6.5%.⁵

However, as depicted in **Table 1**, U.S. trade with Mexico recovered strongly enough in 2010 to push the U.S. trade deficit with Mexico to its nadir. In 2010, the deficit was up \$6.4 billion, in nominal terms, from 2007, reaching \$97.2 billion—reflecting a 14.6% average annual increase in the deficit from 1997 to 2010.

TABLE 1

U.S.-Mexico trade balance and job displacement, 1997–2010
U.S. trade with Mexico (\$billions, nominal)

	1997	2000	2007	2010	Changes in \$billions		Percent change
					1997–2010	2007–10	1997–2010
<i>U.S. domestic exports*</i>	\$68.4	\$100.4	\$119.4	\$131.6	\$63.2	\$12.2	92%
<i>U.S. imports for consumption</i>	85.0	134.7	210.2	228.8	143.8	18.7	169
<i>U.S. trade balance</i>	-16.6	-34.3	-90.8	-97.2	-80.6	-6.4	485
<i>Average annual change in the trade balance</i>					-6.2	-2.1	14.6

U.S.-Mexico trade-related jobs supported and displaced (thousands of jobs)							
	1997	2000	2007	2010	Changes in thousands of jobs		Percent change
					1997–2010	2007–10	1997–2010
<i>U.S. domestic exports</i>	523.7	767.1	780.7	791.9	268.2	11.2	51%
<i>U.S. imports for consumption—jobs displaced</i>	626.3	966.7	1,347.2	1,474.8	848.5	127.6	135
<i>U.S. trade deficit—net jobs lost</i>	102.6	199.6	566.5	682.9	580.6	116.4	566

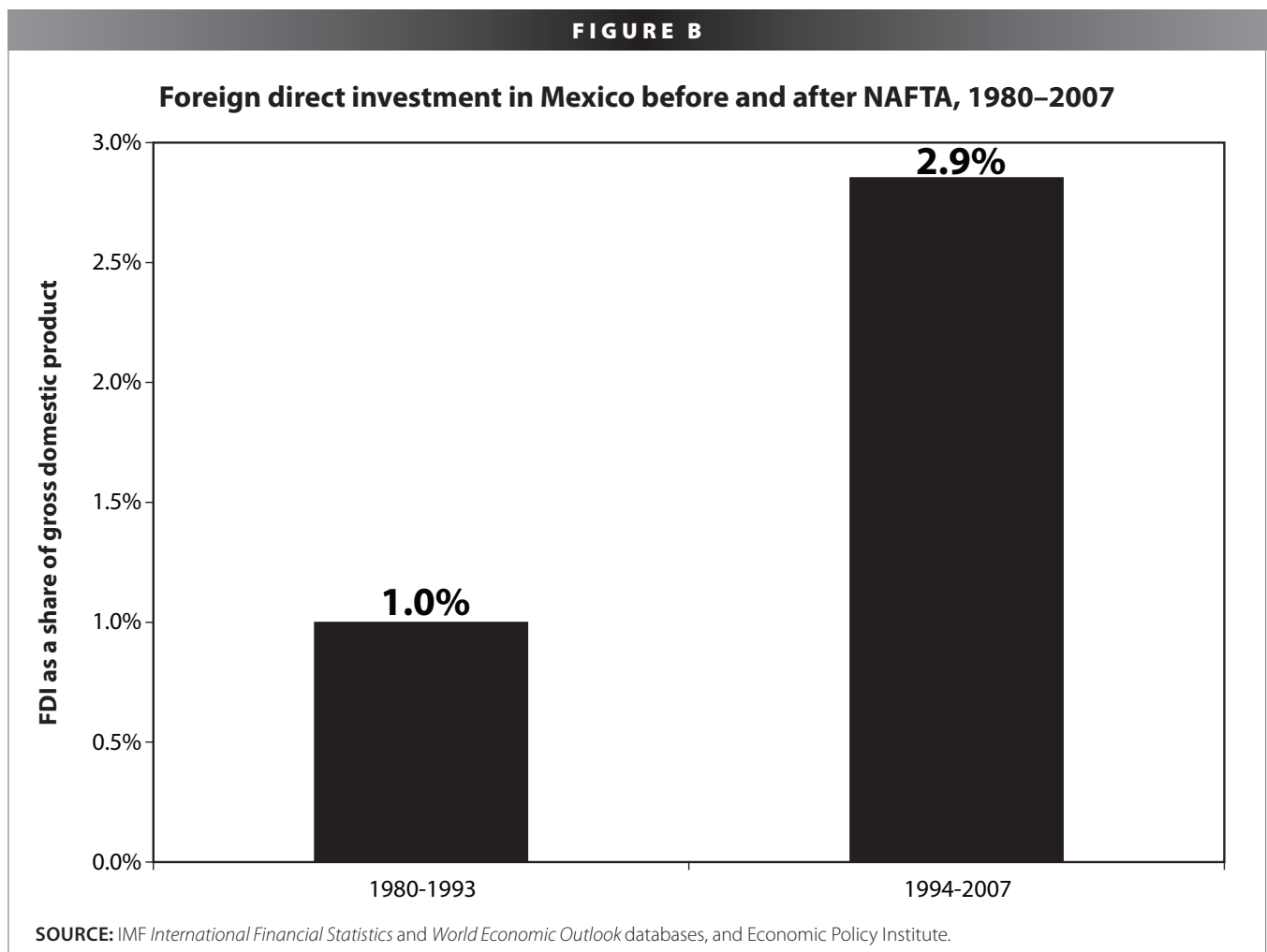
* Domestic exports are goods produced in the United States, and exclude re-exports, i.e., goods produced in other countries and shipped through the United States. Total exports as reported by the U.S. International Trade Commission include re-exports. Total exports were estimated to be \$163.3 billion in 2010, while U.S. re-exports to Mexico represent 19.4% of total exports. The employment estimates shown here are based on domestic exports only. See text and endnote 1 for further details and references.

SOURCE: EPI analysis of U.S. Census Bureau, United States International Trade Commission, and Bureau of Labor Statistics data.

Despite the U.S. experience with Mexico after NAFTA took effect, both Democratic and Republican administrations have continued to use the same arguments to predict that free trade agreements with other countries will lead to trade gains and new U.S. jobs. For example, in testimony before the U.S. Senate Finance Committee, U.S. Trade Representative Ron Kirk (2011) said, regarding the proposed U.S.-Korea Free Trade Agreement, “It is time to realize this agreement’s promise of more than \$10 billion in increased goods exports and more than 70,000 American jobs.” This statement is cleverly crafted to ignore the likely impact of the agreement on U.S. imports—but the implied promise is clear: By cutting Korean tariffs and other market access barriers, the KORUS FTA will support job gains in the United States. However, as shown in this report, the United States experienced substantial net job displacement due to rising trade deficits with Mexico after NAFTA, and will likely suffer a similar result if the KORUS FTA is adopted (Scott 2010a).

Why NAFTA failed to improve the U.S. trade balance with Mexico

From the standpoint of the business community, NAFTA’s most important achievement was that it made Mexico a much safer and more attractive location to invest and outsource U.S. manufacturing production. NAFTA’s investment provisions created new and improved safeguards for foreign investors, including new dispute settlement tribunals providing a mechanism for settling disputes with foreign governments outside of the Mexican legal system.⁶ By eliminating Mexico’s developmental state and use of local content rules, and other demands and conditions on foreign investors, the trade agreement greatly reduced the cost of doing business in Mexico, and increased the security of those investments.



NAFTA's intellectual property provisions ensured that companies could retain complete control of their intellectual property. Finally, the services provisions opened up new markets for foreign investment in sectors formerly run by the state in Mexico, such as health care, banking, and transportation services.

For all these reasons, and because of the availability of a large, nearby pool of low-wage workers, foreign direct investment (FDI) in Mexico soared after NAFTA took effect. Between 1980 and 1993, FDI averaged only 1% of gross domestic product in Mexico. From 1994, when NAFTA took effect, until 2007, it nearly tripled, to 2.9% of GDP, as shown in **Figure B**.⁷ Those investments fueled a flood of outsourcing to Mexico. As a result, the average, annual rate of growth of imports from Mexico increased from 9.0% in the 1980–93 era to 11.7% in the post-NAFTA period (1994–2010).

