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WORLD TRADE FLOWS: 1962-2000

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ABSTRACT

We document a set of bilateral trade data by commodity for 1962-2000, which is available from www.nber.org/data (International Trade Data, NBER-UN world trade data). Users must agree not to resell or distribute the data for 1984-2000. The data are organized by the 4-digit Standard International Trade Classification, revision 2, with country codes similar to the United Nations classification. This dataset updates the Statistics Canada World Trade Database as described in Feenstra, Lipsey, and Bowen (1997), which was available for years 1970-1992. In that database, Statistics Canada had revised the United Nations trade data, mostly derived from the export side, to fit the Canadian trade classification and in some cases to add data not available from the export reports. In contrast, in the new NBER-UN dataset we give primacy to the trade flows reported by the importing country, whenever they are available, assuming that these are more accurate than reports by the exporters. If the importer report is not available for a country-pair, however, then the corresponding exporter report is used instead. Corrections and additions are made to the United Nations data for trade flows to and from the United States, exports from Hong Kong and China, and imports into many other countries.

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1. Introduction

In this paper we document a set of bilateral trade data for 1962-2000, which is available from www.nber.org/data (International Trade Data, NBER-UN world trade data). Users must agree not to resell or distribute any of the data for 1984-2000. The data are organized by the 4-digit Standard International Trade Classification, Revision 2, with country codes similar to the United Nations classification. This dataset updates the Statistics Canada World Trade Database as described in Feenstra, Lipsey and Bowen (1997), which was available for years 1970-1992. In that database, Statistics Canada had revised the United Nations trade data, mainly drawn from export reports, to fit the Canadian trade classification and, in some cases, to add data not available from reported exports.

In contrast, in the new NBER-UN dataset, we give primacy to the importers' reports, whenever they are available, assuming that these are more accurate than reports by the exporter. If the importer report is not available for a country-pair, however, the corresponding exporter report is used instead. If the importer's report is deficient in various ways, exporters' reports and other information are used to adjust them. In addition, corrections and additions are made to the United Nations data for trade flows to and from the United States, exports from Hong Kong and China, and imports into many other countries, as described herein.

The NBER-UN trade data were constructed from United Nations trade data over two periods: (i) 1962-1983, the data for which covered all trading partners and were classified by SITC Rev. 1; (ii) 1984-2000, for which we purchased current UN Comtrade data that covered 72 reporter countries and were classified by SITC Rev. 2 trade flows, provided they exceeded $100,000 per year. These data also included quantities of exports and imports.[1]

[1] These limits on the amount of data acquired from the UN for 1984-2000 arose from our budget constraint.

Data for the early years (1962-1983), are taken from UN data collected at various times by Robert Lipsey and Harry Bowen for different trade studies. They reflect the UN data bases at the times of original acquisition, and do not include any subsequent revisions such as may be included in the current UN Comtrade data base for those years. We converted the SITC Rev. 1 codes to SITC Rev. 2 and also adjusted the country codes, as discussed in section 2. The final dataset uses the value reported by the importer in the early years, unless that value happens to be missing, in which case the exporter value is used instead. Information on trade quantities before 1984 was not available.

For the later years (1984-2000), the 72 countries for which import and export data were obtained from the UN are listed in Table 1. They accounted for 98% of world exports in the last five years. For these countries, we have used the imports reported to the UN at the SITC Rev. 2 level in the NBER-UN dataset, but made many adjustments as described below. Note that these imports can come from any country in the world – not just the 72 countries listed above. For the exports from these 72 countries to a trading partner, we again use the trading partners' reported imports provided that the trading partner is included in the above list. When the trading partner is *not included* in the above list, however, we instead use the reported exports by the country above. In this way, there is only a *single value* reported for a trade flow from one country to another for each 4-digit SITC Rev. 2 product, which is the value reported by the importer whenever it is available.

For example, the dataset includes imports to Algeria (the first country listed in Table 1) from every country in the world, and also exports from Algeria to every country in the world, but in the latter case we use the trading partners *reported imports* from Algeria (rather than the Algerian reported exports) whenever possible. When the two countries *are both not included* in

Table 1: Countries with Reported Trade Data for 1984-2000

Algeria	Fm Czechoslovakia (1984-1992)*	Kuwait*	Russian Federation (1992-2000)*
Angola	Fm Fed Germany (1984-1990)	Libya	South Afr. Cus. Union (1984-1999)
Argentina	Fm USSR (1984-1991)	Luxemburg (1999-2000)	Saudi Arabia*
Australia	Fm Yugoslavia (1984-1991)	Malaysia	Singapore
Austria	France	Mexico*	Slovakia
Belgium (1999-2000)	Germany (1991-2000)	Morocco	Slovenia
Belgium-Luxembourg (1984-1998)	Greece	Netherlands	South Africa (2000)*
Brazil	Hong Kong**	New Zealand	Spain
Bulgaria	Hungary	Nigeria	Sweden
Canada	India	Norway	Switzerland
Chile	Indonesia	Oman	Thailand
China	Iran	Pakistan	Tunisia
Colombia	Ireland	Peru	Turkey*
Czech Republic (1993-2000)	Israel	Philippines	United Kingdom
Denmark	Italy	Poland	United Arab Emirates*
Dominican Republic	Japan	Portugal	USA
Ecuador	Kazakhstan (1992-2000)	Qatar	Venezuela
Finland	Korea Republic	Romania	Vietnam

* Missing import data:
Fm Czechoslovakia (1991,1992); Kuwait (1984-86, 2000); Mexico (1984-1985);
Saudi Arabia (1997); Turkey (1984); Russian Federation (1992-1995);
South Afr. Cus. Union (1986-1991); United Arab Emirates (1987, 1994-1998, 2000)
** Referred to as China Hong Kong Special Administrative Region (China HK SAR).

Table 1, however, the trade flows for 1984-2000 are entirely *missing* from the dataset. In addition, there were some instances of trade flows for countries that are listed in Table 1 but were not available from the UN for unknown reasons. We adjusted for this when the United States was a trading partner by merging the UN data with the U.S. imports and exports reported in Feenstra (1996, 1997) and Feenstra, Romalis, and Schott (2002). In particular, we assumed that the trade values in the U.S. trade database were always more accurate than those in the UN database, and so we used the former to replace the latter, as discussed in section 3.

