

REPORT ON THE U.S. EMPLOYMENT IMPACT OF THE UNITED STATES – KOREA FREE TRADE AGREEMENT

Pursuant to section 2102(c)(5) of the Trade Act of 2002, the United States Trade Representative, in consultation with the Secretary of Labor, provides the following Report on the U.S. Employment Impact of the United States – Korea Free Trade Agreement. The report was prepared by the U.S. Department of Labor.

Table of Contents

Executive Summary	3
I. Introduction: Overview of the U.S. Employment Impact Report	4
A. Scope, Outline, and Data Sources of this Report.....	4
B. Legislative Mandate.....	4
C. Public Outreach and Comments.....	5
1. Responses to Federal Register Notice.....	5
2. Reports of the Labor Advisory Committee for Trade Negotiations and Trade Policy and Other Advisory Committees.....	5
II. Background and Contents of the United States– Korea Free Trade Agreement (KORUS).....	7
A. Bilateral Economic Setting.....	7
1. Population and the Economy.....	7
2. Labor Force.....	7
a. U.S. Labor Force.....	7
b. Korea’s Labor Force.....	8
3. International Merchandise Trade.....	8
a. Global Merchandise Trade.....	8
b. Bilateral Merchandise Trade.....	9
4. International Trade in Services.....	9
5. Foreign Direct Investment.....	10
6. Summary and Conclusions.....	10
B. Barriers to Bilateral Trade Prior to the KORUS.....	10
1. Merchandise Trade.....	10
2. Trade in Services.....	11
C. Major Elements of the KORUS.....	12
III. Potential Employment Effects of the KORUS.....	12
A. The Current Volume and Industrial Structure of U.S.-Korea Trade.....	13
B. The Potential Effects of Removing Current Barriers to Trade.....	14
C. Effects as Determined by Computable General Equilibrium Studies.....	15
1. U.S. International Trade Commission (2011, 2007, and 2001).....	17
2. Memorandum from the Majority Staff of the Senate Committee on Finance Subcommittee on Trade (2011).....	19
3. Institute for International Economics: Schott, Bradford, and Moll (2006) and Choi and Schott (2001)	20
4. Korea Economic Institute: Kiyota and Stern (2007).....	21

D. Bilateral Trade and Domestic Employment Trends in Selected Industries.....	21
1. Automobiles and Light Duty Motor Vehicles (North American Industrial Classification System (NAICS) 33611)	22
a. U.S. Employment Trends before the KORUS.....	22
b. Bilateral Trade Trends and Potential Impacts of the KORUS.....	23
2. Tires (NAICS 32621)	24
a. U.S. Employment Trends before the KORUS.....	24
b. Bilateral Trade Trends and Potential Impacts of the KORUS.....	25
3. Other Motor Vehicle Parts (NAICS 33639).....	26
a. U.S. Employment Trends before the KORUS.....	26
b. Bilateral Trade Trends and Potential Impacts of the KORUS.....	27
4. Resin and Synthetic Rubbers (NAICS 32521).....	28
a. U.S. Employment Trends before the KORUS.....	28
b. Bilateral Trade Trends and Potential Impacts of the KORUS.....	28
5. Broadwoven Fabrics (NAICS 31321).	29
a. U.S. Employment Trends before the KORUS.....	29
b. Bilateral Trade Trends and Potential Impacts of the KORUS.....	30
6. Knit Fabrics and Lace (NAICS 31324)	31
a. U.S. Employment Trends before the KORUS.....	31
b. Bilateral Trade Trends and Potential Impacts of the KORUS.....	32
7. Summary Remarks.....	33
E. Features in the KORUS that Affect the Adjustment Process.....	33
1. Rules of Origin Provisions.....	33
2. Gradual Phase-in of the KORUS.....	34
3. Safeguards and Other Special Procedures.....	34
a. General Bilateral Safeguard.....	34
b. Textile and Apparel Bilateral Emergency Action Safeguard.....	35
c. Motor Vehicle Safeguard.....	36
d. Alternative Procedures for Disputes Concerning Motor Vehicles.....	36
IV. The Labor Chapter of the KORUS.....	36
Tables.....	38
Table III.1: U.S. Exports to Korea by NAICS-based Sector and Subsector, 2006- 2010.....	39
Table III.2: U.S. Imports from Korea by NAICS-based Sector and Subsector, 2006-2010...	40
Table III.3: Customs Value, Dutiable Value, Calculated Duties, and Average Rate of Duty on U.S. Imports from Korea by NAICS-based Subsector, 2010.....	41
Table III.4: Summary of Tariff Staging Commitments.....	42

Executive Summary

This U.S. employment impact report was prepared pursuant to section 2102(c)(5) of the Trade Act of 2002. Section 2102(c)(5) requires the President to review and report to the Congress on the impact of future trade agreements on U.S. employment and labor markets. This report describes the relevant provisions of the United States – Korea Free Trade Agreement (KORUS), including a summary of the labor provisions, and assesses the potential employment effects of the KORUS.

Although the KORUS is expected to improve the competitiveness of U.S. exports to the Republic of Korea (Korea) when tariffs are removed on a wide range of products, the major finding of this report is that the agreement is not expected to have a significant effect on aggregate employment in the United States. General equilibrium simulations of the agreement find an overall employment impact ranging from negligible to an increase of 280,000 jobs, depending on whether the U.S. labor market is assumed to be at full employment (no net gain in jobs) or high unemployment (potential net gain). The limited impact on the U.S. labor market is attributable to: (i) the large size of the U.S. economy relative to the economy of Korea; (ii) the relatively small share of U.S. trade with Korea relative to U.S. global trade; (iii) the fact that possible employment losses in some industries are likely to be offset by employment increases in other industries; (iv) provisions in the KORUS for the gradual removal of U.S. tariffs on import-sensitive goods from Korea over an extended period; and (v) safeguards contained in the KORUS to attenuate the effects of certain increases in imports.

I. Introduction: Overview of the U.S. Employment Impact Report

A. Scope, Outline, and Data Sources of this Report

This employment impact report provides background and context for the United States – Korea Free Trade Agreement (KORUS), including the bilateral economic setting, current barriers to bilateral trade, and the major elements of the KORUS (found in Part II). The report then considers the potential employment effects of the KORUS on the United States (Part III). Finally, the report briefly describes the Labor Chapter of the KORUS (Part IV).

Unless otherwise specified, the value of U.S. imports and exports used in this report are based on compilations of official statistics gathered by the U.S. Department of Commerce and are extracted from the U.S. International Trade Commission’s (USITC) Interactive Tariff and Trade Dataweb.¹ Data on the U.S. labor market are drawn from various data-gathering programs of the U.S. Department of Labor’s Bureau of Labor Statistics (BLS). Information about the U.S. labor force is from the BLS Current Population Survey.² Industry-level employment and average hourly earnings are from the BLS Current Employment Statistics program.³ All of the referenced data tables appear at the end of this report.

B. Legislative Mandate

This report on the U.S. employment impact of the KORUS is prepared pursuant to section 2102(c)(5) of the Trade Act of 2002 (“Trade Act”) (Pub. L. No. 107-210). Section 2102(c)(5) provides that the President shall review the impact of future trade agreements on United States employment, including labor markets, modeled after Executive Order 13141 to the extent appropriate in establishing procedures and criteria. The report is prepared for the Committee on Ways and Means of the House of Representatives and the Committee on Finance of the Senate and is made available to the public.

The President, by Executive Order 13277 (67 Fed. Reg. 70305 (Nov. 21, 2002)), assigned the responsibility for conducting reviews under section 2102(c)(5) to the United States Trade Representative (USTR). USTR delegated its responsibility to the Secretary of

¹ The USITC Interactive Tariff and Trade Dataweb is available at <http://dataweb.usitc.gov/>. All trade data are in nominal (current dollar) terms. The value of U.S. imports is the customs value (the appraised value of the merchandise, exclusive of import duties, freight, insurance, and other charges incurred in placing the merchandise alongside the carrier at the port of exportation) of U.S. merchandise imports for consumption (the amount that immediately enters U.S. consumption channels, but not bonded warehouses or Foreign Trade Zones). The value of U.S. exports is the free alongside ship (FAS) value of domestic U.S. merchandise exports (goods that are grown, mined, produced, or manufactured in the United States and sent to foreign countries).

² Data from the Current Population Survey are available at www.bls.gov/cps.

³ Data from the Current Employment Statistics program are available at www.bls.gov/ces.

Labor with the requirement that reviews be coordinated through the Trade Policy Staff Committee (67 Fed. Reg. 71606 (Dec. 2, 2002)).

The employment impact report is modeled, to the extent appropriate, on the environmental review of trade agreements mandated by Executive Order 13141 (64 Fed. Reg. 63169 (Nov. 18, 1999)); the guidelines developed for the implementation of that order have been adapted for use in this employment impact report.

C. Public Outreach and Comments

1. Responses to Federal Register Notice

The U.S. Department of Labor (USDOL) and USTR jointly published a notice on March 3, 2006, in the *Federal Register* announcing the initiation of a review of the potential impact on U.S. employment and effects on domestic labor markets of the proposed KORUS. The notice requested written comments from the public on potentially significant sectoral or regional employment impacts (both positive and negative) in the United States, as well as other likely labor market effects of the Agreement.⁴

The American Dehydrated Onion and Garlic Association (ADOGA) was the only entity that submitted written comments in response to the notice. It opposed any tariff reduction on U.S. imports of dehydrated onion and garlic under the agreement, fearing increased imports from the Republic of Korea (Korea) and the potential for transshipments of products from China. It argued that duty-free treatment of dehydrated onion and garlic from Korea would have a negative impact on its industry, its 3,700 employees, their families, and the economically distressed small rural Western communities. It noted a lack of alternative employment opportunities in these communities. The ADOGA raised the same concerns in submissions on the U.S. employment impact of previous free trade agreements.

2. Reports of the Labor Advisory Committee for Trade Negotiations and Trade Policy and Other Advisory Committees

Section 2104(e) of the Trade Act requires that trade advisory committees provide the President, USTR, and Congress with reports under section 135(e)(1) of the Trade Act of 1974, as amended, not later than 30 days after the President notifies Congress of his intent to enter into an agreement. All of the advisory committee reports were submitted by April 27, 2007, and are available on the USTR Web site.⁵

The Advisory Committee on Trade Policy and Negotiations (ACTPN) and nearly all of the other trade advisory committees expressed the view that the KORUS is in the economic interest of the United States and stated their support for it. The ACTPN found

⁴ See 71 Fed. Reg. 10998-10999 (March 3, 2006).

⁵ See <http://www.ustr.gov/trade-agreements/free-trade-agreements/korus-fta/advisory-group-reports-korus-fta>.

the KORUS “to be strongly in the best economic interest of the United States” and that it “should be enacted into law as soon as possible.”

The Labor Advisory Committee for Trade Negotiations and Trade Policy (LAC) argued that the agreement would not promote the economic interests of the United States and contended that the KORUS is “the most economically problematic trade agreement negotiated since [the North American Free Trade Agreement (NAFTA)]” and that the KORUS “presents the potential for significant negative economic impact on the United States, particularly on jobs and wages.” Further, the LAC argued that the agreement would not protect the fundamental human rights of workers in either country. Regarding concerns expressed by the LAC about the labor law obligations of the agreement and the treatment of violations of the Labor Chapter in dispute settlement, it is important to note that the Labor Chapter was subsequently modified in May 2007.⁶

The LAC also detailed specific concerns about automotives and steel, two industries in which the U.S. trade deficit with Korea is highly concentrated. The LAC strongly opposed provisions of the KORUS that call for an immediate reduction in U.S. and Korean tariffs on most autos and also noted concerns with the KORUS’s process for addressing non-tariff barriers in the auto sector. They suggested that tariffs should not be reduced until it can be verified that the Korean auto market has opened significantly. An accompanying agreement to the KORUS includes adjustments to the tariff elimination schedule for cars and trucks, a special automotive safeguard, and provisions to address certain non-tariff measures. This agreement seeks to address some of the concerns expressed by the LAC.⁷ The LAC also expressed concerns about the treatment of steel in the agreement. In its view, the KORUS’s rules of origin could allow Chinese steel to be minimally processed in Korea and then receive duty-free access to the U.S. market (allowing China to circumvent existing rules on antidumping and countervailing duty orders).

On January 26, 2011, USTR provided the Advisory Committees with an opportunity to comment on new agreements reached in December 2010 to resolve outstanding issues related to the KORUS by submitting an addendum to their earlier reports by February 18,

⁶ Relative to FTAs approved prior to May 2007, the obligations of the Labor Chapter have been strengthened in two ways. First, the Parties commit to adopt and maintain, and to enforce in practice, labor laws that protect the fundamental rights stated in the 1998 *International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work and its Follow-up*. In FTAs prior to May 2007, and the Labor Chapter as originally negotiated in the KORUS, the obligation was to strive to enforce existing national labor laws and internationally recognized labor rights. Second, disputes arising under the Labor Chapter will be handled according to the same procedures as commercial disputes arising under other chapters, rather than according to procedures specific to labor disputes.

⁷ Under the new agreements, tariffs on U.S. imports of Korean autos will not be eliminated until the fifth year after the KORUS enters into force. Reductions in tariffs on U.S. imports of Korean trucks are also delayed. The agreement also addresses numerous non-tariff barriers in the auto sector and provides for an auto-specific safeguard to protect against potential surges of Korean cars and trucks once the tariffs are eliminated. Details on these new auto-related provisions are available at http://www.whitehouse.gov/sites/default/files/fact_sheet_increasing_us_auto_exports_us_korea_free_trade_agreement_v2_0.pdf.

2011. As of this writing, five advisory committees, including the LAC, have submitted addendums to their reports, and these are posted on the USTR Web site.⁸

In its addendum, the LAC expressed its view that the new agreements “will provide additional protections for the U.S. auto industry and its workers, especially in the short term” and “may also lead to increased market access for U.S.-produced automobiles.” However, the LAC expressed concern about how the agreement might impact workers in the auto parts and supply industry. The LAC remained concerned about many provisions of the KORUS.