The average annual rate of growth of exports to Mexico also increased, but much less, rising from 7.7% in the pre-NAFTA period to 8.3% post-NAFTA. The relatively slow export growth was caused, in part, by the peso crisis, which produced stagnating real wages in Mexico for at least a decade following NAFTA (Salas 2006; Papademetriou 2003). Stagnant wages limited consumption demand for exports from the United States. Parts, supplies, and components for use in Mexican export-oriented factories (so-called tourist exports) increased initially, but leveled off as Mexican supply chains (such as parts, engine, and stamping plants in the automotive sector) deepened and expanded.⁸

Since U.S. imports from Mexico grew much more rapidly than exports to Mexico after NAFTA, the trade deficit grew rapidly, as shown earlier in Figure A. Growing trade deficits usually result in trade-related job displacement and job losses, which was the case after NAFTA took effect, as shown below.

Employment impacts of U.S.-Mexico trade deficits

The United States had a small \$1.6 billion trade surplus with Mexico in 1993, the year before NAFTA took effect. By 1997, the United States had developed a \$16.6 billion trade deficit with Mexico, which increased to \$97.2 billion in 2010, as shown in Table 1. Between 1997 and 2010, the U.S. trade deficit with Mexico increased \$6.2 billion per year, or 14.6% per year.

This paper estimates the impact of that change in trade on employment by calculating the labor content of changes in the trade balance—the difference between exports and imports. For example, each \$1 billion in U.S. auto parts exported to Mexico supports U.S. jobs, but each \$1 billion in autos and trucks imported from Mexico displaces the workers who would have been making them in the United States. On balance, the net employment effect of trade flows is determined by changes in the trade balance. Growing trade deficits usually result in job displacement.

The employment impacts of trade deficits are assessed using an input-output model that estimates the direct and indirect labor requirements of producing output in a given domestic industry. The model includes 202 U.S. industries, 84 of which are in the manufacturing sector.⁹ The model estimates the amount of labor (number of jobs) required to produce a given volume of exports and the labor displaced when a given volume of imports is substituted for domestic output. The net of these two numbers is the estimated number of jobs displaced by changes in the trade balance, holding all else equal.

U.S. exports to Mexico in 2010 supported 791,900 jobs, but U.S. imports displaced production that would have supported 1,474,800 jobs, as shown in the bottom half of Table 1. Therefore, the \$97.2 billion U.S. trade deficit with Mexico in 2010 displaced 682,900 jobs.¹⁰ Since the United States had a small trade surplus in 1993 (not shown), all of those jobs were displaced between 1993 and 2010.¹¹ On average, 40,200 jobs have been lost or displaced per year since NAFTA took effect.¹²

U.S. jobs displaced by the trade deficit with Mexico are a net drain on employment in trade-related industries, especially those in the manufacturing sector. Even if increased demand in other sectors absorbs all the workers displaced by trade (an unlikely event), job quality is likely to suffer, as many non-trade-related industries, such as retail and home health care, pay lower wages and have less comprehensive benefits than trade-related industries.

Furthermore, the 116,400 U.S. jobs displaced by the \$6.4 billion increase in the deficit between 2007 and 2010 are counted as job losses because the U.S. labor market was in recession between 2007 and 2010. Since the U.S.-Mexico trade balance shrank in 2008 and 2009, all of these jobs were lost in 2010. Given the excess capacity in the economy in 2011, and the fact that short-term interest rates are close to zero, the 116,400 jobs displaced by trade since the recession began likely to be net job losses for the entire economy.

This loss of 116,400 jobs is large relative to the increase in the trade deficit between 2007 and 2010. It is explained, in part, by a decline in the deficit in crude oil and petroleum products, and a proportionately larger increase in the trade deficit in manufactured products (which are more labor intensive) in 2010 and by related changes in some price deflators. Falling prices for some manufactured goods expanded the real, non-oil trade deficit (dominated by trade in manufactured products), which increased about \$28 billion (versus the \$6.4 billion increase in the nominal deficit). There were large increases in the nominal trade deficit in a few manufactured goods (e.g., non-ferrous metal products, computer and peripheral products), which also experienced large price declines that magnified the impact of these shifts on real trade flows.

Trade deficits and job displacement, by industry

U.S. non-oil trade deficits, which are responsible for the bulk of all jobs displaced by NAFTA, are concentrated in a few key industries, especially computer and electronic parts and motor vehicles and parts. More than three-fourths of the U.S. trade deficit with Mexico in 2010 arose in these two industries. As a result, NAFTA-related job displacement is concentrated in these sectors, and in the regions of the country where they are located.

Table 2 summarizes U.S. trade with Mexico in 2010. Non-oil goods, which include everything in this table except for oil and gas mining and refined petroleum products, were responsible for 85.5% of total imports (column one in Table 2). Non-oil goods imports were dominated by manufacturing, which in turn was dominated by durable goods, which totaled \$163.1 billion, or 71.3% of total U.S. imports from Mexico.

While durable goods included a wide array of commodities, they were dominated by computer and electronic parts, which were responsible for \$53 billion (23.2%) of total imports; and by motor vehicles and parts, which were \$51.3 billion (22.4%) of total imports.

Compared with durable goods, non-durable goods (including food products, textiles, and apparel) made up a smaller share of manufactured imports: At \$13.8 billion, they were responsible for 6.0% of total imports. Imports of industrial supplies (including refined petroleum products) were \$14.1 billion (6.2%).

Non-oil goods were responsible for 89.4% of total exports (column 2). Manufactured products also dominated U.S. exports, but the composition was different from imports. Durable goods, while still the largest manufacturing sector, was responsible for only \$68.1 billion in exports in 2010, or 51.7% of the total.

Within the durable goods industries, the United States largely ships components to Mexico for final assembly, including \$11.7 billion in computer and electronic parts; while they account for 8.9% of total exports, computer and electronics exports are roughly one-fifth of the value of computer and electronics parts imports. Similarly, exports of motor vehicles and parts to Mexico totaled \$15.9 billion, accounting for 12.1% of total exports, but less than one-third of the value of motor vehicles and parts imports.

Within manufacturing, industrial supplies were responsible for \$41.6 billion (31.6%) of total U.S. exports to Mexico in 2010. This included \$17.6 billion in chemicals (13.4%) and \$11.9 billion in refined petroleum products (9.1%). While the United States is a large net importer of crude oil, it has exported growing volumes of refined petroleum products back to Mexico in recent years. The smallest category of manufacturing exports were non-durable goods (\$11.7 billion, 8.9% of the total), which were dominated by food and kindred products (\$7.6 billion) and textiles and fabrics (\$2.4 billion).