For the later years (1984-2000) the dataset *excludes* trade flows at the 4-digit SITC Rev. 2 level when they are less than $100,000 per year. Some adjustment has been made for these

"low-valued" trade flows, however, by comparing the 4-digit trade flows with those at higher levels of aggregation. For example, if the imports or exports between two countries are summed across all for 4-digit categories within SITC 111 (non-alcoholic beverages), and that total is *less than* the trade flow for the 3-digit category SITC 111, then we create an "artificial" 4-digit category called 111A or 111X which includes the "additional" trade reported at the 3-digit SITC level but not the 4-digit SITC level.[2] In this way, we are able to capture some of the low-valued trade flows within the artificial categories ending in A or X.[3] This procedure is described in more detail in section 4.

A final set of adjustments to the UN data concerns specific countries where we know that the UN values are inaccurate. As described in section 5, we have painstakingly checked the 4-digit SITC trade values against other auxiliary data for specific countries, and corrected a number of inconsistencies in the UN data and added other data. The countries with corrections and additions include: Australia, Austria, Belgium, Canada, China, Czech Republic (1993 - 2000), Denmark, Former Czechoslovakia (1984- 1992), Former German Federal Republic (1984-1990), France, Germany (1991-2000), Hungary, India, Ireland, Israel, Italy, Japan, Korea, Kuwait, Malaysia, Mexico, Netherlands, Poland, Russian Fed, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Emirates, and the United Kingdom. The resulting data (in SAS or STATA format) are stored as:

WTF??.SAS7DBAT, where ?? = 62, 63,…,00 (30 – 70 megabytes in size)

WTF??.DTA (for STATA), where ?? = 62, 63,…,00 (30 – 70 megabytes in size)

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[2] 111A indicates that there are no imports or exports at all between the two countries in 4-digit SITC categories within 111, so that 111A is the "aggregate" 3-digit import or export value. Conversely, 111X indicates that there is already some other 4-digit SITC category within 111 that has reported trade, so that 111X is the "extra" trade unreported at the 4-digit level.

[3] These artificial SITC categories also occurred within the Statistics Canada World Trade Database, described in Feenstra, Lipsey, and Bowen (1997).

Second, for the years 1988-2000 we make adjustments for the exports of China versus Hong Kong. Because Chinese goods are often re-exported through Hong Kong, some trading partners (such as the United States) attribute the full value of such goods to China.[4] This ignores, however, the markup on these goods as they pass through Hong Kong, which should more accurately be treated as an (service) export by Hong Kong. Using an auxiliary dataset on Hong Kong trade, we have estimated the markups on Chinese goods as they pass through Hong Kong en-route to each destination country. With these markups, we attribute a portion of the trading partners imports from China as an import from Hong Kong instead, i.e., we raise the import value from Hong Kong and lower the import value from China by the same amount. This procedure is discussed in section 6, and the revised data of bilateral trade with either Hong Kong or China as the exporter is stored as:

CHINA_HK??.SAS7DBAT, where ?? = 88, 89,…,00 (3 – 5 megabytes in size)

CHINA_HK??. DTA (for STATA), where ?? = 88, 89,…,00 (3 – 5 megabytes in size)

A data file of the bilateral trade flows (summed across SITC commodities) is also available at **WTF_BILAT.SAS7DBAT** and **WTF_BILAT.DTA**. Section 7 provides further documentation and the Appendixes to this paper describe the country codes, SITC conversions and other features of the NBER-UN trade data.

2. Description of the United Nations Trade Data

2.1 Country Names and Code

The United Nations trade data lists countries according to their 5-digit Standard Classification of Customs Areas and Territories. We have adapted the UN country names and codes to match the 6-digit classification complied in the World Trade Database by Statistics

[4] See Feenstra, Hai, Woo, and Yao (1999).

Canada, as reported in Feenstra, Lipsey, and Bowen (1997). Thus, the country codes used in the earlier dataset over 1970-1992, and the country codes used in this new dataset over 1962-2000, are essentially the same. The complete list of the modified UN country codes (henceforth called the NBER-UN country codes) is given in Appendix A, with the accompanying notes presented in Appendix B. Note in particular that the NBER-UN country code for Taiwan is '454900'. This code corresponds to the UN country code of '458960' and the UN country description of 'Asia Othr. NS', so we are imputing Taiwan trade from that classified as 'Asia other not specified' by the United Nations.

2.2 SITC Classification

The commodities in the UN trade data are classified by the 4-digit Standard International Trade Classification, Revision 2 (SITC Rev.2). Changes were made to countries for which the original data were classified in SITC Rev.1. That was the case for all countries before 1984. Table 2 lists the countries originally classified by SITC Rev.1, by year and direction of trade (DOT=1 for importer report, and DOT=2 for exporter report).

Table 2: UN Countries with SITC Rev.1

Country Name	Country Code	Year	DOT = 1 Importer	DOT = 2 Exporter
Dominican Republic	352140	1988		X
Mexico	334840	1984-1985	X	X
Turkey	447920	1984		X
Former Yugoslavia	598900	1984-1990	X	X
All countries	-	1962-1983	X	X

Note: DOT = Direction of reported trade

The concordance between the SITC Rev.1 and SITC Rev.2 is given by SITCR1_2.ASC. Note that this concordance file is at the 5-digit level. Thus, the 5-digit SITC are first truncated to

the 4-digit level. Then the 4-digit SITC Rev.1 (truncated 5-digit SITC Rev.1) are matched with corresponding 4-digit SITC Rev.2 using the maximum count of the SITC Rev.2 frequency. In a tie, the maximum is given by the first corresponding 4-digit SITC Rev.2 listed numerically.

This method used for the concordance is described by the example given in Table 3, where columns (1) and (2) list the 5-digit SITC Rev.1 and SITC Rev.2, respectively. Columns (3) and (4) give the corresponding 4-digit level for SITC Rev.1 and SITC Rev.2, respectively. The frequency count of the 4-digit SITC Revision 2 is presented in column (5) and the matching 4-digit SITC Rev.2 used in the concordance is shown in column (6).

