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What is Behind the U.S.-Japanese Trade Imbalance?

**Just the Facts on the Commodity Composition of U.S.-Japanese
Trade**

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This paper addresses the question, *what is the commodity composition of U.S. imports and exports to Japan and which types of goods have a significant impact on the U.S.-Japanese trade balance*. This paper presents an empirical analysis of the composition of trade. Results from this paper are used to motivate an empirical analysis of the commodity composition's effect on the trade balance between the United States and Japan from 1978 through 1996 in Clements and Breuer [1997]. Data analyses of the commodity composition of trade are sparse at best and, in most instances, trade studies report statistics on only highly aggregated data such as Leamer [1984]. This paper's contribution is to uncover the behavior of the disaggregated trade data that may contribute to the time-series patterns of more aggregated data.

To date, there has been little work that links the commodity composition of exports and imports to the behavior of the trade balance. While there has been work, beginning with Orcutt [1950], that examines how responsive exports and imports at a disaggregated level are to the exchange rate and other variables, these studies do not aggregate up the results to explain the trade balance. However, it seems reasonable to assert that the aggregate trade balance's responsiveness to macroeconomic variables like the exchange rate, relative prices, etc. depends on the commodity composition of exports and imports. Shifts in the commodity composition of exports and imports may explain why for some sample periods, the trade balance is responsive to exchange rate changes, and in others is not. For an extreme example, suppose that a country's exports were entirely automobiles and that its imports were entirely computers. Further, assume that automobiles and computers, because they are a necessity, are not responsive to exchange rate changes. Thus, when the exchange rate changes, there may be little change in the volume of trade but a change in the value of

trade. The change in the value of the trade balance would depend on how much the exchange rate changed despite no change in exports or imports.

The following *section 1.1* describes the data set. *Section 1.2* provides an analysis of the data and the *section 1.3* draws conclusions concerning the commodity composition of U.S.-Japan trade.

1.1 DATA DESCRIPTION

The United States and Japanese trade data base was constructed by the Bureau of Census Foreign Trade Division and is disaggregated to the three-digit ("subgroup") level of *Revision 3* of the *Standard International Trade Classification Code* (SITC) Index.¹ It contains monthly observations of export and import value data for the period 1978 to November 1996 (reported in nominal dollar values). There are 10 one-digit sections, 67 two-digit divisions, and 275 three-digit level export and 281 import categories. Table 1-1 shows the broad categories of commodities reported by the Bureau of Census at the one, two, and three-digit level of the SITC codes.

¹ I acknowledge support from the College of Business Administration's Small Grants Fund at the University of South Carolina.

Table 1-1 Descriptive Statistics

SITC CODES FOR U.S. EXPORTS AND IMPORTS			
One-Digit SITC Code Section Description	Two-Digit Divisions	Three-Digit Subgroups Exports	Three-Digit Subgroups Imports
Section 0: Food and Live Animals	10	38	37
Section 1: Beverages and Tobacco	2	4	4
Section 2: Crude Materials, Inedible, Except Fuels	9	37	37
Section 3: Mineral Fuels, Lubricants and Related Materials	4	13	11
Section 4: Animal and Vegetable Oils, Fats, and Waxes	3	6	7
Section 5: Chemicals and Related Products	9	32	35
Section 6: Manufactured Goods Classified Chiefly by Material	9	55	55
Section 7: Machinery and Transport Equipment	9	51	57
Section 8: Miscellaneous Manufactured Articles	8	33	33
Section 9: Commodities and Transactions Not Classified Elsewhere in SITC	4	8	8

Source: Standard International Trade Classification, *Revision 3*

1.1a. Irregularities in Data Set

There are several classification changes involving the U.S. export and import data to Japan which must be noted. In 1987, the U.S. government adopted a major revision to SITC codes, known as *Revision 3*. This revision realigned some three-digit products groups within the two-digit product sections. In certain cases, the three-digit category label has changed slightly in wording although the actual code number has not been altered. For most cases the changes solely reflect syntax decisions. In all cases, I used the most recent subgroup label *Revision 3* to define the category.

Section 9, Commodities and transactions not classified elsewhere in SITC are not considered in this study. The 900s category includes items such as 931 special

transactions and commodities not classified by kind, 961 gold, non-monetary (excluding ores and concentrates), and 984 estimate of low valued import transactions. A full listing of section 9 is included in *Appendix A* at the end of this paper.

1.1b. Episodes of Analysis

In the remainder of this paper, there will be an overview of each of the one-digit categories which will be followed by a complete examination at the more finely disaggregated two and three-digit level of detail. In this paper, the 1978-1996 time period is broken into four distinct episodes around which the study of export and import data is organized. The episodes are based on the average changes in the yen-dollar exchange rate for periods defined by well-known historical economic events that may have a bearing on trade flows. The net change in the value of the dollar since 1978 has been small but peaks and troughs have been quite pronounced (the average yen per dollar exchange rate from 1978 to 1996 was 157.74). The four distinct episodes or eras of exchange rate activity I will examine are: (1) the pre-U.S. dollar appreciation era, 1978 to 1980, (2) the U.S. dollar appreciation era, 1981 to 1985, (3) the dollar depreciation and exchange rate management era, 1986 to 1991, and (4) the Robert E. Rubin era, 1992 to 1996.² Table 1-2 shows the yen per U.S. dollar average exchange rates for these periods. Of course, during these episodes, there are other economic

² Robert E. Rubin, U.S. Treasury Secretary, has been the most influential cabinet member in the Clinton regime on the value of the dollar. His strong-dollar campaign has been so successful that he now is having trouble capping the dollar's rise. In a speech in Tokyo on April 4, 1997, Rubin accused the Japanese of allowing the yen to slide downward propelling Japanese exports upwards. He stated that, "I don't believe a nation's currency should be used as an instrument of trade policy." After this address, the dollar escalated 4 percent, to approximately 127 yen. If the strong dollar endures, the Japanese trade surplus will continue causing U.S.-Japanese trade tension within the backdrop of a weakening U.S. economy. Rubin needs to engineer a gradual decline in the value of the dollar, because an abrupt weakening will increase

changes taking place (such as trade policy, recessions, etc.) that do not necessarily correspond to the breakdown of the episodes that I organized my study around.

Table 1-2 Yen Per U.S. Dollar Average Exchange Rates

Year	Average ¥/\$ Exchange Rate
1978	210.44
1979	219.14
1980	226.74
1981	220.54
1982	249.08
1983	237.51
1984	237.52
1985	238.54
1986	168.52
1987	144.64
1988	128.15
1989	137.96
1990	144.79
1991	134.71
1992	126.65
1993	111.20
1994	102.21
1995	94.06
1996	108.79

Source: International Financial Statistics, IMF, various issues

As a starting point, in the late 1970s, the international value of the U.S. dollar tumbled downward until a combined, concerted effort by central banks to purchase U.S. dollars arrested the fall. The dollar then stabilized for nearly two years. This is the era from 1978 to 1980 when the yen-dollar exchange rate average was ¥218.77. As a response to the second oil shock, the increase in oil prices and fears about oil availability

U.S. prices of imports and increase inflationary pressure on the U.S. economy.

resulted in substantial depreciation of the yen against the dollar (although to a greater extent in 1979 than in 1973).

The international value of the dollar soared in the first half of the 1980s. The U.S. experience mirrored economic theory as this massive period of appreciation strengthened U.S. imports, stifled U.S. exports, and acted as a drag on aggregate demand. Several American sectors were hurt by this terms-of-trade effect (namely, agriculture, textiles, steel, and automobiles) resulting in an increased wave of protectionism.

Unable to ignore the link between the strong dollar and rising protectionism, economic officials fearing a catastrophe in the international trading system met to jointly intervene in the foreign-exchange market thus beginning the era of exchange rate management. The Plaza Accord in September 1985 exemplified a new attitude toward cooperation among the major industrial nations on exchange rates aimed at bringing the dollar down through both moral suasion and some adjustment of monetary policy.

From 1986 to 1991, the dollar underwent an era of depreciation brought about by the international cooperative agreements to devalue the dollar, the aforementioned Plaza Accord and the Louvre Accord, which in February 1987 renewed the cooperative effort to stabilize the exchange rate. The yen approximately doubled in value against the dollar over the first half of this era. This represented a major appreciation in value over a relatively brief period and one that proved to be a rather permanent shift. Some of the shift reflects varying rates of inflation between the two countries, which during the 1980s was higher in the U.S. than in Japan. The period of 1990-1991 was a time of momentous change for the Japanese economy as Japan entered into a recession in 1991 (which lasted until 1993). During the early 1990s, the Gulf War failed to cause a decline in the yen, providing a fundamentally different response than the one provoked by the oil

crises of the 1970s and demonstrated the increased confidence and resilience to potential disruptions of the supply of imported raw materials. In sharp contrast, the yen actually appreciated substantially against the dollar in 1990, at least until November, and remained rather stable thereafter.

From 1992 to 1996, a strong U.S. economy and a relatively weak Japanese economy had driven the dollar up against the yen. In 1991, Japan experienced its first year of negative output growth since the mid-1970s. The strong U.S. state was drawing imports from Japan, which only accomplished to widen the U.S. trade deficit with Japan even further. In the past a volatile yen has produced serious problems for both Japan and the world economy. If Japan undertakes a competitive yen depreciation in 1997, the result could be a huge surge in Japan's trade surplus in 1997 and especially in 1998. In February 1997, Japan's trade surplus with the U.S. rose 12 percent, to \$3.2 billion, its fifth straight month of increase. Since 1996, a new exchange rate era has unfolded as Japan has faced the rising yen and the Asian crisis.

1.2 DATA ANALYSIS OF THE COMPOSITION OF U.S.-JAPAN TRADE

The objective of this analysis is to provide a detailed breakdown of the contributions of individual product groups to U.S.-Japan trade that will further an understanding of the determinants of the trade imbalance between the two countries. This paper assesses in detail the trade performance of nine product sections at the two-digit level and is extended to the three-digit level in key products, which have had a significant impact on the U.S.-Japan trade balance.

Table 1-3 below shows the overall U.S.-Japan trade balance and the U.S.-Japanese trade balance at the one-digit level of detail over the episodes of examination.

Table 1-3 U.S.-Japan Trade Balance by One-Digit Section (in billions of dollars)

U.S.-JAPAN TRADE BALANCE				
One-Digit SITC	1978-1980	1981-1985	1986-1991	1992-1996
Section 0: Food and Live Animals	\$6.17	\$5.26	\$6.30	\$7.84
Section 1: Beverages and Tobacco	0.41	0.51	1.22	1.78
Section 2: Crude Materials, Inedible, Except Fuels	8.20	5.40	5.70	5.40
Section 3: Mineral Fuels, Lubricants and Related Materials	2.10	2.70	1.30	0.82
Section 4: Animal and Vegetable Oils, Fats, and Waxes	0.13	0.09	0.04	0.07
Section 5: Chemicals and Related Products	1.30	2.10	1.50	0.89
Section 6: Manufactured Goods Classified Chiefly by Material	-7.80	-7.10	-4.40	-3.20
Section 7: Machinery and Transport Equipment	-26.73	-39.10	-62.77	-61.83
Section 8: Miscellaneous Manufactured Articles	-2.70	-3.70	-4.40	-3.50
Overall U.S.-Japan Trade Balance	-18.92	-33.84	-55.51	-51.73

The United States trade balance with Japan has been in a deficit over the 1978-1996 sample period. Sections 0, 1, 2, 3, 4, and 5 remained net surplus contributors to the trade balance and sections 6, 7, and 8 remained net deficit contributors throughout the sample period.

Table 1-4 presents the one-digit sections of U.S. exports and imports as a percentage of total exports to and imports from Japan over the episodes of analysis.

Table 1-4 U.S.-Japan Exports and Imports by One-Digit Section (expressed as a percent of total U.S. exports/imports)

U.S.-JAPAN EXPORTS AND IMPORTS BY ONE-DIGIT SECTION								
One-Digit SITC	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
Section 0: Food and Live Animals	21.63	0.93	19.83	0.71	16.38	0.38	16.99	0.27
Section 1: Beverages and Tobacco	1.66	0.03	1.88	0.04	2.99	0.05	3.68	0.04
Section 2: Crude Materials, Inedible, Except Fuels	25.19	0.23	17.48	0.17	14.29	0.19	9.36	0.16
Section 3: Mineral Fuels, Lubricants and Related Materials	7.27	0.21	9.44	0.08	3.37	0.19	1.11	0.17
Section 4: Animal and Vegetable Oils, Fats, and Waxes	0.48	0.02	0.33	0.01	0.28	0.03	0.17	0.01
Section 5: Chemicals and Related Products	9.39	2.14	11.87	2.13	12.57	2.46	9.64	3.29
Section 6: Manufactured Goods Classified Chiefly by Material	4.66	19.71	4.92	14.71	6.01	8.05	4.98	6.47
Section 7: Machinery and Transport Equipment	17.64	66.05	22.11	74.21	27.31	80.85	32.87	78.22
Section 8: Miscellaneous Manufactured Articles	6.60	8.31	6.72	7.50	10.80	7.78	12.65	8.08

It is particularly evident that the majority of U.S. imports from Japan is and has been section 7 goods -- machinery and transport equipment. From 1978-1996, machinery and transport equipment alone comprised on average 74.8 percent of total U.S. imports from Japan and only 25 percent of total U.S. exports to Japan which makes the section the largest contributor to the U.S. trade deficit with Japan. Generally, trade appears to be growing more rapidly in higher-technology products and highly processed items included in sections 6, 7, and 8. Also, it is apparent that the U.S. has experienced a significant decline in the exportation of section 0 commodities to Japan as well as crude materials and mineral fuels, sections 2 and 3.

Tables 1-5 and 1-6 below show the SITC three-digit commodities, which make up the top 50 percent of all U.S. exports to and imports from Japan in each year from 1978 through 1996. These tables motivate the selection of the individual product groups analyzed at the three-digit level of detail later in this paper by demonstrating the overall significance of the individual product groups performance relative to total U.S. exports to and imports from Japan.

Table 1-5 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to Japan

Year	# of SITC codes totaling 50% of exports	SITC Codes
1978	14	222 247 044 322 792 041 263 011 000 211 874 282 045 121
1979	15	247 044 222 322 792 041 263 874 011 211 282 752 541 248 045
1980	14	044 322 247 222 792 041 684 263 045 288 874 011 752 246
1981	15	044 322 792 222 247 041 263 011 874 541 045 684 752 759 524
1982	15	322 044 222 792 247 041 011 263 541 334 874 524 759 684 752
1983	15	044 792 222 322 247 041 011 334 541 874 263 752 759 524 341
1984	16	044 222 792 322 247 263 524 752 759 874 334 541 011 041 776 728
1985	16	792 044 222 322 752 759 247 334 874 541 524 011 034 041 776 263
1986	22	792 044 222 247 011 752 759 524 541 034 874 322 334 776 041 251 057 714 641 211 764 288
1987	18	792 247 044 759 011 752 222 874 034 541 776 251 524 334 122 322 248 057
1988	19	792 044 752 011 247 759 034 874 222 776 541 251 684 122 322 288 764 248 714
1989	21	792 752 247 044 759 776 874 034 896 684 251 011 222 122 764 525 248 541 321 288 012
1990	19	792 752 247 044 896 759 776 122 034 874 684 011 781 764 222 251 525 248 714
1991	21	792 752 759 776 044 247 122 874 034 684 764 222 011 525 781 251 012 248 714 541 728
1992	19	792 752 759 034 247 776 044 122 874 011 222 781 764 012 525 684 251 248 714
1993	20	792 247 752 776 044 759 034 122 874 011 781 764 222 012 525 248 081 784 898 714
1994	19	792 776 752 781 247 759 122 874 764 044 011 034 222 012 248 525 898 728 784
1995	18	776 781 792 752 764 759 044 874 247 011 122 034 012 728 222 251 641 784
1996	17	776 752 792 781 044 759 764 874 247 122 011 012 034 728 222 784 872

Note: For a full representation of the top 50 percent of SITC codes for each year see *Appendix C* .