TABLE 2

Trade with Mexico, by industry (billions of dollars), 2010

Industry*	Imports		Exports		Trade balance	
	dollars	share	dollars	share	dollars	share
Agriculture, forestry, fisheries	\$7.5	3.3%	\$6.5	4.9%	-\$1.0	1.0%
Mining	29.6	12.9	2.6	2.0	-27.0	27.8
<i>Oil and gas</i>	29.3	12.8	2.0	1.5	-27.3	28.1
<i>Minerals and ores</i>	0.3	0.1	0.7	0.5	0.3	-0.3
Manufacturing	191.0	83.5	121.3	92.2	-69.7	71.7
<i>Non-durable goods</i>	13.8	6.0	11.7	8.9	-2.1	2.2
Food and kindred products	4.6	2.0	7.6	5.8	3.0	-3.1
Beverage and tobacco products	2.6	1.1	0.5	0.4	-2.1	2.1
Textiles and fabrics	0.5	0.2	2.4	1.8	1.9	-1.9
Textile mill products	0.7	0.3	0.3	0.2	-0.4	0.4
Apparel and accessories	3.7	1.6	0.5	0.4	-3.2	3.3
Leather and allied products	1.7	0.7	0.5	0.4	-1.2	1.3
<i>Industrial supplies</i>	14.1	6.2	41.6	31.6	27.5	-28.3
Wood products	0.1	0.1	0.5	0.4	0.3	-0.4
Paper	0.9	0.4	4.1	3.1	3.1	-3.2
Printed matter and related products	0.4	0.2	0.5	0.4	0.1	-0.1
Refined petroleum products	3.8	1.7	11.9	9.1	8.1	-8.3
Chemicals	3.8	1.7	17.6	13.4	13.8	-14.2
Plastics and rubber products	2.8	1.2	5.9	4.5	3.1	-3.2
Nonmetallic mineral products	2.1	0.9	1.0	0.8	-1.1	1.1
<i>Durable goods</i>	163.1	71.3	68.1	51.7	-95.1	97.8
Primary metals	9.7	4.2	6.9	5.3	-2.8	2.9
Fabricated metal products	5.3	2.3	5.3	4.0	0.0	0.0
Not specified metal industries	0.0	0.0	0.0	0.0	0.0	0.0
Machinery, except electrical	11.8	5.2	11.4	8.6	-0.4	0.4
Computer and electronic parts	53.0	23.2	11.7	8.9	-41.3	42.5
<i>Computer and peripheral equipment</i>	13.6	5.9	2.3	1.7	-11.3	11.6
<i>Communications, audio and video equipment</i>	30.5	13.3	3.1	2.4	-27.4	28.1
<i>Navigational, measuring, electromedical, and control instruments</i>	5.1	2.2	2.0	1.6	-3.0	3.1
<i>Semiconductor and other electronic components & storage media</i>	3.9	1.7	4.3	3.2	0.3	-0.3
Electrical equipment, appliances, and components	16.3	7.1	6.2	4.7	-10.1	10.4
Transportation equipment	52.2	22.8	17.7	13.4	-34.5	35.5
<i>Motor vehicles and parts</i>	51.3	22.4	15.9	12.1	-35.4	36.4
<i>Aerospace product and parts</i>	0.7	0.3	1.4	1.1	0.7	-0.8
<i>Railroad, ship, and other transportation equipment</i>	0.2	0.1	0.4	0.3	0.2	-0.2
Furniture and fixtures	1.3	0.6	0.3	0.2	-1.0	1.0
Miscellaneous manufactured commodities	13.5	5.9	8.5	6.5	-5.0	5.1
Scrap and non-comparable imports	0.8	0.3	1.1	0.9	0.4	-0.4
SUBTOTAL, NON-OIL GOODS	\$195.7	85.5%	\$117.7	89.4%	-\$78.0	80.2%
TOTAL	\$228.8	100.0%	\$131.6	100.0%	-\$97.2	100.0%

* Excludes utilities, construction, and service sectors, which had no trade, and communications, which had less than \$0.1 billion in imports and exports.

SOURCE: EPI analysis of U.S. Census Bureau, United States International Trade Commission, and Bureau of Labor Statistics data.

The total U.S. trade deficit with Mexico in 2010 (Table 2, column three) was almost entirely explained by the deficit in durable goods (\$95.1 billion, 97.8%). Durable goods trade deficits in computers and electronic parts (\$41.3 billion, 42.5%) and motor vehicles and parts (\$35.4 billion, 36.4%) together explained more than three-fourths of the U.S. trade deficit with Mexico in 2010. In contrast, the United States had a much smaller trade deficit in non-durable goods (\$2.1 billion), which included trade surpluses in food and kindred products (\$3.0 billion) and textile and fabrics (\$1.9 billion).¹³ The United States also had trade surpluses in industrial supplies (\$27.5 billion), which included surpluses in refined petroleum (\$8.1 billion), chemicals (\$13.8 billion), and plastics (\$3.1 billion). Finally, the United States had a trade deficit of only \$1 billion (1%) in agricultural, forestry and fisheries products. Detailed trade data (not shown) reveal that the United States had a surplus of about \$4.5 billion in cash grains and oil seeds in 2010, which was more than offset by a \$5.5 billion deficit in vegetables, melons, fruits, and tree nuts.

The picture that emerges from Table 2 is that of an integrated North American economy, one in which the United States exports high volume, capital-intensive manufactured supplies (textiles, refined petroleum, chemicals, and plastics) and parts for durable products, and imports a much larger volume of manufactured goods, which is dominated by imports of finished autos and computers and electronic components. The U.S. trade deficit with Mexico in crude oil was offset in 2010 by the U.S. surplus in industrial supplies. Crude oil prices were relatively low in 2010, and increasing oil prices could shift the sign of this balance in the future, but the basic tradeoff is likely to persist.

Trade deficits were highly correlated with job displacement

Trade deficits were highly correlated with job displacement by industry, as shown in **Table 3**. The U.S. trade deficit with Mexico in 2010 displaced 415,000 manufacturing jobs, about three-fifths (60.8%) of the 682,900 displaced overall from 1994–2010.

Within manufacturing, the hardest-hit industry was computer and electronic parts—150,300 jobs displaced (22%). This sector included computer and peripheral equipment (27,600 jobs, 4.0%), communication and audio-video equipment (82,800, 12.1%), and semiconductors and components (24,900 jobs, 3.6%). In motor vehicles and parts, 108,000 jobs were displaced, 15.8% of the total. Other hard-hit sectors included apparel and accessories (22,100 jobs, 3.2%), fabricated metal products (39,200 jobs, 5.7%), and miscellaneous manufacturing (22,300 jobs, 3.3%).

Although they don't appear in commodity trade flows, several service industries that provided key inputs to traded goods production experienced substantial job displacement, including administrative and support services (50,500 jobs, 7.4%) and professional, scientific, and technical services (53,300 jobs, 7.8%).

The U.S. trade deficit with Mexico in motor vehicles and parts, in particular, grew very rapidly in 2010. In part, this reflects the depressed state of the U.S. auto industry in 2009, in the wake of the financial crisis and the collapse of GM and Chrysler. It also reflects decisions to close large numbers of GM and Chrysler assembly plants as part of their bankruptcy-restructuring plans. Meanwhile, GM, Chrysler, Ford, and foreign auto manufacturers continued to invest in new vehicle-assembly plants in Mexico, and in plants to manufacture major parts such as engines and transmissions (Scott 2009).

As a result of U.S.-based plant closures and new plant openings in Mexico, more jobs were created in Mexico in 2010 (30,400) by the growth of net exports of autos and parts to the United States than were created in the entire U.S. auto industry in the same period, which added only 25,700 jobs between December 2009 and December 2010.¹⁴ The growth in job displacement in autos and parts in 2010 explains more than one-quarter of all jobs displaced between 2007 and 2010 (116,400 in total; see Table 1).

TABLE 3

Net U.S. jobs created or displaced by trade with Mexico, by industry, 2010

	Industry total*	Industry share of total jobs displaced
Agriculture, forestry, fisheries	8,200	-1.2%
Mining	-21,000	3.1
<i>Oil and gas</i>	-17,600	2.6
<i>Minerals and ores</i>	-3,300	0.5
Utilities	-2,000	0.3
Construction	-11,100	1.6
Manufacturing	-415,000	60.8
<i>Nondurable goods</i>	-22,200	3.3
Food and kindred products	5,700	-0.8
Beverage and tobacco products	-3,600	0.5
Textiles and fabrics	6,400	-0.9
Textile mill products	-3,400	0.5
Apparel and accessories	-22,100	3.2
Leather and allied products	-5,200	0.8
<i>Industrial supplies</i>	3,200	-0.5
Wood products	-1,500	0.2
Paper	4,800	-0.7
Printed matter and related products	-2,500	0.4
Petroleum and coal products	1,700	-0.2
Chemicals	13,100	-1.9
Plastics and rubber products	-2,300	0.3
Nonmetallic mineral products	-10,000	1.5
<i>Durable goods</i>	-396,000	58.0
Primary metals	-22,900	3.4
Fabricated metal products	-39,200	5.7
Not specified metal industries	0	0.0
Machinery, except electrical	-7,200	1.1
Computer and electronic parts	-150,300	22.0
<i>Computer and peripheral equipment</i>	-27,600	4.0
<i>Communications, audio and video equipment</i>	-82,800	12.1
<i>Navigational, measuring, electromedical, and control instruments</i>	-14,900	2.2
<i>Semiconductor and other electronic components & magnetic and optical media production</i>	-24,900	3.6
Electrical equipment, appliances, and component	-38,600	5.7
Transportation equipment	-105,500	15.4
<i>Motor vehicles and parts</i>	-108,000	15.8
<i>Aerospace product and parts</i>	2,000	-0.3
<i>Railroad, ship, and other transportation equipment</i>	400	-0.1
Furniture and fixtures	-9,600	1.4
Miscellaneous manufactured commodities	-22,300	3.3
<i>Other manufacturing not specified</i>	0	0.0

cont. on page 12

TABLE 3 (CONTINUED)

Net U.S. jobs created or displaced by trade with Mexico, by industry, 2010

	Industry total*	Share of total jobs displaced
Wholesale and retail trade	0	0.0%
Transportation	-26,000	3.8
Information	-16,300	2.4
Finance and insurance	-14,800	2.2
Real estate and rental and leasing	-9,100	1.3
Professional, scientific, and technical services	-53,300	7.8
Management of companies and enterprises	-39,500	5.8
Administrative and support and waste management and remediation services	-50,500	7.4
Education services	-1,000	0.1
Health care and social assistance	-500	0.1
Arts, entertainment, and recreation	-4,600	0.7
Accommodation and food services	-12,900	1.9
Other services	-8,100	1.2
Government	-4,600	0.7
Scrap and noncomparable imports	0	0.0
TOTAL JOBS CREATED OR DISPLACED*	-682,900	100.0%

* Subcategory and category totals may not exactly add up due to rounding errors.