Starting with the first set of numbers, SITC 0320 from Rev.1 corresponds to both SITC Rev.2 0371 and 0372. The frequency count for each of the SITC Rev.2 is one; therefore, SITC Rev.2 0371 is selected as the match for SITC Rev.1 0320 since it is listed numerically first. In the next set of numbers, SITC Rev.1 0520 is matched with SITC Rev.2 0579 since this SITC has the highest count in the correspondence between the two revisions.

3. Merging with the U.S. Trade Data

As noted in section 1, there were some instances of trade flows for countries that are listed in Table 1 but were not available from the UN for unknown reasons. This included a number of cases of trade with the United States, in particular. To offset this, we have merged U.S. imports and exports with the UN trade data. The U.S. trade dataset described in detail in Feenstra (1996, 1997) and Feenstra, Romalis, and Schott (2002) is available at the 5-digit SITC Rev.2 level, and includes import and export values but not quantities.[5] By aggregating to the 4-

[5] As discussed in Feenstra, Romalis, and Schott (2002), the U.S. imports are "imports for consumptions" for 1972-1988 and "general imports" for 1989-2000. "General imports" consist of foreign merchandise that leaves the dock and immediately enter consumption channels, bonded warehouses, or foreign trade zones. In contrast, foreign merchandise cleared through customs for intermediate consumption reflects "imports for consumption." These include merchandise coming from U.S. foreign trade zones and withdrawals from bonded warehouses for

Table 3: SITC Rev.1 and SITC Rev.2 Concordance

5-SITCRev.1	5-SITCRev.2	4-SITCRev.1	4-SITCRev.2	4-SITCRev.2 FreqCount	4-SITCRev.2 Match
(1)	(2)	(3)	(4)	(5)	(6)
03201	03710	0320	0371	1	0371
03202	03720	0320	0372	1	0371
05201	05796	0520	0579	2	0579
05202	05760	0520	0576	1	0579
05203	05752	0520	0575	1	0579
05209	05799	0520	0579		0579
26621	26650	2262	2265	1	2265
26622	26660	2262	2266	1	2265
26623	26670	2262	2267	1	2265
27311	27311	2731	2731	3	2731
27311	27311	2731	2731	3	2731
27313	27313	2731	2731		2731
27610	27896	2761	2789	1	2789

digit SITC level, we have used this data to replace all trade values in the UN data over 1972-2000 when the trading partner is the United States.[6] The use of the U.S. values to replace the UN values can be expected to improve the quality of the trade data in most cases. To merge these datasets, changes were made to a few U.S. country names and codes to match the NBER-UN classification, as listed in Table 4.

Table 4: U.S. Country Names and Codes Modification

U.S. Data		NBER-UN data		
Code	**Name**	**Code**	**Name**	**Full US description**
368961	Puerto Rico	218400	USA	Puerto Rico
999990	Int_Org	999990	Int Org	International Organization
999991	All_Cty	100000	World	All Countries

consumption. For all years, the U.S. import data are on a c.i.f. basis, and include the costs of all freight, insurance and other charges (excluding import duties) incurred in transporting the merchandise from the port of exportation to the first port of entry in the United States.

[6] Values less than one thousand dollars in the U.S. trade dataset are omitted. Note that the quantities in the UN data (if available) were not adjusted or replaced.

4. Adjusting the UN Data at Differing Levels of Aggregation: A and X codes for 1984-2000

Ideally, the sum of the value of imports or exports at a disaggregate SITC level should equal to the value of that trade flow at a higher aggregate SITC level. For example, the sum of the value of imports at the 4-digit SITC level should equal to the value of imports for the corresponding 3-digit SITC level, while the sum of the value of imports at the 3-digit SITC level should equal the value of imports for the corresponding 2-digit SITC level, etc. However, this is not the case in our UN data, for several reasons. First, countries may not report the detailed 4-digit SITC data to the UN, whereas they do include these trade flows in their 3-digit or 2-digit reports. Second, for the years 1984-2000, the data that we acquired from the UN only included the 4-digit imports or exports if they exceeded $100,000. But the same dollar lower-limit was applied at the 3- or 2-digit level, so there will be trade flows reported in the 3 and 2-digit level that are excluded from the 4-digit data. To resolve this, two sets of codes are created at the disaggregate SITC level: the "A" and the "X" codes.

The first set of codes deals with the case in which the value of imports or exports at the disaggregate SITC level is available but does not equal to the value at the higher aggregate SITC level. As an example, suppose the value of imports is reported for SITC 4441 and 4442 as $100 million and $50 million, respectively giving a sum of $150 million for SITC 444, but the reported value of import for SITC 444 is $200 million. To deal with such a case, an additional SITC is created which combines the beginning of the 3-digit SITC with an ending of X (444X) and its value equals the difference between the reported value and the sum of the values of imports at the 4-digit SITC (50). This residual category represents "extra" trade. Thus, 444X represents extra trade in the 3-digit SITC group 444, 44XX represents extra trade in the 2-digit SITC group 44, and 4XXX represents extra trade in the 1-digit SITC group 4.

The second set of codes deals with the case in which there are no imports or exports reported at the disaggregate SITC level, but there is such a value at the higher aggregate SITC level. As an example, suppose the value of imports is reported as $200 million for SITC 444, but there are no corresponding four-digit SITC with leading numbers of 444. To deal with such a case, an additional SITC is created which combines the beginning of the 3-digit SITC with an ending of A (444A) and is given a value equal to the value of import at the 3-digit SITC level (200). This residual category represents "aggregate" imports or exports in SITC 444. (Having a double "AA" or triple "AAA" ending would occur rarely if at all).

The A and X codes are not used for the adjusted SITC codes of the 35 countries for which specific corrections and adjustments were made, as described in Section 5.

5. Corrections and Additions to Individual Countries' Data

Countries were selected for adjustment of the UN data for 1984-2000 on several grounds. Aside from China, Hong Kong, and the United States, which are discussed separately, two criteria were used, and the country's data were adjusted if either one was met. One was that the sum of imports in all 4-digit SITC subgroups fell short of the aggregate imports from the world by $US 1 billion in any year. The other was that the country reported imports from unidentified partners of more than $US 1 billion in any year. About half of the countries in the UN data set met one of the two criteria and their data were therefore subject to adjustment.