II. Background and Contents of the KORUS

A. Bilateral Economic Setting

1. Population and the Economy

Korea’s population in 2009 was 48.7 million, 15.9 percent that of the United States.⁹ Korea has a land area slightly larger than the State of Indiana. Measured using the Atlas method for making cross-country comparisons, Korea’s gross national income (GNI) was \$966.6 billion in 2009, approximately 6.8 percent of U.S. GNI of \$14.2 trillion. Using this measure, Korea’s GNI per capita was \$19,830, approximately 42.8 percent of U.S. per capita GNI of \$46,360. Alternatively, on a Purchasing Power Parity (PPP) basis, Korea’s GNI was \$1.3 trillion in 2009, approximately 9.5 percent of U.S. GNI of \$14.0 trillion. Using this measure, Korea’s GNI per capita was \$27,240, approximately 59.7 percent of U.S. GNI per capita of \$45,640.

2. Labor Force

a. U.S. Labor Force

In 2010, the U.S. civilian labor force totaled 153.9 million workers, of which 46.7 percent (71.9 million) was female.¹⁰ The U.S. civilian labor force consists of employed and unemployed persons¹¹ in the civilian non-institutional population age 16 and older. A

⁸ See <http://www.ustr.gov/trade-agreements/free-trade-agreements/korus-fta/advisory-group-reports-korus-fta>.

⁹ The data in this section are from the World Bank’s World Development Indicators. The World Development Indicators database is available online at <http://data.worldbank.org/>. GNI is defined as the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. Using the Atlas method, GNI and GNI per capita figures are in current U.S. dollars. Using the PPP method, GNI and GNI per capita figures are in current international dollars (which, in principal, have the same purchasing power as one U.S. dollar spent in the United States).

¹⁰ All data on the U.S. labor force are from the Current Population Survey and are available on the Bureau of Labor Statistics’ Web site at <http://www.bls.gov/cps/>.

¹¹ Persons are classified as unemployed if they had no employment during the reference week, had actively looked for work in the prior four weeks, and are currently available for work.

total of 139.1 million workers were employed in the United States in 2010.¹² The service sector accounted for about four-fifths (81.2 percent) of U.S. employment.¹³ Industry accounted for 17.2 percent of U.S. employment, and agriculture made up 1.6 percent. The unemployment rate in the United States was 9.6 percent in 2010.

b. Korea's Labor Force

In 2009, the civilian labor force in Korea totaled 24.4 million workers, of which 41.3 percent (10.1 million) was female.¹⁴ The Korean civilian labor force consists of employed and unemployed persons in the civilian non-institutional population age 15 and older. A total of 23.5 million workers were employed in Korea in 2009. The service sector accounted for 68.5 percent of employment. Industry accounted for 24.4 percent of employment, and agriculture made up 7.0 percent.¹⁵ The unemployment rate in Korea was 3.6 percent in 2009.

3. *International Merchandise Trade*

a. Global Merchandise Trade

Based on available statistics from the World Trade Organization (WTO), total U.S. merchandise trade with the world amounted to \$2.7 trillion (\$1.1 trillion in merchandise exports and \$1.6 trillion in merchandise imports) in 2009.¹⁶ The United States was the world's third largest merchandise exporter (behind China and Germany) and the number one merchandise importer.

Korea's total merchandise trade with the world amounted to \$686.6 billion (\$363.5 billion in merchandise exports and \$323.1 billion in merchandise imports) in 2009. Korea was ranked the ninth largest merchandise exporter and the twelfth largest merchandise importer in the world.

¹² Employment and unemployment data refer to the civilian labor force.

¹³ U.S. employment data broken out by sector (i.e., services, industry, and agriculture) are classified according to the North American Industrial Classification System (NAICS) in the Current Population Survey. Therefore, they are not strictly comparable with other countries' data, including Korea, which uses the Korean Standard Industry Classification.

¹⁴ All data presented in this section on the Korean labor force are from the Organization for Economic Cooperation and Development Annual Labor Force Statistics - Summary Tables; available from <http://stats.oecd.org/index.aspx>.

¹⁵ Due to rounding, percent of total civilian employment in services, industry and agriculture do not sum to 100 percent.

¹⁶ Data for this and the next paragraph are from the WTO and are based on total merchandise trade. WTO Trade Profiles (March 2011) by country are available at <http://stat.wto.org/CountryProfile/WSDBCountryPFHome.aspx?Language=E>.

Merchandise trade as a percent of gross domestic product (GDP) is an indicator of the relative importance of merchandise trade to an economy. In 2009, merchandise trade was equivalent to 19 percent of GDP for the United States and 82 percent for Korea.¹⁷

b. Bilateral Merchandise Trade

Korea's share of U.S. exports rose to 3.3 percent in 2010 from 2.9 percent in 2009.¹⁸ In 2010, Korea was the United States' seventh largest merchandise export market (behind Canada, Mexico, China, Japan, Germany, and the United Kingdom). U.S. merchandise exports to Korea recorded a five-year high of \$36.8 billion in 2010. This was up 36.1 percent from the five-year low of \$27.1 billion recorded in 2009. Due to weak economic conditions globally, total U.S. exports to all countries fell significantly in 2009 before starting to rebound in 2010. While U.S. exports to Korea fully rebounded past their previous high, U.S. exports to all countries in 2010 were still 4.1 percent below their 2008 levels.

Korea's share of total U.S. merchandise imports was 2.5 percent in 2010, the same as in 2009. In 2010, Korea was the United States' seventh largest source for merchandise imports (behind China, Canada, Mexico, Japan, Germany, and the United Kingdom). U.S. merchandise imports from Korea recorded a five-year high of \$47.9 billion in 2010. This was up 23.6 percent from a five-year low of \$38.8 billion in 2009. Due to weak economic conditions globally, total U.S. imports from all countries fell significantly in 2009 before starting to rebound in 2010. While U.S. imports from Korea fully rebounded past their previous high, U.S. imports from all countries in 2010 were still 9.2 percent below their 2008 levels.

4. *International Trade in Services*

The United States was the world's number one commercial services exporter (\$476.0 billion) and number one commercial services importer (\$334.3 billion) in 2009, based on data from the WTO.¹⁹ By comparison, Korea's exports of commercial services to the world amounted to \$72.5 billion (ranked 15th) and its imports of commercial services from the world totaled \$79.5 billion in 2009 (ranked 12th).

¹⁷ Data are from the World Bank, World Development Indicators. Merchandise trade as a share of GDP is the sum of merchandise exports and imports divided by the value of GDP, all in current U.S. dollars. The indicator does not give the share of GDP generated by imports and exports, but indicates that the value of imports and exports is equivalent to the resulting percentage of GDP.

¹⁸ As noted in section I.A of this report, trade data, unless otherwise noted, are from the USITC Dataweb. All trade data are in nominal (current dollar) terms. Imports are the custom value of imports for consumption. Exports are the FAS value of domestic exports.

¹⁹ WTO statistics and rankings refer to commercial services, which exclude trade in government services not included elsewhere. See WTO Trade Profiles (March 2011).

According to the U.S. Department of Commerce, in 2009, U.S. exports of private services to Korea were \$12.6 billion, and U.S. imports of private services from Korea were \$6.4 billion.²⁰

5. *Foreign Direct Investment*

U.S. foreign direct investment (FDI) in Korea was \$27.0 billion (on a historical-cost basis) in 2009, up from \$22.4 billion in 2008. Korean FDI in the United States was \$12.0 billion (on a historical-cost basis), down slightly from \$12.1 billion in 2008.²¹

In 2009, Korea's global inward stock of FDI was estimated to be \$110.8 billion, and its global outward stock of FDI was estimated to be \$115.6 billion.²²

6. *Summary and Conclusions*

The United States imports more merchandise from Korea than it exports to the country (\$47.9 billion compared to \$36.8 billion), while in services, the U.S. exports roughly twice as much as it imports from Korea (\$12.6 billion compared to \$6.4 billion). U.S. global trade is dominated by other large economies, including Mexico and Canada. Korea's population, economy, and labor force are substantially smaller than those of the United States. The size of Korea relative to the United States and the dominance of other partners in U.S. trade limit the effect that the KORUS can have on aggregate levels of U.S. employment.

B. Barriers to Bilateral Trade Prior to the KORUS

1. *Merchandise Trade*

The United States and Korea are members of the WTO. The WTO Agreement obligates Members to accord "most favored nation/normal trade relations" (MFN/NTR)²³ tariff treatment to the goods of other WTO members. Under MFN, with certain exceptions, if a

²⁰ Private services exclude services transactions by the U.S. government (including the military). The U.S. Department of Commerce, Bureau of Economic Analysis publishes detailed annual statistics on cross-border trade in services. See Table 2 "Private services trade by area and country, 1992-2009," available at http://bea.gov/international/international_services.htm.

²¹ See *Survey of Current Business* (July 2010), pp. 32-35. This source defines foreign direct investment position in the United States as the value of foreign direct investors' equity in, and net outstanding loans to, their U.S. affiliates. The position may be viewed as the foreign direct investors' net financial claim on their U.S. affiliates whether in the form of equity or debt. Available online at http://www.bea.gov/scb/pdf/2010/07%20July/0710_dip.pdf.

²² See United Nations Conference on Trade and Development, World Investment Report 2010 Country Fact Sheets. Available online at <http://www.unctad.org/Templates/Page.asp?intItemID=2441&lang=1>.

²³ U.S. law uses the term "normal trade relations" (NTR) instead of the term "most favored nation" (MFN) to describe the principle of nondiscriminatory treatment of trading partners. The WTO Agreement uses the term MFN.

tariff is applied to a good from one Member country, the same tariff must be applied to the same good from all Member countries.²⁴

According to the WTO, Korea's simple average MFN applied tariff rate was 12.1 percent for all products in 2009.²⁵ The average was 48.6 percent for agricultural goods (WTO definition) and 6.6 percent for non-agricultural goods. Korea maintains tariff rate quotas (TRQs) for various products that are intended to provide minimum access to previously closed markets or to maintain pre-Uruguay Round access.²⁶ While the tariff rates applied to imports of a commodity up to the level of the quota may be minimal, tariffs on quantities exceeding the quota, particularly for agricultural and fishery products, are often prohibitive. Korea also uses "adjustment tariffs" to increase applied tariff rates to protect domestic agricultural, fishery, and plywood producers. In addition, Korea maintains certain burdensome standards, technical regulations, and conformity assessment regulations and other non-tariff barriers to trade.²⁷

The United States maintains a transparent and largely open trade regime, although it maintains some non-tariff barriers to trade. According to the WTO, the United States' simple average MFN applied tariff rate was 3.5 percent for all products. The average was 4.7 percent for agricultural products (based on the WTO definition) and 3.3 percent for non-agricultural goods.²⁸ As part of the WTO Trade Policy Review of the United States, the WTO Secretariat recently noted that "the U.S. trade and investment regimes are among the most open in the world, and have remained so throughout the period under review."²⁹ Most imports either enter the United States duty-free or at low tariffs, although the United States maintains some relatively high tariffs on sensitive products, including tobacco, certain dairy products, sugar, textiles and apparel, and footwear.³⁰

2. Trade in Services

²⁴ Among the allowable exceptions to MFN are bilateral free trade agreements. Any removal of tariffs agreed between the United States and Korea in the KORUS does not have to be extended to other countries. See Paul R. Krugman and Maurice Obstfeld, *International Economics* (Boston, MA: Addison-Wesley, 2009), p. 239. See also WTO, *Principles of the Trading System*, available online at http://www.wto.org/english/thewto_e/whatis_e/tif_e/fact2_e.htm#nondiscrimination.

²⁵ See WTO Tariff Profile for the Republic of Korea, available online at <http://stat.wto.org/TariffProfile/WSDBTariffPFHome.aspx?Language=E>

²⁶ The discussion on Korea is based upon *Foreign Trade Barriers: Korea* (Office of the U.S. Trade Representative, 2010). Available online at http://www.ustr.gov/sites/default/files/uploads/reports/2010/NTE/2010_NTE_Korea_final.pdf.

²⁷ For more information, see *2010 Report on Technical Barriers to Trade* (Office of the U.S. Trade Representative, 2010), p. 97. Available online at <http://www.ustr.gov/sites/default/files/REPORT%20ON%20TECHNICAL%20BARRIERS%20TO%20TRADE%20FINALTO%20PRINTER%2025Mar09.pdf>.

²⁸ See WTO Trade Profile for the United States, available online at <http://stat.wto.org/CountryProfile/WSDBCcountryPFHome.aspx?Language=E>.

²⁹ World Trade Organization, *Trade Policy Review United States, Report by the Secretariat*, WT/TPR/S/235 (Geneva, August 2010), paragraph 1, p. vii. Available online at http://www.wto.org/english/tratop_e/tpr_e/tp335_e.htm.

³⁰ World Trade Organization, *Trade Policy Review United States, Report by the Secretariat*, WT/TPR/S/235 (Geneva, August 2010), paragraph 32, p. 26.

Korea maintains restrictions in services and investments in certain service sectors.³¹ For example, the advertising market is highly restricted and all broadcast advertising time must be purchased through a state-sponsored agency. Korea restricts foreign participation in broadcast and cable television by limiting the amount of airtime allowed for foreign programs. Other sectors where Korea restricts foreign investment include maritime and air transportation. Regulatory oversight and transparency are concerns in the financial sector.

The U.S. services and investment regimes are generally open,³² with some exceptions. For example, in the maritime sector, cabotage laws reserve domestic routes to U.S. operators and provide government support for U.S.-flag vessels. Similarly, the United States restricts foreign ownership and control of U.S. air transport carriers, and the provision of domestic air service is restricted to U.S. carriers.

C. Major Elements of the KORUS

The KORUS consists of a Preamble, twenty-four chapters and various annexes. The chapters are: Initial Provisions and Definitions; National Treatment and Market Access for Goods; Agriculture; Textiles and Apparel; Pharmaceuticals and Medical Devices; Rules of Origin and Origin Procedures; Customs Administration and Trade Facilitation; Sanitary and Phytosanitary Measures; Technical Barriers to Trade; Trade Remedies; Investment; Cross-Border Trade in Services; Financial Services; Telecommunications; Electronic Commerce; Competition-Related Matters; Government Procurement; Intellectual Property Rights; Labor; Environment; Transparency; Institutional Provisions and Dispute Settlement; Exceptions; and Final Provisions. There are three annexes that specify non-conforming measures in services, investment, and financial services. New agreements signed on February 10, 2011, contain additional commitments, principally with respect to autos. The complete text of the KORUS, the new agreements, and summary fact sheets are available on USTR's Web site.³³

III. Potential Employment Effects of the KORUS

The focus of this report is on the potential impact of the KORUS on U.S. employment and labor markets. The background and context presented in Part II suggests that the agreement is likely to have a limited aggregate employment impact. In this Part, the report explores possible impacts on the industrial composition of U.S. employment. It does so in five steps. First, the current industrial structure of U.S.-Korea trade is presented. The next section gives an overview of the tariff changes resulting from the KORUS and a qualitative assessment of their impact. This is followed by a review of

³¹ See *Foreign Trade Barriers: Korea* (Office of the U.S. Trade Representative, 2010).