SOURCE: EPI analysis of U.S. Census Bureau, United States International Trade Commission, and Bureau of Labor Statistics data.

Trade deficits and job displacement, by state

U.S. trade deficits with Mexico in 2010 reduced demand for goods produced in every region of the United States and have led to job displacement in all 50 states and the District of Columbia, as shown in Tables 4A–4C and in Figure C. Jobs displaced due to this deficit exceeded 0.5% of total employment in states such as Michigan, Indiana, Kentucky, Ohio, Tennessee, New Hampshire, Illinois, and Alabama, as shown in **Table 4A** and **Figure C**. More than 86,000 jobs were displaced in California, more than 55,000 were displaced in Texas, more than 43,000 jobs were displaced in Michigan, and more than 30,000 jobs were displaced in Ohio, Illinois, and New York each, as shown in **Table 4B**. An alphabetical list of job losses by state is shown in **Table 4C**.

Figure C (and the companion interactive map posted on EPI's website on May 3, 2011, under *Economic Snapshots* and *Lastest Research*) shows that the effects of growing trade deficits with Mexico have been widely felt across the United States and that no area has been exempt from their impact. Job displacement has been concentrated in Midwestern states, which are heavily impacted by losses in the auto sector, and in states with high-tech industries, such as Texas and California.

Growing trade deficits with Mexico have clearly reduced domestic employment in traded goods industries, especially in the manufacturing sector, which has been hard hit by plant closings and job losses. Manufacturing workers displaced by trade have had a particularly difficult time securing comparable employment elsewhere in the economy. More than one-third of workers displaced from manufacturing dropped out of the labor force (Kletzer 2001, 101, Table D2), and average wages of those who found work elsewhere fell between 11% and 13%.

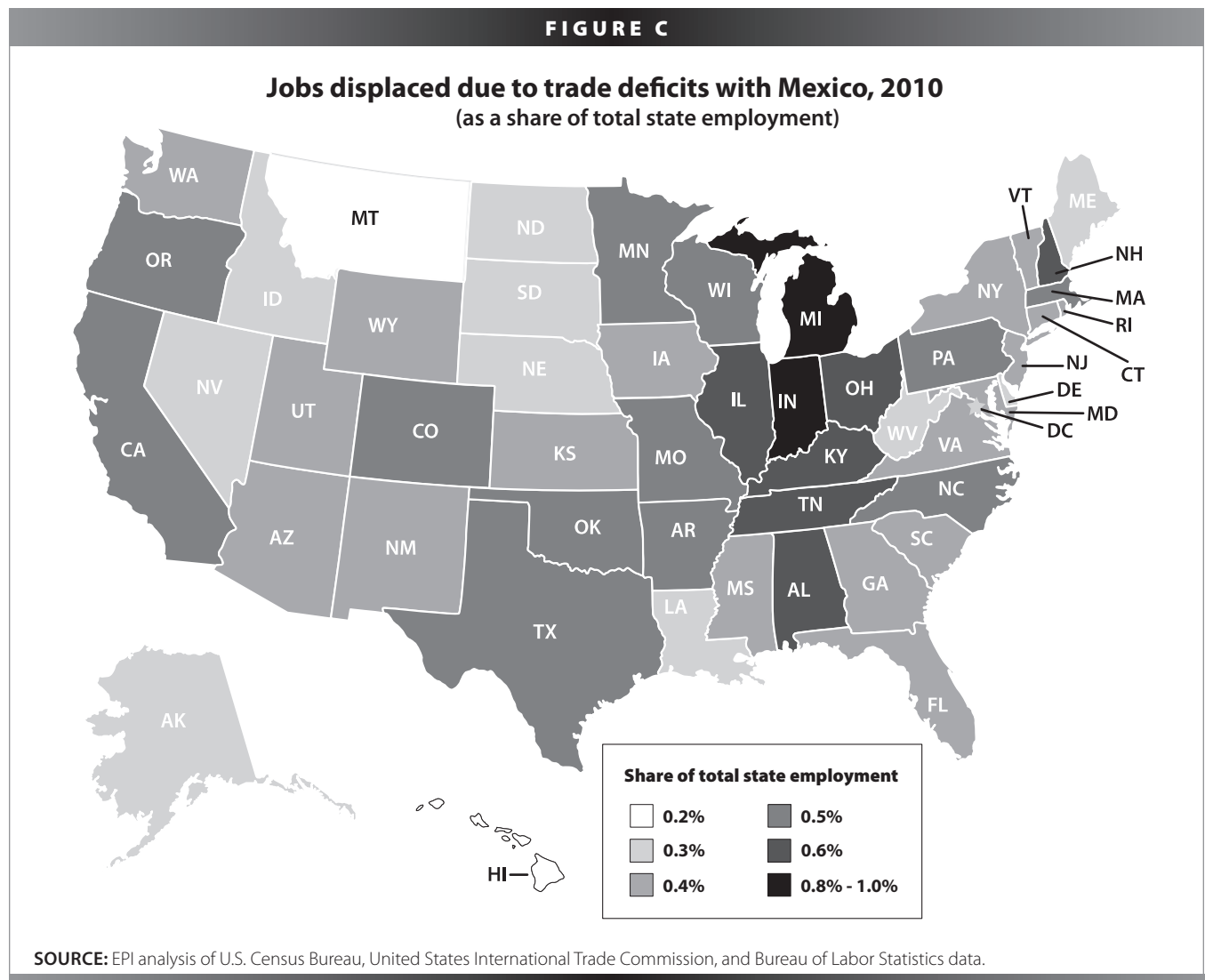
Some economists have argued that job loss numbers extrapolated from trade flows are uninformative because aggregate employment levels in the United States are set by a broad range of macroeconomic influences, not just by trade

flows. However, while the trade balance is but one of many variables affecting aggregate job creation, the employment impacts of trade identified in this paper can be interpreted as the “all else equal” effect of trade on domestic employment.

The Federal Reserve, for example, may decide to cut interest rates to make up for job losses stemming from deteriorating trade balances (or any other economic influence), leaving net employment unchanged. This, however, does not change the fact that trade deficits *by themselves* are a net drain on employment.

Further, even in the best-case scenario in which jobs displaced by trade flows are replaced on a one-to-one ratio by new jobs, the job numbers in this paper are a (conservative) measure of the involuntary job displacement caused by growing trade deficits and a potent indicator of imbalance in the U.S. labor market and wider economy. Economists may label it a wash when the loss of a hundred manufacturing jobs in Ohio or Pennsylvania is offset by the hiring of a hundred construction workers in Las Vegas, but in the real world these displacements often cause large income losses and even permanent damage to workers’ earning power (Bivens 2008b).

Lastly, it’s important to note that many of the mechanisms that help push back against employment losses from growing trade deficits are not operating in the current recession (or jobless recovery). In short, in today’s high-unemployment economy, jobs displaced due to trade deficits with Mexico are much more likely to be actual net, economy-wide losses, rather than just job reallocations.



In the United States, 24.8 million people were unemployed or underemployed as of February 2011 (Shierholz 2011). In this situation, jobs displaced clearly represent jobs lost. Even if jobs were gained in Nevada (as they were lost in Michigan, Indiana and other states in the industrial Midwest) as trade deficits with Mexico grew between 1993 and 2008, those jobs disappeared after the Great Recession of 2008-09. Nevada had the highest unemployment rate of any state, at 14.2%, in January 2011 (Economic Policy Institute 2011).