5.1 Australian Imports

Australia reported some imports at only the 3-digit SITC level. Partner totals are quite complete, except in 1990. At the 4-digit SITC level, but not the 3-digit level, there are substantial imports reported from unidentified partners, "Special categories", 90939, and "Not specified," 90899, as well as "Europe, n.e.s"., 90838.

Of the imports reported at only the 3-digit group level, more than half the items were allocated to 4-digit subgroups by the distribution of partner exports to Australia in the same years. Most of the rest of the 3-digit groups were allocated by the distribution of Australia's imports from the same partners in nearby years. The last few 3-digit groups were allocated using the average distribution among the partners reporting at the 4-digit level in the same years.

Imports from unidentified partners under SITC 5225, "Other inorganic bases and metallic oxides," in all years except 1988 to 1992 were attributed to the United States, Japan, and Saudi Arabia on the basis of export distributions. Imports from unidentified partners under SITC 7611, "Television receivers," were allocated to Singapore and Japan in 1984-1987 and 1993-1994, to Singapore, Japan, and the United Kingdom in 1995-96, and to Singapore in 1997-2000, all on the basis of partner exports to Australia. Imports of SITC 334, "Petroleum products," in 1993-2000 were allocated to Kuwait, Oman, Qatar, Saudi Arabia, and the UAE according to the reported distribution of exports. Imports of SITC 6412, "Printing paper," were allocated to Indonesia and South Korea.

In 1993-98 and 2000, reported total imports from identified partners were nearly equal to reported aggregate imports, but at the SITC 4-digit level there were large imports reported from unidentified partners. These were allocated to Australia's partners in proportion to the difference between each partner's reported total of 4-digit imports into Australia, and the reported total imports from that partner. These allocation to each partner were then distributed across 4-digit subgroups in proportion to reported 4-digit imports. For 1984-92 and 1999, imports from unidentified partners were distributed among identified partners in proportion to identified imports. The missing imports in 1990 were also allocated to partners and SITC subgroups in proportion to imports from identified partners.

5.2 Austrian imports

From 1984 through 1996, many items were reported in Austrian data only at the 3-digit level. In addition, there were large imports from unidentified partners in 1995, mostly in SITC 3414, "Petroleum gases." There were almost 2000 SITC by partner import combinations reported at the 3-digit level. Almost half of them were distributed to 4-digit subgroups according to the distribution of exports to Austria reported by the same partners for the same years. Most of the others were allocated according to the distribution of imports from the same partners in nearby years. The last set was allocated according to the 4-digit distribution within 3-digit groups of imports from all partners combined.

Imports of SITC 3414 from unidentified partners in 1995 were allocated to the Russian Federation, the main source in other years. For several items, imports were reported only from unidentified partners in 1995. The partner distributions for the average of 1994 and 1996, where available, were used to allocate these to partners in 1995. For other items, 1993 partner imports were used for the allocation. Imports from unidentified partners of unidentified SITCs were distributed proportionately to all identified partners and SITCs.

5.3 Belgian imports

Imports into Belgium in UN data include many items reported at the 3- digit SITC level and some reported from unidentified partners.

Most of the imports reported at the 3-digit level were allocated to 4-digit SITC subgroups on the basis of exports to Belgium by the same partners in the same years. Almost all the remaining 3-digit SITC groups were allocated to 4-digit subgroups on the basis of imports from the same partners in the closest year. One last group was allocated to subgroups on the basis of imports from all partners in the same years.

Imports from unidentified partners were distributed to identified partners in proportion to their shares of each SITC. Imports not identified by partner or SITC were distributed to partners and SITCs in proportion to identified imports.

5.4 Canadian imports

The major problem with Canadian import data is large imports from unidentified partners, under the headings, “Special Categories” and “Free Zones.” A smaller problem is that some imports are reported at only the 3-digit level. Of the imports from unidentified partners, about half were “Special Transactions,” which provided no basis for allocation by partner or SITC. These imports were dropped from the data set. Imports from unidentified partners in identified SITC subgroups were allocated proportionately to identified partners in most cases.

Imports of motor cars (SITC 7810) listed as from Caribbean n.e.s. were reallocated to Korea, since that country was omitted as an import partner for this SITC and the values matched Korea’s reported exports closely. Oil imports from Caribbean, n.e.s. were allocated to Trinidad. The imports reported at only the 3-digit SITC level were divided into 4-digit subgroups on the basis of reported exports to Canada by the same partner in the same year in most cases, by the same partner in a nearby year in some cases, and by all partners in the same year in two cases.

5.5 China imports

In the UN data, China records imports from their own trade zones differently from those imported from another country. In 1984-1986 there are large imports from a partner called "Not Specified" and in 1985 and 1986 from a partner called "Special Categories." The latter item is $14 to 17 billion, and is available by 4-digit SITC. From 1996 to 2000 there are imports from a partner called "Free Zones" ranging from $1 to 7 billion. The early imports are mainly iron and steel products while the later imports are mainly computer and electrical machinery parts.

To account for China's import from itself, the trade value is recalculated if the reporting country is China (ICode = 481560) and the partner country is characterized as either the "Free Zones" (ECode = 908380) or "Special Categories" (ECode = 908390) or "Areas NES" (ECode = 908990). The new partner countries are respectively given the names of China FTZ (ECode = 481561), China SC (ECode = 481562), and China NES (Ecode = 481563). The value and quantity corresponding to the newly created China FTZ (China SC or China NES) is subtracted from Areas NES (Special Categories or Areas NES, respectively) by SITC to prevent double counting. An example of the adjustment made to the UN import data is given in Appendix C.

5.6 Czech Republic imports

The main problems of Czech Republic import data are imports from unidentified partners 53492 (European Union n.e.s.) in 1996 and 90899 (Not specified) in 1996-99, particularly 1996. The imports from 53492 in each SITC subgroup were distributed to EU countries in proportion to positive amounts of (reported exports minus reported imports). For seven subgroups where this allocation was not possible, the imports were distributed in proportion to reported imports.