³² See World Trade Organization, *Trade Policy Review United States, Report by the Secretariat*, WT/TPR/S/235 (Geneva, August 2010).

³³ See <http://www.ustr.gov/trade-agreements/free-trade-agreements/korus-fta>.

publicly available computable general equilibrium modeling exercises that attempt to simulate the effects of liberalization of trade between the United States and Korea. The fourth step considers impacts in specific industries where U.S. imports from Korea were subject to substantial tariffs in 2009. Finally, there is a discussion of mechanisms within the KORUS available to ease economic adjustments that the U.S. and Korean economies may face as the KORUS takes effect. This Part suggests a tendency for offsetting increases and decreases in output and employment across industries, and for other offsetting factors within industries.

A. The Current Volume and Industrial Structure of U.S.-Korea Trade

Over the past five years, U.S. merchandise exports to Korea have averaged about 3.1 percent of all U.S. merchandise exports to the world, or \$32.2 billion a year. U.S. merchandise exports to Korea have been concentrated in a few industrial subsectors (based on the North American Industry Classification System, NAICS): machinery, except electrical; chemicals; computer and electronic products; transportation equipment; agricultural products; food manufacturing; and waste and scrap (see Table III.1).³⁴

Over the past five years, U.S. merchandise imports from Korea have averaged about 2.4 percent of all U.S. merchandise imports from the world, or \$44.7 billion a year. U.S. merchandise imports from Korea have been concentrated in the following NAICS-based subsectors: computer and electronic products; transportation equipment; electrical equipment, appliances, and components; machinery, except electrical; petroleum and coal products; primary metal manufacturing; plastics and rubber products; and chemicals (see Table III.2).

In 2010, 55.6 percent of all merchandise imports from Korea entered the United States duty-free, mainly due to MFN duty-free treatment,³⁵ while the remaining 44.4 percent was subject to an average 3.1 percent rate of duty. In 2010, U.S. imports from Korea in the following NAICS-based subsectors were subject to the highest amount of duties (see Table III.3):

- transportation equipment (total duties, \$243.2 million; average rate of duty on dutiable goods, 2.5 percent);³⁶

³⁴ For the purposes of relating foreign trade statistics to U.S. industrial output and employment, the Bureau of the Census has mapped 10-digit Harmonized Tariff Schedule (HTS) numbers used for U.S. exports and import statistics to their closest NAICS-based code. Some categories of traded items have no direct domestic counterpart. NAICS-based 91000-99000 categories were created to classify such goods. For example, NAICS 99000—Special Classification Provisions, not otherwise specified or included, contains primarily imports and exports of low-value shipments not specified by kind, exposed film and prerecorded tapes, articles imported for repairs, returned goods, and articles donated to charity.

³⁵ In 2010, a small amount of imports from Korea (less than 0.1 percent of imports from Korea) entered duty-free under the WTO Agreement on Trade in Pharmaceutical Products (\$19.1 million), the WTO Agreement on Trade in Civil Aircraft (\$16.6 million), and the Uruguay Round concessions on Intermediate Chemicals for Dyes (\$199,096).

³⁶ The average rate of duty is the ratio of calculated duties over the dutiable value of imports in the subsector. The dutiable value represents the customs value of items imported into to the United States that

- plastics and rubber products (\$78.8 million; 4.2 percent);
- chemicals (\$56.0 million; 5.6 percent);
- electrical equipment, appliances, and components (\$46.6 million; 2.1 percent);
- textiles and fabrics (\$41.4 million; 9.6 percent);
- apparel and accessories (\$40.8 million; 15.1 percent);
- machinery, except electrical (\$39.9 million; 3.2 percent); and
- fabricated metal products (\$32.9 million; 3.9 percent).

In 2010, the ten leading U.S. merchandise imports (on an eight-digit Harmonized Tariff Schedule (HTS) tariff line basis) accounted for 46.5 percent of all U.S. merchandise imports from Korea and about one-third (32.4 percent) of all calculated duties. The following six of these ten leading merchandise imports received MFN duty-free treatment:

- telephones for cellular or other wireless networks (total imports, \$7.5 billion);
- printed circuit assemblies (\$2.4 billion);
- electronic integrated circuits (\$1.5 billion);
- combined electric refrigerator-freezers (\$863.3 million);
- memories (\$837.9 million); and
- U.S. goods returned without having been advanced in value or improved in condition while abroad (\$651.4 million).

The remaining four items were subject to modest tariffs:

- passenger motor cars and other vehicles for cylinder capacity exceeding 1500cc but not exceeding 3000cc (total imports, \$5.6 billion; tariff rate, 2.5 percent);
- passenger motor cars and other vehicles for cylinder capacity exceeding 3000cc (\$1.3 billion; 2.5 percent);
- new pneumatic rubber radial tires used on motor cars (\$943.9 million; 4.0 percent); and
- kerosene-type jet fuel from petroleum oils (\$647.8 million; 52.2 cents per barrel, or 0.6 percent).

B. The Potential Effects of Removing Current Barriers to Trade

The immediate effects of the KORUS will come from the removal of tariffs on bilateral merchandise trade and the provision of expanded market access (through preferential tariff rate quotas) on specific sensitive goods (mainly agricultural items). According to the WTO, in 2009, Korea's simple average applied import tariff was 12.1 percent, in contrast to the U.S. simple average applied tariff of just 3.5 percent.³⁷ Prior to the

is subject to duty. The total imports and dutiable value for each of these subsectors are presented in Table III.3.

³⁷ See WTO Tariff Profiles for the Republic of Korea and the United States, available online at <http://stat.wto.org/TariffProfile/WSDBTariffPFHome.aspx?Language=E>

KORUS, 37.5 percent of U.S. tariff lines were MFN duty-free, while only 13.3 percent of Korean tariff lines were MFN duty-free.³⁸ When the KORUS enters into force, 82.2 percent of U.S. tariff lines and 79.9 percent of Korean tariff lines will be duty-free immediately. Duties on other sensitive originating goods will be phased out over varying transition periods ranging from two to twenty years. Within five years, 92.7 percent of U.S. tariff lines and 91.8 percent of Korean tariff lines will be duty-free.

Since the initial tariff barriers in Korea are much higher than those in the United States, the removal of these barriers means that it is likely that the price paid by Korean consumers for U.S. goods will fall more than the price paid by U.S. consumers for Korean goods. Accordingly, it is reasonable to expect that the lowering of the barriers through the KORUS will have a greater impact on increasing U.S. exports to Korea than increasing Korean exports to the United States.

The removal of Korean tariffs on many U.S. products in key export sectors, such as industrial and consumer electronic machinery and parts, auto parts, power generation equipment, the majority of chemicals, medical and scientific equipment, motorcycles, and certain wood products is likely to make those products more competitive in Korean markets.

The KORUS will also open Korea's approximately \$500 billion services market³⁹ more fully to U.S. service providers. Under the KORUS, Korea will commit to provide meaningful market access across virtually all major service sectors, including express delivery services. The KORUS would likely not have as large effect on U.S. imports of services from Korea, as the U.S. services market is already very open (see section II.B.2 of this report).

In the long term, the KORUS may also lead to increased FDI between Korea and the United States as a result of the more stable legal framework the KORUS creates for investors. All forms of investment are protected under the agreement. The United States already affords equal treatment to investors. U.S. investors in Korea will enjoy the right to establish, acquire, and operate investments on an equal footing with local investors in almost all sectors. Investor protections will be backed by an impartial and transparent dispute settlement mechanism.

³⁸ See Table III.4 for more detailed information. United States International Trade Commission. *U.S. – Korea Free Trade Agreement: Potential Economy-wide and Selected Sectoral Effects*. Investigation No.TA-2104-24. September 2007. Corrected printing released March 2010. Available online at <http://www.usitc.gov/publications/pub3949.pdf>.

³⁹ The size of the Korean service sector is based on “Services, etc., value added (current U.S. \$)” from the World Bank, World Development Indicators. Value added is the net output of a sector.

C. Effects as Determined by Computable General Equilibrium Studies

This section summarizes seven publicly available computable general equilibrium (CGE) studies which use different methodologies and assumptions to assess the impact of various simulations of trade liberalization between the U.S. and Korean economies.⁴⁰ These simulations are not necessarily consistent with the terms of the actual agreement; nevertheless, the studies may give insights as to the magnitude or direction of changes that might accompany the KORUS.

Most of the studies used a CGE model known as the Global Trade Analysis Project (GTAP) model to simulate the possible impact of the removal of tariff and quota restraints on bilateral merchandise trade. The GTAP global database contains historical information on bilateral trade patterns, production, consumption, and the intermediate use of commodities and services. The database also contains information on tariffs, some non-tariff barriers, and other taxes.

The standard GTAP model is a multi-region, multi-sector model with perfect competition and constant returns to scale. Bilateral trade is handled using the Armington assumption that internationally traded goods are differentiated by country of origin (that is, imports are imperfect substitutes for domestic products). The simulations use expected KORUS-induced consumer and producer price changes to predict changes in the volume of trade of goods between the United States and Korea.

The results of the simulations vary, even among studies done with the same GTAP model. These variations arise from differences in policy assumptions, the age of the data used, the level of aggregation employed, and technical assumptions about the type of competition firms face when engaged in international trade. The simulations cannot predict what may happen to goods that historically have not been traded between the partners. Because of difficulty in quantifying services liberalization, liberalization of trade in services is generally not modeled.⁴¹

CGE simulations generally are based on an assumption that there is full employment in the economies studied. Most simulations discussed below make this assumption. As a logical consequence, economy-wide employment levels remain constant. Increased employment in some sectors is fully counterbalanced by decreases in others, as sectoral wages adjust to draw workers away from contracting and toward expanding sectors. Adjustments to aggregate employment can be accommodated in CGE simulations, if unemployment is assumed and wages are not allowed to adjust in response to sectoral reallocation of workers. One CGE simulation of the KORUS pursues this strategy. It produces the largest available estimate of aggregate employment change from the KORUS: an increase of 280,000, which is less than one-fifth of one percent of total U.S.

⁴⁰ Only publicly available computable general equilibrium studies that calculated the effects of a potential FTA between the United States and Korea on the U.S. economy were included in this literature review.

⁴¹ Among the KORUS models considered below, only the one developed by Kiyota and Stern for the Korea Economic Institute incorporates liberalization in trade in services.

employment. The direction and magnitude of this result is consistent with projections for other economic indicators. For example, the studies of merchandise trade liberalization between the United States and Korea that consider overall effects on welfare find a small positive impact on U.S. welfare. The studies find U.S. welfare gains in the range of 0.05 percent to 0.2 percent (that is, less than one-fifth of one percent) of U.S. GDP, with gains ranging from \$0.8 billion to \$25.1 billion.

Further detail on the available studies follows below.

1. *U.S. International Trade Commission (2011, 2007, and 2001)*^{42,43,44}

The U.S. International Trade Commission (USITC) has published three official reports regarding a free trade agreement between the United States and Korea. Both the 2007 and 2001 reports examine the economic impact of bilateral trade liberalization on the U.S. economy as a whole.⁴⁵ The 2011 report is an update that focuses solely on the passenger vehicle sector.

The USITC 2007 study uses the GTAP model and database⁴⁶ to analyze goods-related provisions of the KORUS. It estimates the effects of tariff and TRQ-related changes negotiated in the agreement.⁴⁷ The model assumes that all provisions of the KORUS are fully phased in on January 1, 2008, rather than phased in over the periods specified in the agreement. Overall, the USITC estimates that U.S. GDP would increase by 0.1 percent (\$10.1-11.9 billion). U.S. welfare would increase by \$1.8 - \$2.1 billion (less than 0.05 percent of projected U.S. GDP).

The study finds “the FTA would likely result in a small to negligible impact on output or employment for most sectors of the U.S. economy, as expected losses in output and employment in contracting sectors are expected to be offset by gains in expanding

⁴² United States International Trade Commission. *U.S. – Korea Free Trade Agreement: Passenger Vehicle Sector Update*. Investigation No.332-523. March 2011. Available online at <http://www.usitc.gov/publications/332/pub4220.pdf>.

⁴³ United States International Trade Commission. *U.S. – Korea Free Trade Agreement: Potential Economy-wide and Selected Sectoral Effects*. Investigation No.TA-2104-24. September 2007. Corrected printing released March 2010. Available online at <http://www.usitc.gov/publications/pub3949.pdf>.

⁴⁴ United States International Trade Commission. *U.S. – Korea FTA: The Economic Impact of Establishing a Free Trade Agreement (FTA) between the United States and the Republic of Korea*. Investigation No.332-425. September 2001. Available online at <http://www.usitc.gov/publications/docs/pubs/332/pub3452.pdf>.

⁴⁵ The 2001 report considers a possible free trade agreement, while the 2007 report considers the agreement signed in 2007.

⁴⁶ GTAP version 6.1 database with a base year of 2001. The authors updated the 2001 data to reflect the state of the economy in 2005 and then projected this data forward to create a baseline for 2008 based on estimates of GDP growth.

⁴⁷ The model and database simulate liberalized trade in all goods subject to liberalization under the KORUS, except for the sector “vegetables, fruits, and nuts.” This sector is subject to partial liberalization as a result of permanent, increasing TRQs. They also attempt to reflect changes in the excise tax on automobiles, tariff elimination on U.S. beef exports, the unchanged treatment of rice, and the differential treatment of food-grade soy beans. For a full discussion, please see Appendix F of USITC (2007).

sectors.”⁴⁸ The model finds the largest percent increases in output (measured as quantity or revenue) in cattle, sheep, goats, and horses (0.7 to 2.0 percent), bovine meat products (0.7 to 2.0 percent), other meat products (0.5 to 0.9 percent), and other animal products (0.4 to 0.8 percent). The largest percent decreases would be in textiles (-0.8 to -0.7 percent), wheat (-0.7 to 0.0 percent), wearing apparel (-0.5 to -0.4 percent), paddy and processed rice (-0.5 to 0.2 percent), electronic equipment (-0.4 to -0.2 percent), and plant-based fibers (-0.4 to 0.1 percent).

