

Memorandum

To: Interested Parties
From: Majority Staff of the Senate Committee on Finance Subcommittee on Trade (Chaired by Senator Ron Wyden)
Date: January 25, 2011
Re: Updated assessment of the U.S.-Korea Free Trade Agreement (FTA)

Summary

There is concern that current debate on the merits and potential economic impact of the U.S.-Korea FTA lacks the necessary candor for policy makers and the American public to engage in productive conversation about trade, globalization, and the future of the American economy. This memo provides an updated quantitative assessment that reexamines the potential economic impacts of the U.S.-Korea FTA on the U.S. economy on a national, state-by-state, and industry-specific basis. It uses recent trade data, and part of the discussion considers the implications of the recent economic downturn. The purpose of presenting this updated assessment is to enable straight talk when the merits of the agreement and more broadly, trade in general, are discussed.

Section I of this memorandum provides an overview and rationale for an updated quantitative assessment of the U.S.-Korea FTA. Section II updates results from economic modeling simulations of the quantifiable elements of a fully implemented U.S.-Korea FTA under two distinct scenarios: one that reflects more robust economic conditions closer to those in 2007 when the agreement was concluded (i.e., lower unemployment and full capacity), and one that reflects relatively weaker economic conditions closer to those at present (i.e., higher unemployment and underused capacity). Section III provides more detailed results of potential employment impacts of the U.S.-Korea FTA on a state and sector basis under the latter scenario.

Section I

Overview

The U.S.-Korea Free Trade Agreement FTA, initially negotiated in 2007 and revised in 2010, has the potential to be the most commercially significant FTA negotiated by the United States in more than 17 years (after the North American Free Trade Agreement), opening up a potentially large market to U.S. exporters. Yet, the debate on the merits and potential economic impact of the agreement is increasingly polarized. Supporters claim that the agreement will be a boon to U.S. exporters, while detractors claim that the agreement will result in substantial American job loss and an increase in the U.S. trade deficit.

In 2007, the independent U.S. International Trade Commission (ITC) concluded that the agreement would have a positive, yet modest, effect on U.S. economic output and employment in most sectors of the economy. For example, according to the ITC's official study, the reduction in tariffs and tariff-rate quotas on goods as a result of the agreement would add nearly \$12 billion to U.S. GDP, \$11 billion in U.S. exports of goods to Korea, and about \$7 billion in U.S. imports from Korea. The ITC report showed that the FTA would likely have a small positive effect on economic output and employment on most sectors of the U.S. economy, with output and employment increasing in most sectors, while declining in others.

Updated Assessment of the U.S.-Korea FTA

The U.S. economy has changed significantly since 2007. Since then, the U.S. suffered a severe financial crisis and one of the worst economic recessions since the Great Depression. The current unemployment rate – which hovers around 10 percent – contributes to the souring of the national mood toward trade. It is inappropriate to preach the benefits of freer trade with Korea without acknowledging the potential loss of American jobs as a result of this agreement, and engaging in a policy discussion about how the U.S. will face growing international competition in the new decade and, indeed, the new century.

For these reasons, we requested that ITC staff with economic modeling skills provide quantitative technical assistance examining the agreement based on current data and economic conditions. The ITC staff then conveyed these quantitative results to the staff of the Senate Committee on Finance’s Subcommittee on Trade. We (the staff of the subcommittee) find that these results show that, in an economy with substantial unemployment and underused capital, the agreement has the potential to create about 280,000 American jobs, but that job growth would be uneven among states and across industry sectors, with some sectors losing out while others benefit.

Section II¹

This section provides results from economic model simulations of the fully implemented U.S.-Korea FTA.² The results are reported for changes in U.S. GDP and welfare, exports, imports, output, and employment by sector (tables 1 to 4). Changes in state- and region-level gross product and employment, and state and regional output and employment by sector are also reported (tables 5 to 8).

The simulations focus on the U.S.-Korea FTA's tariff and tariff-rate quota (TRQ) reductions. The lack of necessary data precludes the quantification of the FTA provisions relating to services, investment, labor, and environment. As such, the simulations tend to underestimate any positive economic effects of the FTA in these sectors.

The method used for the simulations is a computable general equilibrium (CGE) simulation. The specific CGE models used are the Global Trade Analysis Project (GTAP) model and the U.S. Applied General Equilibrium (USAGE) model.

The base data reflect 2009 trade and economic conditions. The models simulate the economic effects of FTA's tariff and TRQ reductions in the U.S. and world economies—in other words, what the economy would have looked like in 2009 had the FTA been fully implemented, holding all else constant.³

Simulation results reflect long-term adjustments of supply, demand, and resource allocations as a result of the FTA. The models do not consider interim adjustments that might be felt as different provisions of the agreement enter into force, nor does it consider various adjustment costs that may occur over time.

In the simulations, bilateral U.S.-Korea ad-valorem tariff equivalents (AVEs) are all reduced to zero (i.e., free of duty), with certain exceptions. No change in quantity traded is anticipated in products that fall within the rice sector, the raw milk sector, the sugarcane and sugar beet sector, or the manufactured sugar sector. In addition, as U.S. exports of oranges to Korea do not experience full liberalization because of the ongoing seasonal orange TRQ in the FTA, the Korea AVE tariffs in the vegetable, fruits, and nuts sector declines from an initial 38.5 percent to 6.7 percent rather than to zero. To isolate the effect of FTA tariff reductions on beef trade from the effects of SPS issues, U.S.-Korea beef trade is based on 2003 data, the most recent year of normal trade prior to the Korean ban on beef imports from the United States. This assumption allows for an estimate that measures the potential changes in trade based solely on the removal of tariffs resulting from implementation of the FTA, and assumes no significant SPS measures that would restrict access to the Korean market. Lastly, Korean liberalization with respect to motor vehicles also includes the reduction of the excise tax on automobiles with an

¹ Material presented in Sections II and III was prepared by staff of the Office of Economics of the U.S. International Trade Commission (USITC or Commission) in response to requests by staff from the Senate Finance Trade Subcommittee, and does not reflect the views of the Commission or Commissioners. The technical assistance is not an official Commission document and if referenced, it should be referenced "work of the staff of the USITC: not a Commission-approved document."

² As negotiated in 2007. The economic model simulations do not take into account subsequent revisions to the agreement that were made in 2010.

³ The model simulations show the marginal effect on the economy, relative to existing trends, of the removal or reduction of tariffs and TRQs as specified in the FTA. For example, a negative effect, such as a decrease in a commodity price or decrease in a sector's output, does not imply that the overall value will be negative as a result of the FTA. Rather the marginal effect of the FTA would either buttress existing negative economic trends or suppress positive ones. For a positive effect, it would do the opposite: enhance a positive economic trend, or suppress a negative one.

engine displacement over 2,000 cubic centimeters (cc). The tax, currently 10 percent, is expected to decline to 5 percent. Although the reduction is included in the FTA, it would apply to all producers; consequently, this change is implemented for all suppliers to the Korean market, including the United States and domestic Korean producers, prorated based on market share across the motor vehicles and parts sector.

We requested that ITC staff simulate two scenarios in the technical assistance:

In Scenario A the amount of labor and capital that is available in the U.S. economy is held fixed and wages and the cost of capital adjust to equilibrate supply and demand for labor and capital.⁴ The Scenario A simulation of fixed labor and capital would reflect a condition close to full employment and full capacity utilization where the FTA creates greater demand for labor and capital in certain industry sectors that must then be reallocated from other sectors. Thus the simulated result for total U.S. employment is zero; employment is reallocated from sector to sector and from state to state. Total employment for a particular state may decline but this does not imply that unemployment is generated in that state; it implies that a certain quantity of labor is now employed in a neighboring state. Many economists consider these types of simulation models, which are based on standard assumptions, to provide reasonable economic responses to tariff changes in most years.

In Scenario B the amount of labor and capital that is available in the U.S. economy is variable; real wages and the cost of capital are held fixed. Under these conditions, the simulations show that U.S. employment would expand by 0.16 percent, or approximately 280,000 jobs. The Scenario B simulation would reflect a condition of less than full employment and excess capacity where the FTA can result in higher employment and increased capacity utilization, drawing resources from currently unemployed labor and capital as well as from other sectors. This approach more closely approximates current U.S. economic conditions than Scenario A.

⁴ The labor and capacity utilization mechanisms in Scenario A are the same as those in the simulations performed in the 2007 USITC publication about the U.S.-Korea FTA (USITC, *U.S.-Korea Free Trade Agreement: Potential Economy-wide and Selected Sectoral Effects*, Sept. 2007).

Table 1 U.S.-Korea FTA: Simulated effects of goods trade liberalization on U.S. GDP and welfare under two different scenarios about capacity utilization and labor employment

Indicator	Change from 2009 baseline			
	Scenario A		Scenario B	
	Fixed capacity utilization and employment		Fixed real wages and returns to capital	
	<i>Million dollars</i>	<i>Percent</i>	<i>Million dollars</i>	<i>Percent</i>
GDP	10,381	0.1	27,261	0.2
Payments to factors	8,670	0.1	21,649	0.2
Land	508	0.8	698	1.1
Unskilled labor	2,670	0.1	6,395	0.2
Skilled labor	1,702	0.1	4,418	0.2
Capital	3,835	0.1	9,317	0.2
Natural resources	-45	0.0	821	0.6
Welfare	1,758	0.0	20,652	0.1
Efficiency	59	0.0	5,452	0.0
Changes in the price of capital goods	215	0.0	20	0.0
Terms of trade (relative price of imports to exports)	1,483	0.0	742	0.0
Capacity utilization	0	0.0	6,688	0.0
Labor employment	0	0.0	7,750	0.1

Note: Zero values indicate values less than 0.05 percent in absolute value. The difference between the sum of payments to factors and GDP is due to changes in net tax payments.