Imports from 90899 in each SITC subgroup were distributed to partners in proportion to reported imports in that group. For seven subgroups with no partner data reported for imports, the import totals reported under 90899 were distributed to partners by the distribution of exports reported by partners. For three small subgroups, no partner distribution was available, and these import records were discarded.

5.7 Danish imports

Demark reports imports under the 3-digit SITC code 334 and imports from unidentified partners, both within the European Union and in the world as a whole. Imports of the 191 cases reported at the 3-digit SITC group level were first allocated to the 4-digit subgroup level by the

4-digit distribution of the same partners' exports to Denmark in the same year. This method accounted for more than half the cases. The remaining cases were dealt with mainly by using the 4-digit distributions of imports from the same partners in nearby years. For the 14 remaining cases, the 4-digit distributions from all reporting and estimated partners was used.

The imports reported to be from "European Union, n.e.s." in each SITC subgroup were allocated to European Union members in proportion to Denmark's reported imports from each EU member in that SITC and year. Imports from unidentified partners were classified as either "Special categories" (90837) or "Not specified" (90899). Imports in both these categories under SITC 3222 were distributed to actual partners in proportion to the differences between reported imports and reported exports for each partner in each year. For other identified SITCs, imports from unidentified partners were allocated to identified partners in proportion to their shares of each SITC. Imports not identified by SITC were allocated to actual partners and SITCs in proportion to Denmark's reported imports.

5.8 Former Czechoslovakia imports

Data for the former Czechoslovakia suffer from several major defects. One is that the data for 1989-90 are reported in SITC Revision 3, rather than SITC Revision 2. A second is that 4-digit data are seriously incomplete, and even 3-digit data and, for some years, 2-digit data, do not cover all imports. Furthermore, large imports are reported from unidentified partners, and imports were hardly reported at all in 1991 and 1992. Since the reported partner totals added up almost completely to Czechoslovakia's reported imports from the world from 1984 to1990, imports from unidentified partners must have been duplicated and were dropped from the data set.

Imports reported at the 4-digit level of SITC Revision 3 in 1989 and 1990 were translated to SITC Revision 2 using a concordance between 5-digit SITC Revision 3 and 4-digit SITC Revision 2. In cases where the 5-digit items in a 4-digit Revision 3 subgroup matched more than one 4-digit SITC Revision 2 subgroup, the 4-digit Revision 3 subgroup was matched to the 4-digit SITC Revision 2 subgroup with the largest number of 5-digit SITC Revision 3 items.

For 1992, no import data by commodity or even by partner were available. The UN Yearbook of International Trade Statistics and the IFS Yearbooks did not even report aggregate imports. The aggregate import total we used was from United Nations (1995). Partner import totals for 1991 were taken from United Nations (1994). Partner import totals for 1992 were estimated from import distributions by partner interpolated between1991 and 1993. Reported imports for the Czech Republic and Slovakia, combined, in 1993, with trade between the two countries eliminated, were used to estimate the distribution of imports into former Czechoslovakia from each partner in that year. For imports from the former USSR (1991) and the Russian Federation (1992), the SITC distribution of Czech imports from the Russian Federation in 1993 was applied to the import totals for 1991 and 1992.

For partner countries for which over 80 per cent of estimated Czech imports were covered by reported exports to Czechoslovakia, the export data were scaled to match the estimated imports. For partner countries with data on exports to Czechoslovakia but missing estimated Czech partner import totals in 1991 and 1992, aggregate Czech imports were first estimated by subtracting total estimated imports from identified partners from the aggregate estimated imports, to arrive at imports from unidentified partners. Then, that total was allocated to this set of partner countries in proportion to their reported total exports to former Czechoslovakia. The distributions of Czechoslovakia's imports from each country, by 4-digit

SITC, were then estimated by using the reported export distributions.

The remaining partners were those with aggregate data on exports to Czechoslovakia, but no data on commodity distributions, and those for which their reported exports to Czechoslovakia fell short of covering 80 per cent of estimated imports. For these, the Czech import distributions by 4-digit SITC subgroups were estimated from Czech import distributions from the same countries in the nearest years.

Imports reported at only the 1-, 2-, or 3-digit level were a substantial part of the totals in 1984-1990. There were almost 11,000 such country by commodity combinations. Almost half of these were allocated to 4-digit subgroups by distributions of exports from the same countries in the same years. Most of the rest of them were allocated using distributions of imports from the same countries in nearby years. After that procedure, there were still over 2,500 country by commodity pairs not allocated to 4-digit subgroups. 225 country by commodity combinations were at the 1- or 2-digit level and almost half of these could first be assigned to 3-digit groups using distributions for the same countries in nearby years. 17 SITC 1-digit by country combinations seemed to have no obvious methods to distribute them and were discarded from the data set since they the amounts of trade involved were small. Almost all the remaining aggregated SITC Division and Group data were allocated to 4-digit subgroups by using the distributions for all reporting countries in the same years.

5.9 Former Federal Republic of Germany imports, 1984-1990

Aggregate partner totals for the Federal Republic of Germany are essentially complete, but at the 4-digit SITC level, large amounts of imports were attributed to unidentified partners (90839, Special Categories). These had to be distributed to identified partners, as far as possible.

One SITC subgroup with the largest imports unidentified by partner is SITC 3414. In 1984 to 1987, all imports in this subgroup were reported under partner 90839 (Special Categories). German imports from Denmark, France, the Netherlands, the United Kingdom, and Norway (1984-85) were taken from those countries' reported exports to Germany. Imports from Norway (1986-87) were taken to be the difference between the reported partner total for Norway and the aggregate of reported 4-digit imports from Norway, which was smaller than the reported value of exports from Norway to the Federal Republic under SITC 3414. The remainder of imports under 90839 were assigned to the Former USSR.

For 1988 to 1990, partner imports from Denmark were reported and used, as were exports to the Federal Republic by France, Italy, the Netherlands, and Norway. The remaining imports from unidentified partners were added to the imports reported from the USSR.