Table 1-6 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Imports from Japan

Year	# of SITC codes totaling 50% of imports	SITC Codes
1978	8	781 764 784 674 785 763 762 678
1979	8	781 674 784 764 785 763 678 751
1980	7	781 784 678 764 785 763 674
1981	6	781 678 764 782 763 785
1982	7	781 678 764 763 782 785 751
1983	7	781 763 764 782 751 776 759
1984	8	781 763 764 782 776 752 759 674
1985	7	781 763 764 782 784 759 752
1986	6	781 763 782 764 784 752
1987	7	781 782 764 763 784 759 752
1988	7	781 784 759 764 752 763 776
1989	7	781 752 764 784 776 759 763
1990	7	781 752 784 764 776 759 763
1991	6	781 752 764 784 776 759
1992	6	781 752 784 776 764 759
1993	6	781 752 776 784 764 759
1994	6	781 752 776 784 764 759
1995	6	781 776 752 784 759 764
1996	7	781 776 752 784 759 713 763

Note: For a full representation of the top 50 percent of SITC codes for each year see *Appendix C*.

A comparison of Table 1-5 to Table 1-6 demonstrates that, in almost every case, the number of goods comprising the top 50 percent of U.S. exports to Japan is double that of the number of goods accounting for the top 50 percent of U.S. imports from Japan. Over the 1978-1996 period, no more than 22 of 275 three-digit SITC goods (or 8.0 percent) have accounted for 50 percent of U.S. exports. For U.S. imports from Japan, no more than 8 of 281 three-digit SITC goods (or 2.8 percent) have accounted for 50 percent of U.S. imports. These tables suggest that a relatively small group of

commodities account for a disproportionate amount of trade between the U.S. and Japan. The top percentage share of U.S. imports from Japan is always triple the top percentage share of U.S. exports to Japan. For example, in 1986-1991, the top U.S. import, SITC 781, from Japan held 23.59 percentage of total imports and the top U.S. export, SITC 792, to Japan held 6.31 percent of total exports. The commodities comprising the top five imports always hold a greater percentage share than the commodities comprising the top five exports to Japan. For U.S. exports to Japan, the goods which make up the remainder of the 50 percent of top exports (after the top five) each comprise, on average, between a 1.0 and 3.0 percentage share of total U.S. exports to Japan. For U.S. imports from Japan, the goods, which make up the remainder of the 50 percent of top imports each comprise, on average, between 3.0 and 5.0 percent of total U.S. imports from Japan.

Table 1-5 also shows that the mix of the of top exports profoundly changed in the latter half of the 1980s as the composition of U.S. exports to Japan shifted towards machinery and transportation equipment. By 1991, all except one (maize 044) of the top five contributors to total U.S. exports to Japan was a section 7 commodity. By 1995, all of the top contributors were section 7 goods.

SITC 781, motor cars, holds the top place as a contributor to U.S. imports from Japan since 1978 despite large swings in the value of the dollar in real and nominal terms. Note that by contrast, this product group does not even appear as a contributor to the top 50 percent of U.S. exports to Japan until 1990; from 1990, SITC 781 is one of the top 15 exports to Japan in each of the subsequent years and its percentage of total U.S. exports to Japan has grown substantially over these six years. However, U.S. exports to Japan of SITC 781 are less than one-sixth of U.S. imports of 781 from Japan.

Table 1-6 shows that the composition of imports is concentrated in Section 7 goods and has changed very little from the 1970s until the present. Also apparent from the mid-1980s on is the high degree of intraindustry trade between the United States and Japan in machinery and transport equipment. In fact, section 7 commodities are the only product group in which the U.S. and Japan engage in intraindustry trade where the traded goods are included in both the top 50 percent of imports and the top 50 percent of exports. These commodities include: automatic data process machines and units thereof (SITC 752), parts etc. for office machines and automatic data process machines (SITC 759), telecommunications equipment, n.e.s. and parts, n.e.s. (SITC 764), thermionic, cold cathode, photocathode valves etc. (SITC 776), motor cars and other motor vehicles (SITC 781), and road vehicles, n.e.s. (SITC 784).

The first commodity that is among both the top 50 percent of U.S. exports to Japan and the top 50 percent of U.S. imports from Japan is SITC 759 where in 1983 it captures a slightly larger percentage share of total U.S. imports from Japan than of total U.S. exports to Japan. This begins a rather permanent pattern in intraindustry trade in section 7 goods between the U.S. and Japan where the percentage of total U.S. imports from Japan generally outranks the percentage share of total U.S. exports to Japan in section 7 commodities where two-way trade exists. From 1985, SITC 752 and SITC 759 are both among the top 50 percent U.S. exports and imports to and from Japan in each of the subsequent years (except 1986 where SITC 759 is not among the top 50 percent of U.S. imports from Japan). U.S.-Japan intraindustry trade of SITC 776 begins in 1984 and continues in every year from 1988 to 1996 where the importance of SITC 776 grows steadily becoming both a top 5 U.S. export and import to and from Japan from 1993-1996, and also, in 1995 and 1996 it was the top U.S. export to Japan and the second highest U.S. import from Japan. From 1986-1995, SITC 764 is among both the top 50

percent of U.S. exports and imports to and from Japan consistently capturing much larger shares of total imports from Japan than total exports. Intraindustry trade of SITC 781 was engaged in by the U.S. and Japan from 1990-1996 and two-way trade of SITC 784 occurred from 1993-1996 with U.S. imports from Japan far outweighing U.S. exports to Japan in both of these categories.

1.2a. Food and Live Animals (Section 0)

Japan is the largest export market for U.S. agricultural products, approximately 20 percent of all U.S. agricultural exports go to Japan. Japan has been the largest single-country market for U.S. agricultural products for the last two decades. Table 1-7 below shows section 0's exports and imports at the one and two-digit level of detail over the episodes of examination as well as the section 0 trade balance. As for U.S. imports of food and live animals from Japan, they are minimal consisting primarily of types of fish (division 03). Table 1-7 shows that U.S. imports of food and live animals has declined throughout the sample.

Table 1-7 U.S.-Japan Exports and Imports Section 0 (expressed as a percent of total U.S. exports/imports)

SECTION 0 FOOD AND LIVE ANIMALS								
Two-Digit Divisions	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
Divisions 00: Live Animals	0.14	0.00	0.07	0.00	0.12	0.00	0.12	0.00
Division 01: Meat and Meat Preparations	2.19	0.01	2.49	0.00	3.38	0.01	4.36	0.00
Division 02: Dairy Products and Birds' Eggs	0.10	0.00	0.08	0.00	0.10	0.00	0.17	0.00
Division 03: Fish (not marine mammals)	3.20	0.70	2.72	0.47	3.77	0.21	3.55	0.13
Division 04: Cereals and Cereal Preparations	12.40	0.02	11.32	0.03	5.42	0.03	4.81	0.03
Division 05: Vegetables and Fruit	2.02	0.12	1.99	0.08	2.30	0.04	2.44	0.04
Division 06: Sugars, Sugar Preparations, and Honey	0.07	0.01	0.05	0.01	0.06	0.01	0.09	0.01
Division 07: Coffee, Tea, Cocoa, Spices	0.22	0.01	0.13	0.01	0.16	0.00	0.11	0.00
Division 08: Feeding Stuff for Animals	1.04	0.00	0.72	0.00	0.84	0.00	1.06	0.01
Division 09: Miscellaneous Edible Products	0.24	0.06	0.26	0.11	0.23	0.08	0.28	0.05
Section 0: One-Digit	21.62	0.93	19.83	0.71	16.38	0.38	16.99	0.27
Section 0: Trade Balance	\$6.17		\$5.26		\$6.30		\$7.84	

The United States exports and imports of food and live animals to and from Japan have the highest average trade balance surplus of all one-digit surplus categories from 1978 to 1996. The relative percentage of exports to and imports from Japan of food and live animals maybe a reflection of the geographical differences between the two countries.

As a whole the cereals and cereal preparation division played a substantial role in exports but have declined over the entire sample. Imports of bulk raw commodities (wheat, corn, and barley, particularly) leveled off and declined in the latter half of the

1980s, while Japanese imports of high-value section 0 products (such as meats, division 01) have increased substantially. The food and live animals decline is also due in part to the relatively high agricultural tariffs, which remain on several imports of intermediate and consumer-oriented food products.³

The most prominently exported good in the food and live animals category is SITC code 044 maize (not including sweet corn), unmilled which is included in division 04, cereals and cereal preparations, whose other products include wheat, rice, barley, cereals, meal and flour of wheat and meslin, cereal meals and flours, n.e.s., and cereal preparations and preparations of flour or starch of fruits or vegetables. Maize is consistently among the top five exported goods of all sections from 1978 to the early 1990s capturing the top spot in 1980, 1981, 1983 and 1984 as Table 1-5 shows. From 1992-1996, corn drops to less than half its percentage share of the 1978-1980 and 1981-1985 periods. Wheat (SITC 041) also endures a substantial decline falling to one-third of its late 1970s and early 1980s levels in 1992-1996.

1.2b. Beverages and Tobacco (Section 1)

Table 1-8 shows that U.S. exports of beverages and tobacco to Japan have risen throughout the sample. The table also shows that beverages and tobacco sustain a trade balance surplus in every year in the sample, and that the value of U.S. exports to Japan has been gradually increasing throughout the 1980s. Thus, the surplus trade balance of beverages and tobacco in 1992-1996 was more than quadruple its 1978-1980 value.

³ The Uruguay Round reductions will not be fully implemented until 2000.

Table 1-8 U.S.-Japan Exports and Imports Section 1 (expressed as a percent of total U.S. exports/imports)

SECTION 1 BEVERAGES AND TOBACCO								
Two-Digit Divisions	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
Divisions 11: Beverages	0.06	0.03	0.09	0.04	0.38	0.04	0.55	0.03
Division 12: Tobacco and Tobacco Manufactures	1.6	0.00	1.79	0.00	2.61	0.01	3.13	0.01
Section 1: One-Digit	1.66	0.03	1.88	0.04	2.99	0.05	3.68	0.04
Section 1: Trade Balance	\$0.41		\$0.51		\$1.22		\$1.78	

The highest contributor to section 1 U.S. exports to Japan was division 12 tobacco and tobacco manufactures, which rose over the episodes of examination. SITC 122, tobacco, manufactured whether containing tobacco substitute, was among the top 50 percent of U.S. exports to Japan from 1987-1996 although its ranks toward the bottom half of this 50 percent.

1.2c. Crude Materials, Inedible, Except Fuels (Section 2)

As Table 1-9 shows, from an overall perspective, Japanese imports of crude materials from the United States have shown a gradually declining trend throughout the sample, although the U.S. continues to sustain a surplus with Japan in crude materials trade. Table 1-9 exhibits U.S. exports and imports of crude materials, inedible except fuels from Japan at the one and two-digit level of detail.

Table 1-9 U.S.-Japan Exports and Imports Section 2 (expressed as a percent of total U.S. exports/imports)

SECTION 2 CRUDE MATERIALS, INEDIBLE, EXCEPT FUELS								
Two-Digit Divisions	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
Divisions 21: Hides, Skins and Furskins, Raw	1.71	0.01	1.26	0.01	1.06	0.00	0.46	0.00
Division 22: Oil Seeds and Oleaginous Fruits	6.44	0.00	5.08	0.00	2.43	0.00	1.80	0.00
Division 23: Crude Rubber	0.15	0.08	0.23	0.05	0.28	0.08	0.13	0.06
Division 24: Cork and Wood	9.94	0.00	5.18	0.00	5.62	0.00	3.93	0.00
Division 25: Pulp and Waste Paper	1.48	0.00	1.47	0.00	1.84	0.00	1.18	0.00
Division 26: Textile Fibers	2.74	0.05	2.35	0.04	1.25	0.05	0.66	0.04
Division 27: Crude Fertilizers	0.85	0.04	0.79	0.03	0.60	0.02	0.53	0.02
Division 28: Metalliferous Ores and Metal Scrap	1.70	0.01	0.86	0.00	0.94	0.01	0.44	0.01
Division 29: Crude Animal and Vegetable Materials	0.18	0.04	0.26	0.04	0.27	0.03	0.23	0.03
Section 2: One-Digit	25.19	0.23	17.48	0.17	14.29	0.19	9.36	0.16
Section 2: Trade Balance	\$8.20		\$5.40		\$5.70		\$5.40	

Exports that stand out in section 2 are oil seeds and oleaginous fruits (division 22) and cork and wood (division 24). Japan is the United States' largest export market for wood products. Since its 1978-1980 heights, section 2, in general, has been on the decline as a percentage of total U.S. exports to Japan with the greatest loss experienced by divisions 22 and 24. As noted in Table 1-5, both oils seeds and oleaginous fruit (222) and wood (247) rank in the overall top five categories exported from 1978 to 1980 (where all except one of the top five categories were raw materials or food and live animals). Additionally, oil seeds and oleaginous fruit and wood were in the top 50 percent of U.S. exports to Japan throughout the sample. In 1985, wood slides in significance for the first time changing the composition of the top five categories. Wood

does rebound in 1986 but its percentage share is less than in 1985 at 2.97 percent. Wood maintains a top five slot of total U.S. export categories until 1991 when all but one (corn) of the top exports are manufactured goods (section 7) yet, reclaims a top five slot in 1992-1994 only to decline thereafter.

1.2d. Mineral Fuels, Lubricants and Related Materials (Section 3)

This category holds particular significance to both the U.S. and Japan. Fuels considered as a commodity group has remained a steady portion of Japan's import structure. Oil remains the single most important product in world trade and is for the most part price-inelastic, especially in the short run. The U.S. maintained a mineral fuels surplus trade balance with Japan throughout the sample, albeit a narrowing surplus as seen in Table 1-10. In 1995, the mineral fuels trade balance surplus was down to half of its 1990 value.

As Table 1-10 shows, mineral fuels, lubricants, and related materials as a whole have declined drastically in importance to total U.S. exports to Japan. The dramatic decline occurs between 1985 to 1986. The largest contributor to this decline is division 32 coal, coke, and briquette. Coal (SITC 322) is the most important mineral fuel the U.S. exports to Japan. It was consistently among the overall top five U.S. goods exported to Japan from 1978 through the mid-1980s. In 1989, following *Revision 3* of the SITC code, coal 322 drops drastically in significance as the category is reclassified to 321, coal, pulverized or not.