Table 2.A U.S.-Korea FTA: Simulated effects on U.S.-Korea bilateral trade, Scenario A (fixed capacity utilization and employment)

GTAP Sector	U.S. exports to Korea (f.o.b.)				U.S. imports from Korea (LDP)			
	Korean AVE		Change in U.S. exports to Korea after FTA		U.S. AVE		Change in U.S. imports from Korea after FTA	
	Exports before FTA	tariff before FTA			Imports before FTA	tariff before FTA		
	Million USD	Percent	Million USD	Percent	Million USD	Percent	Million USD	Percent
Paddy and processed rice	43	n/a	0	0.1	1	7.5	0	0.0
Wheat	292	1.0	1	0.5	0	0.0	0	12.1
Cereal grains n.e.c.	1,211	2.2	12	1.0	0	1.1	0	5.7
Vegetables, fruit, nuts	274	38.5	202	73.7	35	0.7	2	7.0
Oil seeds	320	2.5	19	6.1	0	0.0	0	8.2
Sugarcane, sugar beet	0	3.0	0	0.2	0	0.0	0	0.0
Plant-based fibers	91	1.0	6	6.9	0	0.5	0	7.7
Crops n.e.c.	213	5.6	63	29.7	7	1.1	1	15.0
Bovine cattle, sheep and goats, horses	8	5.9	1	10.2	0	0.0	0	7.3
Animal products n.e.c.	290	3.3	36	12.3	1	0.5	0	4.0
Raw milk	0	0.0	0	0.1	0	0.0	0	0.1
Wool, silkworm cocoons	0	1.0	0	15.8	0	0.0	0	10.3
Forestry	180	2.0	15	8.4	0	0.2	0	2.9
Fishing	27	19.6	14	51.9	23	0.0	0	1.2
Coal	220	0.0	0	0.0	0	0.0	0	0.0
Oil and gas	0	0.0	0	-0.1	0	0.0	0	0.0
Minerals n.e.c.	414	1.9	13	3.1	2	0.0	0	-0.1
Bovine meat products	1,085	38.0	1,190	109.8	6	0.4	1	14.7
Meat products n.e.c.	301	24.8	611	203.0	1	2.4	0	37.6
Vegetable oils and fats	194	5.4	35	17.8	2	4.1	1	38.1
Dairy products	71	39.6	263	368.7	6	16.8	11	181.6
Sugar	2	43.5	0	-1.2	0	8.8	0	0.0
Food products n.e.c.	813	10.0	320	39.3	320	4.6	54	16.9
Beverages and tobacco products	97	35.1	88	90.3	88	3.3	4	4.8
Textiles	175	8.3	145	82.9	1,043	11.0	979	93.9
Wearing apparel	76	12.4	100	131.1	158	16.5	260	164.5
Leather products	81	6.2	46	57.3	44	8.8	52	118.9
Wood products	58	4.8	21	36.4	125	0.5	3	2.7
Paper products, publishing	614	2.4	81	13.2	415	0.3	5	1.3
Petroleum, coal products	403	0.0	0	0.0	1,087	2.1	75	6.9
Chemical, rubber, plastic products	5,665	6.7	2,541	44.9	3,093	3.0	585	18.9
Mineral products n.e.c.	254	7.8	135	52.9	184	2.1	18	10.0
Ferrous metals	1,221	1.2	78	6.4	1,284	0.2	8	0.6
Metals n.e.c.	661	3.7	222	33.6	151	2.4	29	19.2
Metal products	393	6.8	221	56.2	1,188	2.4	184	15.5
Motor vehicles and parts	359	7.9	194	54.1	8,108	2.4	907	11.2
Transport equipment n.e.c.	798	0.9	59	7.4	497	0.1	-1	-0.1
Electronic equipment	3,128	0.6	138	4.4	13,182	0.2	230	1.7
Machinery and equipment n.e.c.	7,464	4.6	2,813	37.7	8,506	1.3	805	9.5
Manufactures n.e.c.	424	5.3	169	39.9	314	3.4	74	23.6
Other sectors	13,057	0.0	10	0.1	8,705	0	-46	-0.5
Total	40,978	4.4	9,862	24.1	48,578	1.3	4,243	8.7

Table 2.B U.S.-Korea FTA: Simulated effects on U.S.-Korea bilateral trade, Scenario B (fixed real wages and returns to capital)

GTAP Sector	U.S. exports to Korea (f.o.b.)					U.S. imports from Korea (LDP)				
	Korean AVE		Change in U.S. exports to			U.S. AVE		Change in U.S. imports		
	Exports	tariff before	Korea after FTA			Imports	tariff before	from Korea after FTA		
	before FTA	FTA	Million USD	Percent	Million USD	before FTA	FTA	Million USD	Percent	Million USD
	<i>Million USD</i>	<i>Percent</i>	<i>Million USD</i>	<i>Percent</i>	<i>Million USD</i>	<i>Percent</i>	<i>Million USD</i>	<i>Percent</i>	<i>Million USD</i>	<i>Percent</i>
Paddy and processed rice	43	n/a	0	0.1	1	7.5	0	0.0	0	12.4
Wheat	292	1.0	1	0.4	0	0.0	0	0.0	0	5.9
Cereal grains n.e.c.	1,211	2.2	12	1.0	0	1.1	0	0.0	0	7.2
Vegetables, fruit, nuts	274	38.5	202	73.7	35	0.7	3	0.0	0	8.6
Oil seeds	320	2.5	19	6.1	0	0.0	0	0.0	0	0.0
Sugarcane, sugar beet	0	3.0	0	0.3	0	0.0	0	0.0	0	7.9
Plant-based fibers	91	1.0	6	6.9	0	0.5	0	0.0	0	15.3
Crops n.e.c.	213	5.6	63	29.5	7	1.1	1	0.0	0	7.5
Bovine cattle, sheep and goats, horses	8	5.9	1	10.2	0	0.0	0	0.0	0	4.1
Animal products n.e.c.	290	3.3	36	12.4	1	0.5	0	0.0	0	0.1
Raw milk	0	0.0	0	0.2	0	0.0	0	0.0	0	10.4
Wool, silkworm cocoons	0	1.0	0	16.2	0	0.0	0	0.0	0	3.2
Forestry	180	2.0	15	8.3	0	0.2	0	0.0	0	1.4
Fishing	27	19.6	14	51.8	23	0.0	0	0.0	0	0.5
Coal	220	0.0	-1	-0.4	0	0.0	0	0.0	0	0.4
Oil and gas	0	0.0	0	-0.2	0	0.0	0	0.0	0	0.4
Minerals n.e.c.	414	1.9	12	2.9	2	0.0	0	0.0	0	14.8
Bovine meat products	1,085	38.0	1,191	109.8	6	0.4	1	0.0	0	37.6
Meat products n.e.c.	301	24.8	612	203.3	1	2.4	0	0.0	0	38.1
Vegetable oils and fats	194	5.4	35	17.9	2	4.1	1	0.0	0	181.8
Dairy products	71	39.6	263	369.0	6	16.8	11	0.0	0	0.1
Sugar	2	43.5	0	-1.0	0	8.8	0	0.0	0	17.0
Food products n.e.c.	813	10.0	321	39.5	320	4.6	54	0.0	0	4.9
Beverages and tobacco products	97	35.1	88	90.4	88	3.3	4	0.0	0	94.1
Textiles	175	8.3	146	83.2	1,043	11.0	981	0.0	0	164.8
Wearing apparel	76	12.4	100	131.5	158	16.5	261	0.0	0	119.1
Leather products	81	6.2	47	57.7	44	8.8	52	0.0	0	2.8
Wood products	58	4.8	21	36.6	125	0.5	3	0.0	0	1.4
Paper products, publishing	614	2.4	82	13.4	415	0.3	6	0.0	0	7.1
Petroleum, coal products	403	0.0	0	0.1	1,087	2.1	77	0.0	0	19.0
Chemical, rubber, plastic products	5,665	6.7	2,552	45.1	3,093	3.0	588	0.0	0	10.1
Mineral products n.e.c.	254	7.8	135	53.0	184	2.1	19	0.0	0	0.8
Ferrous metals	1,221	1.2	79	6.5	1,284	0.2	10	0.0	0	19.4
Metals n.e.c.	661	3.7	223	33.8	151	2.4	29	0.0	0	15.6
Metal products	393	6.8	222	56.5	1,188	2.4	185	0.0	0	11.3
Motor vehicles and parts	359	7.9	195	54.3	8,108	2.4	915	0.0	0	0.0
Transport equipment n.e.c.	798	0.9	61	7.7	497	0.1	0	0.0	0	1.9
Electronic equipment	3,128	0.6	147	4.7	13,182	0.2	248	0.0	0	9.5
Machinery and equipment n.e.c.	7,464	4.6	2,836	38.0	8,506	1.3	811	0.0	0	23.7
Manufactures n.e.c.	424	5.3	170	40.2	314	3.4	75	0.0	0	-0.4
Other sectors	13,057	0.0	22	0.2	8,705	0	-35	0.0	0	8.9
Total	40,978	4.4	9,928	24.2	48,578	1.3	4,301			

Table 3.A U.S.-Korea FTA: Simulated effects on U.S. global trade, Scenario A (fixed capacity utilization and employment)

GTAP Sector	U.S. exports to the world (f.o.b.)			U.S. imports from the world (LDP)		
	Exports before		Change in U.S. exports after FTA <i>Percent</i>	Imports before		Change in U.S. imports after FTA <i>Percent</i>
	FTA <i>Million USD</i>	<i>Million USD</i>		FTA <i>Million USD</i>	<i>Million USD</i>	
Paddy and processed rice	1,392	-8	-0.6	476	2	0.5
Wheat	5,522	-39	-0.7	678	4	0.6
Cereal grains n.e.c.	7,486	1	0.0	727	5	0.6
Vegetables, fruit, nuts	13,730	148	1.1	10,765	34	0.3
Oil seeds	9,590	-27	-0.3	714	3	0.5
Sugarcane, sugar beet	9	0	-0.8	10	0	0.0
Plant-based fibers	4,837	-14	-0.3	22	0	0.3
Crops n.e.c.	2,783	25	0.9	7,258	52	0.7
Bovine cattle, sheep and goats, horses	680	-2	-0.3	1,627	27	1.7
Animal products n.e.c.	3,598	26	0.7	1,795	11	0.6
Raw milk	4	0	-1.2	24	0	1.1
Wool, silkworm cocoons	53	-1	-1.3	25	0	1.2
Forestry	1,397	10	0.7	438	1	0.2
Fishing	766	12	1.6	2,314	7	0.3
Coal	12,936	-4	0.0	2,987	2	0.1
Oil and gas	3,172	-6	-0.2	234,671	146	0.1
Minerals n.e.c.	6,940	8	0.1	11,167	8	0.1
Bovine meat products	2,011	1,181	58.7	4,117	35	0.9
Meat products n.e.c.	6,562	552	8.4	1,807	10	0.6
Vegetable oils and fats	3,788	15	0.4	3,639	15	0.4
Dairy products	2,453	246	10.0	2,317	15	0.7
Sugar	189	-1	-0.5	1,602	5	0.3
Food products n.e.c.	21,384	262	1.2	31,605	86	0.3
Beverages and tobacco products	4,739	81	1.7	15,238	14	0.1
Textiles	14,031	94	0.7	52,547	225	0.4
Wearing apparel	2,525	91	3.6	65,095	90	0.1
Leather products	2,033	23	1.1	34,409	47	0.1
Wood products	9,823	-24	-0.2	48,168	123	0.3
Paper products, publishing	31,379	-25	-0.1	24,988	65	0.3
Petroleum, coal products	32,421	-12	0.0	102,148	63	0.1
Chemical, rubber, plastic products	207,112	1,767	0.9	197,815	611	0.3
Mineral products n.e.c.	11,003	92	0.8	23,080	58	0.3
Ferrous metals	20,575	19	0.1	34,146	58	0.2
Metals n.e.c.	31,170	66	0.2	41,937	83	0.2
Metal products	23,709	111	0.5	37,160	172	0.5
Motor vehicles and parts	92,839	-38	0.0	224,550	510	0.2
Transport equipment n.e.c.	94,407	-403	-0.4	40,110	106	0.3
Electronic equipment	90,587	-436	-0.5	258,597	376	0.1
Machinery and equipment n.e.c.	242,594	1,502	0.6	271,892	996	0.4
Manufactures n.e.c.	14,475	85	0.6	69,955	145	0.2
Other sectors	549,306	-1,286	-0.2	271,694	367	0.1
Total	1,586,012	4,089	0.3	2,134,313	4,575	0.2