For subgroup 7929, "Parts of aircraft falling within SITC 792," no imports were reported from identified partners in 1984 and 1985. Reported partner exports to the FRG in 1985 came fairly close to the total reported imports, and the remaining imports were assigned to France, for which reported exports fell far short of reported imports in later years. In 1984, the United States did not report exports to the FRG, and FRG imports were assumed to be identical to those of 1985. The remaining unidentified imports were assigned to France.

For other years and SITC subgroups, the imports reported in SITC Section 9, the imports from unidentified partners, other than those already distributed to partners in SITC subgroups 3414 and 7929, were distributed to partners in proportion to the differences between the total of 4-digit total imports from each identified partner and total imports from each partner. They were then allocated to 4-digit subgroups in proportion to the estimated distribution of imports at the 4-digit subgroup level.

5.10 French imports

French import data include large amounts of imports from unidentified partners, usually more than $3 billion and sometimes over $4 billion. In addition, imports as large as almost $4 billion are reported at the 3-digit SITC level.

There were also more than 700 SITC by partner entries that were reported only at the 3-digit SITC level. More than two thirds of these were allocated to 4-digit SITC subgroups by the distribution of exports to France reported by the same partners in the same years. All but a few of the remaining 3-digit groups were allocated to 4-digit subgroups in proportion to imports from the same partners in nearby years, and the last few were allocated by the distribution of imports from the world in each 4-digit group in each year.

Imports from unidentified partners were reported under 90838 (Free Zones), 90839 (Special Categories), and 90899 (Not Specified). In all the 4-digit subgroups other than SITC 5241, export data were used to allocate imports from unidentified partners. In cases where reported exports exceeded reported imports, imports from unidentified partners were allocated to identified partners in proportion to the differences between reported exports and reported imports. In cases where reported exports did not exceed reported imports, the imports from unidentified partners were allocated to identified partners in proportion to reported imports.

In SITC 5241 (Fissile chemical elements and isotopes; other radio-active chemical elements and radio-active isotopes; and related products), reported export values were substituted for reported import values in all cases where reported exports were larger. The remainder of the imports from unidentified partners in this subgroup were allocated to Niger. Niger was the largest reported source in most years but reported small exports in 1996 and 1997, when there were large reported French imports from unspecified partners.

5.11 German imports, 1991-2000

The two main problems with German import data are the reporting at a level more aggregated than 4-digit SITC and reporting of imports from unidentified partners at the 4-digit level, but not in the aggregate to any large extent.

More than half of the SITC-partner combinations reported at levels of aggregation above the 4-digit level, of which there were over 12,000, were allocated to the 4-digit level by using the 4-digit distributions of foreign partners' exports to Germany in each year. Almost all the rest were allocated by using the distributions reported in nearby years for the same countries.

Of the 143 remaining combinations, about half, all at the 3-digit level, were estimated by using the distribution across all countries in each year. Imports reported at only the 1-digit Division level were small, and were dropped from the data set.

Imports under 90839 (Special categories) were dropped in 1991-97 and 2000, since they were duplicated by imports from identified partners at a level more aggregated than 4-digit SITC. However, most of these imports from identified partners were in SITC Division 9, with no commodity breakdown. In 1998 and 1999, imports under 90839, except for those in Division 9, were allocated to partners in proportion to the distribution of positive values of (reported exports-reported imports) in each SITC subgroup. After that, imports under 90839 in Division 9 were distributed to identified partners according to the SITC Division 9 distributions in 1997 and 2000 respectively. Finally, imports under SITC Division 9 in 1991-2000 were allocated to partners in proportion to the distribution of positive values of (reported exports – reported imports) in each SITC subgroup. Imports categorized as 90837 (Bunkers) and 90899 (Not specified) were dropped from the data set since none of these was large, and there was little basis for allocating them to partners.

5.12 Hungarian imports

Before 1991, most of Hungary's imports were reported at only the 2-digit DITC Division level. In addition, some imports, in fairly small amounts, were reported as coming from unidentified partners or unidentified European partners. The imports from partner Europe, other, n.e.s., partner 57568, were allocated to European countries in general, in proportion to Hungary's imports from them, since the European countries not listed could not account for the imports. Imports from unidentified partners worldwide were similarly allocated to identified partners in proportion to Hungary's imports from them.

Although exports to Hungary by reporting countries accounted for only 40-60 per cent of Hungary's total imports before 1992, the reason was that important suppliers to Hungary, such as the Former USSR, the former German Democratic Republic, and the former Czechoslovakia did not report their exports at all. For the remaining countries, the distributions of their exports to Hungary in each year were used to allocate Hungary's reported imports at the 2-digit or 3-digit level to 4-digit SITC subgroups. Most of the remaining 2- or 3-digit divisions and groups were allocated using the 4-digit breakdowns of imports from the same partners in the closest years. The remaining aggregates were subdivided using the 4-digit distributions for all partners combined.

5.13 Indian imports

India's reported imports by partner add up almost completely to total reported imports if 3-digit and 4-digit data are combined. There are no duplications between 3- and 4-digit data. The data by SITC from each partner were scaled to match the partner totals.

The major problem was the reporting of SITC 334 at only the 3-digit level from 1986 through 1997 and the attribution of those imports to unidentified partners. Distributions of

exports to India reported by partners are used to allocate imports to partners and to divide imports into 4-digit subgroups. The partners used were: 1986-89: Period average distributions of exports by Bahrain, Kuwait, Singapore, and Former Soviet Union; 1990-91: Period average distribution of exports by Bahrain, Kuwait, Singapore, Saudi Arabia, UAE, Kazakhstan, and Russian Federation combined; 1992-97: Period average distribution of exports by same countries as for 1990-91, with Kazakhstan and Russian Federation separated.

5.14 Irish imports

The principal problem with Irish import data is the listing of large amounts of imports from unidentified partners. Unidentified partner imports were concentrated in SITC subgroups 3222, 7599, 7764, and 8983. Since differences between reported imports and reported exports appeared to explain the unidentified origins of imports in these subgroups, the imports reported from unidentified partners were allocated to partners in proportion to differences between reported imports and reported exports from identified partners for which reported exports were larger. For SITC subgroups 7522 and 7525, import values that were smaller than reported partner exports were replaced by the reported export values, and the differences subtracted from unidentified imports. For all other SITC subgroups, except those of SITC Division 9, imports from unidentified partners in each SITC subgroup were assigned to identified partners in proportion to the identified partner imports. Imports from unidentified partners in Division 9 were divided among the 10 countries with the largest excesses of exports over imports in this Division, in proportion to those differences.