Estimates of the effects on employment show the same trends, with similar percent changes. The largest percent increases in employment are found in sectors producing cattle, sheep, goats, and horses (0.7 to 1.8 percent), bovine meat products (0.7 to 1.8 percent), other meat products (0.5 to 0.8 percent), other animal products (0.5 to 0.7 percent), and other cereals and grains (0.2 to 0.5 percent). The largest percent decreases in employment are found in sectors producing textiles (-0.8 to -0.7 percent), wheat (-0.7 to -0.1 percent), wearing apparel (-0.5 to -0.4 percent), and paddy and processed rice (-0.5 to 0.1 percent).

The USITC 2011 study examines the effects of the passenger vehicle provisions of the new agreements signed on February 10, 2011. The study includes two separate general equilibrium simulations. The first assumes the removal of all Korean non-tariff measures in the auto sector, but does not consider the effects of tariff changes associated with the KORUS. This simulation uses a model similar to the GTAP model that includes detailed industry differentiated demand information for Korean consumers.⁴⁹ Under this scenario, the USITC reports that the potential increase in U.S. exports of certain passenger cars to Korea associated with the removal on non-tariff measures could range from 41 to 56 percent (\$48 million to \$66 million).⁵⁰ Estimates of changes to sector output, employment, and U.S. imports are not reported.

The second simulation updates the 2007 GTAP simulation for the “motor vehicles and parts” sector using 2009 data. Like the 2007 GTAP simulation, this updated simulation considers only the removal of tariffs, and does not model the removal of non-tariff measures. For the updated simulation, the USITC reports that U.S. exports to Korea in the “motor vehicles and parts” sector could increase by 54 percent (\$194 million), and U.S imports from Korea could increase by 11 percent (\$907 million). These results are similar to those reported from the 2007 simulation, which showed U.S. exports increasing between 46 to 59 percent and U.S. imports increasing between 9 and 12 percent.

⁴⁸ See USITC (2007), p. xix.

⁴⁹ The standard GTAP model differentiates internationally traded goods only by country of origin, not by specific industries.

⁵⁰ Because Korean non-tariff measures appear to have had the effect of significantly raising the cost of U.S. passenger vehicle exports to Korea, the gap between this price and the price of comparable U.S. exports worldwide was used to measure the impact of the Korean non-tariff measures. This price gap is estimated to be 7.5 percent in 2008 to 2010. Removal of this price gap could result in a similar price decline for Korean consumers.

Estimates of changes to sector output and employment from the updated simulation are not reported.⁵¹

The earlier USITC 2001 study uses the GTAP model and an earlier GTAP database⁵² to simulate the possible impact of the elimination of all tariffs and some non-tariff border measures between Korea and the United States with no gradual phase-in provisions. The simulation assumes that the trade liberalization would be implemented in 2001, and analyzes the effects of the trade liberalization in 2005, four years after implementation.⁵³ The study finds that changes in aggregate U.S. output and employment would likely be negligible, due primarily to the size of the U.S. economy relative to that of the Korean economy. Overall, the USITC estimates that U.S. GDP would increase by 0.2 percent (\$20 billion). Estimates of the effects on sectoral employment are similar to those in the 2007 study with, for example, increases in agriculture (0.8 percent) and decreases in textiles and apparel (-1.4 percent).

*2. Memorandum from the Majority Staff of the Senate Committee on Finance Subcommittee on Trade (2011)*⁵⁴

The majority staff of the Senate Committee on Finance Subcommittee on Trade released a memo containing their analysis of technical work undertaken by the staff of the USITC.⁵⁵ The analysis updates and extends the work done in USITC (2007). The majority staff considers two scenarios. Scenario A uses 2009 trade and employment data to update the scenario employed in USITC (2007); e.g., the size of the labor force and the capital stock are held constant, and wages and the cost of capital adjust. The findings are generally the same as those published in USITC (2007).⁵⁶

Scenario B extends this work by changing the assumptions about the labor force and capital stock to reflect weaker economic conditions that the majority staff authors note “more closely approximates current U.S. economic conditions”⁵⁷ (a period of high unemployment and underused capacity). In this scenario, the size of aggregate employment and the capital stock in the U.S. economy are allowed to adjust, and the real

⁵¹ The comparable percentage impacts on exports and imports between the two simulations discussed in the paragraph may suggest that the updated simulation would yield impacts in motor vehicles and parts output and employment that are similar to the 2007 simulation. There, changes in both ranged from -0.2 to -0.1 percent. As the discussion earlier in this section shows, these were not among the largest estimated sectoral changes in output or employment.

⁵² The USITC uses the GTAP version 4 database with a base year of 1995.

⁵³ Data are projected using forecasts of population growth and economic growth from the World Bank. Capital is assumed to grow at the same rate as GDP.

⁵⁴ Available online at <http://wyden.senate.gov/download/?id=d0b7cd8b-268c-4eff-98f3-aa085f45bd69>.

⁵⁵ The memo notes that this technical assistance was provided at the request of the Subcommittee, that the memo is not an official Commission document, and that it should be referenced as “work of the staff of the USITC: not a Commission-approved document.”

⁵⁶ The updated Simulation A finds U.S. GDP would increase by 0.1 percent (\$10.4 billion), and U.S. welfare would increase by 0.0 percent (\$1.8 billion). Sectoral output and employment changes are also very similar to the 2007 findings.

⁵⁷ Majority staff (2011), p. 4.

wages and cost of capital in the United States are fixed. This scenario finds that U.S. GDP would increase by 0.2 percent (\$27.3 billion), and U.S. welfare would increase by 0.1 percent (\$20.7 billion). U.S. employment would increase by 280,000 (0.2 percent). The sectors that would show the largest percent increases in employment are similar to those in USITC (2007): cattle, sheep, goats, and horses (1.4 percent); bovine meat products (1.3 percent); other meat products (0.7 percent); and other animal products (0.7 percent). The only sectors showing decreases in employment are wheat (-0.5 percent); textiles (-0.4 to -0.3 percent); electronic equipment (-0.1 percent), and plant-based fibers (-0.1 percent). Percent changes in output, both in terms of quantity and revenue, are similar to the percent changes in employment.

3. *Institute for International Economics: Schott, Bradford, and Moll (2006)*⁵⁸ and *Choi and Schott (2001)*⁵⁹

The 2006 study by Schott, Bradford, and Moll updates an earlier exercise by Choi and Schott (2001) using a newer GTAP model⁶⁰ and an updated version of the GTAP database.⁶¹ The authors examine two scenarios: (1) complete free trade and (2) complete free trade in everything except rice. Both scenarios are considered in the medium and long term. For full liberalization, the simulation estimates that U.S. welfare would increase by \$766 million (0.01 percent of GDP) in the medium term and \$8.8 billion (0.07 percent of GDP) in the long term. For Korea, the model estimates increases of \$27.6 billion (3.5 percent of GDP) and \$51.8 billion (6.6 percent of GDP) respectively. With rice excluded, U.S. welfare would increase by \$6.3 billion (0.05 percent of GDP) in the medium term and \$13.7 billion (0.1 percent of GDP) in the long term. For Korea, the model estimates increases of \$20.2 billion (2.6 percent of GDP) and \$40.9 billion (5.2 percent of GDP) respectively.

The model estimates small changes in the sectoral composition of U.S. production. In the medium term under the full liberalization scenario, the authors find a large percentage increase in U.S. production of paddy rice; however, the increase is from a very small level.⁶² Other increases would be in other primary products (6.5 percent) and other food products (0.3 percent). The model predicts declines or no change in all other sectors, including in processed rice (-21.1 percent), wheat (-12.0 percent), textiles (-1.4 percent), and leather products (-1.3 percent). In the estimates for the long term in the scenario where rice is excluded from the liberalization (which is closer to the case of the actual KORUS), the percent change in U.S. output is generally small. The largest declines

⁵⁸ Schott, Jeffrey J., Scott C. Bradford, and Thomas Moll. 2006. *Negotiating the Korea – United States Free Trade Agreement*. Policy Briefs in International Economics PB06-4. Washington: Institute for International Economics (June). Available online at <http://www.iie.com/publications/pb/pb06-4.pdf>.

⁵⁹ Choi, Inmom, and Jeffrey J. Schott. 2001. *Free Trade between Korea and the United States?* Policy Analysis in International Economics 62. Washington: Institute for International Economics (April). Available online at <http://bookstore.petersoninstitute.org/book-store/326.html>.

⁶⁰ The basic structure of their model is based on a global general equilibrium model originally developed by Harrison, Rutherford, and Tarr.

⁶¹ GTAP version 6 database with a base year of 2001.

⁶² As of the date of their data, paddy rice accounted for just 0.01 percent of total U.S. output.

would be in wheat (-6.1 percent), paddy rice (-3.1 percent), textiles (-1.4 percent), and leather products (-1.3 percent). The results show increases in other primary products (6.5 percent) and other food products (0.3 percent).

Information on sectoral labor market effects in the United States is not included. By skill levels, the authors find little change in the long run real factor prices for labor. Under the complete free trade simulation, the price for unskilled labor increases by about 0.1 percent and the change for skilled labor is even less. The model predicts large shifts in the industrial composition of Korean employment but little effect on the overall size of the labor market.

The 2001 study by Choi and Schott uses an earlier GTAP model and the 1995 GTAP database to simulate a variety of scenarios. For complete trade liberalization (removal of all tariffs that Korea and the U.S. impose on each other), the simulations project that U.S. welfare would increase by \$3.8 billion (0.05 percent of GDP) in the medium term and \$8.9 billion (0.13 percent of GDP) in the long term. The authors find “very small structural effects on the U.S. economy.”⁶³ In the medium term, they find the largest increase in output in agriculture (1.6 percent) and the largest declines in output in textile and apparel (-1.2 percent) and transportation equipment (-0.3 percent).

4. *Korea Economic Institute: Kiyota and Stern (2007)*

In this study, the authors use the Michigan Model of World Production and Trade (Michigan Model)⁶⁴ – a multi-country CGE model – to evaluate the economic effects of the proposed KORUS. The Michigan Model varies from the standard GTAP model in that it incorporates some aspects of imperfect competition, increasing returns to scale, and product differentiation at the firm level. While the GTAP models rely on the Armington assumption, the Michigan model allows for differentiated products supplied by monopolistically competitive firms and imports from other countries to compete more directly with domestic products. The main data source is the GTAP version 6.0 database which has a reference year of 2001. This study also differs from those discussed above in that it includes estimates of liberalized trade in services.

The authors estimate that, with the bilateral elimination of tariffs and export subsidies in agriculture, manufactures, and services, U.S. welfare would increase by \$25.1 billion (0.14 percent of GDP) and Korean welfare would increase by \$9.3 billion (1.26 percent of GDP).⁶⁵

The model predicts small changes in U.S. domestic industrial composition. The model finds the largest percent increases in the production of oil seeds (1.7 percent), other grains (1.6 percent), and rice (1.1 percent), and the largest declines in wearing apparel (-0.5

⁶³ See Choi and Schott (2001), p. 115.

⁶⁴ For further information about the model, see <http://www.fordschool.umich.edu/rsie/model>.

⁶⁵ The incorporation of liberalization in trade in services and the removal of export subsidies in this model produces stronger economic results due to the high non-tariff barriers assumed to exist in these areas.

percent) and textiles (-0.4 percent). Estimates of the effects on employment show the same trends, with similar percent changes. The largest percent increases in employment are found in oil seeds (1.7 percent), other grains (1.6 percent), and rice (1.1 percent). The largest percent decreases in employment are found in wearing apparel (-0.6 percent) and textiles (-0.5 percent).

D. Bilateral Trade and Domestic Employment Trends in Selected Industries

As the review of CGE studies illustrates, there are likely to be output and employment losses in some industries and new opportunities in others as output and employment adjust to the KORUS. For the following analysis, two sets of industries were reviewed to determine likely employment effects: (1) industries that already have a large volume of imports from Korea that face low tariff rates; and (2) industries that currently face high tariff rates that will be reduced or eliminated under the KORUS.

This section examines factors at play in six industries where the removal of current tariffs on U.S. imports from Korea will be notable.⁶⁶ The text table below identifies the six 5-digit NAICS-based industries where U.S. imports from Korea were subject to the highest amount of calculated duties in 2010. All are in the manufacturing sector.

Text Table: Customs Value, Dutiable Value, Calculated Duties, and Average Rate of Duty on U.S. Imports from Korea in Industries with Highest Calculated Duties in 2010

Industry	Customs Value	Dutiable Value	Calculated Duties	Average Rate of Duty
	(Millions)			
33611 – Automobiles and Light Duty Motor Vehicles	6,938.6	6,917.9	172.9	2.5%
32621 – Tires	1,209.2	1,181.3	47.2	4.0%
33639 – Other Motor Vehicle Parts	1,278.8	1,074.2	26.5	2.5%
32521 – Resin and Synthetic Rubbers	522.4	346.7	21.8	6.3%
31321 – Broadwoven Fabrics	222.2	193.2	18.1	9.4%
31324 – Knit Fabrics and Lace	148.9	148.1	16.8	11.3%

The three identified auto-related industries (NAICS 33611, 32621, and 33639) are examples of industries that currently have a low tariff and a high volume of imports. The other three industries are examples of industries that currently face a relatively high tariff and imports are more modest.

The discussion below shows that in these industries changes in U.S. tariffs under the KORUS may tend to reduce U.S. employment; however, in some of these industries, changes in Korean tariffs may tend to increase U.S. employment.