Table 3.B U.S.-Korea FTA: Simulated effects on U.S. global trade, Scenario B (fixed real wages and returns to capital)

GTAP Sector	U.S. exports to the world (f.o.b.)			U.S. imports from the world (LDP)		
	Exports before		Change in U.S. exports after FTA	Imports before		Change in U.S. imports after FTA
	FTA	Change in U.S. exports after FTA		FTA	Change in U.S. imports after FTA	
	Million USD	Million USD	Percent	Million USD	Million USD	Percent
Paddy and processed rice	1,392	-7	-0.5	476	2	0.5
Wheat	5,522	-42	-0.8	678	5	0.7
Cereal grains n.e.c.	7,486	2	0.0	727	6	0.8
Vegetables, fruit, nuts	13,730	149	1.1	10,765	43	0.4
Oil seeds	9,590	-28	-0.3	714	5	0.6
Sugarcane, sugar beet	9	0	-0.9	10	0	0.2
Plant-based fibers	4,837	-14	-0.3	22	0	0.4
Crops n.e.c.	2,783	21	0.8	7,258	66	0.9
Bovine cattle, sheep and goats, horses	680	-2	-0.3	1,627	29	1.8
Animal products n.e.c.	3,598	27	0.7	1,795	13	0.7
Raw milk	4	0	-1.2	24	0	1.2
Wool, silkworm cocoons	53	0	-0.9	25	0	1.2
Forestry	1,397	9	0.6	438	2	0.5
Fishing	766	12	1.6	2,314	11	0.5
Coal	12,936	-43	-0.3	2,987	17	0.6
Oil and gas	3,172	-8	-0.3	234,671	702	0.3
Minerals n.e.c.	6,940	1	0.0	11,167	56	0.5
Bovine meat products	2,011	1,183	58.8	4,117	35	0.9
Meat products n.e.c.	6,562	567	8.6	1,807	10	0.5
Vegetable oils and fats	3,788	20	0.5	3,639	17	0.5
Dairy products	2,453	251	10.2	2,317	15	0.7
Sugar	189	-1	-0.3	1,602	5	0.3
Food products n.e.c.	21,384	286	1.3	31,605	99	0.3
Beverages and tobacco products	4,739	84	1.8	15,238	24	0.2
Textiles	14,031	122	0.9	52,547	264	0.5
Wearing apparel	2,525	97	3.8	65,095	130	0.2
Leather products	2,033	28	1.4	34,409	74	0.2
Wood products	9,823	-5	0.0	48,168	139	0.3
Paper products, publishing	31,379	30	0.1	24,988	72	0.3
Petroleum, coal products	32,421	-3	0.0	102,148	292	0.3
Chemical, rubber, plastic products	207,112	2,064	1.0	197,815	781	0.4
Mineral products n.e.c.	11,003	100	0.9	23,080	88	0.4
Ferrous metals	20,575	40	0.2	34,146	104	0.3
Metals n.e.c.	31,170	98	0.3	41,937	143	0.3
Metal products	23,709	162	0.7	37,160	184	0.5
Motor vehicles and parts	92,839	58	0.1	224,550	683	0.3
Transport equipment n.e.c.	94,407	-183	-0.2	40,110	113	0.3
Electronic equipment	90,587	-198	-0.2	258,597	584	0.2
Machinery and equipment n.e.c.	242,594	2,065	0.9	271,892	1,066	0.4
Manufactures n.e.c.	14,475	122	0.8	69,955	186	0.3
Other sectors	549,306	-650	-0.1	271,694	642	0.2
Total	1,586,012	6,411	0.4	2,134,313	6,708	0.3

Table 4 U.S.-Korea FTA: Simulated effects on U.S. output and employment under two scenarios about capacity utilization and employment

GTAP sector	Scenario A				Scenario B			
	Fixed capacity utilization and employment				Fixed real wages and returns to capital			
	Output		Labor quantity		Output		Labor quantity	
	Quantity	Revenue	Skilled	Unskilled	Quantity	Revenue	Skilled	Unskilled
	<i>Percent changes</i>							
Paddy and processed rice	-0.2	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1
Wheat	-0.5	-0.4	-0.5	-0.5	-0.5	-0.4	-0.5	-0.5
Cereal grains n.e.c.	0.3	0.5	0.4	0.4	0.4	0.6	0.5	0.5
Vegetables, fruit, nuts	0.2	0.5	0.3	0.3	0.3	0.5	0.4	0.4
Oil seeds	-0.2	0.0	-0.2	-0.2	-0.2	0.0	-0.1	-0.1
Sugarcane, sugar beet	0.0	0.3	0.1	0.1	0.1	0.4	0.2	0.2
Plant-based fibers	-0.3	-0.1	-0.2	-0.2	-0.2	0.0	-0.1	-0.1
Crops n.e.c.	-0.1	0.2	0.0	0.0	0.0	0.3	0.1	0.1
Bovine cattle, sheep and goats, horses	1.1	1.4	1.2	1.3	1.2	1.5	1.4	1.4
Animal products n.e.c.	0.5	0.6	0.5	0.5	0.6	0.7	0.7	0.7
Raw milk	0.2	0.4	0.3	0.3	0.3	0.5	0.4	0.4
Wool, silkworm cocoons	0.2	0.3	0.3	0.3	0.4	0.5	0.6	0.6
Forestry	0.0	0.1	0.0	0.0	0.1	0.3	0.2	0.2
Fishing	0.1	0.4	0.1	0.1	0.1	0.5	0.2	0.2
Coal	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1
Oil and gas	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1
Minerals n.e.c.	0.0	0.1	0.0	0.0	0.1	0.5	0.2	0.2
Bovine meat products	1.2	1.4	1.2	1.2	1.3	1.5	1.3	1.3
Meat products n.e.c.	0.6	0.7	0.6	0.6	0.7	0.8	0.7	0.7
Vegetable oils and fats	0.1	0.2	0.1	0.1	0.3	0.3	0.3	0.3
Dairy products	0.3	0.4	0.3	0.3	0.4	0.5	0.4	0.4
Sugar	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.1
Food products n.e.c.	0.1	0.2	0.1	0.1	0.2	0.3	0.2	0.2
Beverages and tobacco products	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.1
Textiles	-0.4	-0.3	-0.4	-0.3	-0.1	-0.1	-0.1	-0.1
Wearing apparel	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.3
Leather products	-0.1	-0.1	-0.1	-0.1	0.1	0.1	0.1	0.1
Wood products	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1
Paper products, publishing	0.0	0.1	0.0	0.0	0.2	0.2	0.2	0.2
Petroleum, coal products	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1
Chemical, rubber, plastic products	0.1	0.2	0.1	0.1	0.3	0.3	0.3	0.3
Mineral products n.e.c.	0.0	0.1	0.0	0.0	0.2	0.2	0.2	0.2
Ferrous metals	-0.1	0.0	-0.1	-0.1	0.1	0.2	0.1	0.1
Metals n.e.c.	-0.1	0.0	-0.1	-0.1	0.1	0.2	0.1	0.1
Metal products	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1
Motor vehicles and parts	-0.1	-0.1	-0.1	-0.1	0.0	0.1	0.0	0.0
Transport equipment n.e.c.	-0.2	-0.1	-0.2	-0.2	0.0	0.0	0.0	0.0
Electronic equipment	-0.3	-0.3	-0.3	-0.3	-0.1	0.0	-0.1	-0.1
Machinery and equipment n.e.c.	0.0	0.1	0.0	0.0	0.2	0.3	0.2	0.2
Manufactures n.e.c.	-0.1	0.0	-0.1	0.0	0.2	0.2	0.2	0.2
Other sectors	0.0	0.1	0.0	0.0	0.2	0.2	0.2	0.2
Total	0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.2

Table 5 U.S.-Korea FTA: Simulated effects on real gross product and employment, by U.S. state, under two scenarios about U.S. capacity utilization and employment