TABLE 4A

Jobs displaced due to trade deficits with Mexico, by state, 2010
(ranked by share of total jobs displaced)

	Net jobs displaced	Total state employment**	Share of state employment		Net jobs displaced	Total state employment**	Share of state employment
<i>Michigan</i>	43,600	4,552,700	1.0%	<i>New Jersey</i>	16,800	4,212,200	0.4%
<i>Indiana</i>	24,400	3,000,700	0.8	<i>Vermont</i>	1,300	329,700	0.4
<i>Kentucky</i>	12,100	1,863,500	0.6	<i>Arizona</i>	10,800	2,756,400	0.4
<i>Ohio</i>	34,900	5,412,100	0.6	<i>New York</i>	34,300	8,954,600	0.4
<i>Tennessee</i>	16,400	2,778,500	0.6	<i>Maryland</i>	10,600	2,827,400	0.4
<i>New Hampshire</i>	4,000	694,200	0.6	<i>Wyoming</i>	1,000	268,800	0.4
<i>Illinois</i>	34,700	6,087,800	0.6	<i>Kansas</i>	5,100	1,380,000	0.4
<i>Alabama</i>	11,100	1,995,900	0.6	<i>New Mexico</i>	3,200	868,100	0.4
<i>Massachusetts</i>	17,100	3,241,300	0.5	<i>Washington</i>	10,800	3,051,500	0.4
<i>Texas</i>	55,600	10,602,400	0.5	<i>Florida</i>	28,800	8,204,700	0.4
<i>California</i>	86,500	16,565,000	0.5	<i>Virginia</i>	13,100	3,739,700	0.4
<i>Wisconsin</i>	14,500	2,849,100	0.5	<i>Idaho</i>	2,400	685,800	0.3
<i>Minnesota</i>	13,700	2,713,700	0.5	<i>Nebraska</i>	3,200	916,600	0.3
<i>Oregon</i>	8,700	1,764,400	0.5	<i>West Virginia</i>	2,600	753,200	0.3
<i>Oklahoma</i>	7,900	1,626,900	0.5	<i>Louisiana</i>	6,000	1,872,100	0.3
<i>Arkansas</i>	5,800	1,237,400	0.5	<i>Puerto Rico</i>	3,800	1,199,900	0.3
<i>Colorado</i>	11,300	2,424,500	0.5	<i>Nevada</i>	3,700	1,206,800	0.3
<i>North Carolina</i>	18,900	4,133,000	0.5	<i>North Dakota</i>	1,000	336,900	0.3
<i>Missouri</i>	12,600	2,774,000	0.5	<i>South Dakota</i>	1,200	407,600	0.3
<i>Pennsylvania</i>	26,300	5,825,400	0.5	<i>Delaware</i>	1,200	407,900	0.3
<i>Mississippi</i>	5,300	1,201,700	0.4	<i>District of Columbia</i>	800	286,400	0.3
<i>South Carolina</i>	8,600	1,950,800	0.4	<i>Alaska</i>	900	322,300	0.3
<i>Utah</i>	5,400	1,228,900	0.4	<i>Maine</i>	1,800	656,400	0.3
<i>Connecticut</i>	7,600	1,742,300	0.4	<i>Hawaii</i>	1,200	605,800	0.2
<i>Iowa</i>	6,500	1,530,400	0.4	<i>Montana</i>	900	464,900	0.2
<i>Georgia</i>	18,300	4,310,000	0.4	<i>United States plus Puerto Rico*</i>	682,900	141,348,700	0.5%
<i>Rhode Island</i>	2,100	526,500	0.4				

* Totals vary slightly due to rounding errors.

** Average state employment in 2005–07. Analysis based on pooled, three-year times series data from the U.S. Census American Community Survey, as described in Scott (2010b, Appendix).

SOURCE: EPI analysis of U.S. Census Bureau, United States International Trade Commission, and Bureau of Labor Statistics data.

TABLE 4B

**Jobs lost through imports, jobs gained through exports,
and net jobs displaced due to trade deficits with Mexico, by state, 2010**
(ranked by number of jobs displaced)

	Import jobs	Export jobs	Net job change		Import jobs	Export jobs	Net job change
<i>California</i>	-174,200	87,700	-86,500	<i>Connecticut</i>	-16,900	9,300	-7,600
<i>Texas</i>	-113,100	57,500	-55,600	<i>Iowa</i>	-17,400	10,800	-6,500
<i>Michigan</i>	-80,500	36,800	-43,600	<i>Louisiana</i>	-14,900	8,900	-6,000
<i>Ohio</i>	-75,100	40,200	-34,900	<i>Arkansas</i>	-14,500	8,600	-5,800
<i>Illinois</i>	-73,000	38,300	-34,700	<i>Utah</i>	-11,700	6,200	-5,400
<i>New York</i>	-71,100	36,700	-34,300	<i>Mississippi</i>	-12,400	7,100	-5,300
<i>Florida</i>	-60,300	31,500	-28,800	<i>Kansas</i>	-13,500	8,300	-5,100
<i>Pennsylvania</i>	-61,400	35,100	-26,300	<i>New Hampshire</i>	-8,200	4,100	-4,000
<i>Indiana</i>	-49,500	25,000	-24,400	<i>Puerto Rico</i>	-9,400	5,600	-3,800
<i>North Carolina</i>	-44,900	26,000	-18,900	<i>Nevada</i>	-8,000	4,200	-3,700
<i>Georgia</i>	-42,200	23,800	-18,300	<i>Nebraska</i>	-9,000	5,800	-3,200
<i>Massachusetts</i>	-33,700	16,600	-17,100	<i>New Mexico</i>	-6,900	3,600	-3,200
<i>New Jersey</i>	-36,800	20,000	-16,800	<i>West Virginia</i>	-6,500	3,800	-2,600
<i>Tennessee</i>	-35,100	18,600	-16,400	<i>Idaho</i>	-6,600	4,100	-2,400
<i>Wisconsin</i>	-37,200	22,700	-14,500	<i>Rhode Island</i>	-5,100	3,000	-2,100
<i>Minnesota</i>	-31,500	17,700	-13,700	<i>Maine</i>	-5,000	3,200	-1,800
<i>Virginia</i>	-30,000	16,800	-13,100	<i>Vermont</i>	-3,000	1,700	-1,300
<i>Missouri</i>	-28,600	15,900	-12,600	<i>Delaware</i>	-3,300	2,000	-1,200
<i>Kentucky</i>	-25,200	13,000	-12,100	<i>Hawaii</i>	-3,000	1,800	-1,200
<i>Colorado</i>	-22,600	11,200	-11,300	<i>South Dakota</i>	-3,900	2,700	-1,200
<i>Alabama</i>	-24,500	13,300	-11,100	<i>North Dakota</i>	-3,100	2,100	-1,000
<i>Arizona</i>	-22,800	11,900	-10,800	<i>Wyoming</i>	-2,500	1,400	-1,000
<i>Washington</i>	-26,400	15,500	-10,800	<i>Alaska</i>	-2,200	1,200	-900
<i>Maryland</i>	-20,900	10,300	-10,600	<i>Montana</i>	-3,200	2,200	-900
<i>Oregon</i>	-19,600	10,900	-8,700	<i>District of Columbia</i>	-1,700	800	-800
<i>South Carolina</i>	-22,500	13,900	-8,600				
<i>Oklahoma</i>	-17,700	9,800	-7,900	<i>United States plus Puerto Rico*</i>	-1,474,800	791,900	-682,900

* Totals vary slightly due to rounding errors.

** Average state employment in 2005–07. Analysis based on pooled, three-year times series data from the U.S. Census American Community Survey, as described in Scott (2010b, Appendix).

SOURCE: EPI analysis of U.S. Census Bureau, United States International Trade Commission, and Bureau of Labor Statistics data.