5.15 Israeli imports

There are two main problems with data for imports into Israel. One is large imports under SITC 334 and other 3-digit groups, not divided into 4-digit subgroups. The other is

imports from unidentified partners, particularly of SITC 3330, Petrol oils, and SITC 6672, Diamonds.

For SITC 3330, imports from Egypt (1984, 1985 1989-97) and Mexico in 1984 and 1985 were taken from the Statistics Canada WTDB. For other years, 20 per cent of imports were attributed to Egypt, following statements in U.S. International Trade Administration (2004) and U.S. Energy Information Administration (2004e). Imports were attributed to other sources, Mexico. Norway, Former USSR (before 1992), the Russian Federation, and Kazakhstan after that, on the basis of reported exports.

A similar breakdown was performed for SITC 334, assigning imports to the same countries as for SITC 333 and dividing them into 4-digit subgroups on the basis of imports in other years or from other countries, where available, and also In general, 3-digit groups were also divided into 4-digit subgroups on the basis of export data.

Imports of SITC 6672, Diamonds were allocated to the South Africa Customs Union, as suggested by the distribution of exports to Israel.

5.16 Italian imports

The most important problem with Italian trade data is the listing of over $5 billion in 1999 and almost $9 billion in 2000 as unidentified by either partner or SITC. In addition, from 1984 through 1987, some imports are reported under non-existent 4-digit SITC codes that are really 3-digit codes.

A comparison of import with partner export reports shows that most of the unidentified imports in 1999 and 2000 were imports of SITC 33 (Petroleum, Petroleum Products, and Related Materials) and 34 (Gas, Natural and Manufactured) from Algeria, the Russian Federation, and Nigeria. These were allocated to those partners in proportion to the discrepancies between their

reported exports to Italy and Italy's reported imports from them. Unidentified imports outside of these two SITC Divisions were allocated to partners in proportion to reported imports in each 4-digit subgroup. Unidentified imports in other years were and imports under 90839 (Special Categories) were dropped from the data set.

The 255 country by partner items reported at only the 3-digit level in 1984 to 1987 were mostly allocated to 4-digit subgroups on the basis of reported exports to Italy by the same partners in the same years. Almost all the rest were allocated using imports from the same partners in a nearby year and the two remaining cases were allocated using the distribution for all partners combined.

5.17 Japanese imports

The main problem with Japanese import data is the reporting of imports of Refined petroleum products, SITC 334, at only the 3-digit SITC level. There were also some very minor imports from unidentified partners, but they were so small that they were simply discarded.

The 3-digit group exports were almost all divided into 4-digit subgroups by using the shares in the nearest year for which they were available for each partner. The few remaining cases that could not be distributed in this way were allocated by the average shares of the subgroups in each year.

5.18 Korean imports

Korea reports large amounts of imports at the 3-digit level and also large amounts from unidentified partners. Small imports from groupings not distinguished by country, "Asia West, n.e.s.," and North Africa, n.e.s.," were dropped from the data set. Most imports reported at the 3-digit level were allocated to 4-digit subgroups on the basis of the 4-digit distributions from the

same countries in nearby years. The remaining 3-digit groups were divided into 4-digit subgroups in proportion to the distributions for all available partner countries combined.

Imports of ships from unidentified partners were also dropped from the data set. Since Korea is a major builder and exporter of ships, it is unlikely that these were genuine imports of goods into Korea. They may have been ships on which some repair or other services were to be performed or ships changing to Korean ownership. Imports of SITC "Petrol oils" from unidentified sources from 1984 to 1987 were allocated to Iran. Imports under SITC 3221, "Anthracite coal," were allocated to Canada and Australia in proportion to their reported exports to Korea. The remaining imports from unidentified sources, classified by 4-digit SITC, were distributed among identified partners in proportion to Korea's imports from them in each year.

5.19 Kuwaiti imports

There is no information at all in the UN data set for imports into Kuwait in 1984 to 1986 and for 2000. In addition, large imports are reported from unidentified partners before 1993. Some imports are reported only at the 3 digit group level.

For 1987 to 1989, while there are large imports reported from unidentified partners at the 4-digit level, partner totals are virtually complete. Thus, it is possible to calculate, for each partner, the imports from unidentified 4-digit subgroups. For each partner, these are distributed across 4-digit subgroups in proportion to the imports identified at the 4-digit level. Thus, it is assumed that the distribution of imports from each partner not reported is identical to the reported distribution from the same partner.

For 1990 to 1992, the partner distribution was assumed to be the same as in 1993, when it was almost complete. The imports at the 4-digit level from unidentified partners were allocated to partners in proportion to the differences between partner totals reported at the 4-digit level and

these estimated partner totals. The estimated imports from each partner unidentified by subgroup were then allocated to subgroups in proportion to the reported imports from that partner.

For 1993-1999, imports unidentified by partner were very small and were dropped from the data set. For 1984-1986 and 2000, when import data were completely missing from the UN data set, some partner totals were available in United Nations (1990) and (1991) for 1988 and 1989, and for 2000 from United Nations (2004).. Imports from those partners for which reported export data covered 80 per cent or more of these partner import totals were estimated as being proportional to the reported exports. Total imports from partners not separately identified in the UN Yearbooks but reporting export data were estimated by assuming that the partner import totals were the same proportion of total imports as the partner export totals were of reported exports to Kuwait of countries other than those for which total partner imports were identified. The total imports from each such partner were then distributed to 4- digit subgroups in proportion to exports to Kuwait reported by that partner. For the remaining partners with estimated Kuwait imports but no export data, the import distributions in the nearest year available were used to estimate imports by 4-digit subgroup.

Of the many commodities reported at only the 3-digit level, some could be allocated to 4-digit subgroups by using the distributions of exports from the same partner in the same year. Most of the rest were allocated by using the distributions of imports from the same partner in a nearby year. The remaining ones were allocated by using the 4-digit distributions of imports from all partners in the same year.