State	Scenario A		Scenario B	
	Fixed U.S. capacity utilization and employment		Fixed real wages and returns to capital	
	Real gross state product	State employment ----- Percent -----	Real gross state product	State employment
Alabama	0.0	0.0	0.1	0.1
Alaska	0.0	0.0	0.1	0.1
Arizona	-0.1	-0.1	0.1	0.1
Arkansas	0.0	0.0	0.2	0.2
California	0.0	0.0	0.1	0.1
Colorado	0.1	0.1	0.2	0.2
Connecticut	-0.1	-0.1	0.1	0.1
Delaware	0.0	0.0	0.1	0.1
Florida	0.0	0.0	0.2	0.2
Georgia	0.1	0.1	0.2	0.2
Hawaii	-0.1	-0.1	0.0	0.0
Idaho	0.1	0.0	0.2	0.2
Illinois	0.0	0.0	0.2	0.2
Indiana	0.0	-0.1	0.1	0.1
Iowa	0.3	0.3	0.5	0.6
Kansas	0.2	0.2	0.4	0.4
Kentucky	0.0	0.0	0.2	0.2
Louisiana	0.0	0.0	0.2	0.2
Maine	-0.1	-0.1	0.1	0.1
Maryland	0.0	0.0	0.1	0.1
Massachusetts	-0.1	-0.1	0.1	0.1
Michigan	-0.1	-0.1	0.1	0.1
Minnesota	0.0	0.0	0.2	0.2
Mississippi	0.0	0.0	0.2	0.2
Missouri	0.0	0.0	0.2	0.2
Montana	0.1	0.1	0.2	0.2
Nebraska	0.3	0.4	0.6	0.6
Nevada	0.0	0.0	0.1	0.1
New Hampshire	-0.1	-0.1	0.1	0.1
New Jersey	-0.1	-0.1	0.2	0.2
New Mexico	0.0	0.0	0.1	0.1
New York	0.0	0.0	0.2	0.2
North Carolina	0.0	0.0	0.1	0.1
North Dakota	0.0	0.0	0.2	0.2
Ohio	-0.1	-0.1	0.1	0.1
Oklahoma	0.1	0.1	0.3	0.3
Oregon	0.0	0.0	0.1	0.1
Pennsylvania	-0.1	-0.1	0.1	0.1
Rhode Island	-0.1	-0.1	0.1	0.1
South Carolina	0.1	0.1	0.2	0.2
South Dakota	0.3	0.3	0.4	0.4
Tennessee	0.0	0.0	0.2	0.2
Texas	0.0	0.0	0.2	0.2
Utah	0.0	0.0	0.1	0.1
Vermont	-0.1	-0.1	0.0	0.0
Virginia	0.1	0.1	0.2	0.2
Washington	0.1	0.1	0.2	0.2
West Virginia	0.0	0.0	0.1	0.1
Wisconsin	-0.1	-0.1	0.1	0.1
Wyoming	0.1	0.1	0.3	0.2

Table 6 U.S.-Korea FTA: Simulated effects on real gross product and employment, by U.S. region, under two scenarios about U.S. capacity utilization and employment

Region	Scenario A		Scenario B	
	Fixed U.S. capacity utilization and employment		Fixed real wages and returns to capital	
	Real gross regional product	Regional employment	Real gross regional product	Regional employment
		----- Percent -----		
North West	0.0	0.0	0.2	0.2
Western	0.0	0.0	0.1	0.1
Rocky Mountain	0.1	0.1	0.3	0.3
Mid-America	0.1	0.1	0.2	0.2
South West	0.1	0.1	0.2	0.2
Midwest	0.0	0.0	0.2	0.2
Great Lakes	-0.1	-0.1	0.1	0.1
Southeastern	0.0	0.0	0.2	0.2
Mid-Atlantic	0.0	0.0	0.2	0.2
New England	-0.1	-0.1	0.1	0.1

Note: In this and the following tables, U.S. states have been grouped to ten regions according to the following:

Northwest: Alaska, Washington, Oregon, Idaho, Montana.

Western: California, Nevada, Arizona, Hawaii.

Rocky Mountain: Utah, Wyoming, Colorado, New Mexico, Nebraska, South Dakota, North Dakota.

Mid-America: Kansas, Missouri, Arkansas.

Southwest: Texas, Oklahoma, Louisiana.

Midwest: Minnesota, Iowa, Wisconsin, Illinois.

Great Lakes: Michigan, Indiana, Ohio.

Southeastern: Kentucky, Tennessee, Mississippi, Alabama, Florida, Georgia, South Carolina, North Carolina.

Mid-Atlantic: Virginia, West Virginia, Maryland, Delaware, Pennsylvania, New Jersey, New York.

New England: Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, Maine.

Table 7.A U.S.-Korea FTA: Simulated effects on employment, by U.S. state and sector, Scenario A (fixed capacity utilization and employment)

State	Agriculture, forestry and fisheries	Mining	Construction	Durable manufacturing	Nondurable manufacturing	Transportation, communications and utilities	Wholesale and retail trade	Finance, insurance and real estate	Other services
----- Percent -----									
Alabama	1.1	-0.1	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
Alaska	0.1	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
Arizona	0.9	-0.2	0.0	-0.3	0.1	-0.1	0.0	-0.1	0.0
Arkansas	1.3	-0.1	0.0	-0.1	0.1	0.1	0.0	0.0	0.0
California	0.4	-0.1	0.0	-0.3	0.2	0.0	0.1	0.0	0.0
Colorado	4.0	-0.1	0.1	-0.1	0.4	0.1	0.1	0.1	0.0
Connecticut	0.1	0.0	-0.1	-0.4	-0.1	-0.1	-0.1	-0.1	-0.1
Delaware	0.5	-0.1	0.0	-0.2	-0.1	0.0	0.0	0.0	0.0
Florida	0.5	0.0	0.0	-0.2	0.1	0.0	0.1	0.0	0.0
Georgia	1.2	0.0	0.1	-0.2	0.2	0.1	0.1	0.1	0.0
Hawaii	0.3	0.0	0.0	-0.1	0.0	-0.1	-0.1	-0.1	0.0
Idaho	1.4	0.0	0.0	-0.3	0.3	0.1	0.0	0.1	0.0
Illinois	1.4	-0.1	0.0	-0.2	0.1	0.0	0.0	0.0	0.0
Indiana	1.5	-0.1	0.0	-0.2	0.0	0.0	-0.1	0.0	0.0
Iowa	3.8	0.2	0.3	0.0	1.2	0.3	0.3	0.3	0.2
Kansas	4.3	-0.1	0.2	-0.2	1.2	0.2	0.2	0.3	0.1
Kentucky	1.8	-0.1	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
Louisiana	0.8	-0.2	0.0	-0.1	0.2	0.1	0.1	0.0	0.0
Maine	0.3	0.0	0.0	-0.2	-0.1	0.0	-0.1	-0.1	0.0
Maryland	0.4	-0.1	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
Massachusetts	0.3	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1
Michigan	0.4	-0.2	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1
Minnesota	1.6	-0.2	0.0	-0.1	0.1	0.0	0.0	0.0	0.0
Mississippi	1.2	-0.1	0.0	-0.1	0.3	0.1	0.1	0.1	0.0
Missouri	2.3	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
Montana	2.3	-0.1	0.1	-0.1	0.1	0.1	0.0	0.1	0.0
Nebraska	4.7	0.1	0.3	0.0	1.9	0.3	0.3	0.3	0.2
Nevada	1.5	-0.1	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
New Hampshire	0.1	0.0	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1
New Jersey	0.2	-0.1	-0.1	-0.3	-0.1	0.0	-0.1	-0.1	0.0
New Mexico	2.0	-0.1	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
New York	0.3	-0.1	0.0	-0.3	0.0	0.0	0.0	-0.1	0.0
North Carolina	1.7	0.0	0.0	-0.2	0.1	0.1	0.0	0.0	0.0
North Dakota	1.2	-0.1	0.0	-0.1	0.2	0.0	0.0	0.0	0.0
Ohio	0.9	-0.2	-0.1	-0.2	-0.1	0.0	-0.1	-0.1	-0.1
Oklahoma	3.5	-0.2	0.1	-0.1	0.3	0.1	0.1	0.2	0.1
Oregon	0.8	0.0	0.0	-0.3	0.1	0.1	0.1	0.0	0.0
Pennsylvania	0.8	-0.1	0.0	-0.2	0.0	0.0	-0.1	-0.1	0.0
Rhode Island	0.4	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	0.0
South Carolina	2.1	0.0	0.0	-0.3	0.1	0.1	0.3	0.1	0.0
South Dakota	3.9	0.0	0.2	0.0	1.6	0.3	0.2	0.2	0.1
Tennessee	1.5	0.0	0.0	-0.2	-0.1	0.0	0.0	0.0	0.0
Texas	2.2	-0.2	0.0	-0.2	0.2	0.1	0.1	0.1	0.0
Utah	2.4	-0.1	0.0	-0.2	0.1	0.0	0.0	0.0	0.0
Vermont	0.5	0.0	-0.1	-0.4	-0.1	-0.1	-0.1	-0.1	-0.1
Virginia	3.4	-0.1	0.1	-0.2	0.5	0.1	0.2	0.1	0.1
Washington	1.3	0.0	0.1	-0.4	0.5	0.1	0.3	0.1	0.0
West Virginia	1.8	-0.1	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
Wisconsin	0.7	0.0	0.0	-0.2	-0.1	0.0	-0.1	-0.1	0.0
Wyoming	4.4	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1

Table 7.B U.S.-Korea FTA: Simulated effects on employment, by U.S. state and sector, Scenario B (fixed real wages and returns to capital)

State	Agriculture, forestry and fisheries	Mining	Construction	Durable manufacturing	Nondurable manufacturing	Transportation, communications and utilities	Wholesale and retail trade	Finance, insurance and real estate	Other services
	----- Percent -----								
Alabama	1.3	0.2	0.1	0.0	0.2	0.2	0.1	0.2	0.1
Alaska	0.3	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Arizona	1.0	0.0	0.1	-0.2	0.3	0.1	0.1	0.1	0.1
Arkansas	1.5	0.2	0.2	0.0	0.3	0.2	0.2	0.2	0.1
California	0.6	0.1	0.2	-0.1	0.3	0.2	0.3	0.2	0.1
Colorado	4.2	0.1	0.2	0.0	0.6	0.2	0.2	0.2	0.1
Connecticut	0.4	0.2	0.1	-0.2	0.1	0.1	0.1	0.1	0.1
Delaware	0.7	0.1	0.2	0.0	0.1	0.2	0.2	0.1	0.1
Florida	0.7	0.2	0.2	-0.1	0.3	0.2	0.3	0.2	0.1
Georgia	1.4	0.1	0.2	0.0	0.3	0.2	0.3	0.3	0.2
Hawaii	0.4	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0
Idaho	1.5	0.1	0.1	-0.1	0.5	0.2	0.2	0.2	0.1
Illinois	1.7	0.2	0.2	0.0	0.3	0.2	0.2	0.2	0.2
Indiana	1.7	0.2	0.1	0.0	0.2	0.2	0.1	0.2	0.1
Iowa	4.1	0.4	0.5	0.2	1.4	0.7	0.6	0.5	0.4
Kansas	4.5	0.2	0.4	-0.1	1.4	0.6	0.5	0.5	0.3
Kentucky	2.0	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Louisiana	1.0	0.1	0.1	0.0	0.3	0.3	0.3	0.2	0.1
Maine	0.5	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Maryland	0.6	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Massachusetts	0.5	0.1	0.1	-0.1	0.1	0.1	0.1	0.1	0.1
Michigan	0.6	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Minnesota	1.8	0.0	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Mississippi	1.4	0.1	0.2	0.0	0.4	0.2	0.2	0.2	0.1
Missouri	2.5	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Montana	2.4	0.1	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Nebraska	4.9	0.3	0.5	0.2	2.1	0.7	0.7	0.5	0.4
Nevada	1.7	0.1	0.1	0.0	0.2	0.2	0.2	0.2	0.1
New Hampshire	0.4	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
New Jersey	0.5	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2
New Mexico	2.1	0.1	0.1	-0.1	0.2	0.2	0.2	0.2	0.1
New York	0.6	0.2	0.2	-0.1	0.2	0.2	0.2	0.1	0.1
North Carolina	1.9	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
North Dakota	1.4	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.1
Ohio	1.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Oklahoma	3.7	0.1	0.3	0.0	0.4	0.3	0.3	0.3	0.2
Oregon	0.9	0.1	0.1	-0.1	0.3	0.2	0.2	0.2	0.1
Pennsylvania	1.1	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Rhode Island	0.6	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
South Carolina	2.3	0.2	0.2	-0.1	0.2	0.3	0.5	0.3	0.1
South Dakota	4.1	0.2	0.4	0.1	1.8	0.6	0.4	0.4	0.2
Tennessee	1.7	0.2	0.2	0.0	0.1	0.2	0.2	0.2	0.1
Texas	2.4	0.1	0.2	-0.1	0.4	0.2	0.2	0.2	0.2
Utah	2.6	0.1	0.1	-0.1	0.3	0.2	0.2	0.2	0.1
Vermont	0.6	0.1	0.1	-0.2	0.1	0.1	0.0	0.1	0.0
Virginia	3.6	0.2	0.2	0.0	0.6	0.3	0.4	0.3	0.1
Washington	1.4	0.2	0.2	-0.2	0.6	0.3	0.4	0.2	0.1
West Virginia	2.0	0.2	0.1	0.0	0.1	0.2	0.2	0.2	0.1
Wisconsin	0.9	0.2	0.2	0.0	0.1	0.2	0.1	0.2	0.1
Wyoming	4.5	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.1