TABLE 4C

**Jobs lost through imports, jobs gained through exports,
and net jobs displaced due to trade deficits with Mexico, by state, 2010**
(ranked alphabetically)

	Import jobs	Export jobs	Net job change		Import jobs	Export jobs	Net job change
<i>Alabama</i>	-24,500	13,300	-11,100	<i>Nebraska</i>	-9,000	5,800	-3,200
<i>Alaska</i>	-2,200	1,200	-900	<i>Nevada</i>	-8,000	4,200	-3,700
<i>Arizona</i>	-22,800	11,900	-10,800	<i>New Hampshire</i>	-8,200	4,100	-4,000
<i>Arkansas</i>	-14,500	8,600	-5,800	<i>New Jersey</i>	-36,800	20,000	-16,800
<i>California</i>	-174,200	87,700	-86,500	<i>New Mexico</i>	-6,900	3,600	-3,200
<i>Colorado</i>	-22,600	11,200	-11,300	<i>New York</i>	-71,100	36,700	-34,300
<i>Connecticut</i>	-16,900	9,300	-7,600	<i>North Carolina</i>	-44,900	26,000	-18,900
<i>Delaware</i>	-3,300	2,000	-1,200	<i>North Dakota</i>	-3,100	2,100	-1,000
<i>District of Columbia</i>	-1,700	800	-800	<i>Ohio</i>	-75,100	40,200	-34,900
<i>Florida</i>	-60,300	31,500	-28,800	<i>Oklahoma</i>	-17,700	9,800	-7,900
<i>Georgia</i>	-42,200	23,800	-18,300	<i>Oregon</i>	-19,600	10,900	-8,700
<i>Hawaii</i>	-3,000	1,800	-1,200	<i>Pennsylvania</i>	-61,400	35,100	-26,300
<i>Idaho</i>	-6,600	4,100	-2,400	<i>Puerto Rico</i>	-9,400	5,600	-3,800
<i>Illinois</i>	-73,000	38,300	-34,700	<i>Rhode Island</i>	-5,100	3,000	-2,100
<i>Indiana</i>	-49,500	25,000	-24,400	<i>South Carolina</i>	-22,500	13,900	-8,600
<i>Iowa</i>	-17,400	10,800	-6,500	<i>South Dakota</i>	-3,900	2,700	-1,200
<i>Kansas</i>	-13,500	8,300	-5,100	<i>Tennessee</i>	-35,100	18,600	-16,400
<i>Kentucky</i>	-25,200	13,000	-12,100	<i>Texas</i>	-113,100	57,500	-55,600
<i>Louisiana</i>	-14,900	8,900	-6,000	<i>Utah</i>	-11,700	6,200	-5,400
<i>Maine</i>	-5,000	3,200	-1,800	<i>Vermont</i>	-3,000	1,700	-1,300
<i>Maryland</i>	-20,900	10,300	-10,600	<i>Virginia</i>	-30,000	16,800	-13,100
<i>Massachusetts</i>	-33,700	16,600	-17,100	<i>Washington</i>	-26,400	15,500	-10,800
<i>Michigan</i>	-80,500	36,800	-43,600	<i>West Virginia</i>	-6,500	3,800	-2,600
<i>Minnesota</i>	-31,500	17,700	-13,700	<i>Wisconsin</i>	-37,200	22,700	-14,500
<i>Mississippi</i>	-12,400	7,100	-5,300	<i>Wyoming</i>	-2,500	1,400	-1,000
<i>Missouri</i>	-28,600	15,900	-12,600				
<i>Montana</i>	-3,200	2,200	-900	<i>United States plus Puerto Rico*</i>	-1,474,800	791,900	-682,900

* Totals vary slightly due to rounding errors.

** Average state employment in 2005–07. Analysis based on pooled, three-year times series data from the U.S. Census American Community Survey, as described in Scott (2010b, Appendix).

SOURCE: EPI analysis of U.S. Census Bureau, United States International Trade Commission, and Bureau of Labor Statistics data.

Trade deficits and job displacement, by congressional district

This study also reports results of a new model¹⁵ which shows that growing trade deficits cost jobs in every congressional district, including the District of Columbia and Puerto Rico (data for 437 districts in all, shown in **Supplemental Tables A and B** posted online to accompany this report). Because the motor vehicles and parts and the computer, electronic equipment and parts industries experienced the largest growth in trade deficits with Mexico, the hardest-hit congressional districts were located in states where those industries had concentrated: Michigan (10 of the top 20 hardest-hit districts), California (4), Indiana (3), Ohio (2), and Texas (1)(see **Table 5**).

TABLE 5

Top 20 hardest-hit congressional districts, 2010 (ranked by share of jobs displaced)

<i>Rank</i>	<i>State</i>	<i>District</i>	<i>Jobs displaced</i>	<i>District employment</i>	<i>Share of district employment</i>
1	California	15	4,900	324,300	1.51%
2	Indiana	3	4,600	346,700	1.33
3	Michigan	11	4,500	352,600	1.28
4	California	14	4,000	320,600	1.25
5	Michigan	10	4,200	340,000	1.24
6	Michigan	9	4,000	328,500	1.22
7	California	16	3,500	303,600	1.15
8	Ohio	4	3,400	299,200	1.14
9	Michigan	12	3,300	297,800	1.11
10	Michigan	14	2,400	220,200	1.09
11	Michigan	5	2,900	269,300	1.08
12	Michigan	15	3,300	326,600	1.01
13	Texas	3	4,200	418,200	1.00
14	Ohio	5	3,100	311,200	1.00
15	Michigan	7	3,100	313,500	0.99
16	Indiana	2	3,100	314,500	0.99
17	California	13	3,000	313,800	0.96
18	Michigan	13	1,900	205,000	0.93
19	Indiana	6	2,800	307,600	0.91
20	Michigan	8	3,100	346,600	0.89

* Totals vary slightly due to rounding errors.

** Average congressional district employment in 2005–07. Analysis based on pooled, three-year times series data from the U.S. Census American Community Survey, as described in Scott (2010b, Appendix).

SOURCE: EPI analysis of U.S. Census Bureau, United States International Trade Commission, and Bureau of Labor Statistics data.

NAFTA and KORUS FTA compared

Proponents of the North American and U.S.-Korea free trade Agreements (NAFTA and KORUS FTA) have made similar claims about the expected benefits of both agreements. They have claimed that both will bring down substantial trade barriers in partner countries, and that both will generate substantial export growth and job creation. However, under most circumstances, trade with Korea will buck the trend under NAFTA and support net job growth only if the U.S. trade balance improves (if the growth of exports exceeds import growth).¹⁶

Mexico and South Korea are different countries, but there are striking similarities in U.S. trading patterns with both. The United States has maintained a significant trade deficit with South Korea for the past decade; in 2010 the largest deficits were in computer and electronic parts (\$11.8 billion), and in autos and parts (\$9.4 billion) (U.S. International Trade Commission, 2011).¹⁷ The largest U.S. trade deficits with Mexico were in these same two industries, as discussed earlier. The deficits in South Korea trade were partially offset by surpluses in food and agricultural products and industrial supplies, which were also offsetting surpluses in U.S. trade with Mexico after NAFTA.

There are, however, substantial differences between Mexico and South Korea. Wages in Mexico are much lower than in South Korea. Industrial production of export goods in Mexico is dominated by foreign-owned plants that were set up to outsource production from the United States, and for low-wage access to the U.S. market (in the case of foreign-owned assembly plants, such as the Volkswagen plants in Mexico). South Korea's industrial structure, on the other hand, is dominated by mammoth industrial conglomerates ("chaebols") and groups such as the Hyundai group, which manufactures Hyundai and Kia brand vehicles. Hyundai is rapidly expanding assembly of vehicles in the United States, but the vast majority of the parts (content) used in these units are imported. Hyundai opened a second U.S. assembly plant in 2010, and has announced plans for a third assembly plant in Canada. The share of auto parts in the U.S. vehicle and parts trade deficit with South Korea increased from 17% in 2009 to 30% in 2010, reflecting the rapid growth of parts imports for Hyundai's U.S. auto assembly plants.

The United States and South Korea agreed to modifications to the original KORUS agreement in December 2010 (Schott 2010). "Most of the changes affect bilateral trade in autos and light trucks; other minor changes involved pharmaceutical patents, U.S. pork exports, and U.S. Visas." In Schott's view, the economic impact of the new agreement "differs little from the old deal. Immediate tariff cuts [on autos and light trucks] have been deferred for a few years," and South Korea's regulatory policies have been relaxed slightly to open their market to U.S. vehicle exports.