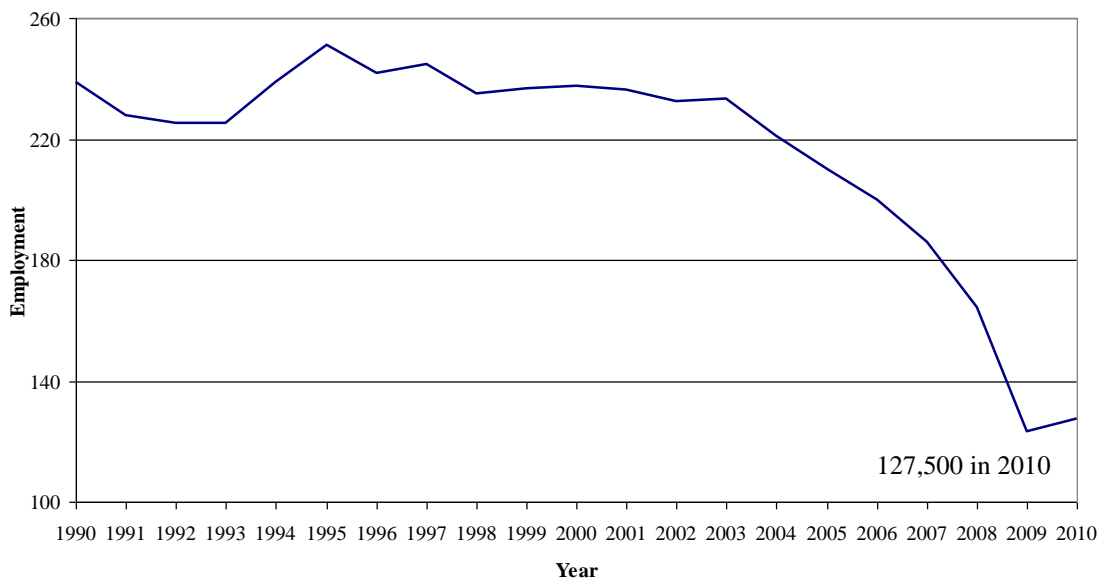
1. Automobiles and light duty motor vehicles (NAICS 33611)

⁶⁶ Because trade with Korea will remain small as a proportion of all commerce in which the United States engages, it is not possible to give quantitative estimates at the detailed industry level of net changes.

a. U.S. Employment Trends before the KORUS

The chart below presents the trend in U.S. employment in the automobile and light duty motor vehicles industry (NAICS 33611) for the years 1990 to 2010. During this period, employment hit a peak in 1995 at 251,300 employees and has shown a general downward trend since that time, before increasing slightly in 2010. Employment was 127,500 in 2010, up from 123,400 in 2009. The average hourly earnings of production employees in the motor vehicles industry group⁶⁷ (NAICS 3361), which includes the automobile and light duty vehicles industry, were \$29.04 in 2010.⁶⁸ This is approximately 1.6 times the average hourly earnings of production employees in the manufacturing sector as a whole, which were \$18.61 in 2010.

Figure 1. U.S. Employment in Automobiles and Light Duty Motor Vehicles (NAICS 33611), 1990-2010
(annual average, in thousands)



Source: BLS, Current Employment Statistics

b. Bilateral Trade Trends and Potential Impacts of the KORUS

U.S. imports of automobiles and light duty motor vehicles from Korea make up a substantial portion of all U.S. imports from Korea. In 2010, U.S. imports in this industry were \$6.9 billion and accounted for 14.5 percent of all U.S. merchandise imports from

⁶⁷ Employment and average hourly earnings data are annual averages reported at the industry (5-digit NAICS) level when available. When industry-level data are not available, data are reported at the industry group (4-digit NAICS) level. The level of aggregation at which employment and average hourly earnings data are estimated and published depends on several factors, including sample size, coverage, and response rates.

⁶⁸ All average hourly earnings are in nominal terms.

Korea. Imports from Korea represent 5.9 percent of all U.S. imports of automobiles and light duty motor vehicles from all sources. In 2010, Korea was the fifth largest supplier of U.S. imports in this industry behind Canada (\$35.8 billion), Japan (\$32.9 billion), Germany (\$18.3 billion), and Mexico (\$14.4 billion).

Two HTS 8-digit items account for nearly all (99.9 percent) of U.S. imports from Korea in this industry: passenger motor cars and other vehicles for cylinder capacity exceeding 1500cc but not exceeding 3000cc (HTS 8703.23.00) and passenger motor cars and other vehicles for cylinder capacity exceeding 3000cc (HTS 8703.24.00).

- Imports of HTS 8703.23.00 from Korea amounted to \$5.6 billion in 2010 and accounted for 9.7 percent of U.S. imports of this item from all sources. This was the second leading HTS 8-digit item from all industries imported from Korea in 2010.
- Imports of HTS 8703.24.00 from Korea amounted to \$1.3 billion in 2010 and accounted for 2.4 percent of U.S. imports of this item from all sources. This was the fifth leading HTS 8-digit item from all industries imported from Korea in 2010.

In 2010, U.S. imports of these items from Korea were subject to a calculated duty of \$172.9 million, or 26.1 percent of all duties on items from Korea. The MFN tariff on each of these items is quite low, at 2.5 percent. Two of the leading suppliers of U.S. imports in this industry – Mexico and Canada – benefit from duty-free treatment of these items under the NAFTA. Under the KORUS, U.S. duties on HTS 8703.23.00 and HTS 8703.24.00 will be eliminated five years after the KORUS enters into force.

While U.S. imports of Korean autos are likely to increase after these tariffs are eliminated, U.S. exports of autos to Korea also have potential to grow. The KORUS contains a range of provisions that are designed to open the Korean auto market to U.S. manufacturers. For example, U.S. exports of most autos to Korea currently face an 8.0 percent tariff and other taxes increase the effective tariff rate even higher. Korea will reduce its tariff on U.S. auto imports to 4.0 percent on the date the KORUS enters into force and will fully eliminate the tariff within five years.

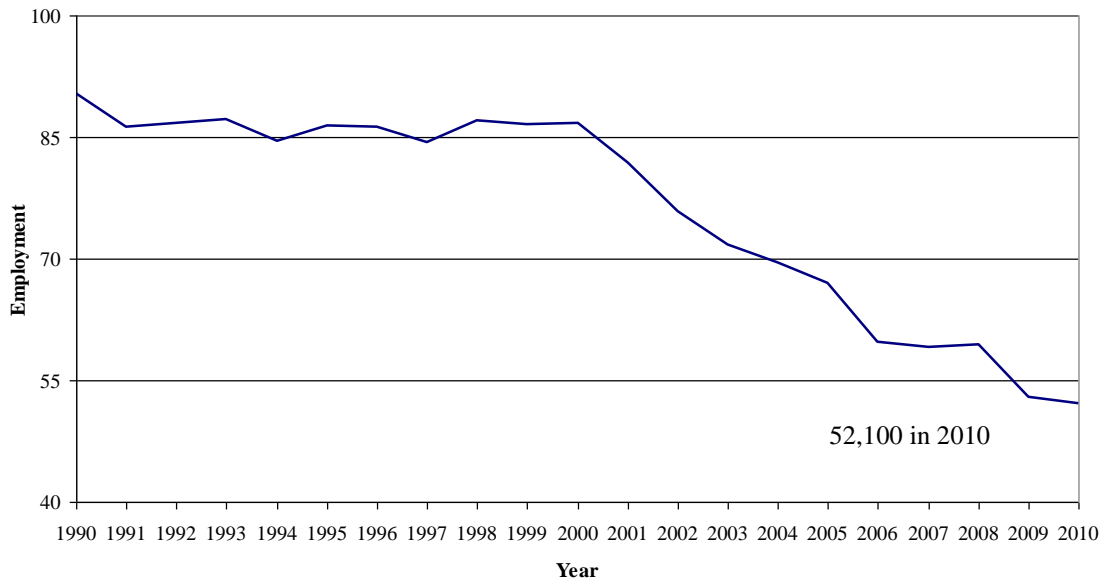
U.S. exports of automobiles and light duty motor vehicles to Korea in 2010 were \$325.5 million and accounted for 0.9 percent of all U.S. merchandise exports to Korea. This represents 0.9 percent of all U.S. exports of automobiles and light duty motor vehicles to all countries. Korea was the 17th largest export market for this industry. The five leading export markets for the United States were Canada (\$10.7 billion), Germany (\$3.9 billion), China (\$3.1 billion), Saudi Arabia (\$2.8 billion), and Mexico (\$2.7 billion).

2. Tires (NAICS 32621)

a. U.S. Employment Trends before the KORUS

The chart below presents the trend in U.S. employment in the tire industry (NAICS 32621) for the years 1990 to 2010. Employment in this industry was fairly steady from 1990 to 2000, averaging around 87,000 employees. Since 2000, this industry has shown a downward trend. Employment in the industry was 52,100 in 2010. The average hourly earnings of production employees in the rubber products industry group (NAICS 3262), which includes the tires industry, were \$16.64 in 2010.

**Figure 2. U.S. Employment in Tires (NAICS 32621),
1990-2010
(annual average, in thousands)**



Source: BLS, Current Employment Statistics

b. Bilateral Trade Trends and Potential Impacts of the KORUS

U.S. imports of tires from Korea make up a small but growing portion of all U.S. imports from Korea. In 2010, U.S. imports in this industry from Korea were \$1.2 billion and accounted for 2.5 percent of all U.S. merchandise imports from Korea (up from \$311.4 million and 0.8 percent in 2000). This represents 11.4 percent of all U.S. imports of tires from all sources (up from 6.6 percent in 2000). In 2010, Korea was the fourth largest supplier of U.S. imports in this industry behind China (\$2.3 billion), Canada (\$1.8 billion), and Japan (\$1.6 billion).

Two HTS 8-digit items accounted for the vast majority (96.4 percent) of U.S. imports from Korea in this industry: new rubber pneumatic radial tires used on motor cars (HTS 4011.10.10) and new rubber pneumatic radial tires used on buses or trucks (HTS 4011.20.10).

- Imports of HTS 4011.10.10 from Korea amounted to \$943.9 million in 2010 and accounted for 16.9 percent of U.S. imports of this item from all sources. This item was the sixth leading HTS 8-digit item imported from Korea in 2010.
- Imports of HTS 4011.20.10 from Korea amounted to \$221.5 million in 2010 and accounted for 7.2 percent of U.S. imports of this item from all sources.

In 2010, U.S. imports of these two items from Korea were subject to a calculated duty of \$46.6 million which accounted for 7.0 percent of all duties on items from Korea. The MFN tariff on each of these two items is 4.0 percent. Under the KORUS, U.S. duties on HTS 4011.10.10 and HTS 4011.20.10 will be removed in five equal annual stages beginning on the date the KORUS enters into force and will be duty-free effective January 1 of year 5.

While U.S. imports of Korean tires may increase after the KORUS enters into force, U.S. exports of tires to Korea also have potential to grow. U.S. exports of tires to Korea currently face an 8.0 percent tariff and will become duty-free immediately on the date the KORUS enters into force.

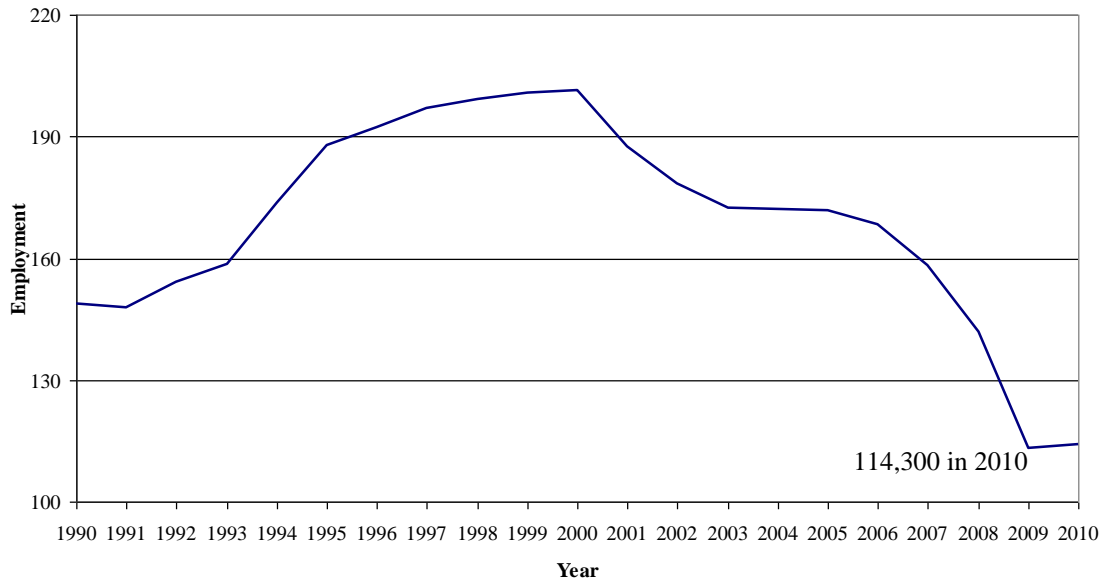
In 2010, U.S. exports of tires to the world were \$4.1 billion, with only \$12.9 million (or 0.3 percent) being exported to Korea. This represents 0.03 percent of all U.S. merchandise exports to Korea. Korea was the 27th largest market for U.S. exports of tires in 2010. The five leading export markets for the United States were Canada (\$1.7 billion), Mexico (\$869.6 million), Australia (\$243.3 million), Chile (\$103.0 million), and Brazil (\$102.5 million).

3. *Other Motor Vehicle Parts (NAICS 33639)*

a. U.S. Employment Trends before the KORUS

The chart below presents the trend in U.S. employment in the other motor vehicle parts industry (NAICS 33639) for the years 1990 to 2010. During this period, employment hit a peak in 2000 at 201,500 employees and has shown a downward trend since that time, before increasing slightly in 2010. Employment was 114,300 in 2010, up from 113,300 in 2009. The average hourly earnings of production employees in the other motor vehicle parts industry were \$16.82 in 2010.

Figure 3. U.S. Employment in Other Motor Vehicles Parts (NAICS 33639), 1990-2010 (annual average, in thousands)



Source: BLS, Current Employment Statistics

b. Bilateral Trade Trends and Potential Impacts of the KORUS

U.S. imports of other motor vehicle parts from Korea make up a small but growing portion of all U.S. imports from Korea. In 2010, U.S. imports in this industry from Korea were \$1.3 billion and accounted for 2.7 percent of all U.S. merchandise imports from Korea (up from \$325.5 million and 0.8 percent in 2000). This represents 5.7 percent of all U.S. imports of other motor vehicle parts from all sources (up from 2.2 percent in 2000). In 2010, Korea was the fifth largest supplier of U.S. imports in this industry behind Mexico (\$6.7 billion), Canada (\$4.9 billion), China (\$3.2 billion), and Japan (\$2.1 billion).