Table 1-10 U.S.-Japan Exports and Imports Section 3 (expressed as a percent of total U.S. exports/imports)

SECTION 3 MINERAL FUELS, LUBRICANTS AND RELATED MATERIALS								
Two-Digit Divisions	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
Division 32: Coal, Coke and Briquette	5.37	0.17	5.21	0.03	0.92	0.14	0.00	0.14
Division 33: Petroleum, Petroleum Products	1.02	0.04	2.83	0.05	1.78	0.05	0.85	0.03
Division 34: Gas, Natural and Manufactured	0.88	0.00	1.40	0.00	0.67	0.00	0.26	0.00
Division 35: Electric Current	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	0.00	<i>na</i>	0.00	<i>na</i>
Section 3: One-Digit	7.27	0.21	9.44	0.08	3.37	0.19	1.11	0.17
Section 3: Trade Balance	\$2.10		\$2.70		\$1.30		\$0.82	

1.2e. Animal and Vegetable Oils, Fats, and Waxes (Section 4)

Table 1-11 shows that animal and vegetable oils, fats, and waxes hold the lowest percentage share of all U.S. exports to Japan throughout the sample as well as the lowest percentage share of all U.S. imports from Japan. The figures show that these commodity groups are an insignificant portion of trade between the U.S. and Japan.

Table 1-11 U.S.-Japan Exports and Imports Section 4 (expressed as a percent of total U.S. exports/imports)

SECTION 4 ANIMAL AND VEGETABLE OILS, FATS, AND WAXES								
Two-Digit Divisions	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
Divisions 41: Animal Oils and Fats	0.29	0.01	0.13	0.00	0.05	0.01	0.04	0.00
Division 42: Fixed Vegetable Fats and Oils	0.14	0.01	0.18	0.01	0.21	0.02	0.12	0.01
Division 43: Animal or Vegetable Fats and Oils, Processed	0.05	0.00	0.02	0.00	0.02	0.00	0.01	0.00
Section 4: One-Digit	0.48	0.02	0.33	0.01	0.28	0.03	0.17	0.01
Section 4: Trade Balance	\$0.13		\$0.09		\$0.04		\$0.07	

Note: The division titles have been abbreviated due to limited space; the full description is contained in Appendix A. SITC 401 (untitled) is omitted because it only records data from 1983-1988 and its value are zero or close to zero in each year.

1.2f. Chemicals and Related Products (Section 5)

The United States is by far the world's largest chemical producer (followed by Japan) and Japan is the second largest destination for U.S. chemical commodity exports. Chemicals are one of the most *globalized* major industries as its products are inputs into agricultural production and most manufacturing products and production processes.

Table 1-12 shows that the United States maintained a trade balance surplus in chemical trade with Japan in every year over the sample. U.S. exports of chemical products to Japan as a percent of total exports and U.S. imports of chemical products from Japan as a percent of total imports continued to grow through the first half of the 1980s despite the strong dollar and the average trade balance surplus increased from its late 1970s values. However, the U.S. chemical industry surpluses with Japan have declined in the succeeding years.

Table 1-12 U.S.-Japan Exports and Imports Section 5 (expressed as a percent of total U.S. exports/imports)

SECTION 5 CHEMICALS AND RELATED PRODUCTS								
Two-Digit Divisions	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
Division 51: Organic Chemicals	2.48	0.67	2.92	0.87	2.60	0.82	2.03	1.39
Division 52: Inorganic Chemicals	1.56	0.20	3.16	0.22	3.43	0.18	2.02	0.25
Division 53: Dyeing, Tanning, and Coloring Materials	0.90	0.15	0.16	0.25	0.19	0.27	0.22	0.28
Division 54: Medical and Pharmaceutical Products	1.60	0.24	2.39	0.26	2.19	0.32	1.57	0.41
Division 55: Essential Oils and Resinoids and Perfume Materials	0.30	0.07	0.31	0.05	0.43	0.07	0.66	0.07
Division 56: Fertilizers	0.28	0.01	0.47	0.01	0.40	0.01	0.31	0.01
Division 57: Plastics in Primary Forms	0.00	0.00	0.01	0.01	0.95	0.33	0.90	0.44
Division 58: Plastics in Non-Primary Forms	0.67	0.77	0.83	0.40	1.04	0.39	0.67	0.41
Division 59: Chemical Materials and Products, n.e.s.	1.60	0.03	1.62	0.06	1.34	0.07	1.56	0.03
Section 5: One-Digit	9.39	2.14	11.87	2.13	12.57	2.46	9.94	3.29
Section 5: Trade Balance	\$1.30		\$2.10		\$1.50		\$0.89	

From 1978 to 1980, the U.S. experienced its lowest percentages of chemical exports to Japan averaging 9.39 percent over these years. U.S. section 5 imports from Japan were far less at an average rate of 2.14 percent (their lowest average percentage over the sample). A marked upturn characterizes the ensuing years from 1981 to 1985 and this growth is attributed to division 52, inorganic chemicals and division 54 medical and pharmaceutical products. The growth has tapered off since 1985.

1.2g. Manufactured Goods Classified Chiefly by Material (Section 6)

Table 1-13 shows that the trade balance on manufactured goods classified chiefly by material (section 6) has been a deficit over every sample period although the trade balance deficit has gradually decreased over the years.

Table 1-13 U.S.-Japan Exports and Imports Section 6 (expressed as a percent of total U.S. exports/imports)

SECTION 6 MANUFACTURED GOODS CLASSIFIED CHIEFLY BY MATERIAL								
Two-Digit Divisions	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
Division 61: Leather, Leather Manufactures, n.e.s., and Dressed Furskins	0.08	0.02	0.10	0.04	0.26	0.01	0.19	0.01
Division 62: Rubber Manufactures, n.e.s.	0.10	0.95	0.17	1.05	0.51	1.19	0.56	1.39
Division 63: Cork and Wood Manufactures	0.11	0.29	0.10	0.11	0.19	0.02	0.29	0.01
Division 64: Paper, Paperboard, and Articles of Paper Pulp	1.00	0.18	1.29	0.20	1.24	0.27	1.28	0.22
Division 65: Textile Yarn, Fabrics, Made-up Articles, n.e.s., and Related Products	0.27	1.48	0.20	1.24	0.24	0.76	0.18	0.56
Division 66: Non-metallic Mineral Manufactures, n.e.s.	0.28	1.69	0.36	1.53	0.43	0.93	0.51	0.76
Division 67: Iron and Steel	0.19	10.20	0.09	6.90	0.29	2.59	0.15	1.53
Division 68: Non-ferrous Metals	2.38	1.14	2.40	0.83	2.54	0.48	1.47	0.29
Division 69: Manufactures of Metal, n.e.s.	0.25	3.76	0.21	2.81	0.31	1.80	0.35	1.70
Section 6: One-Digit	4.66	19.71	4.92	14.71	6.01	8.05	4.98	6.47
Section 6: Trade Balance	-\$7.80		-\$7.10		-\$4.40		-\$3.20	

Table 1-13 shows that U.S. textile exports and imports are relatively insignificant in their overall contribution to U.S.-Japan trade. However, the table shows that iron and steel were major import commodities from Japan rising until 1985 and declining thereafter. These imports were subject to the trigger price mechanism (TPM) in the first

half of the sample. A decline ensued in the latter half of the sample when the industry matured and from 1986-1991 and continued this downward trend from 1992-1996.

Voluntary export restraints (VER) were in effect in the second half of the sample.

The most prominent three-digit division of iron and steel products imported from Japan are SITC categories 674, iron and nonalloy steel flat-rolled products, clad, etc., and 678 iron and steel wire. (Note that the *Revision 2* SITC descriptions of these codes are 674 universals, plates and sheets of iron or steel and 678, tubes, pipes and fittings of iron or steel.) Each category accounted for over 3.0 percent of total U.S. imports from Japan in the first half of the sample and declined to just a fraction of this share in the mid-1980s and 1990s with shares of 1.0 percent in the late 1980s and less than 0.30 percent in the 1990s.

1.2h. Machinery and Transport Equipment (Section 7)

Table 1-14 below shows U.S. exports and imports of machinery and transport equipment to and from Japan at the two-digit level of detail. In the 1990s, as a percentage of total exports to Japan, machinery and transport equipment has nearly doubled from its late 1970s shares. The main contributors to section 7 exports are divisions 75, 77, 78, and 79. Other transport equipment (division 79) was the leading U.S. export category to Japan in the first half of the sample and electrical machinery (division 77) was the primary contributor in the 1990s more than doubling from its late 1970s percentage share.

As a percentage of total imports, section 7 commodities account for approximately three-fourths of total U.S. imports from Japan with division 78 (road vehicles) accounting for between one-fourth to one-third of all U.S. imports from Japan

over the entire sample period. Division 75 and 77 grew throughout the sample more than tripling their shares in the 1990s (each accounting for over 13 percent of total U.S. imports from Japan) over their late 1970s percentage shares. Division 76 accounted for over 14 percent of total U.S. imports from Japan during the dollar appreciation era and declined to half that value in the 1990s.

Table 1-14 U.S.-Japan Exports and Imports Section 7 (expressed as a percent of total U.S. exports/imports)

SECTION 7 MACHINERY AND TRANSPORTATION EQUIPMENT								
Two-Digit Divisions	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
Division 71: Power Generating Machinery and Equipment	1.28	1.93	2.08	2.01	1.90	3.30	2.04	4.68
Division 72: Machinery Specialized for Particular Industries	1.79	2.53	2.67	2.44	1.97	4.97	2.06	3.72
Division 73: Metal Working Machinery	0.48	1.56	0.42	3.95	0.68	2.55	0.64	1.71
Division 74: General Industrial Machinery and Equipment, n.e.s., and Machine Parts, n.e.s.	1.87	3.15	1.61	3.05	1.87	4.47	1.90	4.40
Division 75: Office Machines/ADP	2.95	3.77	4.81	7.01	7.00	11.23	7.46	14.75
Division 76: Telecommunications	0.22	11.52	0.20	14.19	0.25	11.71	0.27	7.91
Division 77: Electrical Machinery	3.02	5.29	3.70	6.77	5.00	8.96	7.57	13.21
Division 78: Road Vehicles	1.31	34.88	0.84	34.15	2.25	33.93	4.96	27.26
Division 79: Other Transport Equipment	4.73	0.43	5.77	0.64	6.58	0.56	5.95	0.56
Section 7: One-Digit	17.64	66.05	22.11	74.21	27.31	80.85	32.87	78.22
Section 7: Trade Balance	-\$26.73		-\$39.10		-\$62.77		-\$61.83	

i. Machinery and Transport Equipment (divisions 71, 72, 73, and 74)

Divisions 71 (power generating machinery and equipment), 72 (machinery specialized for particular industries), 73 (metal working machinery), and 74 (general industrial machinery and equipment, n.e.s., and machine parts, n.e.s.) individually have a rather minor role in overall section 7 trade and will therefore be analyzed as a group.

U.S. exports of division 71, 72, 73, and 74 to Japan as a percentage of total exports have contributed roughly 7.0 percent to total U.S. exports throughout the sample period.

Divisions 71 and 72 are the primary contributors each accounting for roughly 2.0 percent of total U.S. exports to Japan.

U.S. imports from Japan of divisions 71, 72, 73, and 74 have contributed between 10 to 15 percent to total U.S. imports throughout the sample period. As a percentage of total imports, power generating machinery and equipment (division 71) has increased the most over the sample period accounting for roughly 5.0 percent of total U.S. imports from Japan in the 1990s. In addition, general industrial machinery, equipment, and parts (division 74) maintained a share of approximately 3.0 to 4.0 percent of total U.S. imports from Japan throughout the sample period.

ii. Office Machines and Computers (division 75)

During the late 1980s and into the 1990s, the U.S. and Japan have engaged in a substantial amount of two-way trade of office machines and automatic data processing machines and this was the fastest growing product group in the 1980s decade. Starting out slowly, this division gained momentum led by the following categories: automatic

data process machines (752) and parts etc. for office machines and automatic data process machines (759). Table 1-15 shows the exports and imports at the three-digit level for division 75 as well as the one and two-digit levels.

Table 1-15 U.S.-Japan Exports and Imports Section 7, division 75 (expressed as a percent of total U.S. exports/imports)

SECTION 7 MACHINERY AND TRANSPORTATION EQUIPMENT								
Division 75: Office Machines and Automatic Data Processing Machines	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
751 Office Machines	0.14	2.69	0.13	2.68	0.12	1.88	0.07	1.69
752 Automatic Data Process Machines	1.62	0.38	2.33	2.04	3.73	5.25	4.27	8.61
759 Parts etc. for Office Machines and ADP	1.19	0.70	2.35	2.29	3.15	4.10	3.12	4.45
Division 75: Two-Digit	2.95	3.77	4.81	7.01	7.00	11.23	7.46	14.75
Section 7: One-Digit	17.64	66.05	22.11	74.21	27.31	80.85	32.87	78.22

Office machines (751) contains common items such as typewriters, calculators, and photocopiers and the importation of this subgroup has declined throughout the sample. Automated data processing machines (752) includes most general-purpose computers and U.S. exports and imports to and from Japan have risen substantially throughout the sample. The 1980s decade was a time of tremendous technological advance and structural change in the computer industry and the success of the high-volume, low-cost Japanese producers in making standardized personal computers and parts contributed to the downfall of the U.S. computer trade balance and the move from a surplus to a deficit.

In the early part of the sample, office machines (SITC 751) was among the top 50 percent of commodities imported to the U.S. from Japan. Automatic data process machines (SITC 752) was among the top 50 percent of commodities exports and imported to and from Japan in 1984 which marks the beginning of the rise in importance for intraindustry trade in ADP machines and its dominance has been maintained through

1996. In the first half of the sample, U.S. exports of SITC 752 to Japan were consistently higher than U.S. imports from Japan. From the mid-1980s, growth in SITC 752 imports from Japan was substantial, more than doubling its import share in the second half of the 1980s from its value in the first half of the 1980s and increasing considerably again in the 1990s, averaging roughly 9.0 percent of total U.S. imports from Japan in 1992-1996. A vital shift occurs in both exports and imports in the latter part of the 1980s towards the higher-technology items categorized in division 75. With the exception of 1986, SITC 759 has been among the top 50 percent of U.S. exports and imports to and from Japan from 1983 through 1996. The importance of SITC 759 continued to rise throughout the late 1980s and into the 1990s where it reached a top five slot in overall U.S. exports to Japan in 1987, 1989, 1990, and 1992 and a top five import slot in overall U.S. imports from Japan in 1988, 1995, and 1996. U.S. imports shares of SITC 759 as a percentage of total U.S. imports from Japan consistently outrank U.S. export shares from the mid-1980s. From 1992-1996, two-way trade of division 75 commodities was at its highest point and imports and exports of 752 and the imports of 759 bolster growth in these shares.

iii. Telecommunications (division 76)

The United States has run a substantial deficit in telecommunications and sound reproducing equipment (consumer electronics) with Japan throughout the sample period. This occurred due to the Japanese success in the American market with products such as facsimile (fax) machines, cordless telephones, telephone answering machines, videocassette recorders (VCRs), camcorders, and compact disc (CD) players; all

products that are now major U.S. imports which either did not exist or were unimportant until the 1980s. The rise of the dollar through 1985 played an important role in the deterioration of the U.S.-Japanese trade balance in telecommunications and sound-reproducing equipment.