Table 8.A U.S.-Korea FTA: Simulated effects on employment, by region and sector, Scenario A (fixed capacity utilization and employment)

Region	Agriculture, forestry and fisheries	Mining	Construction	Durable manufacturing	Nondurable manufacturing	Transportation, communications and utilities	Wholesale and retail trade	Finance, insurance and real estate	Other services
----- Percent -----									
North West	1.2	-0.1	0.0	-0.3	0.3	0.1	0.2	0.1	0.0
Western	0.4	-0.1	0.0	-0.3	0.2	0.0	0.1	0.0	0.0
Rocky Mountain	3.4	-0.1	0.1	-0.1	0.8	0.1	0.1	0.1	0.1
Mid-America	2.5	-0.1	0.1	-0.2	0.3	0.1	0.0	0.1	0.0
South West	2.3	-0.2	0.0	-0.2	0.2	0.1	0.1	0.1	0.0
Midwest	1.9	-0.1	0.0	-0.2	0.2	0.0	0.0	0.0	0.0
Great Lakes	0.9	-0.1	-0.1	-0.2	-0.1	0.0	-0.1	-0.1	-0.1
Southeastern	1.2	-0.1	0.0	-0.2	0.1	0.1	0.1	0.0	0.0
Mid-Atlantic	1.2	-0.1	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
New England	0.3	0.0	-0.1	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1

Table 8.B U.S.-Korea FTA: Simulated effects on employment, by region and sector, Scenario B (fixed real wages and returns to capital)

Region	Agriculture, forestry and fisheries	Mining	Construction	Durable manufacturing	Nondurable manufacturing	Transportation, communications and utilities	Wholesale and retail trade	Finance, insurance and real estate	Other services
----- Percent -----									
North West	1.4	0.1	0.2	-0.2	0.5	0.2	0.3	0.2	0.1
Western	0.6	0.1	0.1	-0.1	0.3	0.2	0.2	0.2	0.1
Rocky Mountain	3.6	0.1	0.2	0.0	0.9	0.3	0.3	0.3	0.2
Mid-America	2.7	0.2	0.2	0.0	0.5	0.3	0.3	0.3	0.2
South West	2.5	0.1	0.2	0.0	0.4	0.3	0.3	0.3	0.2
Midwest	2.1	0.1	0.2	0.0	0.4	0.3	0.2	0.2	0.2
Great Lakes	1.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Southeastern	1.4	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Mid-Atlantic	1.4	0.2	0.2	0.0	0.3	0.2	0.2	0.2	0.1
New England	0.5	0.1	0.1	-0.1	0.1	0.1	0.1	0.1	0.1

Table 9.A U.S.-Korea FTA: Simulated effects on gross output, by U.S. state and sector, Scenario A (fixed capacity utilization and employment)

State	Agriculture, forestry and fisheries	Mining	Construction	Durable manufacturing	Nondurable manufacturing	Transportation, communications and utilities	Wholesale and retail trade	Finance, insurance and real estate	Other services
----- Percent -----									
Alabama	0.9	-0.1	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
Alaska	0.0	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
Arizona	0.8	-0.1	0.0	-0.3	0.1	-0.1	0.0	-0.1	0.0
Arkansas	1.1	0.0	0.0	-0.1	0.1	0.1	0.0	0.0	0.0
California	0.4	-0.1	0.0	-0.3	0.1	0.0	0.1	0.0	0.0
Colorado	3.5	-0.1	0.1	-0.1	0.4	0.1	0.1	0.1	0.0
Connecticut	0.0	-0.1	-0.1	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1
Delaware	0.4	-0.1	0.0	-0.2	-0.1	0.0	0.0	0.0	0.0
Florida	0.4	0.0	0.0	-0.2	0.1	0.0	0.1	0.0	0.0
Georgia	1.1	0.0	0.1	-0.2	0.2	0.1	0.1	0.1	0.0
Hawaii	0.2	0.0	0.0	-0.1	0.0	-0.1	-0.1	-0.1	0.0
Idaho	1.1	0.0	0.0	-0.2	0.3	0.1	0.0	0.1	0.0
Illinois	1.1	-0.1	0.0	-0.2	0.1	0.0	-0.1	0.0	0.0
Indiana	1.2	-0.1	0.0	-0.2	0.0	0.0	-0.1	0.0	0.0
Iowa	3.4	0.2	0.3	0.0	1.2	0.3	0.3	0.3	0.2
Kansas	3.8	0.0	0.2	-0.2	1.2	0.2	0.2	0.3	0.1
Kentucky	1.5	-0.1	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
Louisiana	0.7	-0.1	0.0	-0.1	0.2	0.1	0.1	0.0	0.0
Maine	0.2	0.0	0.0	-0.2	-0.1	0.0	-0.1	-0.1	0.0
Maryland	0.3	-0.1	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
Massachusetts	0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1
Michigan	0.2	-0.2	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1
Minnesota	1.3	-0.2	0.0	-0.1	0.1	0.0	0.0	0.0	0.0
Mississippi	1.0	-0.1	0.0	-0.1	0.2	0.1	0.1	0.1	0.0
Missouri	1.9	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
Montana	1.8	-0.1	0.1	-0.1	0.1	0.1	0.0	0.1	0.0
Nebraska	4.1	0.1	0.3	0.0	1.8	0.3	0.3	0.3	0.2
Nevada	1.1	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
New Hampshire	0.0	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1
New Jersey	0.1	-0.1	-0.1	-0.2	-0.1	0.0	-0.1	-0.1	-0.1
New Mexico	1.6	-0.1	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
New York	0.2	-0.1	0.0	-0.3	0.0	0.0	0.0	-0.1	0.0
North Carolina	1.5	0.0	0.0	-0.2	0.1	0.0	0.0	0.0	0.0
North Dakota	0.9	0.0	0.0	-0.1	0.1	0.0	0.0	0.0	0.0
Ohio	0.7	-0.1	-0.1	-0.2	-0.1	0.0	-0.1	-0.1	-0.1
Oklahoma	3.0	-0.1	0.1	-0.1	0.3	0.1	0.1	0.2	0.1
Oregon	0.7	0.0	0.0	-0.3	0.1	0.1	0.1	0.0	0.0
Pennsylvania	0.6	-0.1	-0.1	-0.2	0.0	0.0	-0.1	-0.1	0.0
Rhode Island	0.3	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	0.0
South Carolina	2.0	0.0	0.0	-0.3	0.1	0.1	0.3	0.1	0.0
South Dakota	3.4	0.0	0.2	0.0	1.6	0.3	0.2	0.2	0.1
Tennessee	1.2	0.0	0.0	-0.2	-0.1	0.0	0.0	0.0	0.0
Texas	1.9	-0.1	0.0	-0.2	0.2	0.1	0.1	0.1	0.0
Utah	2.0	-0.1	0.0	-0.2	0.1	0.0	0.0	0.0	0.0
Vermont	0.3	0.0	-0.1	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1
Virginia	3.1	-0.1	0.1	-0.2	0.4	0.1	0.2	0.1	0.1
Washington	1.2	0.0	0.1	-0.4	0.5	0.1	0.2	0.1	0.0
West Virginia	1.5	-0.1	0.0	-0.2	-0.1	0.0	0.0	0.0	0.0
Wisconsin	0.5	0.0	0.0	-0.2	-0.1	0.0	-0.1	-0.1	0.0
Wyoming	3.7	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1

Table 9.B U.S.-Korea FTA: Simulated effects on gross output, by U.S. state and sector, Scenario B (fixed real wages and returns to capital)