In 2010, U.S. imports of other motor vehicle parts from Korea were subject to a calculated duty of \$26.5 million, or 4.0 percent of all duties on items from Korea.⁶⁹ The average rate of duty for these items was 2.5 percent. The U.S. MFN tariff and the planned tariff elimination schedule vary by HTS 8-digit item. The leading three HTS 8-digit items in the industry (which accounted for 69.1 percent of all imports from Korea in this industry in 2010) have MFN tariffs ranging from duty-free to 2.5 percent, and those with duties will be eliminated immediately when the KORUS enters into force.

⁶⁹ The other motor vehicle parts industry is comprised of many HTS 8-digit items. In 2010, U.S. imported 28 separate HTS 8-digit items from Korea that were mapped to this NAICS industry.

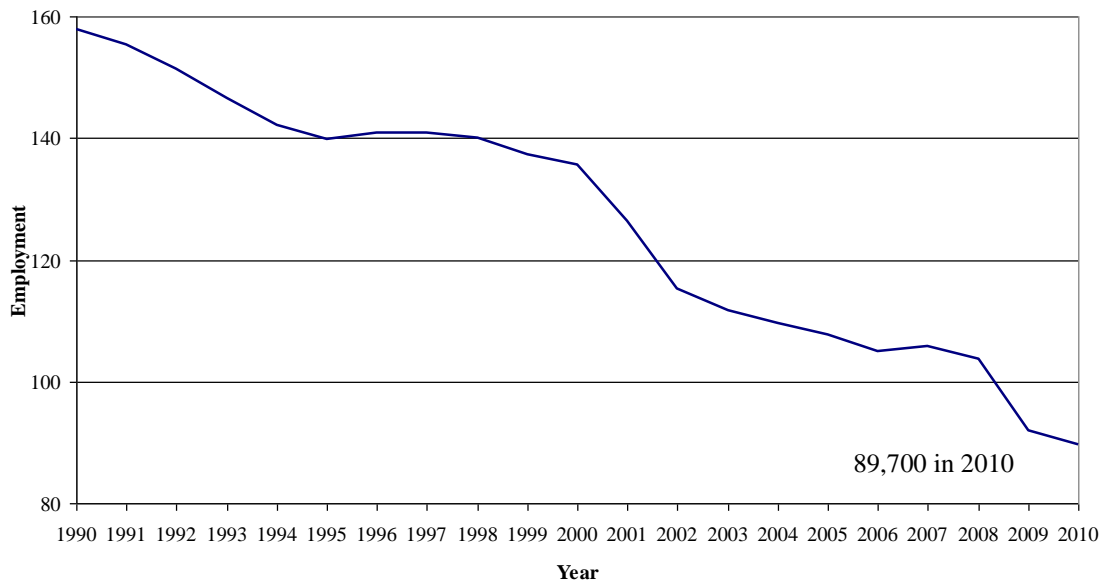
While U.S. imports of other motor vehicle parts from Korea may increase after the KORUS enters into force, U.S. exports of other motor vehicle parts to Korea also have potential to grow. U.S. exports of other motor vehicle parts to Korea currently face a 10.0 percent tariff and will become duty-free immediately on the date the KORUS enters into force. U.S. exports of other motor vehicle parts to all countries amounted to \$21.9 billion in 2010, or 1.9 percent of all U.S. merchandise exports to the world. Of this, U.S. exports to Korea accounted for just 1.0 percent, or \$229.3 million in 2010.

4. Resin and Synthetic Rubbers (NAICS 32521)

a. U.S. Employment Trends before the KORUS

The chart below presents the trend in U.S. employment in the resin, rubber, and artificial fibers industry group (NAICS 3252), which includes the resin and synthetic rubbers industry, for the years 1990 to 2010. Employment has shown a dramatic downward trend over this period, falling by 43.2 percent. Employment in this industry group was 89,700 in 2010. The average hourly earnings of production employees in this industry group were \$21.11 in 2010.

Figure 4. U.S. Employment in Resin, Rubbers, and Artificial Fibers (NAICS 3252), 1990-2010 (annual average, in thousands)



Source: BLS, Current Employment Statistics

b. Bilateral Trade Trends and Potential Impacts of the KORUS

In 2010, U.S. imports of resin and synthetic rubbers from Korea were \$522.4 million and accounted for 1.1 percent of all U.S. merchandise imports from Korea. This represents 4.4 percent of all U.S. imports of resin and synthetic rubbers from all sources. In 2010,

Korea was the fifth largest supplier of U.S. imports in this industry behind Canada (\$4.3 billion), Japan (\$1.2 billion), Germany (\$1.1 billion), and Mexico (\$941.9 million).

In 2010, U.S. imports of resin and synthetic rubbers from Korea were subject to a calculated duty of \$21.8 million, or 3.3 percent of all duties on items from Korea.⁷⁰ The average rate of duty for these items was 6.3 percent. The U.S. MFN tariff and the planned tariff elimination schedule vary by HTS 8-digit item. The leading five HTS 8-digit items in the industry (which accounted for 54.2 percent of all imports from Korea in this industry in 2010) have MFN tariffs ranging from duty-free to 6.5 percent. Of those items that currently face duties, some will be eliminated immediately when the Agreement enters into force and others will be phased out over a ten year period.

While U.S. imports of Korean resin and synthetic rubbers may increase after the KORUS enters into force, U.S. exports of resin and synthetic rubbers to Korea also have potential to grow. U.S. exports of resin and synthetic rubbers to Korea currently face tariffs ranging between 5.0 and 8.0 percent. Some items will become duty-free immediately on the date the KORUS enters into force, while others will be phased in over a period of three years. U.S. exports of resin and synthetic rubbers to all countries amounted to \$32.6 billion in 2010, or 2.9 percent of all U.S. merchandise exports to the world. Of this, U.S. exports to Korea accounted for just 2.6 percent or \$852.6 million in 2010.

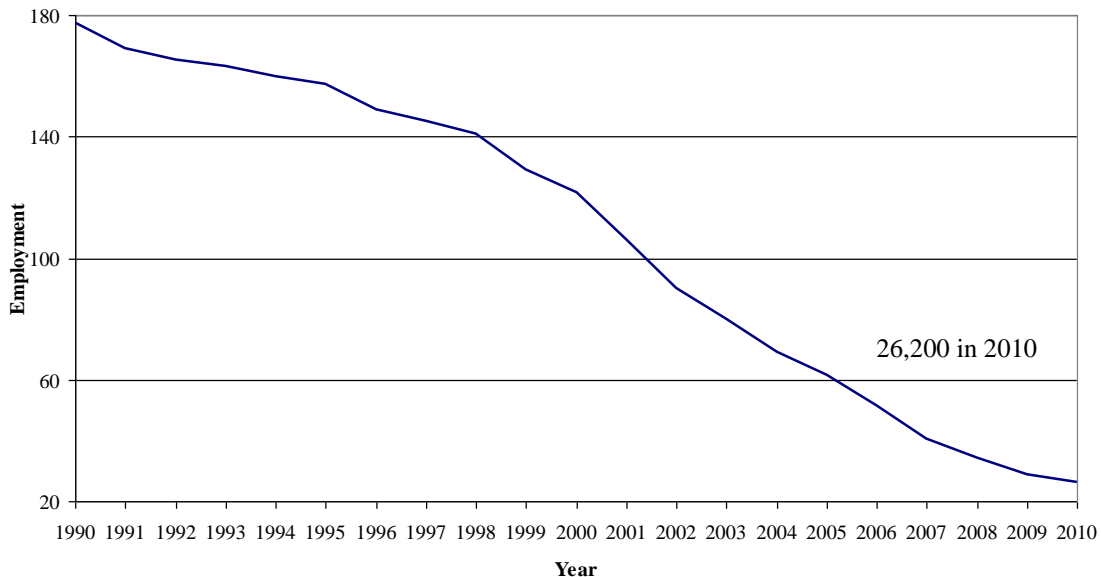
5. *Broadwoven Fabrics (NAICS 31321)*

a. U.S. Employment Trends before the KORUS

The chart below presents the trend in U.S. employment in the broadwoven fabrics industry (NAICS 31321), for the years 1990 to 2010. Employment has shown a dramatic downward trend over this period, falling by 85.2 percent. Employment in this industry was 26,200 in 2010. The average hourly earnings of production employees in the broadwoven fabrics industry were \$15.29 in 2010.

⁷⁰ The resin and synthetic rubbers industry is comprised of many HTS 8-digit items. In 2010, U.S. imported 77 separate HTS 8-digit items from Korea that were mapped to this NAICS industry.

**Figure 5. U.S. Employment in Broadwoven Fabrics (NAICS 31321),
1990-2010
(annual average, in thousands)**



Source: BLS, Current Employment Statistics

b. Bilateral Trade Trends and Potential Impacts of the KORUS

From 1974 through 1995, global trade in textiles and apparel was governed by the Multifiber Arrangement (MFA). The MFA formalized a framework of bilateral agreements and unilateral actions setting quotas that limited imports of textile and apparel products from developing countries into a developed country in order to protect domestic industries. On January 1, 1995, the MFA was replaced by the WTO Agreement on Textiles and Clothing (ATC), which established a transitional process for the ultimate removal of these quotas over a ten year period.⁷¹ The phase-out was completed and the ATC expired on January 1, 2005. During the transition period and since the expiration of the ATC, global trade in the textile and apparel sector has become increasingly dominated by China and a number of other low-cost developing country producers.

Despite this trend, Korea has maintained its position as a major supplier of broadwoven fabrics to the United States. Over the past ten years, U.S. imports of broadwoven fabrics from Korea have accounted for an average of 8.0 percent of U.S. imports from all countries in this industry. In 2010, U.S. imports of broad-woven fabrics from Korea were \$222.2 million and accounted for 8.7 percent of all U.S. imports of broad-woven fabrics from all sources. This represents 0.5 percent of all U.S. merchandise imports from Korea. In 2010, Korea was the third largest supplier of U.S. imports in this industry behind China (\$687.7 million) and Canada (\$257.3 million).

⁷¹ For more details about the WTO Agreement on Textiles and Clothing, see the WTO Web site at http://www.wto.org/english/tratop_e/texti_e/textintro_e.htm.

In 2010, U.S. imports of broadwoven fabrics from Korea were subject to a calculated duty of \$18.1 million, or 2.7 percent of all duties on items from Korea.⁷² The average rate of duty for these items was 9.4 percent. The U.S. MFN tariff and the planned tariff elimination schedule vary by HTS 8-digit item. The leading three HTS 8-digit items in the industry (which accounted for 61.3 percent of all imports from Korea in this industry in 2010) have MFN tariffs ranging from duty-free to 14.9 percent, and those with duties will be phased out over five years once the Agreement enters into force.

The broadwoven fabrics industry is not a large export industry for the United States. Such U.S. exports to all countries amounted to \$1.7 billion in 2010, or just 0.2 percent of all U.S. merchandise exports to the world. U.S. exports of broadwoven fabrics to Korea in 2010 were \$8.3 million and accounted for 0.02 percent of all U.S. merchandise exports to Korea. This represents 0.5 percent of all U.S. exports of broadwoven fabrics to all countries. Most U.S. exports of broadwoven fabrics to Korea currently face tariffs ranging from 8 to 10 percent tariff, and some will be eliminated immediately when the Agreement enters into force, while others will be phased out over a five year period.

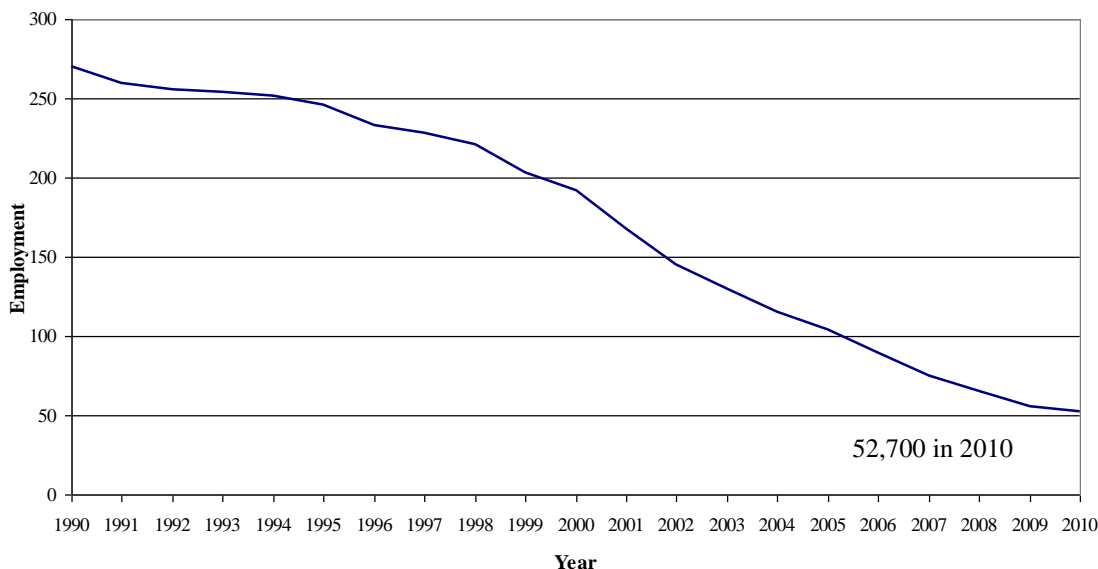
6. *Knit fabrics and lace (NAICS 31324)*

a. U.S. Employment Trends before the KORUS

The chart below presents the trend in U.S. employment in the fabric mills industry group (NAICS 3132), which includes the knit fabrics and lace industry, for the years 1990 to 2010. Employment has shown a dramatic downward trend over this period, falling by about four-fifths (80.5 percent). Employment in this industry group was 52,700 in 2010. The average hourly earnings of production employees in this industry group were \$14.67 in 2010.