Division 76 commands a substantial amount of U.S. imports from Japan from 1978 through 1996 as Table 1-16 shows. For analytical purposes it is useful to divide this category into consumer electronics (SITC 761, 762, and 763) and telecommunications equipment (SITC 764). Telecommunications equipment includes a variety of consumer electronic items and industrial equipment with different trade characteristics. Table 1-16 exhibits the three-digit categorization of division 76 as well as the one and two-digit levels.

Table 1-16 U.S.-Japan Exports and Imports Section 7, division 76 (expressed as a percent of total U.S. exports/imports)

SECTION 7 MACHINERY AND TRANSPORTATION EQUIPMENT								
Division 76: Telecommunications and Sound Recording and Reproducing Equipment	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
761 Television Receivers	0.01	1.26	0.01	0.81	0.03	0.39	0.03	0.25
762 Radio-broadcast Receivers	0.01	2.43	0.01	2.00	0.02	1.78	0.06	0.77
763 Sound Recorders	0.10	3.38	0.09	5.84	0.10	4.33	0.09	2.39
764 Telecommunication Equipment	0.10	4.45	0.09	5.54	0.10	5.21	0.09	4.50
Division 76: Two-Digit	0.22	11.52	0.20	14.19	0.25	11.71	0.27	7.91
Section 7: One-Digit	17.64	66.05	22.11	74.21	27.31	80.85	32.87	78.22

Sound recorders (763) including gramophones and VCRs and telecommunications equipment (764) are the primary forces behind the surge of division 76 commodities in the 1980s. Telecommunications equipment is among the

top 50 percent of overall U.S. imports from Japan in every year from 1978 through 1995 and it is among the top five U.S. imports in each year from 1978 to 1994. Also, sound recorders are among the top five U.S. imports in each year from 1981 through 1987 and are included in the top 50 percent of overall U.S. imports from Japan from 1978-1990 and in 1996. As for U.S. exports of telecommunications equipment and sound recording and reproducing equipment, there has been little change in the share of these commodities to total U.S. exports to Japan over the entire sample period.

iv. Electrical Machinery (division 77)

Division 77 contains a broad assortment of heavy electrical equipment, electromedical equipment, home appliances, electronic parts, and electrical goods not elsewhere specified. Both exports and imports of division 77 have grown throughout the sample period as Table 1-17 below shows. Trade in this division is highly competitive and further increases in U.S. exports will be tempered by the nationally oriented procurement practices of the Japanese and differing technical standards. Table 1-17 also shows the exports and imports of division 77 at the three-digit level as a percentage of total U.S. exports and imports to and from Japan.

Table 1-17 U.S.-Japan Exports and Imports Section 7, division 77 (expressed as a percent of total U.S. exports/imports)

SECTION 7 MACHINERY AND TRANSPORTATION EQUIPMENT								
Division 77: Electrical Machinery, Apparatus and Appliances, n.e.s., and Electrical Parts Thereof	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
771 Electric Power Machinery and Parts Thereof	0.05	0.18	0.06	0.27	0.08	0.37	0.14	0.41
772 Electrical Apparatus for Switching or Protecting Electric Circuit	0.47	0.86	0.62	0.96	0.64	1.39	0.57	1.90
773 Equipment for Distributing Electricity, n.e.s.	0.05	0.15	0.09	0.18	0.11	0.27	0.24	0.24
774 Electro-diagnostic Apparatus	0.65	0.15	0.61	0.25	0.75	0.50	0.82	0.56
775 Household Type Electric and Nonelectric Equipment, n.e.s.	0.19	1.16	0.12	1.00	0.11	0.49	0.13	0.22
776 Thermionic, Cold Cathode, Photocatmode Valves etc.	1.08	1.26	1.54	2.42	2.55	3.62	4.75	7.13
778 Electrical Machinery and Apparatus, n.e.s.	0.53	1.53	0.66	1.69	0.76	2.32	0.92	2.75
Division 77: Two-Digit	3.02	5.29	3.70	6.77	5.00	8.96	7.57	13.21
Section 7: One-Digit	17.64	66.05	22.11	74.21	27.31	80.85	32.87	78.22

U.S. exports and imports of thermionic, cold cathode, photocatmode valves etc. (SITC 776) has risen substantially throughout the sample period and remained the largest contributor to both U.S. exports and imports to and from Japan. In the late 1970s, U.S. exports and imports of SITC 776 held roughly the same percentage share to total U.S. exports and imports from Japan. However in the 1990s, the share of U.S. imports of SITC 776 as a percentage of total U.S. imports from Japan was nearly double that of U.S. exports of SITC 776 as a percentage of total exports. Interestingly, in 1995 and 1996, SITC 776 is the top U.S. export to Japan and the second highest U.S. import from Japan. However, the share of SITC 776 as a percentage of total imports, averaging 9.0

percent, is higher than the share of SITC 776 as a percentage of total exports, averaging 6.0 percent. This anomaly shows the consistently lower and more proportionately balanced shares of the top 50 percent of U.S. exports to Japan as compared to the relatively more concentrated or disproportionate shares of U.S. imports from Japan. The other commodities in the division contribute, in general, less than 1.0 percent to both total U.S. exports to Japan and total U.S. imports from Japan. The only exception is electrical machinery and apparatus, n.e.s. (SITC 778) which increased modestly throughout the sample, averaging roughly 2.0 percent of total U.S. imports from Japan.

v. Road Vehicles (division 78)

Unique to U.S. imports from Japan is the domination of road vehicles, division 78, which holds the highest percentage share of total U.S. imports from Japan in every year in the sample. This group has played, by far, the most important role in the deterioration of the U.S. trade balance with Japan. As a whole, division 78 has a commanding lead of U.S. imports throughout the sample. It consistently accounts for one-third of total U.S. imports from Japan from 1978 to the early 1990s and decreases slightly from 1992 to 1996 where it captures over one-fourth of total U.S. imports from Japan.

From Table 1-18 below, it is apparent that during the early 1980s to the mid-1980s, the expansion of SITC 781 imports from Japan was the key factor in the U.S.-Japan trade deficit. In dollar terms, SITC 781 was the largest single contributing category to the overall U.S.-Japan trade deficit.

Table 1-18 U.S.-Japan Exports and Imports Section 7, division 78 (expressed as a percent of total U.S. exports/imports)

SECTION 7 MACHINERY AND TRANSPORTATION EQUIPMENT								
Division 78: Road Vehicles	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
781 Motor Cars and Other Motor Vehicles	0.72	25.18	0.18	25.23	1.01	23.59	3.26	19.50
782 Motor Vehicles for Transport of Goods and Special Purchase Vehicles	0.07	1.10	0.05	4.41	0.08	3.59	0.15	1.20
783 Parts and Accessories of Motor Vehicles, etc.	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00
784 Road Vehicles, n.e.s.	0.44	4.78	0.54	2.11	0.84	5.09	1.32	5.70
785 Motorcycles and Cycles, Motorized and not Motorized	0.07	3.82	0.06	2.40	0.13	0.81	0.18	0.85
786 Trailers and Semi-trailers, Other Vehicles not Mechanically Propelled	0.01	0.00	0.01	0.00	0.18	0.85	0.04	0.01
Division 78: Two-Digit	1.31	34.88	0.84	34.15	2.25	33.93	4.96	27.26
Section 7: One-Digit	17.64	66.05	22.11	74.21	27.31	80.85	32.87	78.22

In the late 1980s, the improvement in the U.S. bilateral trade deficit with Japan was attributed to the narrowing of the deficit in road vehicles, division 78, (particularly increased U.S. exports of 781 to Japan from 1990-1996 and decreased U.S. imports from 1989-1996). Exports of division 78 do not share the magnitude of their counterparts yet still maintain an increasing growth rate throughout the 1980s and 1990s. The exports of motor cars are the most significant factor in this growth as SITC 781 is one of the top 50 percent of exported commodities to Japan in 1990-1996 (as shown in Table 1-18). There was an increase in intraindustry trade between the U.S. and Japan of road vehicles, n.e.s. (SITC 784) from 1993 to 1996. During this period road vehicles, n.e.s. was among both the top 50 percent of U.S. exports and imports to and from Japan with U.S. imports from

Japan holding a percentage share over four times greater than the share of U.S. exports of SITC 784.

vi. Other Transport Equipment (division 79)

Table 1-19 below shows the U.S. exports and imports as a percentage of total U.S. exports to and imports from Japan for division 79, other transport equipment. Division 79 contributes between 5-6 percent to total U.S. exports to Japan over the 1978-1996 period. SITC 792 (aircraft and associated equipment, spacecraft vehicles and parts) accounts for nearly all of the U.S. exports to Japan of division 79. In fact, exports of SITC 792 to Japan is the only section 7 commodity which is in the top five overall exports to Japan in every year between 1978-1996. As a percentage of total U.S. imports from Japan, no division 79 commodity is among the top 50 percent of U.S. imports from Japan.

Table 1-19 U.S.-Japan Exports and Imports Section 7, division 79 (expressed as a percent of total U.S. exports/imports)

SECTION 7 MACHINERY AND TRANSPORTATION EQUIPMENT								
Division 79: Other Transport Equipment	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
791 Railway Vehicles and Associated Equipment	0.01	0.09	0.12	0.17	0.05	0.09	0.02	0.06
792 Aircraft and Associated Equipment, Spacecraft Vehicles and Parts	4.68	0.31	5.61	0.41	6.31	0.39	5.81	0.46
793 Ships Boats and Floating Structures	0.04	0.03	0.04	0.06	0.22	0.08	0.12	0.04
Division 79: Two-Digit	4.73	0.43	5.77	0.64	6.58	0.56	5.95	0.56
Section 7: One-Digit	17.64	66.05	22.11	74.21	27.31	80.85	32.87	78.22

1.2i. Miscellaneous Manufactured Articles (Section 8)

Miscellaneous manufactured articles (section 8) encompass a wider variety of product types than all other sections. As Table 1-20 below shows, in every year from 1978 to 1996, trade with Japan in the section 8 renders an U.S. trade balance deficit. Table 1-20 also categorizes miscellaneous manufactured articles at the two-digit level.

Table 1-20 U.S.-Japan Exports and Imports Section 8 (expressed as a percent of total U.S. exports/imports)

SECTION 8 MISCELLANEOUS MANUFACTURED ARTICLES								
Two-Digit Divisions	1978-1980		1981-1985		1986-1991		1992-1996	
	% export	% import	% export	% import	% export	% import	% export	% import
Division 81: Prefabricated Buildings, Sanitary Plumbing, Heating and Lighting Fixtures and Fittings, n.e.s.	0.04	0.04	0.04	0.02	0.12	0.04	0.17	0.05
Division 82: Furniture and Parts Thereof	0.06	0.08	0.07	0.15	0.15	0.22	0.32	0.14
Division 83: Travel Goods, Handbags, and Similar Containers	0.02	0.08	0.02	0.05	0.05	0.02	0.15	0.01
Division 84: Articles of Apparel and Clothing Accessories	0.39	0.85	0.25	0.76	0.59	0.37	1.42	0.15
Division 85: Footwear	0.07	0.10	0.12	0.05	0.14	0.01	0.15	0.00
Division 87: Professional, Scientific and Controlling Instruments, n.e.s.	2.44	1.29	2.80	1.34	3.43	1.68	4.23	2.10
Division 88: Photographic Equipment/Optical Goods, n.e.s.	1.37	4.39	1.35	3.44	1.28	2.86	1.11	3.16
Division 89: Miscellaneous Manufactured Articles, n.e.s.	2.21	1.48	2.07	1.69	5.04	2.58	5.10	2.47
Section 8: One-Digit	6.60	8.31	6.72	7.50	10.80	7.78	12.65	8.08
Section 8: Trade Balance	-\$2.70		-\$3.70		-\$4.40		-\$3.50	

U.S. exports of miscellaneous manufactured goods as a percentage of total exports to Japan took a sharp upturn in the mid-1980s which has continued throughout the 1990s averaging approximately 7.0 percent in the first half of the sample and nearly double that amount in the second half. U.S. imports of miscellaneous manufactured goods from Japan can be classified as stable contributing to approximately 8 percent of all U.S. imports from Japan throughout the sample period.

U.S. imports of apparel from Japan are surprisingly low throughout the sample period perhaps because of the Multi-Fiber Agreement (MFA) trade protection. U.S. exports of apparel goods have grown considerably since 1992 following the dollar depreciation.

Professional, scientific and controlling instruments, and apparatus, n.e.s., (division 87), are items used primarily to measure, analyze, and test other materials and equipment and this product group is readily employed in the production process to provide improvements in the quality control of products. Over the sample, exports of this division experienced a gradual upward trend. Division 87 has historically been a strong surplus category of the United States and because non-price factors (such as quality, custom design, etc.) are relatively important determinants of sales in this product group, the rapid appreciation of the dollar in 1981-1985 may have hurt U.S. producers of precision instruments far less than it hurt other U.S. manufacturing industries. U.S. imports from Japan of these goods mirrored the same pattern.

Division 88 includes photographic equipment, cinema films, optical goods, watches, and clocks. There has been little variation in the share of total U.S. exports to or imports from Japan in this division over the sample period.

Division 89 is the most all-encompassing SITC division with goods ranging from baby carriages to arms and ammunition. Most of the items in this group are low-

technology items characterized by labor-intensive production processes. Table 1-20 shows that export of division 89 have more than doubled since 1985. At the three-digit level, works of art, collectors' pieces and antiques (SITC 896) was among the top 50 percent of U.S. exports to Japan in 1989 and 1990 accounting for between 2.0 and 3.0 percent of total U.S. exports to Japan. Additionally, musical instruments and parts, records, tapes, etc. (SITC 898) was among the top 50 percent of U.S. exports to Japan in 1993-1994 accounting for just over 1.0 percent of total U.S. exports to Japan. As a percentage of total U.S. imports from Japan, division 89 contributed approximately 1.5 percent in the first half of the sample and increased to 2.5 percent in the second half of the sample period.

1.3 CONCLUSIONS FOR COMMODITY COMPOSITION OF U.S.-JAPANESE TRADE

The previous sections of this paper have presented detailed information at the one-, two-, and three-digit level of the commodity composition of trade between the U.S. and Japan. Overall trends in the data were discussed with an emphasis on those trends that may be important to understanding the U.S.-Japan trade balance. Outlined below is a list of observations from the data that are noteworthy.

U.S.-Japan Trade Balance

- The United States trade balance with Japan has been in a deficit over the 1978-1996 sample period.
- Sections 0, 1, 2, 3, 4, and 5 remained net surplus contributors to the trade balance.