State	Agriculture, forestry and fisheries	Mining	Construction	Durable manufacturing	Nondurable manufacturing	Transportation, communications and utilities	Wholesale and retail trade	Finance, insurance and real estate	Other services
----- Percent -----									
Alabama	1.1	0.2	0.1	0.0	0.1	0.2	0.1	0.2	0.1
Alaska	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Arizona	0.9	0.1	0.1	-0.2	0.3	0.1	0.1	0.1	0.1
Arkansas	1.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
California	0.5	0.1	0.1	-0.1	0.3	0.2	0.2	0.2	0.1
Colorado	3.7	0.1	0.2	0.0	0.6	0.2	0.2	0.2	0.1
Connecticut	0.3	0.1	0.1	-0.1	0.1	0.1	0.1	0.1	0.1
Delaware	0.6	0.1	0.2	0.0	0.1	0.1	0.2	0.1	0.1
Florida	0.6	0.2	0.2	-0.1	0.3	0.2	0.3	0.2	0.1
Georgia	1.3	0.1	0.2	0.0	0.3	0.2	0.3	0.3	0.2
Hawaii	0.3	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0
Idaho	1.3	0.1	0.1	-0.1	0.4	0.2	0.2	0.2	0.1
Illinois	1.3	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Indiana	1.4	0.1	0.1	0.0	0.2	0.2	0.1	0.2	0.1
Iowa	3.6	0.4	0.5	0.2	1.4	0.7	0.6	0.5	0.4
Kansas	4.0	0.2	0.4	-0.1	1.4	0.6	0.5	0.5	0.3
Kentucky	1.6	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Louisiana	0.8	0.1	0.1	0.0	0.3	0.2	0.2	0.2	0.1
Maine	0.4	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Maryland	0.5	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Massachusetts	0.4	0.1	0.1	-0.1	0.1	0.1	0.1	0.1	0.1
Michigan	0.5	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Minnesota	1.5	0.0	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Mississippi	1.2	0.1	0.2	0.0	0.4	0.2	0.2	0.2	0.1
Missouri	2.1	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Montana	1.9	0.1	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Nebraska	4.3	0.3	0.5	0.2	2.0	0.7	0.7	0.5	0.4
Nevada	1.3	0.1	0.1	0.0	0.2	0.2	0.2	0.2	0.1
New Hampshire	0.3	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
New Jersey	0.5	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2
New Mexico	1.7	0.1	0.1	-0.1	0.1	0.2	0.1	0.2	0.1
New York	0.5	0.2	0.2	0.0	0.2	0.2	0.2	0.1	0.1
North Carolina	1.7	0.2	0.1	0.0	0.2	0.2	0.2	0.2	0.1
North Dakota	1.1	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.1
Ohio	0.9	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Oklahoma	3.2	0.1	0.3	0.1	0.4	0.3	0.3	0.3	0.2
Oregon	0.8	0.1	0.1	-0.1	0.2	0.2	0.2	0.2	0.1
Pennsylvania	0.9	0.1	0.2	0.0	0.2	0.2	0.1	0.2	0.1
Rhode Island	0.5	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
South Carolina	2.2	0.2	0.2	-0.1	0.2	0.3	0.4	0.3	0.1
South Dakota	3.6	0.2	0.4	0.1	1.7	0.6	0.4	0.4	0.2
Tennessee	1.4	0.2	0.2	0.0	0.1	0.2	0.2	0.2	0.1
Texas	2.0	0.1	0.2	0.0	0.4	0.2	0.2	0.2	0.1
Utah	2.2	0.1	0.1	-0.1	0.2	0.2	0.1	0.1	0.1
Vermont	0.5	0.1	0.1	-0.1	0.0	0.1	0.0	0.1	0.0
Virginia	3.4	0.2	0.2	0.0	0.6	0.3	0.4	0.3	0.1
Washington	1.3	0.1	0.2	-0.2	0.6	0.2	0.4	0.2	0.1
West Virginia	1.7	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.1
Wisconsin	0.7	0.2	0.1	0.0	0.1	0.2	0.1	0.1	0.1
Wyoming	3.8	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.1

Table 10.A U.S.-Korea FTA: Simulated effects on gross output, by region and sector, Scenario A (fixed capacity utilization and employment)

Region	Agriculture, forestry and fisheries	Mining	Construction	Durable manufacturing	Nondurable manufacturing	Transportation, communications and utilities	Wholesale and retail trade	Finance, insurance and real estate	Other services
	----- Percent -----								
North West	1.0	-0.1	0.0	-0.3	0.3	0.1	0.1	0.0	0.0
Western	0.4	-0.1	0.0	-0.3	0.1	0.0	0.1	0.0	0.0
Rocky Mountain	2.9	-0.1	0.1	-0.1	0.7	0.1	0.1	0.1	0.1
Mid-America	2.1	0.0	0.1	-0.2	0.3	0.1	0.0	0.1	0.0
South West	2.0	-0.1	0.0	-0.2	0.2	0.1	0.1	0.1	0.0
Midwest	1.6	-0.1	0.0	-0.1	0.2	0.0	0.0	0.0	0.0
Great Lakes	0.7	-0.1	-0.1	-0.2	-0.1	0.0	-0.1	-0.1	-0.1
Southeastern	1.1	-0.1	0.0	-0.2	0.1	0.0	0.1	0.0	0.0
Mid-Atlantic	1.0	-0.1	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
New England	0.2	-0.1	-0.1	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1

Table 10.B U.S.-Korea FTA: Simulated effects on gross output, by region and sector, Scenario B (fixed real wages and returns to capital)

Region	Agriculture, forestry and fisheries	Mining	Construction	Durable manufacturing	Nondurable manufacturing	Transportation, communications and utilities	Wholesale and retail trade	Finance, insurance and real estate	Other services
	----- Percent -----								
North West	1.2	0.1	0.2	-0.2	0.4	0.2	0.3	0.2	0.1
Western	0.5	0.1	0.1	-0.1	0.3	0.2	0.2	0.2	0.1
Rocky Mountain	3.1	0.1	0.2	0.0	0.9	0.3	0.3	0.3	0.2
Mid-America	2.3	0.2	0.2	0.0	0.5	0.3	0.3	0.3	0.2
South West	2.1	0.1	0.2	0.0	0.4	0.2	0.2	0.2	0.2
Midwest	1.8	0.1	0.2	0.0	0.3	0.2	0.2	0.2	0.2
Great Lakes	0.9	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Southeastern	1.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
Mid-Atlantic	1.3	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1
New England	0.4	0.1	0.1	-0.1	0.1	0.1	0.1	0.1	0.1

Section III

This section provides more detailed simulated results of the U.S.-Korea FTA under scenario B.

Table 11 shows job changes for the U.S. economy as a whole and by sector. Table 12 shows job changes for each state as a whole and by sector. Note that approximately 86 percent of the job gains are in the services sectors.

Table 13 shows job changes for ten U.S. regions⁵ and the District of Columbia as a whole and by sector. The regional results were obtained by summing the state level effects shown in table 12.

In order to calculate the FTA results for jobs by sector and state, additional job statistics for 2009 were obtained from the Census Bureau and BEA.⁶

⁵ The U.S. states have been grouped to ten regions according to the following: Northwest: Alaska, Washington, Oregon, Idaho and Montana; Western: California, Nevada, Arizona and Hawaii; Rocky Mountain: Utah, Wyoming, Colorado, New Mexico, Nebraska, South Dakota, North Dakota; Mid-America: Kansas, Missouri and Arkansas; Southwest: Texas, Oklahoma and Louisiana; Midwest: Minnesota, Iowa, Wisconsin and Illinois; Great Lakes: Michigan, Indiana and Ohio; Southeastern: Kentucky, Tennessee, Mississippi, Alabama, Florida, Georgia, South Carolina and North Carolina; Mid-Atlantic: Virginia, West Virginia, Maryland, Delaware, Pennsylvania, New Jersey and New York; and New England: Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire and Maine.

⁶ State-level employment data are collected every 5 years by the Bureau of the Census as part of the Economic Census. These data are collected at the NAICS 6 digit level by state. In this technical assistance, the 2007 Census data were projected to 2009 using BEA's Regional Economic Accounts data. These data provide total full-time and part-time employment by broad NAICS industry, by state. Several concordances were applied to map the Census statistics from the NAICS sector system to the sectors in the GTAP and USAGE models. The Bureau of Labor Statistics is another source of jobs statistics by sector and state. The Census statistics, however, allow a more precise mapping of the jobs statistics to the sectors in the GTAP and USAGE models than the BLS statistics allow.

Table 11 U.S.-Korea FTA: Simulated results for U.S. job changes, Scenario B (fixed real wages and returns to capital)

Sector	Number of jobs
Jobs result for U.S. economy as a whole	277,061
<u>Sector job results</u>	
Agriculture	8,277
Fishing and forestry	1,582
Coal	112
Oil and gas	639
Minerals n.e.c.	542
Bovine meat products	1,783
Meat products n.e.c.	2,162
Vegetable oils and fats	13
Dairy products	472
Sugar	19
Food products n.e.c.	1,425
Beverages and tobacco products	249
Textiles	-437
Wearing apparel	489
Leather products	21
Wood products	1,120
Paper products, publishing	2,561
Petroleum, coal products	113
Chemical, rubber, plastic products	4,670
Mineral products n.e.c.	747
Ferrous metals	350
Metals n.e.c.	205
Metal products	1,593
Motor vehicles and parts	300
Transport equipment n.e.c.	35
Electronic equipment	-426
Machinery and equipment n.e.c.	5,683
Manufactures n.e.c.	473
Electric utilities	598
Gas manufacture, distribution	356
Water utilities	287
Construction	15,842
Trade, wholesale and retail	56,181
Transportation services n.e.c.	5,483
Water transportation	301
Air transportation	1,369
Communication services	1,788
Financial services n.e.c.	18,673
Insurance	5,404
Business services n.e.c.	32,244
Recreational and other services	22,086
Public administration, defense, education and health services	78,920

Sources: GTAP model simulations and 2009 U.S. labor statistics from the U.S. Census Bureau and the Bureau of Economic Analysis.
Note: Sector-level results do not necessarily sum to the economy-wide result in the first row because the model aggregates all labor occupations to just two labor types. Thus these results are approximate.