According to Schott, these changes will "[p]robably not...make much of a difference..." in terms of the economic impacts of the agreement. He notes that "Korean automakers already are sourcing a greater share of their U.S. sales from U.S.-based assembly plants." Thus, they will circumvent the delayed phase-out of U.S. tariffs on Korean auto imports. Tariffs on U.S. auto parts imports from South Korea will be eliminated immediately once the agreement takes effect, which will encourage Hyundai to source more parts from South Korea. The deal also includes a special "duty drawback" provision that will allow Korean firms to import parts and components from other countries, and re-export them to the United States, while rebating and avoiding all import duties (both Korean and U.S.), if only 35% of the content of those parts originates in Korea. This will create a vast conduit for duty-free imports of parts with high levels of content from China. These parts could also penetrate U.S. domestic automaker supply chains, which could accelerate U.S. job displacement.¹⁸

Growing U.S.-Korea trade deficits are likely to displace an additional 159,000 U.S. jobs in the first seven years after the agreement takes effect (Scott 2010a), based on the terms of KORUS, as originally negotiated. Based on Schott's 2010 analysis, and the additional data reviewed here, that estimate is, if anything, likely to be conservative. Like NAFTA, the KORUS FTA is likely to result in growing U.S. trade deficits and job displacement, especially in the motor vehicles and parts and the computer and electronics parts industries.

Conclusion

The growing U.S. trade deficit with Mexico has displaced a large number of jobs in the United States and is a significant contributor to the current crisis in U.S. manufacturing, which lost 5.6 million jobs between 2000 and February 2011 (BLS 2011). U.S. trade with Mexico in 2010 cost 682,900 U.S. jobs, and three-fifths of the jobs displaced (415,000) were in the manufacturing sector.

NAFTA proponents claimed that falling tariffs would generate rapidly growing exports and a sustained and growing trade surplus with Mexico. In fact, the United States has experienced steadily growing trade deficits with Mexico. Despite this experience, proponents of the U.S.-Korea Free Trade Agreement have claimed that growing exports will support 70,000 U.S. jobs. The job displacement that arose from U.S. trade deficits with Mexico after NAFTA took effect provides powerful evidence that the KORUS FTA is likely to lead to growing U.S. trade deficits and job displacement.

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Endnotes

1. The analyses in this report exclude transshipments of goods through the United States to Mexico because production and transshipment of goods made in other countries does not support productive employment in the United States. Only goods domestically produced and consumed in U. S. trade with Mexico—usually referred to in official U.S. trade statistics as “domestic exports”—are reported in Figure A. Comparable imports are those that are for consumption. Trade statistics used in the analysis shown in Figure A were obtained from the United States International Trade Commission (USITC 2011). These data are compiled from the official trade statistics of the U.S. Department of Commerce. The USITC (2010) likewise excludes transshipments from its analyses of the likely impacts of trade agreements, such as the proposed U.S.-Korea Free Trade Agreement, basing its analyses instead on domestic exports and consumption imports. For example, the USITC (2010, 1-6 to 1-7) notes that “U.S. merchandise exports to Korea were valued at \$30.8 billion in 2006,” and that U.S. merchandise imports from Korea were valued at \$44.7 billion in 2006.” These data correspond precisely with U.S. domestic exports to Korea and U.S. imports for consumption, as reported by the USITC (2011). U.S. total goods exports to Korea were \$32.5 billion in 2006, nearly \$2 billion more than the value reported by USITC’s analysis of the “Potential Economy-wide and Selected Sectoral Effects” of KORUS FTA. Thus transshipments were excluded from that analysis. See also McArthur and Tucker (2010). Andriamananjara, Arce and Ferrantino (2004) of the U.S. International Trade Commission note that “Data representing transshipments or re-exports are almost always excluded from analytical portrayals of international trade...”
2. The United States had a trade deficit of \$68.6 billion in crude oil and refined products with Canada in 2010. U.S. production of these products has been in decline for some years, and development of alternatives (such as ethanol and electric cars) will require large investments and much time. Furthermore, crude oil production and refining are two of the least labor-intensive industries in the economy. Thus, imported oil and refined products now are essentially non-competing imports, and do not displace domestic production.
3. The National Association of Attorneys General (2002), representing 54 states and territories, passed a resolution expressing concern about the inclusion of measures such as dispute settlement provisions section of chapter 11, of NAFTA: “That provision has raised serious concerns over its impact on the power of government to act to protect health, welfare and the environment” (Spitzer 2002).
4. Under NAFTA, Mexico was allowed to phase out its corn tariffs over a 10-year period. However, it made a unilateral decision to eliminate all corn tariffs shortly after the agreement took effect. This allowed U.S. agribusiness firms to flood Mexico with cheap, subsidized U.S. corn and oil seeds, which made it difficult or impossible for subsistence farmers to survive.
5. The U.S. real GDP growth was 0.0% in 2008 and -2.6% in 2009. Thus, as is often said, when the U.S. economy gets a cold, Mexico gets pneumonia. Mexico is much more dependent on exports than the United States.
6. These tribunals, also known as investor state tribunals, are quasi-judicial bodies set up in the dispute settlement section of the investment chapter to hear complaints and issue binding awards of damages that can’t be appealed to any court.
7. FDI in Mexico fell in 2008 due to the impact of the recession. Information on FDI in 2009–10 was not available at the time of this report.
8. Both import and export growth surged dramatically in the first few years after NAFTA took effect: U.S. imports increased 22.2% per year between 1993 and 1997, while U.S. exports to Mexico increased 15.0% per year. After 1997 the growth rate of bilateral trade fell sharply: U.S. imports from Mexico increased 7.7% per year between 1997 and 2010, while the growth of exports to Mexico slowed to only 5.6% per year. The slowdown was likely caused by a combination of events including the 1997-98 Asian financial crisis; the rapid growth of Chinese exports, especially after China entered the World Trade Organization in 2001; and the U.S. recession of 2001, which led to a decade of slow growth in the United States and culminated in the financial crisis of 2008–09. These factors combined to increase competition for Mexican-based exporters, and to suppress or reduce U.S. demand for Mexico’s exports. The one constant in each of the post-NAFTA periods was that U.S. imports continued to grow more rapidly than exports, expanding the bilateral trade deficit.
9. See appendix of Scott (2010b) for a technical presentation and details on data sources used. This model has been completely updated and expanded for this study using new data on employment by state, industry, and congressional district from the American Community Survey, and data on employment requirements for 2008 and related economic data from the Bureau of Labor Statistics (2010, 2010a). Trade data collected by the U.S. Census Bureau were downloaded from the United States International Trade Commission (2011).
10. The jobs displaced by trade were also estimated using analysis based on macro-economic multipliers. In 2010, a 1 percentage-point decline in GDP reduced employment by 1.2 million jobs. U.S. GDP in 2010 was \$14.7 trillion, and the trade deficit with Mexico was \$97.2 billion, which equaled 0.663% of U.S. GDP. Multiplying .663 time 1.2 million yields 795,700 jobs, this is about 16.5% more than the 682,900 jobs estimated in Table 1. Thus, macroeconomic analysis largely confirms the input/output-based estimates in this report.
11. Scott (2006, Table 1) estimates that the U.S. trade surplus with Mexico supported 29,385 U.S. jobs in 1993.
12. Average annual jobs displaced were estimated by dividing the 682,900 jobs displaced as of 2010 by 17 years (1994-2010).
13. The U.S. also had significant trade deficits with Mexico in beverages, apparel, and leather products. The beverage deficit is a product, in part, of the fact that the U.S. still maintains quotas on sugar imports. Mexico is a major sugar producer and beverage imports contain large volumes of sugar and other sweeteners.
14. U.S. auto and parts exports to Mexico (NAICS 3361-63) increased \$4.7 billion between 2009 and 2010, but imports of these products increased \$17.3 billion, and the U.S. trade deficit in these products increased \$12.5 billion. The increased trade deficit, which was caused by the rapid growth of net imports from Mexico, was a stimulus to employment in the Mexican auto industry. The estimate of 30,400 net jobs created in Mexico is conservative because it is based on the U.S. jobs-to-trade ratios. Since wages are much lower in Mexico, more jobs would be supported there for each billion dollars in exports to the United States.
15. For further background on the EPI Congressional District/jobs model see Scott (2010b), including the appendix to that report.