- Sections 6, 7, and 8 remained net deficit contributors throughout the sample period.
- There is a high degree of intraindustry trade at the three-digit SITC level in section 7 commodities throughout the 1980s and particularly in the 1990s. This is related to the rise of foreign direct investment from Japan during this time period.
- Automatic data process machines and units thereof (SITC 752), parts etc. for office machines and automatic data process machines (SITC 759), telecommunications equipment, n.e.s. and parts, n.e.s. (SITC 764), thermionic, cold cathode, photocatmode valves etc. (SITC 776), motor cars and other motor vehicles (SITC 781), and road vehicles, n.e.s. (SITC 784) are the only commodities which are among both the top 50 percent of U.S. exports to Japan and the top 50 percent of U.S. imports from Japan in the sample period.
- In every year of the sample period, the percentage share of total U.S. imports held by motor cars and other motor vehicles (SITC 781) and road vehicles, n.e.s. (SITC 784) is always substantially greater than the percentage share held by the U.S. exports of SITC 781 and 784.
- In every year except 1996, U.S. imports from Japan of telecommunications equipment, n.e.s. and parts, n.e.s. (SITC 764) as a percentage of total imports are always greater than U.S. exports of SITC 764 to Japan as a percentage of total exports.
- In every year from 1983 to 1996, U.S. imports from Japan of parts etc. for office machines and automatic data process machines (SITC 759) as a percentage of total imports are always greater than U.S. exports of SITC 759 to Japan as a percentage of total exports.

- From 1985 to 1996, U.S. imports of thermionic, cold cathode, photocathode valves etc. (SITC 776) as a percentage of total imports are always greater than U.S. exports of SITC 776 to Japan as a percentage of total exports.
- In every year from 1986 to 1996, U.S. imports from Japan of automatic data process machines and units thereof (SITC 752) as a percentage of total imports are always greater than U.S. exports of SITC 752 to Japan as a percentage of total exports.

U.S. Exports to Japan

- From 1978 through 1996, 14 to 22 of the 275 three-digit SITC export categories, or 5.1 percent to 8 percent, account for 50 percent of total U.S. exports to Japan.
- From 1978 through 1996, corn (SITC 044) consistently ranked in the top ten contributors to total U.S. exports to Japan yet its percentage share of exports declined significantly after 1984.
- The relative significance of agricultural exports commodities particularly raw bulk items such as corn have declined markedly after the mid-1980s. Higher value items such as meat (division 01) and fish (division 03) increased during the 1980s due to changes in Japanese income and diet.
- U.S. exports of beverages and tobacco (section 1) have doubled in the second half of the sample primarily led by U.S. tobacco (SITC 122) exports to Japan.
- Until the mid-1980s, crude materials, inedible, except fuels (section 2) and mineral fuels, lubricants, and related materials (section 3) were strong U.S. export sectors bolstered by oil seeds (SITC 222), wood (SITC 247), and coal (SITC 321). A pivotal

loss in shares translated into a major loss of trade balance surplus for these commodities from 1986-1996.

- U.S. exports of animal and vegetable oils, fats, and waxes (section 4) commodities generally declined over the sample range and were half their 1978-1980 percentage share of total U.S. exports to Japan in the latter half of the 1980s and in the 1990s.
- Chemical exports have endured a loss in percentage share from its 1980s heights causing a reduction in the section 5 trade balance surplus.
- Manufactured goods classified chiefly by material (section 6) exports have remained stable while its imports have declined dramatically and this occurrence has caused the narrowing of the section 6 deficit, down one-fourth of its late 1970s and early 1980s highs.
- Aircraft (SITC 792) is the only exported commodity, which remains in the top five overall U.S. exports to Japan from 1978-1996.
- Miscellaneous manufactured articles (section 8) exports have doubled in size from their late 1970s and early 1980s levels while imports have remained stable.

U.S. Imports from Japan

- From 1978 through 1996, 6 to 8 of the 281 three-digit SITC import categories, or 2.1 percent to 2.8 percent, account for 50 percent of total U.S. imports to Japan.
- From 1985 to 1996, the top 50 percent of U.S. imports from Japan are all section 7 commodities.
- U.S. imports from Japan of sections 0, 1, and 2 have declined throughout the sample.

- U.S. imports of mineral fuels, lubricants, and related materials (section 3) from Japan declined in the early to mid-1980s and rose slightly in the latter half of the 1980s and into the 1990s.
- U.S. imports from Japan of animal and vegetable oils, fats, and waxes (section 4) commodities remained constant throughout the sample period at 0.02 percent of total imports from Japan.
- U.S. chemical imports from Japan declined modestly in the early to mid-1980s and rose in the latter half of the 1980s and ascended markedly from 1992-1996.
- U.S. imports from Japan of section 6 commodities, manufactured goods classified chiefly by material, have declined significantly over the sample. In 1992-1996, they were approximately one-fifth of their percentage share held in 1978-1980.
- Iron and steel were prominent U.S. imports from Japan in 1978 to 1980, thereafter declining as the Japanese iron and steel industry matures. After 1984, iron and steel was absent from the top 50 percent of U.S. imports from Japan.
- Throughout the sample period office machines and automatic data processing machines (division 75) acquired increasing importance in total U.S. imports from Japan. The growing use of general-purpose computers included in this category was a significant boost in division 75 imports to U.S.
- Telecommunications equipment (division 76) was significant in every year of the sample. This group includes general consumer electronic items (such as VCRs, fax machines, and cordless telephones) which became commonplace in the 1980s and 1990s
- Motor cars (SITC 781) is the top imported good from Japan in every year in the sample. Other division 78 commodities gained increasing importance through the 1980s and 1990s.

- Machinery and transport equipment (section 7) imports from Japan namely divisions 75, 76, 77, and 78 are still increasing but at a decelerated rate do to relocation of manufacturing bases abroad and re-importation of these commodities back to Japan.
- U.S. imports from Japan of miscellaneous manufactured articles, section 8, have remained a steady percentage of total imports from Japan at just over 9.0 percent.

APPENDIX A

DESCRIPTION OF STANDARD INTERNATIONAL TRADE CLASSIFICATION (SITC) REVISION 3

Classification of Sections, Divisions, and Groups

Section 0: Food and Live Animals

- Division 00: Live animals other than animals of division 03
001 Live animals other than animals of division 03
- Division 01: Meat and meat preparations
011 Meat of bovine animal, fresh, chilled, or frozen
012 Meat n.e.s. and edible offal, fresh, chilled, or frozen
016 Meat, edible offal, salted, dried, smoked, flour, etc.
017 Meat and edible meat offal prepared or preserved n.e.s.
- Division 02: Dairy products and birds' eggs
022 Milk, cream, milk products except butter or cheese
023 Butter and other fats and oils derived from milk
024 Cheese and curd
025 Birds' eggs and yolk, fresh, dried, persevered, egg albumin
- Division 03: Fish (not marine mammals), crustaceans, molluscs and aquatic invertebrates, and preparations thereof
034 Fish, fresh (live or dead), chilled or frozen
035 Fish, dried salted or in brine, smoked, flours meals pellets
036 Crustacean etc. fresh, chilled, frozen, dried, salted, etc.
037 Fish/crustaceans/molluscs/aquatic invertebrate prepared/preserved n.e.s.
- Division 04: Cereals and cereal preparations
041 Wheat (including spelt) and meslin, unmilled
042 Rice
043 Barley, unmilled
044 Maize (not including sweet corn) unmilled
045 Cereals, unmilled except wheat, rice, barley, maize
046 Meal and flour of wheat and flour of meslin
047 Cereal meals and flours, n.e.s.
048 Cereal preparations and preparations of flour or starch of fruits or vegetables
- Division 05: Vegetables and fruit
054 Vegetables fresh, chilled, frozen, roots, tubers etc. fresh, dried
056 Vegetables, roots and tubers, prepared or preserved, n.e.s.

- 057 Fruit, nuts (not including oil nuts) fresh or dried
- 058 Fruit preserved, fruit preparations (excluding fruit juice)
- 059 Fruit/vegetable juices unfermented not including added spirit

Division 06: Sugars, sugar preparations, and honey

- 061 Sugars, molasses and honey
- 062 Sugar confectionery

Division 07: Coffee, tea, cocoa, spices, and manufactures thereof

- 071 Coffee and coffee substitutes
- 072 Cocoa
- 073 Chocolate and other food preparations containing cocoa n.e.s.
- 074 Tea and mate
- 075 Spices

Division 08: Feeding stuff for animals (not including unmilled cereals)

- 081 Feeding stuff for animals not including unmilled cereal

Division 09: Miscellaneous edible products and preparations

- 091 Margarine and shortening
- 098 Edible products and preparations, n.e.s.

Section 1: Beverages and Tobacco

Division 11: Beverages

- 111 Non-alcoholic beverages, n.e.s.
- 112 Alcoholic beverages

Division 12: Tobacco and tobacco manufactures

- 121 Tobacco, unmanufactured, tobacco substitute
- 122 Tobacco, manufactured whether containing tobacco substitute

Section 2: Crude Materials, Inedible, Except Fuels

Division 21: Hides, skins and furskins, raw

- 211 Hides and skins (except furskins), raw
- 212 Furskins, raw

Division 22: Oil seeds and oleaginous fruits

- 222 Oil seeds/oleaginous fruit for extra soft fixed vegetable oil
- 223 Oil seeds, oleaginous fruit for extra fixed vegetable oil

Division 23: Crude rubber (including synthetic and reclaimed)

- 231 Natural rubber in primary form or plts, shts or strp
- 232 Synthetic rubber, reclaimed rubber, waste etc. of unhardened rubber
- 233 Synthetic rubber latex, synthetic

Division 24: Cork and wood

- 244 Cork, natural, raw and waste (including blocks or sheets)
- 245 Fuel wood (excluding wood waste) and wood charcoal

- 246 Wood in chips or particles and wood waste
- 247 Wood in the rough or roughly squared
- 248 Wood, simply worked and railway sleepers of wood

Division 25: Pulp and waste paper
 251 Pulp and waste paper

Division 26: Textile fibers (other than wool tops and other combed wool) and their wastes (not manufactured into yarn or fabric)
 261 Silk textile fibers
 263 Cotton textile fibers
 264 Jute etc. text fibers n.e.s., raw, proc, tow and waste
 265 Vegetable textile fibers, raw or proc but not spun, waste
 266 Synthetic fibers suitable for spinning
 267 Manmade fibers n.e.s. for spinning, manmade fiber waste
 268 Wool and other animal hair (including wool tops)
 269 Worn clothing and other worn textile articles, rags

Division 27: Crude fertilizers, other than those of division 56, and crude minerals (excluding coal, petroleum, and precious stones)
 271 Fertilizers, crude
 272 Fertilizer, crude, other than those of division 56
 273 Stone, sand, and gravel
 274 Sulfur and unroasted iron pyrites
 277 Natural abrasives n.e.s. (including industrial diamonds)
 278 Crude minerals, n.e.s.

Division 28: Metalliferous ores and metal scrap
 281 Iron ore and concentrates
 282 Ferrous waste and scrap, rmltng iron or steel ingots
 283 Copper ores and concentrates, cooper mattes, cement copper
 284 Nickel ores and concentrates, nickel mattes, oxide sint, etc
 285 Aluminum ores and concentrates (including alumina)
 286 Ores and concentrates or uranium or thorium
 287 Ores and concentrates or base metals, n.e.s.
 288 Non-ferrous base metal waste and scrap, n.e.s.
 289 Ores and concentrates or precious metal and waste, scrap etc.

Division 29: Crude animal and vegetable materials, n.e.s.
 291 Crude animal materials, n.e.s.
 292 Crude vegetable materials, n.e.s.

Section 3: Mineral Fuels, Lubricants and Related Materials

Division 32: Coal, coke and briquette
 321 Coal, pulverized or not, but not agglomerated
 322 Briquettes, lignite and peat
 323 Briquettes; coke and semi-coke
 325 Coke, semi-coke etc. of coal, lignite etc., re carbon

- Division 33: Petroleum, petroleum products, and related materials
333 Crude oil from petroleum or bituminous minerals
334 Oil (not crude) from petroleum and bituminous minerals etc.
335 Residual petroleum products, n.e.s. etc.

- Division 34: Gas, natural and manufactured
341 Gas, natural and manufactured
342 Liquefied propane and butane
343 Natural gas, whether or not liquefied
344 Petroleum gases and other gaseous hydrocarbons n.e.s.
345 Coal gas, water gas, producer gas etc., n.e.s.

- Division 35: Electric current
351 Electric current

Section 4: Animal and vegetable oils, fats, and waxes

- Division 41: Animal oils and fats
411 Animal oils and fats

- Division 42: Fixed vegetable fats and oils, crude, refined, or fractionated
421 Fixed vegetable fats and oils, soft, crude, refined etc.
422 Fixed vegetable fats and oils crude, refined etc., not soft
423 Fixed vegetable oils, soft
424 Other fixed vegetable oils, fl

- Division 43: Animal or vegetable fats and oils, processed; waxes of animal or vegetable origin; inedible mixtures or preparations of animal or vegetable fats and oils, n.e.s.
431 Animal/vegetable fats/oils process/waxes/inedible prep n.e.s.

Section 5: Chemicals and Related Products

- Division 51: Organic chemicals
511 Hydrocarbons n.e.s. and specified derivatives
512 Alcohol, phenols etc. and halogenated etc., derivatives
513 Carboxylic acids etc. halides etc., and derivatives
514 Nitrogen-function compounds
515 Organic-inorganic and heterocyclic compounds etc.
516 Organic chemicals, n.e.s.

- Division 52: Inorganic chemicals
522 Inorganic chemical elements, oxides, halogen salts
523 Metallic salts and peroxy salts of inorganic acids
524 Inorganic chemicals n.e.s., precious metal compounds
525 Radioactive and associated materials

- Division 53: Dyeing, tanning, and coloring materials
531 Synthetic organic coloring matter, color lakes etc.

- 532 Dying and tanning extracts, synthetic tanning materials
- 533 Pigments, paints, varnishes and related materials
- Division 54: Medical and pharmaceutical products
 - 541 Medicinal etc. products, except medicaments
 - 542 Medicaments (including veterinary medicaments)
- Division 55: Essential oils and resinoids and perfume materials; toilet, polishing, and cleaning preparations
 - 551 Essential oils, perfume and flavor materials
 - 553 Perfumery, cosmetics or toilet preparations, except soaps
 - 554 Soap, cleansing and polishing preparations
- Division 56: Fertilizers (other than those of group 272)
 - 562 Fertilizers (except crude of group 272)
- Division 57: Plastics in primary forms
 - 571 Polymers of ethylene, in primary forms
 - 572 Polymers of styrene, in primary forms
 - 573 Polymers of vinyl chloride and other hal olefins etc.
 - 574 Polyacetals etc., epoxide resins etc., primary forms
 - 575 Plastics, n.e.s., in primary forms
 - 579 Wastes, parings and scrap, of plastics
- Division 58: Plastics in non-primary forms
 - 581 Tubes, pipes and hoses of plastics
 - 582 Plates, sheets, film, foil and strip of plastics
 - 583 Monofit, cr-sect ov 1 mm, rods etc., of plastics
- Division 59: Chemical materials and products, n.e.s.
 - 591 Insecticides, disinfectants etc., retail packed etc.
 - 592 Starches, inulin and wh gluten, albuminoidol substances, glues
 - 593 Explosives and pyrotechnic products
 - 597 Additives for min oils etc., antifreeze etc. preparations
 - 598 Miscellaneous chemical products, n.e.s.