Table 12 U.S.-Korea FTA: Simulated results for state-level job changes, Scenario B (fixed real wages and returns to capital)

Sector	Alabama	Alaska	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	Florida	Georgia
Jobs result for state as a whole	3,083	326	2,379	2,556	28,148	6,247	1,212	667	16,594	10,784
Sector job results										
Agriculture	718	2	286	845	1,210	1,922	28	20	528	866
Fishing and forestry	21	33	-1	-2	1,618	5	16	0	467	6
Coal	9	0	3	0	0	9	0	0	0	0
Oil and gas	4	3	2	17	16	33	2	0	-2	0
Minerals n.e.c.	6	3	0	8	25	13	3	0	51	12
Bovine meat products	13	3	67	15	768	274	0	1	139	106
Meat products n.e.c.	104	0	-5	157	128	-4	-2	43	26	308
Vegetable oils and fats	1	0	0	1	1	0	0	0	0	1
Dairy products	1	0	6	1	53	2	1	0	4	3
Sugar	0	0	0	0	2	0	0	0	3	1
Food products n.e.c.	16	19	4	16	202	24	3	2	37	40
Beverages and tobacco products	3	0	4	1	91	8	2	1	17	15
Textiles	-1	0	3	0	52	6	0	0	14	37
Wearing apparel	-5	0	1	7	383	3	0	0	30	27
Leather products	0	0	0	1	0	0	0	0	1	0
Wood products	18	0	10	8	17	12	3	1	2	19
Paper products, publishing	21	1	18	29	208	51	22	4	111	92
Petroleum, coal products	4	1	1	2	22	2	1	1	3	2
Chemical, rubber, plastic products	31	2	18	25	282	32	12	-3	104	94
Mineral products n.e.c.	11	0	9	6	72	14	4	1	40	36
Ferrous metals	-3	0	-1	3	-5	0	-1	0	1	0
Metals n.e.c.	-3	0	-3	-1	-11	0	-4	0	-1	-1
Metal products	11	0	-4	7	-36	11	-8	1	23	24
Motor vehicles and parts	-15	0	-5	-5	-53	1	-5	1	-9	-5
Transport equipment n.e.c.	-16	0	-63	-10	-329	-8	-172	-2	-46	-82
Electronic equipment	-7	0	-79	-5	-632	-17	-16	-2	-114	-20
Machinery and equipment n.e.c.	10	0	6	15	68	31	-14	1	41	27
Manufactures n.e.c.	4	0	4	4	55	7	4	0	20	14
Electric utilities	16	1	9	9	71	17	5	2	42	42
Gas manufacture, distribution	11	3	8	11	46	12	4	1	20	23
Water utilities	2	0	2	3	24	4	1	1	10	7
Construction	227	21	143	160	1,462	374	118	49	902	620
Trade, wholesale and retail	740	79	689	503	9,558	1,343	312	229	5,537	3,348
Transportation services n.e.c.	92	6	103	120	1,181	180	30	16	498	347
Water transportation	9	6	3	12	67	3	10	3	122	18
Air transportation	12	4	17	11	87	39	3	2	30	51
Communication services	24	5	24	19	264	60	21	6	170	116
Financial services n.e.c.	207	20	221	155	2,416	473	153	61	1,336	750
Insurance	75	3	87	35	642	182	95	17	454	256
Business services n.e.c.	457	61	417	332	4,244	893	218	102	2,515	1,752
Recreational and other services	318	50	439	216	2,915	616	212	83	1,678	1,056
Public administration, defense, education, health services	543	49	634	454	5,484	1,027	519	144	3,243	1,663

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Table 12 U.S.-Korea FTA: Simulated results for state-level job changes, Scenario B (fixed real wages and returns to capital), *continued*

Sector	Hawaii	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland
Jobs result for state as a whole	186	1,436	11,462	4,087	10,877	7,682	3,702	4,324	652	4,812
Sector job results										
Agriculture	33	572	1,343	1,083	3,694	2,859	1,759	393	40	108
Fishing and forestry	27	32	34	10	110	68	1	111	0	28
Coal	0	0	19	10	0	1	41	1	0	2
Oil and gas	0	2	10	1	1	52	8	63	0	0
Minerals n.e.c.	1	4	26	10	17	20	7	4	0	6
Bovine meat products	0	29	285	129	866	907	59	8	0	38
Meat products n.e.c.	-2	-3	-76	-25	-20	-9	-25	32	0	16
Vegetable oils and fats	0	0	7	5	12	1	0	0	0	0
Dairy products	0	5	11	3	20	1	4	2	0	4
Sugar	1	2	0	0	0	0	0	4	0	1
Food products n.e.c.	1	31	146	114	181	77	12	12	17	10
Beverages and tobacco products	0	0	12	7	10	5	17	3	2	5
Textiles	0	0	7	5	6	5	4	3	1	4
Wearing apparel	1	0	7	1	3	3	4	2	0	5
Leather products	0	0	-1	0	0	0	0	0	-1	-1
Wood products	0	3	22	30	40	17	15	3	1	5
Paper products, publishing	2	8	139	49	111	66	43	27	9	47
Petroleum, coal products	0	0	11	7	2	7	2	19	0	2
Chemical, rubber, plastic products	1	8	125	83	122	77	25	45	5	38
Mineral products n.e.c.	1	2	19	13	17	14	9	10	1	9
Ferrous metals	0	0	-1	-17	7	3	-2	1	0	-1
Metals n.e.c.	0	0	-4	-14	3	0	-10	0	0	-1
Metal products	0	1	15	-1	34	23	3	8	0	6
Motor vehicles and parts	0	0	-7	-65	5	7	-10	2	-1	-1
Transport equipment n.e.c.	0	1	-5	0	10	-147	-2	1	-2	-9
Electronic equipment	0	-56	-34	-26	-5	-4	0	-1	-12	-34
Machinery and equipment n.e.c.	0	5	38	12	118	68	5	12	0	19
Manufactures n.e.c.	1	2	26	11	9	10	5	7	1	4
Electric utilities	2	4	32	15	29	24	10	15	2	17
Gas manufacture, distribution	1	2	28	13	15	18	8	14	1	10
Water utilities	0	1	10	5	10	14	4	6	0	5
Construction	19	89	649	270	540	352	236	263	54	358
Trade, wholesale and retail	34	298	2,483	952	2,366	1,697	808	1,265	173	1,293
Transportation services n.e.c.	1	67	464	194	523	355	136	136	19	135
Water transportation	14	0	21	3	11	3	14	104	4	19
Air transportation	-7	1	65	15	34	35	19	14	2	23
Communication services	2	13	100	34	66	92	27	42	7	53
Financial services n.e.c.	16	85	999	280	570	441	243	268	44	375
Insurance	4	25	328	112	245	184	65	70	17	109
Business services n.e.c.	29	229	1,762	578	998	839	509	562	89	756
Recreational and other services	-9	120	1,286	464	679	503	347	398	99	583
Public administration, defense, education, health services	31	221	2,559	992	1,600	1,117	649	728	171	1,059

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Table 12 U.S.-Korea FTA: Simulated results for state-level job changes, Scenario B (fixed real wages and returns to capital), *continued*

Sector	Massachusetts	Michigan	Minnesota	Mississippi	Missouri	Montana	Nebraska	Nevada	New Hampshire	New Jersey
Jobs result for state as a whole	2,640	3,560	5,531	2,533	5,887	1,153	7,582	1,976	638	8,761
Sector job results										
Agriculture	29	437	1,639	642	2,513	779	2,462	82	20	76
Fishing and forestry	84	10	7	46	8	-3	16	10	4	57
Coal	0	0	0	1	0	3	0	0	0	0
Oil and gas	1	12	1	15	1	4	3	4	0	1
Minerals n.e.c.	4	3	0	2	16	6	7	17	2	8
Bovine meat products	18	71	246	18	117	9	1,112	0	0	63
Meat products n.e.c.	-11	-22	-36	96	-10	-1	-13	0	0	10
Vegetable oils and fats	0	0	2	0	1	0	4	0	0	0
Dairy products	2	8	23	1	22	0	4	2	0	7
Sugar	0	1	3	0	0	1	1	0	0	0
Food products n.e.c.	9	13	82	7	25	2	57	4	1	36
Beverages and tobacco products	4	5	4	1	7	1	3	1	1	12
Textiles	-1	7	3	4	6	0	4	1	1	9
Wearing apparel	-2	1	1	8	7	0	0	0	0	6
Leather products	0	-1	-2	-2	0	0	0	0	0	-1
Wood products	4	12	24	20	15	2	14	4	2	16
Paper products, publishing	37	35	81	16	73	6	64	12	7	119
Petroleum, coal products	2	3	4	4	4	3	0	0	0	9
Chemical, rubber, plastic products	16	27	45	27	69	2	57	9	2	114
Mineral products n.e.c.	4	8	15	7	13	2	9	6	2	19
Ferrous metals	-1	-15	2	2	2	0	2	0	0	-1
Metals n.e.c.	-6	-10	-1	-1	-7	-3	1	-1	-3	-2
Metal products	-7	-13	13	5	9	0	20	1	0	15
Motor vehicles and parts	-4	-39	1	-7	1	0	7	-1	-1	1
Transport equipment n.e.c.	-20	-12	6	3	-40	0	0	-4	-5	-3
Electronic equipment	-65	-16	-14	-3	-14	-1	-2	-5	-11	-43
Machinery and equipment n.e.c.	-6	-66	44	8	15	1	67	2	0	32
Manufactures n.e.c.	18	8	10	4	9	2	5	6	3	14
Electric utilities	7	18	22	11	18	4	5	7	2	17
Gas manufacture, distribution	9	13	13	8	14	2	12	6	2	17
Water utilities	1	1	4	3	5	1	3	1	0	11
Construction	194	244	315	170	392	82	347	110	54	527
Trade, wholesale and retail	507	832	1,113	668	1,361	266	1,577	658	164	2,135
Transportation services n.e.c.	65	109	189	103	236	42	428	78	15	253
Water transportation	10	10	3	6	14	0	3	5	1	34
Air transportation	6	17	23	10	23	6	37	15	2	49
Communication services	34	37	39	21	53	8	40	18	6	82
Financial services n.e.c.	236	308	416	160	420	73	406	183	49	707
Insurance	99	129	148	33	158	16	147	45	25	291
Business services n.e.c.	365	642	654	311	878	135	655	270	81	1,400
Recreational and other services	480	560	538	197	578	106	511	305	110	1,007
Public administration, defense, education, health services	998	1,278	1,214	380	1,153	197	1,053	280	193	2,060

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Table 12 U.S.-Korea FTA: Simulated results for state-level job changes, Scenario B (fixed real wages and returns to capital), *continued*