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16. In theory, growing trade deficits with Korea could support small amounts of net job creation, but only if the U.S. specialized in exporting labor-intensive goods such as apparel to Korea, but that is highly unlikely. In 2009, the top four U.S. exports to Korea were semiconductors, basic chemicals, aerospace products, and oilseeds and grains. These are all capital-intensive goods that support relatively few jobs per million dollars of output.
 17. Analysis excludes transshipments, and includes only U.S. domestic exports and imports for consumption.
 18. The KORUS FTA revisions also included measures to reduce regulatory barriers to vehicle imports in Korea. One of these would allow each U.S. automaker to sell up to 25,000 vehicles per year in South Korea if they meet U.S. safety standards (each currently sells fewer than 5,000 units per year). Frequently changing and capricious Korean auto safety standards have been a barrier to U.S. vehicle exports. However, even if each U.S. automaker fills its quota under the new agreement, the growth in exports is likely to be swamped by the growth in the sales of imported and transplant-produced vehicles in the United States. Hyundai's U.S. sales increased from 735,000 units in 2009 to 894,000 units in 2010, an increase of 159,000 units or 21.7% (WardsAuto, 2011). Hyundai's 2010 U.S. sales grew faster than all but two other producers, both with much smaller market shares (Subaru, 264,000 units, an increase of 21.8%; and Porsche, 25,000 units, an increase of 28.6%). Total light vehicle sales (cars and light trucks) increased 11.1%, and sales of U.S.-based firms increased 13.3% in 2010, for comparison purposes.

References

- Andriamananjara, Soamiely, Hugh Arce and Michael J. Ferrantino. 2004. "Transshipment in the United States." U.S. International Trade Commission Office of Economics, Working Paper No. 2004-04-B. Washington, D.C.: USITC.
- Bivens, L. Josh. 2008. "Trade, jobs, and wages: Are the public's worries about globalization justified?" Economic Policy Institute, Issue Brief No. 244. Washington, D.C.: EPI. <http://www.epinet.org>. <http://www.epi.org/publications/entry/ib244/>
- Blecker, Robert A. 1997. "NAFTA and the Peso Collapse: Not Just a Coincidence." Economic Policy Institute, Briefing Paper. Washington, D.C.: EPI, March 1. http://www.epi.org/page/-/old/briefingpapers/1997_bp_nafta.pdf
- Bureau of Labor Statistics, Office of Employment Projections. 2010. Special Purpose Files—Industry Output and Employment. Washington, D.C.: U.S. Department of Labor. http://www.bls.gov/emp/ep_data_industry_out_and_emp.htm
- Bureau of Labor Statistics, Office of Employment Projections. 2010a. Special Purpose Files— Employment Requirements. Washington, D.C.: U.S. Department of Labor. http://www.bls.gov/emp/ep_data_emp_requirements.htm
- Bureau of Labor Statistics, 2011. Current Employment Statistics—CES (National). Washington, D.C.: U.S. Department of Labor. <http://www.bls.gov/ces/>
- Campbell, Bruce. 2006. "Backsliding: The Impact of NAFTA on Canadian Workers." In Robert E. Scott, Carlos Salas, Bruce Campbell, and Jeff Faux, "Revisiting NAFTA: Still not working for North America's workers." Economic Policy Institute Briefing Paper #173. Washington, D.C.: EPI.
- Clinton, Bill. 1993. "The NAFTA: Expanding U.S. exports, jobs and growth." Clinton administration statement on the North American Free Trade Agreement. Washington, D.C.: U.S. Government Printing Office, July.
- Economic Policy Institute. 2011. "Ten states still struggle with double-digit unemployment." EPI State Jobs Picture, March 10. Washington, D.C.: Economic Policy Institute.
- Faux, Jeff. 2006. *The Global Class War*. Hoboken, N.J.: John Wiley & Sons Inc.
- Hufbauer, Gary Clyde and Jeffrey J. Schott. 1993. *NAFTA: An Assessment*. Washington, D.C.: Institute for International Economics.
- Kirk, Ron. 2011. Testimony of United States Trade Representative Ron Kirk before the Senate Finance Committee, March 9. <http://www.ustr.gov/about-us/press-office/speeches/transcripts/2011/testimony-united-states-trade-representative-ron-kir>
- Kletzer, Lori G. 2001. *Job Loss From Imports: Measuring the Costs*. Washington, D.C.: Institute for International Economics.
- McArthur, Travis and Todd Tucker. 2010. "Lies, Damn Lies, and Export Statistics: How Corporate Lobbyists Distort Record of Flawed Trade Deals." Washington, D.C.: Public Citizen. <http://www.citizen.org/documents/FTA%20Penalty%20Paper%20FINAL1.pdf>
- NAFTA Secretariat. 2011. North American Free Trade Agreement (text). <http://www.nafta-sec-alena.org/en/view.aspx?x=202>

National Association of Attorneys General. 2002. "Resolution: In Support of State Sovereignty and Regulatory Authority." Washington, D.C.: National Association of Attorneys General, Spring meeting, March 19-22.

Papademetriou, Demetrious, John Audley, Sandra Polaski, and Scott Vaughan. 2003. "NAFTA's Promise and Reality: Lessons from Mexico for the Hemisphere." Carnegie Endowment Report, November. Washington, D.C.: Carnegie Endowment for International Peace. <http://www.carnegieendowment.org/publications/index.cfm?fa=view&id=1390>

Public Citizen. 2010. "Table of NAFTA 'chapter 11' foreign investor-state cases and claims." Washington, D.C.: Public Citizen. http://www.citizen.org/documents/NAFTA_Investor_State_Chart_Nov_2010.pdf

Salas, Carlos. 2006. "Between Unemployment and Insecurity in Mexico: NAFTA enters its second decade." In Scott, Salas, Campbell and Faux, "Revisiting NAFTA: Still not working for North America's workers."

Schott, Jeffrey J. 2010. "Korus FTA 2.0: Assessing the Changes." Peterson Institute for International Economics, Policy Brief No. PB10-28. Washington, D.C.: Peterson Institute for International Economics. <http://www.piie.com/publications/pb/pb10-28.pdf>

Scott, Robert E. 2006. "NAFTA's Legacy: Rising trade deficits lead to significant job displacement and declining job quality for the United States." In Scott, Salas, Campbell and Faux, "Revisiting NAFTA: Still not working for North America's workers."

Scott, Robert E. 2009. "Invest in America: Essential policies needed to secure U.S. jobs in the auto industry." Economic Policy Institute, Briefing Paper #233. Washington, D.C.: EPI. <http://www.epi.org/publications/entry/bp233/>

Scott, Robert E. 2010a. "Trade policy and job loss." Economic Policy Institute, Working Paper #289. Washington, D.C.: EPI. http://www.epi.org/publications/entry/trade_policy_and_job_loss/

Scott, Robert E. 2010b. "Unfair China Trade Costs Local Jobs." Economic Policy Institute, Briefing Paper #260. Washington, D.C.: EPI. <http://www.epi.org/publications/entry/bp260/>

Scott, Robert E., Carlos Salas, Bruce Campbell, and Jeff Faux. 2006. "Revisiting NAFTA: Still not working for North America's workers." Economic Policy Institute, Briefing Paper #173. Washington, D.C.: EPI. <http://www.epi.org/publications/entry/bp173/>

Shierholz, Heidi. 2011. "February rebounds, but road to jobs recovery remains years long." Washington, D.C.: Economic Policy Institute. March 4. http://www.epi.org/publications/entry/february_rebounds_but_road_to_jobs_recovery_remains_years_long/

Spitzer, Elliot. 2002. Letter from the State of New York, Office of the Attorney General, to Sens. Charles E. Schumer and Hillary Rodham Clinton (including a resolution by the National Association of Attorneys General on resolution on investor state trade measures in the North American Free Trade Agreement). May 9.

United States International Trade Commission (USITC). 2010. "U.S.-Korea Free Trade Agreement: Potential Economy-wide and Selected Sectoral Effects." USITC Publication 3949, September 2007, corrected printing March 2010. Washington, D.C.: USITC. <http://www.usitc.gov/publications/332/pub3949.pdf>

United States International Trade Commission. 2011. "USITC Interactive Tariff and Trade Dataweb." Washington, D.C.: USITC, accessed February 2011. <http://dataweb.usitc.gov/>

WardsAuto. 2011. "Key Automotive Data." Detroit: WardsAuto.com. <http://wardsauto.com/keydata/>