Section 6: Manufactured Goods Classified Chiefly By Material

- Division 61: Leather, leather manufactures, n.e.s., and dressed furskins
 - 611 Leather
 - 612 Manufactures of leather (including composition) n.e.s., saddlery etc.
 - 613 Furskins (and pieces), tanned or dressed
- Division 62: Rubber manufactures, n.e.s.
 - 621 Materials of rubber (pastes, plates, sheets, etc.)
 - 625 Rubber tires, inter treads, tire flaps and inner tubes
 - 628 Articles of rubber, n.e.s.
 - 629 Articles of rubber, n.e.s.
- Division 63: Cork and wood manufactures (excluding furniture)

- 633 Cork manufactures
 - 634 Veneers, plywood, particleboard, other worked wood n.e.s.
 - 635 Wood manufactures, n.e.s.
- Division 64: Paper, paperboard, and articles of paper pulp, of paper or of paperboard
- 641 Paper and paperboard
 - 642 Paper and paperboard, cut to size or shape, articles
- Division 65: Textile yarn, fabrics, made-up articles, n.e.s., and related products
- 651 Textile yarn
 - 652 Cotton fabrics, woven (not narrow or special fabrics)
 - 653 Woven fabrics, manmade textile materials (not narrow or special fabrics)
 - 654 Woven fabrics or textile materials not cotton or manmade
 - 655 Knitted or crocheted fabrics, n.e.s.
 - 656 Tullies, lace, embroidery, ribbons, trimmings, etc.
 - 657 Special yarns, special textile fabrics, etc.
 - 658 Made-up articles of textile materials, n.e.s.
 - 659 Floor coverings, etc.
- Division 66: Non-metallic mineral manufactures, n.e.s.
- 661 Lime, cement and fabricated construct materials n.e.s.
 - 662 Clay and refractory construction materials
 - 663 Mineral manufactures, n.e.s.
 - 664 Glass
 - 665 Glassware
 - 666 Pottery
 - 667 Pearls, precious and semiprecious stones
- Division 67: Iron and steel
- 671 Pig iron, spiegeleisen etc. iron and steel powders etc.
 - 672 Iron or steel primary forms and semifinish products
 - 673 Iron and nonalloy steel flat-roll products, not clad etc.
 - 674 Iron and nonalloy steel flat-rolled products, clad, etc.
 - 675 Alloy steel flat-rolled products
 - 676 Iron and steel bars, rods, angles, shapes and sections
 - 677 Iron and steel rails and railway track construction material
 - 678 Iron and steel wire
 - 679 Iron and steel tubes, pipes and hol profiles, fittings
- Division 68: Non-ferrous metals
- 681 Silver, platinum and other platinum group metals
 - 682 Copper
 - 683 Nickel
 - 684 Aluminum
 - 685 Lead
 - 686 Zinc
 - 687 Tin
 - 688 Uranium depleted in U235 and t
 - 689 Miscellaneous non-ferrous base metals for metallurgy and cermets

- Division 69: Manufactures of metal, n.e.s.
- 691 Metal structures and parts n.e.s. iron, steel, and Aluminum
 - 692 Metal containers for storage or transport
 - 693 Wire products (excluding insulate electric) and fencing grills
 - 694 Nails, screws, nuts etc., iron, steel, copper, Aluminum
 - 695 Tools for use in the hand or in machines
 - 696 Cutlery
 - 697 Household equipment of base metal, n.e.s.
 - 699 Manufactures of base metal, n.e.s.

Section 7: Machinery and Transport Equipment

- Division 71: Power generating machinery and equipment
- 711 Steam or other vapors generating boilers, etc.
 - 712 Steam turbines and other vapor turbines, and parts thereof
 - 713 Internal combustion piston engines, and parts, n.e.s.
 - 714 Engines and motors, nonelectric and parts, n.e.s.
 - 716 Rotating electric plant and parts thereof, n.e.s.
 - 718 Power generating machinery and parts, n.e.s.
- Division 72: Machinery specialized for particular industries
- 721 Agricultural machinery (excluding tractors) and parts
 - 722 Tractors (other than mechanical handling equipment)
 - 723 Civil engineering and contractors' plant and equipment
 - 724 Textile and leather machinery and parts thereof n.e.s.
 - 725 Paper mill and pulp mill machinery, paper-cutting machinery
 - 726 Printing and bookbinding machinery and parts thereof
 - 727 Food-processing machines (excluding domestic)
 - 728 Machinery etc. specialized for particular industries n.e.s.
- Division 73: Metal working machinery
- 731 Machinery tools working by removing metal or other material
 - 733 Machine tools for working but not removing metal
 - 735 Parts, n.e.s. and access for metal work machine tools
 - 736 Machine tools for working metal
 - 737 Metalworking machinery, and parts thereof, n.e.s.
- Division 74: General industrial machinery and equipment, n.e.s., and machine parts, n.e.s.
- 741 Heating and cooling equipment and parts thereof, n.e.s.
 - 742 Pumps for liquids, liquid and parts thereof, n.e.s.
 - 743 Pumps, air or other gas compressors and fans
 - 744 Mechanical handling equipment and parts thereof, n.e.s.
 - 745 Nonelectrical machinery, tools, appliances and parts, n.e.s.
 - 746 Ball or roller bearings
 - 747 Taps, cockes, valves and sim appliances
 - 748 Transmission shafts and cranks, bearing housings, etc.
 - 749 Nonelectric parts and accessories of machinery n.e.s.
- Division 75: Office machines and automatic data processing machines

- 751 Office machines
- 752 Automatic data process machines and units thereof
- 759 Parts etc. for office machine and auto data process machine

Division 76: Telecommunications and sound recording and reproducing apparatus and equipment

- 761 Television receivers
- 762 Radiobroadcast receivers whether/not including sound recordings etc.
- 763 Sound recorders, TV recorders, recordings/ media unr
- 764 Telecommunications equipment, n.e.s. and parts, n.e.s.

Division 77: Electrical machinery, apparatus and appliances, n.e.s., and electrical parts thereof (including non-electrical counterparts n.e.s. of electrical household type equipment)

- 771 Electric power machinery and parts thereof
- 772 Electrical apparatus for switching or protecting electric circuit
- 773 Equipment for distributing electricity, n.e.s.
- 774 Electro-diagnostic apparatus
- 775 Household type electric and nonelectric equipment, n.e.s.
- 776 Thermionic, cold cathode, photocatmode valves etc.
- 778 Electrical machinery and apparatus, n.e.s.

Division 78: Road vehicles (including air-cushion vehicles)

- 781 Motor cars and other motor vehicles
- 782 Motor vehicles for transport of goods and special purchase vehicles
- 783 Parts and accessories of motor vehicles, etc.
- 784 Road vehicles, n.e.s.
- 785 Motorcycles and cycles, motorized and not motorized
- 786 Trailers and semi-trailers, other vehicles not mechanically propelled

Division 79: Other transport equipment

- 791 Railway vehicles and associated equipment
- 792 Aircraft and associated equipment, spacecraft vehicles and parts
- 793 Ships boats and floating structures

Section 8: Miscellaneous Manufactured Articles

Division 81: Prefabricated buildings, sanitary plumbing, heating and lighting fixtures and fittings, n.e.s.

- 811 Prefabricated buildings
- 812 Sanitary, plumbing and heating fixtures and fittings n.e.s.
- 813 Lighting fixtures and fittings n.e.s.

Division 82: Furniture and parts thereof; bedding, mattresses, mattress supports, cushions and similar stuffed furnishing

- 821 Furniture and parts, bedding, mattresses, etc.

Division 83: Travel goods, handbags, and similar containers

831 Trunks, suitcases, vanity cases, briefcases, etc.

Division 84: Articles of apparel and clothing accessories

840 Special U.N. category

841 Men's or boy's coats, jackets etc., textile, not knitted

842 Women/girls coats, capes etc., textile fabric, not knitted

843 Men's or boy's coats, jackets etc., textile, knitted

844 Women/girls coats, capes etc., textile, knitted

845 Articles of apparel of textile fabrics n.e.s.

846 Clothing accessories, of textile, knitted or not, except babies

847 Clothing accessories, of textile

848 Apparel and clothing accessories except textile, headgear, all material

Division 85: Footwear

851 Footwear

Division 87: Professional, scientific and controlling instruments, and apparatus, n.e.s.

871 Optical instruments and apparatus, n.e.s.

872 Instruments and apparatus, n.e.s., for medical, dental etc. purpose

873 Meters and counters, n.e.s.

874 Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.

Division 88: Photographic apparatus, equipment and supplies, and optical goods, n.e.s.; watches and clocks

881 Photographic apparatus and equipment, n.e.s.

882 Photographic and cinematographic supplies

883 Cinema film, exp/develop whether/not incor sound tract

884 Optical goods, n.e.s.

885 Watches and clocks

Division 89: Miscellaneous manufactured articles, n.e.s.

891 Arms and ammunition

892 Printed matter

893 Articles, n.e.s. of plastics

894 Baby carriages, toys, games and sporting goods

895 Office and stationery supplies, n.e.s.

896 Works of art, collectors' pieces and antiques

897 Jewelry, goldsmith' and silversmiths' wares etc.

898 Musical instruments and parts, records, tapes etc.

899 Miscellaneous manufactured articles, n.e.s.

Section 9: Commodities and Transactions Not Classified Elsewhere in SITC

Division 91: Postal packages not classified according to kind

Division 92: Special transactions and commodities not classified according to kind

Division 93: Coin (other than gold coin) not being legal tender

931 Special transactions and commodities not classified by kind

Division 94: Gold, non-monetary (excluding gold, ores, and concentrates)

- 950 Coin including gold, proof fan presentation sets
- 961 Coin (other than gold coin) not being legal tender
- 971 Gold, non-monetary (excluding ores and concentrates)
- 984 Estimate of low valued import transactions
- 992 Shipments not over \$10,000, not identified by kind
- 994 Estimate low value shipments, Canadian low value and n.i.k.
- 998 Adjustment for undocumented exports

APPENDIX B

REVISION 2 AND REVISION 3 DATA DISCREPANCIES

U.S. EXPORT DATA

1. The following three-digit subgroups are only exported to Japan and are not imported from Japan: 000, 023, 286, 345, 351, 688, 831, and 840.
2. There are several three-digit subgroups in the export data, which report data only from 1978 to December 1988. They are as follows: 233, 251, 323, 341, 423, 424, 580, 584, 585, 628, 688, 736, 840, and 847. From 1989 to 1996, there are no values reported in the aforementioned categories. For clarification purposes, these values are not "zeros." There are blanks reflecting unavailable data from 1989 to 1996. In addition, SITC group 286 and 333 only contain a single number. In category 286, from January 1983 through February 1987 and April 1987 through December 1988 a zero value is reported and the only non-zero value is in March 1987. For all other dates there is no value reported. In category 333, from January 1983 through May 1985 and July 1985 through December 1988 a zero value is reported and the only non-zero value is in June 1985. For all other dates there is no value reported.
3. There are several three-digit subgroups in the export data, which report data only from January 1989 to 1996. They are as follows: 231, 264, 283, 284, 285, 321, 325, 342, 343, 344, 345, 351, 421, 422, 525, 542, 571, 573, 574, 575, 579, 593, 597, 629, 731, 733, 735, 746, 747, 748, 811, 813, 841, and 891. Reconciling this data irregularity is not

difficult and in the majority of cases, the label for the subgroups simply changes due to changes in export patterns.

U.S. IMPORT DATA

- 1.** The following three-digit subgroups are only imported from Japan and are not exported to Japan: 272, 401, 510, 550, 581, 690, 710, 730, 740, 750, 780, 790, 864, and 890.
- 2.** There are several three-digit subgroups in the import data, which report data only from 1978 to December 1988. They are as follows: 014, 211, 233, 264, 271, 341, 401, 423, 424, 510, 550, 584, 585, 628, 690, 710, 736, 740, 750, 847, 864, and 890. From 1989 to 1996, there are no values reported in the aforementioned categories. SITC 580 only records data from 1978 to 1982 and has a zero value in 1981 and 1982. SITC 730, 780 and 790 have data reported only from 1978 to 1982 and have zero values in 1980, 1981, and 1982.
- 3.** There are several three-digit subgroups in the import data, which report data only from January 1989 to 1996. They are as follows: 016, 017, 059, 231, 272, 284, 285, 321, 325, 342, 344, 421, 422, 525, 542, 571, 573, 574, 575, 579, 581, 593, 597, 629, 731, 733, 735, 746, 747, 748, 811, 813, and 891. SITC 283 has data from 1993 to 1996 and only has a non-zero value in 1993. SITC 343 also has data only from 1993 to 1996 and has a zero value in all four years except 1995.

REVISIONS

In Division 84, articles of apparel and clothing accessories, the classifications of SITC codes changed substantially in 1987 with the introduction of *Revision 3* and are worthy of formal documentation. Division 84 is composed of seven three-digit product groups. For comparison to get a better picture for the nature of the data, the three-digit product groups according to *Revision 2* and *Revision 3* are listed in the table below. Division 84 represents a substantial reclassification involving the preceding three-digit product groups according to *Revision 3*.