⁷² The broad-woven fabrics industry is comprised of many HTS 8-digit items. In 2010, U.S. imported 244 separate HTS 8-digit items from Korea that were mapped to this NAICS industry.

**Figure 6. U.S. Employment in Fabric Mills (NAICS 3132),
1990-2010
(annual average, in thousands)**



Source: BLS, Current Employment Statistics

b. Bilateral Trade Trends and Potential Impacts of the KORUS

The phase-out of the MFA and ATC, described above, has had important effects on global patterns of trade throughout this industry. Korea continues to be a major supplier of knit fabrics and lace to the United States, although U.S. imports of these products from Korea have fallen each year since the expiration of the ATC. Korea had been the leading supplier of U.S. imports in this industry until 2009 when it was overtaken by China. In 2010, U.S. imports of knit fabrics and lace from Korea were \$148.9 million and accounted for 19.8 percent of all U.S. imports of knit fabrics and lace from all sources (down from \$274.4 million and 27.3 percent in 2004). This represents 0.3 percent of all U.S. merchandise imports from Korea (down from 0.6 percent in 2004). U.S. imports of knit fabrics and lace from China were \$241.2 million in 2010 (up from \$58.6 million in 2004).

In 2010, U.S. imports of knit fabrics and lace from Korea were subject to a calculated duty of \$16.8 million, or 2.5 percent of all duties on items from Korea.⁷³ The average rate of duty for these items was 11.3 percent. The U.S. MFN tariff and the planned tariff elimination schedule vary by HTS 8-digit item. The leading three HTS 8-digit items in the industry (which accounted for 57.1 percent of all imports from Korea in this industry in 2010) have MFN tariffs ranging from 10.0 to 12.3 percent and will be phased out over a ten year period.

⁷³ The knit fabric and lace industry is comprised of many HTS 8-digit items. In 2010, U.S. imported 56 separate HTS 8-digit items from Korea that were mapped to this NAICS industry.

The knit fabrics and lace industry is not a large export industry for the United States. Such U.S. exports to all countries amounted to \$1.1 billion in 2010, or just 0.1 percent of all U.S. merchandise exports to the world. U.S. exports of knit fabric and lace to Korea in 2010 were \$7.6 million and accounted for 0.02 percent of all U.S. merchandise exports to Korea. This represents 0.7 percent of all U.S. exports of knit fabric and lace to all countries. Most U.S. exports of knit fabric and lace to Korea currently face a 10 percent tariff and will become duty-free immediately on the date the KORUS enters into force.

7. Summary remarks

As discussed above, the removal of tariffs allows for growth in both U.S. imports and exports. While increased exports support U.S. employment in these industries, higher imports may displace jobs.

In each of these industries, the United States imports products from many countries. Any increase in imports from Korea as the result of tariff preferences given by the KORUS would likely be due in part to diversion from other trading partners. For example, the USITC estimates that approximately 91 percent of the estimated increase in apparel imports from Korea will be imports diverted from other trading partners and approximately 55 to 57 percent of the estimated increase in motor vehicles and parts from Korea will be imports diverted from other trading partners.⁷⁴

Ultimately, net employment effects will depend on a number of factors. The previous discussion of specific selected industries suggest that pre-existing employment trends, the change in the relative prices of Korean and U.S. goods as both countries remove tariffs, the possibility of trade diversion from other trading partners, and other policy changes may all play a role.⁷⁵ The effects on employment can move in offsetting directions, so that a prediction of the net impact in very specific industries is not possible.

E. Features in the KORUS that Affect the Adjustment Process

This section discusses features in the KORUS that affect the extent and speed of adjustments that the KORUS may necessitate and others that are available to help ease and facilitate the adjustment process in the United States as well as Korea. These include: (1) the rules of origin provisions of the KORUS, which determine what products can benefit from the preferential tariff treatment of the KORUS; (2) the gradual phase-out of U.S. tariffs on automobiles and parts and sensitive agricultural goods originating from Korea; and (3) mechanisms to address injurious increases, if they occur, in imports from Korea.

⁷⁴ See USTIC (2007), p. 2-12.

⁷⁵ A selection of other industries would likely reveal other factors, such as the proportion of domestic consumption accounted for by imported goods, price responsiveness, and the labor-content of production.

1. Rules of Origin Provisions

The KORUS's rules of origin are designed to ensure that the benefits of free trade accrue to Korea and the United States by ensuring that the products benefiting from preferential treatment under the KORUS originate from Korea or the United States and by preventing products from other countries from receiving preferential treatment under the KORUS. The KORUS contains strict rules of origin, including requirements that specify that items from outside the region must undergo substantial transformation within the United States or Korea to be eligible for benefits under the KORUS. Operationally, this means a change in HTS classification—either a change from one subheading (6-digit HTS) to another within or outside the group, a new heading (4-digit HTS), or a new chapter (2-digit HTS), and, for some items, meeting a specific regional content rule.

Textile and apparel goods produced or assembled by a Party generally must meet a “yarn forward” rule (i.e., be produced from yarns that originated in either Party) in order to be eligible for preferential treatment under the KORUS.

The KORUS contains a *de minimis* provision for material that is not originating. Generally, if the value of all non-originating materials used in the production of a good that does not undergo the required change in HTS classification does not exceed 10 percent of the adjusted value of the good, and the good otherwise meets all other applicable criteria, it qualifies as an originating good, although there are some exceptions to this general rule (e.g., 7 percent by weight for textiles).

2. Gradual Phase-in of the KORUS

Table III.4 summarizes the tariff removal phase-in schedule for U.S. import tariffs on goods originating from Korea and the phase-in schedule for Korean tariffs on goods originating in the United States under the KORUS. Prior to the KORUS, 37.5 percent of U.S. tariff lines were MFN duty-free, while only 13.3 percent of Korean tariff lines were MFN duty-free. When the KORUS enters into force, 82.2 percent of U.S. tariff lines and 79.9 percent of Korean tariff lines will be duty-free. Duties on other sensitive goods will be phased out over varying transition periods ranging from two to twenty years. Within five years, 92.7 percent of U.S. tariff lines and 91.8 percent of Korean tariff lines will be duty-free.

3. Safeguards and Other Special Procedures

The KORUS contains safeguard mechanisms, including a general bilateral safeguard, a textile and apparel emergency action safeguard, and an automobile safeguard, that provide additional means of dealing with potential adverse employment effects.

a. General Bilateral Safeguard

If, as a result of the reduction or elimination of a customs duty under the KORUS, an originating good of the other Party is imported into the territory of a Party in such increased quantities as to be a substantial cause or threat of serious injury to a domestic industry producing a like or directly competitive product, the Trade Remedies Chapter of the KORUS (Chapter 10) allows the importing Party to:

- suspend the further reduction of the rate of customs duty provided for that good under the KORUS;
- increase the rate of customs duty on the good to a level not to exceed the lesser of the MFN applied rate of duty on the good in effect at the time the action is taken or the MFN applied rate of duty on the good in effect on the day immediately preceding the date of entry into force of the KORUS; or
- in the case of a customs duty applied to a good on a seasonal basis, increase the rate of duty to a level not to exceed the lesser of the MFN applied rate of duty on the good in effect for the corresponding season immediately preceding the date of application of the safeguard measure, or the MFN applied rate of duty on the good in effect for the corresponding season immediately preceding the date of entry into force of the KORUS.

A safeguard action may be in place for up to two years, and may be extended by up to one year if the competent authorities determine the safeguard measure continues to be necessary. Neither Party may impose a bilateral safeguard measure more than once on the same good. The Party taking the action must provide appropriate trade liberalizing compensation in the form of concessions having substantially equivalent trade effects or equivalent to the value of the additional duties expected to result from the measure. Each Party retains its rights and obligations for global safeguard actions under Article XIX of GATT 1994 and the WTO Agreement on Safeguards.

b. Textile and Apparel Bilateral Emergency Action Safeguard

If, as a result of the reduction or elimination of a duty under the KORUS, a textile or apparel good benefiting from preferential tariff treatment under the KORUS is being imported into the territory of a Party in such increased quantities, in absolute terms or relative to the domestic market for that good, and under such conditions as to cause or threaten serious damage to a domestic industry producing a like or directly competitive good, the importing Party may suspend the further reduction of the duty rate on the good, or increase the rate of duty on the good to a level not to exceed the lesser of the MFN applied rate of duty in effect at the time the action is taken or the MFN applied rate of duty in effect on the date of entry into force of the KORUS, to the extent and for such

time as necessary to prevent or remedy such damage and to facilitate adjustment by the domestic industry.⁷⁶

A bilateral emergency safeguard action may be in place for up to two years, and may be extended by up to two years. No emergency action against a good may be taken or maintained beyond the period ending ten years after duties on that good have been eliminated pursuant to the KORUS. No emergency action may be taken more than once by an importing Party against a particular good of the exporting Party. Upon termination of the emergency action, the rate of duty will be the rate that would have been in effect but for the emergency action. The Party taking the action must provide mutually agreed trade liberalizing compensation in the form of concessions having substantially equivalent trade effects or equivalent to the value of the additional duties expected to result from the emergency action. Such concessions are limited to textile or apparel goods, unless the Parties agree otherwise. Neither Party may take bilateral emergency safeguard action and a safeguard measure under Chapter Ten of the KORUS or a measure under Article XIX of GATT 1994 and the WTO Agreement on Safeguards with respect to the same good at the same time.

c. Motor Vehicle Safeguard

The new agreements include a special auto safeguard that is available for ten years following the full elimination of tariffs for each Korean auto product. A safeguard can be applied for two years, and can be extended for up to two years, with a maximum four year period of duration. The U.S. government is not subject to retaliation if there is no agreement with Korea on reductions or other compensation for up to two years after this special safeguard is applied. This safeguard can be applied more than once to the same product.

d. Alternative Procedures for Disputes Concerning Motor Vehicles

The KORUS contains an expedited dispute settlement process for disputes involving measures that relate to motor vehicles that violate, nullify, or impair a KORUS commitment (Annex 22-A: Alternative Procedures for Disputes Concerning Motor Vehicles). If the panel determines that a Party has failed to comply with its obligations or is causing nullification or impairment, under the KORUS, and is materially affecting the sale, offering for sale, purchase, transportation, distribution, or use of motor vehicles originating in the other Party, the complaining Party may suspend its tariff concessions on passenger cars and assess duties at a level not to exceed the prevailing MFN rate.

⁷⁶ Article 4.1 of the KORUS: Bilateral Emergency Actions.

IV. The Labor Chapter of the KORUS

The Labor Chapter of the KORUS⁷⁷ contains provisions that support protection of labor rights and enforcement of labor laws, thereby helping to preserve a level playing field for American workers. It satisfies the relevant provisions of the Trade Act of 2002 and reflects the May 10, 2007, Congressional-Executive Agreement on Trade.

Article 19.1 of the Chapter reaffirms the Parties' obligations as members of the International Labor Organization (ILO). Article 19.2.1 commits each Party to "adopt and maintain in its statutes and regulations, and practices thereunder," fundamental labor rights as stated in the 1998 ILO Declaration on Fundamental Principles and Rights at Work,⁷⁸ and includes a prohibition on the worst forms of child labor.⁷⁹ Article 19.2.2 further provides that "neither Party shall waive or otherwise derogate from, or offer to waive or otherwise derogate from, its statutes or regulations implementing" the obligation in Article 19.2.1 "in a manner affecting trade or investment between the Parties." Article 19.3 states that "neither Party shall fail to effectively enforce its labor laws,⁸⁰ including those it adopts or maintains in accordance with Article 19.2.1, through a sustained or recurring course of action or inaction, in a manner affecting trade or investment between the Parties." Article 19.4 obligates each Party to provide procedural guarantees for enforcement of its labor laws, including access to labor tribunals, proceedings that are transparent and comply with due process of law, and remedies to ensure enforcement of labor laws.

All obligations in the Chapter are subject to the same dispute settlement procedures and enforcement mechanisms as commercial obligations in the KORUS. The Chapter also establishes a labor cooperation and capacity building mechanism to improve labor standards and advance common commitments regarding labor matters.

⁷⁷ Full text available from <http://www.ustr.gov/trade-agreements/free-trade-agreements/korus-fta/final-text>.

⁷⁸ The ILO Declaration states that all ILO members have an obligation "to respect, to promote and to realize, in good faith and in accordance with the Constitution, the principles concerning the fundamental rights which are the subject of those Conventions, namely: (a) freedom of association and the effective recognition of the right to collective bargaining; (b) the elimination of all forms of forced or compulsory labour; (c) the effective abolition of child labour; and (d) the elimination of discrimination in respect of employment and occupation." See <http://www.ilo.org/public/english/standards/relm/ilc/ilc86/com-dtxt.htm>.

⁷⁹ Establishing a Party's violation of Article 19.2.1 requires demonstration that the Party "has failed to adopt or maintain a statute, regulation, or practice in a manner affecting trade or investment between the parties [to the agreement]."

⁸⁰ Article 19.8 defines "labor laws" for the purposes of the Agreement as "a Party's statutes and regulations, or provisions thereof, that are directly related to the following internationally recognized labor rights: (a) freedom of association; (b) the effective recognition of the right to collective bargaining; (c) the elimination of all forms of forced or compulsory labor; (d) the effective abolition of child labor, a prohibition on the worst forms of child labor, and other labor protections for children and minors; (e) the elimination of discrimination in respect of employment and occupation; and (f) acceptable conditions of work with respect to minimum wages, hours of work, and occupational safety and health."