Sector	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina
Jobs result for state as a whole	1,321	16,711	7,651	785	5,497	5,615	2,725	9,963	523	4,547
Sector job results										
Agriculture	527	323	1,300	439	890	3,332	715	783	3	761
Fishing and forestry	0	90	149	-1	21	15	147	1	16	24
Coal	5	0	0	3	11	2	0	24	0	0
Oil and gas	14	7	1	7	17	100	0	20	0	0
Minerals n.e.c.	3	26	15	2	17	14	7	18	1	6
Bovine meat products	0	34	472	11	47	81	63	288	0	213
Meat products n.e.c.	-3	-13	109	-2	-46	-12	8	-14	-3	122
Vegetable oils and fats	0	0	0	0	2	1	0	0	0	0
Dairy products	3	25	2	0	17	2	5	14	0	2
Sugar	0	1	0	3	0	0	0	0	0	0
Food products n.e.c.	4	49	29	5	42	11	29	55	1	18
Beverages and tobacco products	0	20	51	0	7	3	5	22	1	2
Textiles	0	22	-13	1	5	3	2	11	-1	5
Wearing apparel	0	75	-34	0	2	3	6	12	-1	24
Leather products	0	-3	-2	0	0	0	0	-4	0	0
Wood products	2	20	41	3	21	8	2	44	1	-6
Paper products, publishing	7	175	78	5	78	33	19	137	7	26
Petroleum, coal products	2	4	2	1	7	7	1	13	0	1
Chemical, rubber, plastic products	5	131	66	3	65	33	21	91	4	21
Mineral products n.e.c.	4	28	18	2	15	14	8	27	0	16
Ferrous metals	0	-3	-1	0	-18	3	-2	-16	0	-3
Metals n.e.c.	0	-9	-6	0	-16	0	-6	-7	-1	-6
Metal products	0	5	14	1	-7	11	-3	9	-4	5
Motor vehicles and parts	0	-38	-21	0	-48	2	-3	-9	0	-38
Transport equipment n.e.c.	-7	-48	-3	-1	-72	-25	-21	-60	1	-10
Electronic equipment	-31	-161	-38	-1	-28	-1	-92	-65	-7	-30
Machinery and equipment n.e.c.	2	30	-4	15	-47	29	5	16	-3	-6
Manufactures n.e.c.	2	48	12	1	15	6	6	13	8	6
Electric utilities	6	62	20	3	21	22	7	28	1	17
Gas manufacture, distribution	4	37	10	4	16	17	4	23	1	8
Water utilities	1	13	5	0	3	7	2	11	0	16
Construction	91	952	498	49	369	333	157	634	36	247
Trade, wholesale and retail	303	4,439	1,753	188	1,292	1,222	837	2,294	101	2,189
Transportation services n.e.c.	58	610	253	42	207	169	117	315	10	160
Water transportation	1	46	11	1	11	5	6	12	4	9
Air transportation	4	44	30	3	31	19	3	47	2	8
Communication services	18	214	83	5	58	51	26	92	7	46
Financial services n.e.c.	83	1,417	524	41	474	339	170	735	48	286
Insurance	18	532	136	21	193	109	71	307	17	109
Business services n.e.c.	189	2,465	1,183	74	880	652	361	1,310	69	713
Recreational and other services	138	1,767	835	59	730	413	318	1,253	92	467
Public administration, defense, education, health services	245	4,877	1,348	116	1,638	843	666	2,674	160	607

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Table 12 U.S.-Korea FTA: Simulated results for state-level job changes, Scenario B (fixed real wages and returns to capital), *continued*

Sector	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	District of Columbia
Jobs result for state as a whole	2,282	5,358	26,993	1,893	118	10,838	7,025	1,192	3,743	897	471
Sector job results											
Agriculture	1,296	1,393	6,690	509	57	1,966	1,306	470	897	569	0
Fishing and forestry	3	0	283	27	-1	96	265	-1	15	0	0
Coal	0	3	12	4	0	11	1	49	0	14	0
Oil and gas	2	2	274	6	0	3	0	14	0	21	0
Minerals n.e.c.	3	11	42	2	1	11	10	2	10	5	0
Bovine meat products	231	37	994	62	0	269	468	0	205	0	0
Meat products n.e.c.	1	-36	29	-2	-1	128	42	5	-71	0	0
Vegetable oils and fats	0	1	1	0	0	0	0	0	0	0	0
Dairy products	7	3	18	11	7	20	7	0	52	0	0
Sugar	0	0	2	0	0	0	0	0	0	1	0
Food products n.e.c.	4	29	74	9	1	20	80	1	29	0	0
Beverages and tobacco products	1	10	22	1	0	29	10	2	7	1	0
Textiles	3	4	23	1	0	13	6	0	4	0	0
Wearing apparel	1	4	29	1	0	13	12	0	-2	0	0
Leather products	0	0	0	0	0	0	0	0	-5	0	0
Wood products	6	18	52	8	1	16	-6	4	28	1	0
Paper products, publishing	17	58	162	18	2	89	44	9	71	4	10
Petroleum, coal products	0	2	44	2	0	1	5	1	1	2	0
Chemical, rubber, plastic products	8	55	195	19	-1	55	51	13	42	8	0
Mineral products n.e.c.	3	14	63	6	2	25	22	3	10	2	0
Ferrous metals	0	0	2	-1	0	0	-1	-2	4	0	0
Metals n.e.c.	0	-5	-8	-2	-1	0	-13	-9	-3	0	0
Metal products	4	10	45	2	0	15	3	3	5	1	0
Motor vehicles and parts	4	-15	-7	-9	0	-11	-4	0	-7	0	0
Transport equipment n.e.c.	0	-5	-220	-42	-4	-5	-253	-8	5	1	0
Electronic equipment	-1	-7	-210	-7	-40	-41	-62	-1	-16	0	-1
Machinery and equipment n.e.c.	14	19	114	13	-3	27	8	2	22	3	0
Manufactures n.e.c.	11	9	42	9	1	12	11	0	11	1	0
Electric utilities	7	7	84	5	1	29	11	5	14	4	2
Gas manufacture, distribution	4	4	64	2	1	20	5	7	8	4	1
Water utilities	2	5	35	2	0	10	8	1	2	1	0
Construction	125	364	1,692	115	16	668	434	75	251	68	14
Trade, wholesale and retail	447	1,225	6,730	493	34	3,323	2,669	296	696	198	31
Transportation services n.e.c.	109	240	1,064	80	8	351	270	33	176	31	4
Water transportation	0	17	85	1	0	25	27	1	5	2	0
Air transportation	5	26	103	9	0	31	13	5	14	4	0
Communication services	15	58	233	18	2	112	82	12	34	5	7
Financial services n.e.c.	160	377	1,930	182	8	711	479	71	253	51	82
Insurance	31	143	693	51	5	190	147	18	142	10	5
Business services n.e.c.	182	803	3,945	262	13	1,553	1,020	129	477	114	122
Recreational and other services	145	562	2,552	195	44	1,020	706	127	437	71	51
Public administration, defense, education, health services	320	1,092	4,241	329	66	1,579	1,241	255	897	106	143

Sources: USAGE model (state-level extension) simulations and 2009 U.S. labor statistics from the U.S. Census Bureau and the Bureau of Economic Analysis.

Note: Sector-level results for each state do not necessarily sum to the state-wide result in the first row because the model aggregates all labor occupations to a single labor input. Thus these results are approximate.

Table 13 U.S.-Korea FTA: Simulated results for region-level job changes, Scenario B (fixed real wages and returns to capital)

Sector	North West	Western	Rocky Mountain	Mid-America	South West	Midwest	Great Lakes	Southeastern	Mid-Atlantic	New England	District of Columbia
Jobs result for state as a whole	12,665	32,689	21,006	16,126	36,931	31,613	13,144	54,254	52,945	5,783	471
Sector job results											
Agriculture	3,374	1,610	7,724	6,217	10,415	7,573	2,411	7,968	3,746	177	0
Fishing and forestry	475	1,654	50	74	408	166	42	715	271	119	0
Coal	4	4	34	1	15	19	21	54	85	0	0
Oil and gas	9	22	85	70	437	12	30	28	44	3	0
Minerals n.e.c.	30	43	35	44	60	54	29	111	71	11	0
Bovine meat products	571	836	1,690	1,039	1,084	1,601	247	1,057	693	18	0
Meat products n.e.c.	46	121	-22	138	49	-203	-93	703	175	-17	0
Vegetable oils and fats	0	1	4	2	2	22	6	4	0	0	0
Dairy products	18	61	27	24	22	105	29	20	71	9	0
Sugar	3	3	6	0	6	3	1	4	1	0	0
Food products n.e.c.	162	210	102	117	96	438	169	188	174	31	0
Beverages and tobacco products	15	96	14	12	28	33	19	117	90	11	0
Textiles	8	56	15	10	29	20	16	54	59	0	0
Wearing apparel	18	386	5	16	34	9	4	57	111	-3	0
Leather products	0	0	-1	1	0	-9	-1	-4	-9	-1	0
Wood products	0	30	46	40	64	114	64	127	106	13	0
Paper products, publishing	78	240	167	168	222	402	162	445	579	83	10
Petroleum, coal products	10	23	9	12	70	18	17	20	30	4	0
Chemical, rubber, plastic products	85	309	132	171	274	335	175	423	437	39	0
Mineral products n.e.c.	34	88	39	34	87	62	35	151	112	13	0
Ferrous metals	-4	-6	2	7	6	11	-51	-5	-24	-3	0
Metals n.e.c.	-21	-15	-1	-9	-8	-5	-39	-33	-28	-14	0
Metal products	2	-39	39	39	64	67	-22	95	54	-19	0
Motor vehicles and parts	-7	-59	3	3	-3	-7	-152	-119	-56	-11	0
Transport equipment n.e.c.	-273	-396	-58	-197	-244	17	-84	-161	-134	-203	0
Electronic equipment	-211	-717	-59	-23	-212	-69	-71	-219	-347	-151	-1
Machinery and equipment n.e.c.	18	76	145	99	155	222	-102	101	125	-26	0
Manufactures n.e.c.	21	67	36	23	55	57	34	74	91	35	0
Electric utilities	27	88	48	51	121	97	53	165	160	19	2
Gas manufacture, distribution	16	60	42	43	95	64	42	94	115	16	1
Water utilities	12	26	14	22	48	27	10	52	52	4	0
Construction	784	1,734	1,168	904	2,288	1,756	882	3,264	3,263	472	14
Trade, wholesale and retail	4,149	10,939	4,548	3,561	9,217	6,658	3,077	16,268	14,009	1,290	31
Transportation services n.e.c.	502	1,364	928	711	1,368	1,352	510	1,829	1,713	146	4
Water transportation	40	90	12	29	194	40	24	207	140	29	0
Air transportation	27	113	101	69	136	137	63	186	201	15	0
Communication services	135	307	161	164	326	238	129	545	570	76	7
Financial services n.e.c.	827	2,836	1,395	1,016	2,537	2,237	1,063	3,882	4,076	537	82
Insurance	263	777	460	377	872	863	433	1,271	1,465	258	5
Business services n.e.c.	1,806	4,959	2,367	2,049	5,159	3,892	2,100	8,243	7,716	835	122
Recreational and other services	1,300	3,649	1,734	1,297	3,362	2,940	1,754	5,459	5,839	1,037	51
Public administration, defense, education, health services	2,374	6,430	3,196	2,724	5,811	6,270	3,908	9,527	12,648	2,107	143

Sources: Table 12.