Table 1-21 Reclassification of SITC Division 84

Revision 2 Product Groups 1978 to 1987	Revision 2 Product Groups 1978 to 1987
None	841 Men's or boy's coats, jackets, suits, blazers, trousers, shorts, shirts, underwear, knitwear, and similar articles of textile fabrics, not knitted or crocheted
842 Outer garments, men's and boys', of textile fabrics (other than knitted or crocheted)	842 Women's and girls' coats, capes, jackets, suits, blazers, trousers, shorts, shirt, underwear, and similar articles of textile fabrics, not knitted or crocheted
843 Outer garments, women's, girls' and infants', of textile fabrics (other than knitted or crocheted)	843 Men's or boy's coats, capes, jackets, suits, blazers, trousers, shorts, shirts, underwear, nightwear, and similar articles of textile fabrics, knitted or crocheted
844 Under garments of textile fabrics (other than knitted or crocheted goods)	844 Women's and girls' coats, capes, jackets, suits, blazers, trousers, shorts, shirt, underwear, and similar articles of textile fabrics, knitted or crocheted
845 Outer garments and other articles, knitted or crocheted, not elastic nor rubberized	845 Articles of apparel of textile fabrics, whether or not knitted or crocheted, n.e.s.
846 Under garments, knitted or crocheted	846 Clothing accessories, of textile fabrics, whether or not knitted or crocheted (other than those for babies)
847 Clothing accessories, of textile fabrics (other than knitted or crocheted)	None
848 Articles of apparel and clothing accessories of other than textile fabrics; headgear of all materials	848 Articles of apparel and clothing accessories of other than textiles fabrics; headgear, all materials

Source: Standard International Trade Classification, *Revisions 2 and 3*

APPENDIX C

TOP 50 % OF U.S. EXPORTS TO AND IMPORTS FROM JAPAN BY YEAR

Classification by Three-Digit SITC Code

Table 1-22 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1978

EXPORTS		IMPORTS		
1978	222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	7.68	781 ▶ Motor cars and other motor vehicles	23.46
	247 ▶ Wood in the rough or roughly squared	7.52	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s.	4.95
	044 ▶ Maize (not including sweet corn) unmilled	7.14	784 ▶ Road vehicles, n.e.s.	4.90
	322 ▶ Briquettes, lignite and peat	4.48	674 ▶ Iron and nonalloy steel flat-rolled products, clad, etc.	4.56
	792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	3.87	785 ▶ Motorcycles and cycles, motorized and not motorized	3.70
	041 ▶ Wheat (including spelt) and meslin, unmilled	3.36	763 ▶ Sound recorders, tv recorders, recordings/ media unr	3.53
	263 ▶ Cotton textile fibers	2.76	762 ▶ Radio-broadcast receivers whether/not incl. Sound recordings etc.	2.92
	011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.44	678 ▶ Iron and steel wire	2.91
	000 ▶ Special U.N. Category	2.17		
	211 ▶ Hides and skins (except furskins), raw	1.92		
	874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	1.90		
	282 ▶ Ferrous waste and scrap, rmltng iron or steel ingots	1.87		
	045 ▶ Cereals, unmilled except wheat, rice, barley, maize	1.86		
	121 ▶ Tobacco, unmanufactured, tobacco substitute	1.77		

Table 1-23 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1979

EXPORTS		IMPORTS	
247 ▶ Wood in the rough or roughly squared	8.51	781 ▶ Motor cars and other motor vehicles	24.99
044 ▶ Maize (not including sweet corn) unmilled	6.88	674 ▶ Iron and nonalloy steel flat-rolled products, clad, etc.	4.80
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	6.03	784 ▶ Road vehicles, n.e.s.	4.38
322 ▶ Briquettes, lignite and peat	5.24	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	4.28
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	4.90	785 ▶ Motorcycles and cycles, motorized and not motorized	3.65
041 ▶ Wheat (including spelt) and meslin, unmilled	3.07	763 ▶ Sound recorders, tv recorders, recordings/ media unr	3.25
263 ▶ Cotton textile fibers	2.60	678 ▶ Iron and steel wire	3.15
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.24	751 ▶ Office machines	2.51
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.17		
211 ▶ Hides and skins (except furskins), raw	1.83		
282 ▶ Ferrous waste and scrap, rmltng iron or steel ingots	1.75		
752 ▶ Automatic data process machines and units thereof	1.52		
541 ▶ Medicinal etc. products, except medicaments	1.49		
248 ▶ Wood, simply worked and railway sleepers of wood	1.48		
045 ▶ Cereals, unmilled except wheat, rice, barley, maize	1.44		

1979

Table 1-24 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1980

EXPORTS		IMPORTS		
1980	044 ▶ Maize (not including sweet corn) unmilled	7.89	781 ▶ Motor cars and other motor vehicle	27.10
	322 ▶ Briquettes, lignite and peat	6.37	784 ▶ Road vehicles, n.e.s.	5.06
	247 ▶ Wood in the rough or roughly squared	6.30	678 ▶ Iron and steel wire	4.13
	222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	5.48	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s.	4.13
	792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	5.27	785 ▶ Motorcycles and cycles, motorized not motorized	4.12
	041 ▶ Wheat (including spelt) and meslin, unmilled	2.88	763 ▶ Sound recorders, tv recorders, recordings/ media unr	3.36
	684 ▶ Aluminum	2.69	674 ▶ Iron and nonalloy steel flat-rolled products, clad, etc.	3.30
	263 ▶ Cotton textile fibers	2.57		
	045 ▶ Cereals, unmilled except wheat, rice, barley, maize	2.43		
	288 ▶ Nonferrous base metal waste and scrap, n.e.s.	2.21		
	874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.05		
	011 ▶ Meat of bovine animal, fresh, chilled, or frozen	1.81		
	752 ▶ Automatic data process machines and units thereof	1.75		
	246 ▶ Wood in chips or particles and wood waste	1.74		

Table 1-25 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1981

EXPORTS		IMPORTS	
044 ▶ Maize (not including sweet corn) unmilled	8.28	781 ▶ Motor cars and other motor vehicles	25.70
322 ▶ Briquettes, lignite and peat	6.81	678 ▶ Iron and steel wire	6.02
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	6.06	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s.	4.98
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	5.31	782 ▶ Motor vehicles for transport of goods and special purchase vehicles	4.80
247 ▶ Wood in the rough or roughly squared	3.86	763 ▶ Sound recorders, tv recorders, recordings media unr	4.69
041 ▶ Wheat (including spelt) and meslin, unmilled	2.84	785 ▶ Motorcycles and cycles, motorized and not motorized	3.91
263 ▶ Cotton textile fibers	2.36		
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.27		
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.19		
541 ▶ Medicinal etc. products, except medicaments	2.03		
045 ▶ Cereals, unmilled except wheat, rice, barley, maize	1.92		
684 ▶ Aluminum	1.84		
752 ▶ Automatic data process machines and units thereof	1.81		
759 ▶ Parts etc. for office machine and auto data process machine	1.74		
524 ▶ Inorganic chemicals n.e.s., precious metal compounds	1.54		

1981

Table 1-26 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1982

EXPORTS		IMPORTS		
1982	322 ▶ Briquettes, lignite and peat	7.38	781 ▶ Motor cars and other motor vehicles	26.16
	044 ▶ Maize (not including sweet corn) unmilled	6.24	678 ▶ Iron and steel wire	6.00
	222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	4.81	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s.	5.10
	792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	4.39	763 ▶ Sound recorders, tv recorders, recordings media unr	4.55
	247 ▶ Wood in the rough or roughly squared	4.10	782 ▶ Motor vehicles for transport of goods and special purchase vehicles	4.01
	041 ▶ Wheat (including spelt) and meslin, unmilled	2.73	785 ▶ Motorcycles and cycles, motorized and not motorized	3.07
	011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.49	751 ▶ Office machines	2.68
	263 ▶ Cotton textile fibers	2.47		
	541 ▶ Medicinal etc. products, except medicaments	2.42		
	334 ▶ Oil (not crude) from petroleum and bituminous minerals etc.	2.39		
	874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.30		
	524 ▶ Inorganic chemicals n.e.s., precious metal compounds	2.26		
	759 ▶ Parts etc. for office machine and auto data process machine	2.16		
	684 ▶ Aluminum	2.01		
	752 ▶ Automatic data process machines and units thereof	1.94		

Table 1-27 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1983

EXPORTS		IMPORTS	
044 ▶ Maize (not including sweet corn) unmilled	8.18	781 ▶ Motor cars and other motor vehicles	27.02
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	6.24	763 ▶ Sound recorders, tv recorders, recordings/ media unr	5.70
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	5.69	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s.	5.62
322 ▶ Briquettes, lignite and peat	4.65	782 ▶ Motor vehicles for transport of goods and special purchase vehicles	4.17
247 ▶ Wood in the rough or roughly squared	3.25	751 ▶ Office machines	2.70
041 ▶ Wheat (including spelt) and meslin, unmilled	2.73	776 ▶ Thermionic, cold cathode, photocatmode valves etc.	2.63
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.57	759 ▶ Parts etc. for office machine and auto data process machine	2.58
334 ▶ Oil (not crude) from petroleum and bituminous minerals etc.	2.48		
541 ▶ Medicinal etc. products, except medicaments	2.46		
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.35		
263 ▶ Cotton textile fibers	2.34		
752 ▶ Automatic data process machines and units thereof	2.22		
759 ▶ Parts etc. for office machine and auto data process machine	2.18		
524 ▶ Inorganic chemicals n.e.s., precious metal compounds	2.04		
341 ▶ Gas, natural and manufactured	1.79		

1983

Table 1-28 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1984

EXPORTS		IMPORTS	
044 ▶ Maize (not including sweet corn) unmilled	8.63	781 ▶ Motor cars and other motor vehicles	22.54
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	5.14	763 ▶ Sound recorders, tv recorders, recordings/ media unr	6.58
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	4.66	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	6.33
322 ▶ Briquettes, lignite and peat	3.74	782 ▶ Motor vehicles for transport of goods and special purchase vehicles	4.11
247 ▶ Wood in the rough or roughly squared	2.77	776 ▶ Thermionic, cold cathode, photocatmode valves etc.	3.87
263 ▶ Cotton textile fibers	2.64	752 ▶ Automatic data process machines and units thereof	3.28
524 ▶ Inorganic chemicals n.e.s., precious metal compounds	2.61	759 ▶ Parts etc. for office machine and auto data process machine	3.12
752 ▶ Automatic data process machines and units thereof	2.57	674 ▶ Iron and nonalloy steel flat-rolled products, clad, etc.	2.78
759 ▶ Parts etc. for office machine and auto data process machine	2.53		
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.45		
334 ▶ Oil (not crude) from petroleum and bituminous minerals etc.	2.43		
541 ▶ Medicinal etc. products, except medicaments	2.40		
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.36		
041 ▶ Wheat (including spelt) and meslin, unmilled	2.31		
776 ▶ Thermionic, cold cathode, photocatmode valves etc.	2.18		
728 ▶ Machinery etc. specialized for particular industries n.e.s	1.96		

1984

Table 1-29 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1985

EXPORTS		IMPORTS		
1985	792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	6.70	781 ▶ Motor cars and other motor vehicles	24.71
	044 ▶ Maize (not including sweet corn) unmilled	5.88	763 ▶ Sound recorders, tv recorders, recordings/ media unr	7.68
	222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	4.30	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	5.65
	322 ▶ Briquettes, lignite and peat	3.47	782 ▶ Motor vehicles for transport of goods and special purchase vehicles	4.98
	752 ▶ Automatic data process machines and units thereof	3.13	784 ▶ Road vehicles, n.e.s.	2.89
	759 ▶ Parts etc. for office machine and auto data process machine	3.12	759 ▶ Parts etc. for office machine and auto data process machine	2.85
	247 ▶ Wood in the rough or roughly squared	3.08	752 ▶ Automatic data process machines and units thereof	2.80
	334 ▶ Oil (not crude) from petroleum and bituminous minerals etc.	2.77		
	874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.67		
	541 ▶ Medicinal etc. products, except medicaments	2.63		
	524 ▶ Inorganic chemicals n.e.s., precious metal compounds	2.63		
	011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.38		
	034 ▶ Fish, fresh (live or dead), chilled or frozen	2.33		
	041 ▶ Wheat (including spelt) and meslin, unmilled	2.11		
	776 ▶ Thermionic, cold cathode, photocatmode valves etc.	1.84		
	263 ▶ Cotton textile fibers	1.68		

Table 1-30 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1986

EXPORTS		IMPORTS	
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	6.88	781 ▶ Motor cars and other motor vehicles	26.59
044 ▶ Maize (not including sweet corn) unmilled	3.30	763 ▶ Sound recorders, tv recorders, recordings/ media unr	7.18
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	3.21	782 ▶ Motor vehicles for transport of goods and special purchase vehicles	5.88
247 ▶ Wood in the rough or roughly squared	2.97	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s.	5.08
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.81	784 ▶ Road vehicles, n.e.s.	3.80
752 ▶ Automatic data process machines and units thereof	2.80	752 ▶ Automatic data process machines and units thereof	3.39
759 ▶ Parts etc. for office machine and auto data process machine	2.75		
524 ▶ Inorganic chemicals n.e.s., precious metal compounds	2.46		
541 ▶ Medicinal etc. products, except medicaments	2.39		
034 ▶ Fish, fresh (live or dead), chilled or frozen	2.39		
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.38		
322 ▶ Briquettes, lignite and peat	2.08		
334 ▶ Oil (not crude) from petroleum and bituminous minerals etc.	1.67		
776 ▶ Thermionic, cold cathode, photocatmode valves etc.	1.61		
041 ▶ Wheat (including spelt) and meslin, unmilled	1.59		
251 ▶ Pulp and waste paper	1.56		
057 ▶ Fruit, nuts (not including oil nuts) fresh or dried	1.42		
714 ▶ Engines and motors, nonelectric and parts, n.e.s.	1.41		
641 ▶ Paper and paperboard	1.27		
211 ▶ Hides and skins (except furskins), raw	1.25		
764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	1.21		
288 ▶ Nonferrous base metal waste and scrap, n.e.s.	1.20		

1986

Table 1-31 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1987

EXPORTS		IMPORTS	
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	6.86	781 ▶ Motor cars and other motor vehicles	25.86
247 ▶ Wood in the rough or roughly squared	4.06	782 ▶ Motor vehicles for transport of goods and special purchase vehicles	4.93
044 ▶ Maize (not including sweet corn) unmilled	3.73	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	4.84
759 ▶ Parts etc. for office machine and auto data process machine	3.36	763 ▶ Sound recorders, tv recorders, recordings/ media unr	4.81
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	3.17	784 ▶ Road vehicles, n.e.s.	4.63
752 ▶ Automatic data process machines and units thereof	3.16	759 ▶ Parts etc. for office machine and auto data process machine	4.36
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	2.88	752 ▶ Automatic data process machines and units thereof	4.13
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.82		
034 ▶ Fish, fresh (live or dead), chilled or frozen	2.62		
541 ▶ Medicinal etc. products, except medicaments	2.48		
776 ▶ Thermionic, cold cathode, photocatmode valves etc.	2.33		
251 ▶ Pulp and waste paper	2.06		
524 ▶ Inorganic chemicals n.e.s., precious metal compounds	1.97		
334 ▶ Oil (not crude) from petroleum and bituminous minerals etc.	1.95		
122 ▶ Tobacco, manufactured whether containing tobacco substitute	1.78		
322 ▶ Briquettes, lignite and peat	1.74		
248 ▶ Wood, simply worked and railway sleepers of wood	1.60		
057 ▶ Fruit, nuts (not including oil nuts) fresh or dried	1.56		

1987

Table 1-32 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1988

EXPORTS		IMPORTS	
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	5.80	781 ▶ Motor cars and other motor vehicles	22.51
044 ▶ Maize (not including sweet corn) unmilled	4.32	784 ▶ Road vehicles, n.e.s.	5.39
752 ▶ Automatic data process machines and units thereof	3.73	759 ▶ Parts etc. for office machine and auto data process machine	5.32
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	3.59	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	4.60
247 ▶ Wood in the rough or roughly squared	3.58	752 ▶ Automatic data process machines and units thereof	4.30
759 ▶ Parts etc. for office machine and auto data process machine	3.18	763 ▶ Sound recorders, tv recorders, recordings/ media unr	3.97
034 ▶ Fish, fresh (live or dead), chilled or frozen	3.01	776 ▶ Thermionic, cold cathode, photocatmode valves etc.	3.97
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	3.00		
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	2.79		
776 ▶ Thermionic, cold cathode, photocatmode valves etc	2.57		
541 ▶ Medicinal etc. products, except medicaments	2.22		
251 ▶ Pulp and waste paper	2.13		
684 ▶ Aluminum	1.97		
122 ▶ Tobacco, manufactured whether containing tobacco substitute	1.63		
322 ▶ Briquettes, lignite and peat	1.60		
288 ▶ Nonferrous base metal waste and scrap, n.e.s.	1.57		
764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	1.56		
248 ▶ Wood, simply worked and railway sleepers of wood	1.53		
714 ▶ Engines and motors, nonelectric and parts, n.e.s.	1.42		