Tables

Table III.1: U.S. Exports to Korea by NAICS-based Sector and Subsector, 2006-2010

NAICS-based U.S. Export Sector and Subsector	Value of U.S. Exports to Korea (millions of dollars)					Percent of	
	2006	2007	2008	2009	2010	Total U.S. Sector Exports in 2010	All U.S. Exports to Korea in 2010
Total U.S. Exports to Korea	30,793.9	33,011.6	33,074.3	27,073.9	36,836.5	3.3	100.0
11—Agriculture and Livestock Products	2,087.8	2,430.7	3,952.0	2,657.3	3,338.1	5.1	9.1
111—Agricultural Products.....	1,521.4	1,89.0	3,475.2	2,194.4	2,838.9	4.9	7.7
112—Livestock and Livestock Products.....	51.8	49.3	39.4	36.9	51.9	3.4	0.1
113—Forestry Products.....	117.8	152.1	180.7	175.7	174.6	8.1	0.5
114—Fish, Fresh, Chilled, or Frozen and Other Marine Products.....	396.8	340.3	256.7	250.2	272.6	6.8	0.7
21—Oil, Gas, Minerals and Ores	317.5	521.0	516.9	599.2	982.9	3.8	2.7
211—Oil and Gas.....	16.9	28.0	24.2	12.6	59.1	0.7	0.2
212—Minerals and Ores.....	300.6	493.0	492.6	586.6	923.8	5.4	2.5
31-33—Manufacturing	26,819.2	27,827.7	25,744.2	21,650.2	29,691.7	3.1	80.6
311—Food Manufacturing.....	1,220.6	1,503.1	1,960.1	1,599.9	2,274.8	4.5	6.2
312—Beverages and Tobacco Products.....	39.0	65.0	83.2	88.8	133.7	2.5	0.4
313—Textiles and Fabrics.....	50.7	49.9	53.0	52.7	93.0	1.2	0.3
314—Textile Mill Products.....	31.3	39.3	38.9	34.1	44.5	1.7	0.1
315—Apparel and Accessories.....	54.7	75.4	79.6	78.4	102.0	3.3	0.3
316—Leather and Allied Products.....	104.6	115.6	98.1	77.0	114.7	4.8	0.3
321—Wood Products.....	55.5	46.2	58.4	33.8	45.6	0.9	0.1
322—Paper.....	401.3	450.7	453.0	432.0	536.9	2.4	1.5
323—Printing, Publishing and Similar Products.....	65.5	92.1	82.7	74.7	78.3	1.3	0.2
324—Petroleum and Coal Products.....	633.7	629.4	803.5	778.8	716.7	1.2	1.9
325—Chemicals.....	4,282.9	5,070.6	4,676.9	4,255.5	5,858.7	3.4	15.9
326—Plastics and Rubber Products.....	226.8	249.3	272.6	215.7	307.0	1.3	0.8
327—Nonmetallic Mineral Products.....	246.6	224.9	249.2	231.1	328.2	3.6	0.9
331—Primary Metal Manufacturing.....	548.7	681.8	907.1	702.3	918.9	1.9	2.5
332—Fabricated Metal Products.....	646.7	835.6	829.8	767.5	1,366.5	4.2	3.7
333—Machinery, Except Electrical.....	4,851.6	4,713.4	4,122.5	3,765.0	6,155.1	4.9	16.7
334—Computer and Electronic Products.....	7,313.8	6,827.5	5,718.6	4,551.5	5,473.7	4.5	14.9
335—Electrical Equipment, Appliances, and Components.....	824.6	859.3	988.0	733.3	824.6	2.6	2.2
336—Transportation Equipment.....	4,600.8	4,609.7	3,557.1	2,518.2	3,505.9	2.0	9.5
337—Furniture and Fixtures.....	34.0	31.3	26.2	16.6	26.1	0.7	0.1
339—Miscellaneous Manufactured Commodities.....	585.8	657.9	648.6	643.2	786.8	2.0	2.1
51—Information	46.1	31.7	15.3	15.5	15.8	1.8	(¹)
511—Publishing Industries (except Internet).....	46.1	31.7	15.3	15.5	15.8	1.8	(¹)
91-99—Special Classification Provisions	1,523.2	2,200.6	2,846.0	2,151.8	2,807.9	3.6	7.6
91—Waste and Scrap.....	787.5	1,371.6	1,992.4	1,377.4	1,618.8	5.5	4.4
92—Used or Second-hand Merchandise.....	190.2	224.9	213.6	145.9	129.3	2.7	0.4
99—Special Classification Provisions, not otherwise specified or included.....	545.5	604.2	639.9	628.5	1,059.8	2.4	2.9

(¹) Less than 0.05 percent.

Note: The NAICS-based industry structure presented in this table is based on the HTS-to-NAICS concordance developed by the U.S. Census Bureau, as extracted from the USITC Dataweb. The NAICS-based manufacturing sector includes many processed agricultural products that are often considered agricultural products. Under alternative aggregation schemes, including the WTO's definition of agricultural products, many of the products classified in NAICS-based subsectors 311 (Food Manufacturing) and 312 (Beverages and Tobacco Products), would be considered agricultural products. The value of U.S. exports is the free alongside ship (FAS) value of domestic U.S. merchandise exports at the U.S. port of export. Because of rounding, figures may not add to totals shown.

Source: USDOL tabulations of tariff and trade data from the U.S. Department of Commerce and the U.S. International Trade Commission.

Table III.2: U.S. Imports from Korea by NAICS-based Sector and Subsector, 2006-2010

NAICS-based U.S. Import Sector and Subsector	Value of U.S. Imports from Korea (millions of dollars)					Percent of	
	2006	2007	2008	2009	2010	Total U.S. Sector Imports in 2010	All U.S. Imports from Korea in 2010
Total U.S. Imports from Korea	44,713.9	45,368.3	46,687.4	38,769.5	47,913.6	2.5	100.0
11—Agriculture and Livestock Products	81.8	89.7	102.2	107.1	117.1	0.3	0.2
111—Agricultural Products.....	30.8	34.4	33.7	35.6	38.6	0.2	0.1
112—Livestock and Livestock Products.....	7.9	9.9	10.3	11.8	12.5	0.3	(¹)
113—Forestry Products.....	1.1	1.6	1.9	0.9	0.6	(¹)	(¹)
114—Fish, Fresh, Chilled, or Frozen and Other Marine Products.....	42.0	43.8	56.3	58.8	65.3	0.6	0.1
21—Oil, Gas, Minerals and Ores	3.4	4.4	6.8	8.7	12.7	(¹)	(¹)
211—Oil and Gas.....	2.7	3.4	5.4	7.7	10.3	(¹)	(¹)
212—Minerals and Ores.....	0.7	1.0	1.4	1.0	2.4	(¹)	(¹)
31-33—Manufacturing	43,658.8	44,170.4	45,176.2	37,616.6	46,479.6	3.0	97.0
311—Food Manufacturing.....	185.5	192.5	201.7	199.9	240.7	0.6	0.5
312—Beverages and Tobacco Products.....	66.7	68.3	73.4	75.6	80.3	0.5	0.2
313—Textiles and Fabrics.....	603.1	601.5	528.7	433.0	515.1	7.9	1.1
314—Textile Mill Products.....	241.9	180.4	167.2	158.9	170.8	1.1	0.4
315—Apparel and Accessories.....	940.9	643.7	518.7	290.3	270.5	0.4	0.6
316—Leather and Allied Products.....	50.2	49.9	44.3	33.1	37.6	0.1	0.1
321—Wood Products.....	7.2	5.9	5.7	4.3	4.1	(¹)	(¹)
322—Paper.....	520.6	498.2	471.1	339.2	454.6	2.2	0.9
323—Printing, Publishing and Similar Products.....	136.3	118.7	116.7	98.4	115.8	2.2	0.2
324—Petroleum and Coal Products.....	2,315.1	2,803.4	2,199.2	1,347.8	2,143.0	2.1	4.5
325—Chemicals.....	1,278.7	1,356.1	1,542.7	1,241.7	1,553.1	0.9	3.2
326—Plastics and Rubber Products.....	1,451.5	1,417.6	1,458.8	1,238.7	1,978.5	5.7	4.1
327—Nonmetallic Mineral Products.....	297.6	299.3	209.3	153.3	208.1	1.3	0.4
331—Primary Metal Manufacturing.....	2,283.1	1,882.1	2,702.2	1,319.5	2,123.2	2.7	4.4
332—Fabricated Metal Products.....	1,134.9	1,390.9	1,528.6	1,365.6	1,496.5	3.2	3.1
333—Machinery, Except Electrical.....	2,932.4	3,356.9	3,530.3	2,682.9	3,119.4	2.9	6.5
334—Computer and Electronic Products.....	13,931.0	14,431.5	16,180.6	14,992.9	17,308.9	5.2	36.1
335—Electrical Equipment, Appliances, and Components.....	2,345.5	2,491.6	2,652.3	2,602.5	3,303.0	4.9	6.9
336—Transportation Equipment.....	12,166.0	11,676.7	10,405.3	8,514.7	10,709.0	4.5	22.4
337—Furniture and Fixtures.....	80.8	84.2	65.5	68.5	85.3	0.3	0.2
339—Miscellaneous Manufactured Commodities.....	689.8	620.9	574.0	455.8	561.9	0.6	1.2
51—Information	1.4	0.5	0.5	0.3	0.1	0.4	(¹)
511—Publishing Industries (except Internet).....	1.4	0.5	0.5	0.3	0.1	0.4	(¹)
91-99—Special Classification Provisions	968.5	1,103.63	1,401.7	1,036.8	1,304.0	1.8	2.7
91—Waste and Scrap.....	34.5	20.3	69.5	12.0	40.7	0.8	0.1
92—Used or Second-hand Merchandise.....	29.6	85.8	61.5	19.2	23.5	0.4	(¹)
98—U.S. Goods Returned and Reimported Items.....	655.0	667.8	807.2	587.1	658.9	1.6	1.4
99—Special Classification Provisions, not otherwise specified or included.....	249.3	329.5	463.5	418.6	580.9	3.0	1.2

(¹) Less than 0.05 percent.

Note: The NAICS-based industry structure presented in this table is based on the HTS-to-NAICS concordance developed by the U.S. Census Bureau, as extracted from the USITC Dataweb. The NAICS-based manufacturing sector includes many processed agricultural products that are often considered agricultural products. Under alternative aggregation schemes, including the WTO's definition of agricultural products, many of the products classified in NAICS-based subsectors 311 (Food Manufacturing) and 312 (Beverages and Tobacco Products), would be considered agricultural products. The value of U.S. imports is the customs value (the appraised value of the merchandise, exclusive of import duties, freight, insurance, and other charges incurred in placing the merchandise alongside the carrier at the port of exportation) of U.S. merchandise imports for consumption (the amount that immediately enters U.S. consumption channels, but not bonded warehouses or Foreign Trade Zones). Because of rounding, figures may not add to totals shown.

Source: USDOL tabulations of tariff and trade data from the U.S. Department of Commerce and the U.S. International Trade Commission.

Table III.3: Customs Value, Dutiable Value, Calculated Duties, and Average Rate of Duty on U.S. Imports from Korea by NAICS-based Subsector, 2010
(sorted by 2010 value of Calculated Duties)

NAICS-based U.S. Import Subsector	Customs Value	Dutiable Value	Calculated Duties	Average Rate of Duty
	(millions of dollars)			percent
336—Transportation Equipment.....	10,709.0	9,708.5	243.2	2.5
326—Plastics and Rubber Products.....	1,978.5	1,896.4	78.8	4.2
325—Chemicals.....	1,553.1	997.3	56.0	5.6
335—Electrical Equipment, Appliances, and Components.....	3,303.0	2,231.0	46.6	2.1
313—Textiles and Fabrics.....	515.1	430.4	41.4	9.6
315—Apparel and Accessories.....	270.5	270.2	40.8	15.1
333—Machinery, Except Electrical.....	3,119.4	1,239.0	39.9	3.2
332—Fabricated Metal Products.....	1,496.5	845.4	32.9	3.9
334—Computer and Electronic Products.....	17,308.9	666.3	17.6	2.6
311—Food Manufacturing.....	240.7	177.6	12.7	7.1
339—Miscellaneous Manufactured Commodities.....	561.9	239.2	11.9	5.0
324—Petroleum and Coal Products.....	2,143.0	1,556.0	10.2	0.7
314—Textile Mill Products.....	170.8	132.9	8.5	6.4
331—Primary Metal Manufacturing.....	2,123.2	260.7	6.5	2.5
327—Nonmetallic Mineral Products.....	208.1	76.0	5.4	7.1
All Other Subsectors.....	2,211.7	570.2	9.5	1.7
Total.....	47,913.8	21,297.0	661.8	3.1

Note: These values are based on U.S. merchandise imports for consumption (the amount that immediately enters U.S. consumption channels, but not bonded warehouses or Foreign Trade Zones). The customs value of U.S. merchandise imports is the appraised value of the merchandise, exclusive of import duties, freight, insurance, and other charges incurred in placing the merchandise alongside the carrier at the port of exportation. The dutiable value represents the customs value of the foreign merchandise imported into the United States that is subject to duty. The calculated duty represents the estimated import duties collected. Estimated duties are calculated based on the applicable rates of duty as shown in the Harmonized Tariff Schedule of the United States Annotated for Statistical Reporting Purposes. Estimates of calculated duty do not necessarily reflect amounts of duty paid. The average rate of duty is the ratio of calculated duties over dutiable value, expressed in percentage terms. Because of rounding, figures may not add to totals shown.
Source: USDOL tabulations of tariff and trade data from the U.S. Department of Commerce and the U.S. International Trade Commission.

Table III.4: Summary of Tariff Staging Commitments

Staging Category	U.S. Commitments		Korean Commitments	
	Number of Lines	Percent	Number of Lines	Percent
Already MFN Duty-Free	3990	37.5%	1498	13.3%
Immediately Duty-Free	4756	44.7%	7514	66.6%
2-year linear	10	0.1%	6	0.1%
3-year linear	356	3.3%	760	6.7%
5-year linear and non-linear	756	7.1%	571	5.1%
6-year linear	1	0.0%	2	0.0%
7-year linear	91	0.9%	41	0.4%
10-year linear and non-linear	560	5.3%	655	5.8%
12-year linear and non-linear	17	0.2%	35	0.3%
15-year linear	65	0.6%	100	0.9%
No change in treatment	0	0.0%	16	0.1%
Other ¹	44	0.4%	81	0.7%
Total	10646	100.0%	11279	100.0%

¹ Other includes a variety of staging categories, including: 9-year linear, duty-free in year 10, 16-year non-linear, 18-year linear, 20-year linear, seasonal, free without bond, and tariff-rate quotas.

Source: USDOL tabulations of USITC data with updates reflecting changes in tariff staging commitments resulting from the new agreements signed on February 10, 2011, provided by USTR. See Table 1.4 in *U.S. – Korea Free Trade Agreement: Potential Economy-wide and Selected Sectoral Effects*. Investigation No.TA-2104-24. September 2007. Corrected printing released March 2010.