1988

Table 1-33 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1989

EXPORTS		IMPORTS	
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	4.57	781 ▶ Motor cars and other motor vehicles	21.65
752 ▶ Automatic data process machines and units thereof	4.31	752 ▶ Automatic data process machines and units thereof	5.90
247 ▶ Wood in the rough or roughly squared	3.76	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e. s.	5.70
044 ▶ Maize (not including sweet corn) unmilled	3.50	784 ▶ Road vehicles, n.e.s.	5.57
759 ▶ Parts etc. for office machine and auto data process machine	2.89	776 ▶ Thermionic, cold cathode, photocatmode valves etc.	4.67
776 ▶ Thermionic, cold cathode, photocatmode valves etc	2.75	759 ▶ Parts etc. for office machine and auto data process machine	4.16
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.63	763 ▶ Sound recorders, tv recorders, recordings/ media unr	3.55
034 ▶ Fish, fresh (live or dead), chilled or frozen	2.56		
896 ▶ Works of art, collectors' pieces and antiques	2.44		
684 ▶ Aluminum	2.38		
251 ▶ Pulp and waste paper	2.25		
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.25		
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	2.01		
122 ▶ Tobacco, manufactured whether containing tobacco substitute	1.97		
764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	1.93		
525 ▶ Radioactive and associated materials	1.79		
248 ▶ Wood, simply worked and railway sleepers of wood	1.59		
541 ▶ Medicinal etc. products, except medicaments	1.47		
321 ▶ Coal, pulverized or not, but not agglomerated	1.34		
288 ▶ Nonferrous base metal waste and scrap, n.e.s.	1.33		
012 ▶ Meat n.e.s. and edible offal, fresh, chilled, or frozen	1.33		

1989

Table 1-34 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1990

EXPORTS		IMPORTS	
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	7.20	781 ▶ Motor cars and other motor vehicles	21.78
752 ▶ Automatic data process machines and units thereof	4.20	752 ▶ Automatic data process machines and units thereof	6.37
247 ▶ Wood in the rough or roughly squared	3.40	784 ▶ Road vehicles, n.e.s.	5.74
044 ▶ Maize (not including sweet corn) unmilled	3.39	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	5.34
896 ▶ Works of art, collectors' pieces and antiques	3.34	776 ▶ Thermionic, cold cathode, photocathode valves etc.	4.04
759 ▶ Parts etc. for office machine and auto data process machine	3.25	759 ▶ Parts etc. for office machine and auto data process machine	3.71
776 ▶ Thermionic, cold cathode, photocathode valves etc	2.80	763 ▶ Sound recorders, tv recorders, recordings/ media unr	3.37
122 ▶ Tobacco, manufactured whether containing tobacco substitute	2.71		
034 ▶ Fish, fresh (live or dead), chilled or frozen	2.61		
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.30		
684 ▶ Aluminum	2.09		
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	1.96		
781 ▶ Motor cars and other motor vehicles	1.90		
764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	1.90		
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	1.74		
251 ▶ Pulp and waste paper	1.60		
525 ▶ Radioactive and associated materials	1.38		
248 ▶ Wood, simply worked and railway sleepers of wood	1.37		
714 ▶ Engines and motors, nonelectric and parts, n.e.s.	1.31		

1990

Table 1-35 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. + Exports to and Imports from Japan, 1991

EXPORTS		IMPORTS	
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	6.53	781 ▶ Motor cars and other motor vehicles	23.16
752 ▶ Automatic data process machines and units thereof	4.20	752 ▶ Automatic data process machines and units thereof	7.41
759 ▶ Parts etc. for office machine and auto data process machine	3.45	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e. s.	5.71
776 ▶ Thermionic, cold cathode, photocatmode valves etc	3.25	784 ▶ Road vehicles, n.e.s.	5.42
044 ▶ Maize (not including sweet corn) unmilled	3.16	776 ▶ Thermionic, cold cathode, photocatmode valves etc.	4.51
247 ▶ Wood in the rough or roughly squared	2.88	759 ▶ Parts etc. for office machine and auto data process machine	3.81
122 ▶ Tobacco, manufactured whether containing tobacco substitute	2.81		
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.60		
034 ▶ Fish, fresh (live or dead), chilled or frozen	2.59		
684 ▶ Aluminum	2.45		
764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	2.12		
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	1.85		
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	1.83		
525 ▶ Radioactive and associated materials	1.64		
781 ▶ Motor cars and other motor vehicles	1.49		
251 ▶ Pulp and waste paper	1.46		
012 ▶ Meat n.e.s. and edible offal, fresh, chilled, or frozen	1.38		
248 ▶ Wood, simply worked and railway sleepers of wood	1.35		
714 ▶ Engines and motors, nonelectric and parts, n.e.s.	1.32		
541 ▶ Medicinal etc. products, except medicaments	1.28		
728 ▶ Machinery etc. specialized for particular industries n.e.s	1.15		

1991

Table 1-36 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1992

EXPORTS		IMPORTS	
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	7.97	781 ▶ Motor cars and other motor vehicles	21.40
752 ▶ Automatic data process machines and units thereof	4.30	752 ▶ Automatic data process machines and units thereof	8.83
759 ▶ Parts etc. for office machine and auto data process machine	3.29	784 ▶ Road vehicles, n.e.s.	5.61
034 ▶ Fish, fresh (live or dead), chilled or frozen	3.28	776 ▶ Thermionic, cold cathode, photocathode valves etc.	5.16
247 ▶ Wood in the rough or roughly squared	3.25	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s.	5.15
776 ▶ Thermionic, cold cathode, photocathode valves etc	3.15	759 ▶ Parts etc. for office machine and auto data process machine	3.87
044 ▶ Maize (not including sweet corn) unmilled	3.11		
122 ▶ Tobacco, manufactured whether containing tobacco substitute	2.71		
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.41		
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.33		
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	1.91		
781 ▶ Motor cars and other motor vehicles	1.83		
764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s.	1.77		
012 ▶ Meat n.e.s. and edible offal, fresh, chilled, or frozen	1.71		
525 ▶ Radioactive and associated materials	1.67		
684 ▶ Aluminum	1.42		
251 ▶ Pulp and waste paper	1.38		
248 ▶ Wood, simply worked and railway sleepers of wood	1.34		
714 ▶ Engines and motors, nonelectric and parts, n.e.s.	1.28		

1992

Table 1-37 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1993

EXPORTS		IMPORTS	
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	5.91	781 ▶ Motor cars and other motor vehicles	20.46
247 ▶ Wood in the rough or roughly squared	3.96	752 ▶ Automatic data process machines and units thereof	9.05
752 ▶ Automatic data process machines and units thereof	3.91	776 ▶ Thermionic, cold cathode, photocatmode valves etc.	6.03
776 ▶ Thermionic, cold cathode, photocatmode valves etc	3.85	784 ▶ Road vehicles, n.e.s.	5.67
044 ▶ Maize (not including sweet corn) unmilled	3.20	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	5.17
759 ▶ Parts etc. for office machine and auto data process machine	2.99	759 ▶ Parts etc. for office machine and auto data process machine	4.17
034 ▶ Fish, fresh (live or dead), chilled or frozen	2.66		
122 ▶ Tobacco, manufactured whether containing tobacco substitute	2.64		
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.58		
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.56		
781 ▶ Motor cars and other motor vehicles	2.40		
764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s.	2.26		
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	2.11		
012 ▶ Meat n.e.s. and edible offal, fresh, chilled, or frozen	1.66		
525 ▶ Radioactive and associated materials	1.64		
248 ▶ Wood, simply worked and railway sleepers of wood	1.62		
081 ▶ Feeding stuff for animals not including unmilled cereal	1.26		
784 ▶ Road vehicles, n.e.s.	1.26		
898 ▶ Musical instruments and parts, records, tapes etc.	1.23		
714 ▶ Engines and motors, nonelectric and parts, n.e.s.	1.21		

1993

Table 1-38 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1994

EXPORTS		IMPORTS	
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	6.41	781 ▶ Motor cars and other motor vehicles	20.45
776 ▶ Thermionic, cold cathode, photocatmode valves etc	4.54	752 ▶ Automatic data process machines and units thereof	8.87
752 ▶ Automatic data process machines and units thereof	4.13	776 ▶ Thermionic, cold cathode, photocatmode valves etc.	7.04
781 ▶ Motor cars and other motor vehicles	3.73	784 ▶ Road vehicles, n.e.s.	5.84
247 ▶ Wood in the rough or roughly squared	3.34	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	4.80
759 ▶ Parts etc. for office machine and auto data process machine	2.90	759 ▶ Parts etc. for office machine and auto data process machine	4.74
122 ▶ Tobacco, manufactured whether containing tobacco substitute	2.69		
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.68		
764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	2.66		
044 ▶ Maize (not including sweet corn) unmilled	2.54		
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.49		
034 ▶ Fish, fresh (live or dead), chilled or frozen	2.45		
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	1.63		
012 ▶ Meat n.e.s. and edible offal, fresh, chilled, or frozen	1.50		
248 ▶ Wood, simply worked and railway sleepers of wood	1.45		
525 ▶ Radioactive and associated materials	1.43		
898 ▶ Musical instruments and parts, records, tapes etc.	1.30		
728 ▶ Machinery etc. specialized for particular industries n.e.s	1.30		
784 ▶ Road vehicles, n.e.s.	1.27		

1994

Table 1-39 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1995

EXPORTS		IMPORTS	
776 ▶ Thermionic, cold cathode, photocatmode valves etc	5.83	781 ▶ Motor cars and other motor vehicles	17.75
781 ▶ Motor cars and other motor vehicles	4.68	776 ▶ Thermionic, cold cathode, photocatmode valves etc.	9.24
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	4.45	752 ▶ Automatic data process machines and units thereof	8.28
752 ▶ Automatic data process machines and units thereof	4.21	784 ▶ Road vehicles, n.e.s.	5.77
764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	3.05	759 ▶ Parts etc. for office machine and auto data process machine	4.70
759 ▶ Parts etc. for office machine and auto data process machine	3.01	764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	4.54
044 ▶ Maize (not including sweet corn) unmilled	2.97		
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	2.72		
247 ▶ Wood in the rough or roughly squared	2.70		
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.61		
122 ▶ Tobacco, manufactured whether containing tobacco substitute	2.32		
034 ▶ Fish, fresh (live or dead), chilled or frozen	2.25		
012 ▶ Meat n.e.s. and edible offal, fresh, chilled, or frozen	1.78		
728 ▶ Machinery etc. specialized for particular industries n.e.s	1.72		
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	1.59		
251 ▶ Pulp and waste paper	1.44		
641 ▶ Paper and paperboard	1.30		
784 ▶ Road vehicles, n.e.s.	1.29		

1995

Table 1-40 Top Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan, 1996

EXPORTS		IMPORTS	
776 ▶ Thermionic, cold cathode, photocatmode valves etc	6.40	781 ▶ Motor cars and other motor vehicles	17.44
752 ▶ Automatic data process machines and units thereof	4.81	776 ▶ Thermionic, cold cathode, photocatmode valves etc.	8.18
792 ▶ Aircraft and associated equipment, spacecraft vehicles and parts	4.29	752 ▶ Automatic data process machines and units thereof	8.02
781 ▶ Motor cars and other motor vehicles	3.67	784 ▶ Road vehicles, n.e.s.	5.63
044 ▶ Maize (not including sweet corn) unmilled	3.66	759 ▶ Parts etc. for office machine and auto data process machine	4.75
759 ▶ Parts etc. for office machine and auto data process machine	3.41	713 ▶ Internal combustion piston engines, and parts, n.e.s	4.55
764 ▶ Telecommunications equipment, n.e.s. and parts, n.e.s	3.27	763 ▶ Sound recorders, tv recorders, recordings/ media unr	3.05
874 ▶ Measuring/checking/analyzing and controlling instruments and apparatus n.e.s.	3.18		
247 ▶ Wood in the rough or roughly squared	2.51		
122 ▶ Tobacco, manufactured whether containing tobacco substitute	2.33		
011 ▶ Meat of bovine animal, fresh, chilled, or frozen	2.27		
012 ▶ Meat n.e.s. and edible offal, fresh, chilled, or frozen	1.99		
034 ▶ Fish, fresh (live or dead), chilled or frozen	1.96		
728 ▶ Machinery etc. specialized for particular industries n.e.s	1.95		
222 ▶ Oil seeds/oleaginous fruit for extra soft fixed vegetable oil	1.72		
784 ▶ Road vehicles, n.e.s.	1.60		
872 ▶ Instruments and apparatus, n.e.s., for medical, dental etc. purpose	1.43		

1996

Table 1-41 Number and Percentages of Three-digit SITC Subgroups Accounting for Over 50 % of Total U.S. Exports to and Imports from Japan

Year	# of SITC Codes Totaling 50% of Exports	% of Industries in Top 50% of U.S. Exports to Japan	# of SITC Codes Totaling 50% of Imports	% of Industries in Top 50% of U.S. Imports from Japan
1978	14	5.09%	8	2.85%
1979	15	5.45%	8	2.85%
1980	14	5.09%	7	2.49%
1981	15	5.45%	6	2.14%
1982	15	5.45%	7	2.49%
1983	15	5.45%	7	2.49%
1984	16	5.82%	8	2.85%
1985	16	5.82%	7	2.49%
1986	22	8.00%	6	2.14%
1987	18	6.55%	7	2.49%
1988	19	6.91%	7	2.49%
1989	21	7.64%	7	2.49%
1990	19	6.91%	7	2.49%
1991	21	7.64%	6	2.14%
1992	19	6.91%	6	2.14%
1993	20	7.27%	6	2.14%
1994	19	6.91%	6	2.14%
1995	18	6.55%	6	2.14%
1996	17	6.18%	7	2.49%

Table 1-42 Average Number and Percentage of SITC Codes Totaling 50% of U.S. Exports to and Imports from Japan

Years	1978 - 1980	1981 - 1985	1986 - 1991	1992 - 1996
Average # of SITC Codes Totaling 50% Exports	14.33	15.40	20.00	18.60
Average % of Industries in Top 50% of U.S. Exports to Japan	5.21%	5.60%	7.28%	6.76%
Average # of SITC Codes Totaling 50% Imports	7.67	7.00	6.67	6.20
Average % of Industries in Top 50% of U.S. Imports from Japan	2.73%	2.49%	2.37%	2.21%

REFERENCES

Clements, Lianne A. and Janice Boucher Breuer, "Will Dollar Depreciation Improve the U.S.-Japanese Trade Deficit?" *Working Paper*, University of South Carolina, 1997.

Leamer, Edward E. *Sources of International Comparative Advantage*. Cambridge: MIT Press, 1984.

Orcutt, Guy. "Measurement of Price Elasticities in International Trade." *Review of Economics and Statistics*, May 1950. 32:117-32.

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