5.20 Malaysian imports

Malaysian import data suffer from two main problems. One is the reporting of imports at the 3-digit SITC level and the other is the attribution of large amounts of imports to unidentified

partners. The main location of the unidentified partners is in the subgroup SITC 7768, "Piezo-electric crystals, mounted; and parts, n.e.s. of the electronic components falling within heading 776, "Thermionic, cold cathode valves." There is a particularly large discrepancy between Malaysia's reported imports from Singapore and Singapore's much larger reported exports to Malaysia. Most of the major exporters of this group report exports to Malaysia smaller than Malaysia's reported imports from them, suggesting that these products pass through Singapore on their way to Malaysia. We attribute the imports reported as from unidentified partners under SITC 7768 to Singapore.

Data on exports to Malaysia are too thin to use as guides to dividing up imports in groups reported only at the 3-digit level in some years. Import data from the same countries in nearby years are used to divide up most of these groups into 4-digit subgroups, but for a few items, imports from the world are used.

5.21 Mexican imports

The major problem with Mexican import data is the absence of any UN data for 1984 and 1985. In addition, some imports were reported only at the 3-digit group level and there were also substantial imports from unidentified partners.

For 1984 and 1985, export data for partners covered almost all of Mexico's imports. Partner totals for imports were taken from United Nations (1990). For partners with both partner totals and reported exports, the total imports from each partner were distributed to 4-digit subgroups by the distribution of reported exports. For partners with reported export data but no import totals from the UN Yearbook (United Nations, 1990), the Mexican import totals were first estimated by allocating the difference between total Mexican imports and imports from partners identified in the Yearbook to partners in proportion to their reported exports to Mexico. These

estimated totals by partner were then distributed among 4-digit subgroups in proportion to the distribution of their exports to Mexico. For partners with Mexican import totals but no export data, imports were allocated to 4-digit subgroups by the distribution of Mexican imports from that partner in the closest year.

Of 92 cases in 1987, 1988, and 1991 where imports from a partner were reported at only the 3-digit or 2-digit level, 49 were distributed to 4-digit subgroups using reported data on exports to Mexico from the same partner in the same year. In other cases, 4-digit breakdowns of exports from the same partners in nearby years were used in the allocation. For a few remaining cases, the allocation was based on the distribution among 4-digit subgroups for the total Mexican imports in the 2-digit or 3-digit groups in the same year.

Most imports from unidentified partners are also unidentified by product. An exception is imports of SITC 5621, Mineral or chemical fertilizers, which can, according to export data, be assigned to "Russian Federation" as a partner. Other imports from unidentified partners that were identified by SITC were distributed to partners in proportion to reported imports by SITC in the same year. Remaining imports of unidentified products from unidentified partners were distributed by the imports of identified products from identified partners in the same year, except that small imports from "Free Zones" in 1989 and from "European Union, n.e.s." in 1995 were dropped.

5.22 Netherlands imports

The major problem with Netherlands import data is the listing of large amounts of imports, sometimes over $5 billion, under partner 90839 (Special Categories). There are also minor imports reported under 90837 (Bunkers) and 90899 (Bunkers), and these have been dropped from the data set.

Since the unidentified partner, 90839 (Special Categories) appears in 4-digit data, but not in 2-digit data in 1984-1987, we calculated the differences, for each partner country, between the reported 2-digit Division totals and 2-digit totals derived by truncating the reported 4-digit import values for each partner, and treated those differences as the basis for the partner distribution of the imports listed under 90839. To allocate those partner totals of unidentified imports to 4-digit SITCs, we calculate the excess of reported exports to the Netherlands over reported imports by the Netherlands in each 4-digit subgroup within each SITC Division. We allocate the differences between reported and truncated 2- digit totals from each partner to 4-digit subgroups in proportion to reported excess amounts of exports over imports in each 4-digit subgroup. Where there were no excess reported exports, the differences between reported 2-digit imports and 2-digit totals from reported 4-digit imports are allocated to 4-digit subgroups by the reported 4-digit import distributions. For a small number of cases with no breakdown on either the export side or the import side, the distribution in a nearby year is used or, in a very few cases, the distribution across all reporting partners.

In 1988-2000, there is no difference between reported 2- digit import totals and 2- digit import totals from truncated 4-digit imports. The imports from unidentified partners are distributed to identified partners by the distribution of differences between export and import reports, by partner and year. In 4-digit subgroups with no excess of exports reported, the imports from unidentified partners are allocated to identified partners in proportion to reported imports from identified partners in the same years.

5.23 Polish imports

Polish import data at the 4-digit SITC level are only about 50 per cent complete in 1984-1991 and much more complete, but still missing 2 to 4 per cent of total imports in 1992, 1993,

and 1995 through 1997. 1-digit division totals were quite complete from 1984 through 1992. Large imports were reported from unidentified partners in all years except 1993 and 1999. In some years, large imports were reported under SITC Division 9 (Commodities and Transactions n.c.e), concealing the commodity composition of those imports.

Since the identified partner totals are larger than the identified partner 1-digit numbers, it is possible to calculate a partner distribution of those imports not identified by 1-digit division. They were allocated to 1-digit divisions in proportion to the imports identified by division for each partner in each year.

In 1985 through 1987, there were large import aggregates reported from unidentified partners. Data for 1984 and 1988 suggested that these were from a stable group of countries, particularly the former USSR the former Czechoslovakia, and the two Germanies. The imports from unidentified partners in 1985-1987 were allocated to identified partners by the average shares in 1984 and 1988.

Reported imports of SITC Division 3 (Mineral Fuels, Lubricants, and Related Materials) decreased sharply from 1990 to 1991, and there was a corresponding increase in Division 9 (Commodities and Transactions n. c. e.), not identifiable by product. Division 9 had shown negligible imports in 1988-1990. It was assumed that these imports should have been classified under Division 3 in 1991, and they were added to that division. There was another large increase in imports reported under Division 9 in 1992, and a large fall in the imports reported in all other divisions. The imports reported under Division 9 were reallocated to the other divisions in the same proportions as reported for 1991.

The imports reported at only the 1- to 3-digit levels, half to two thirds of total imports in 1984-88 and almost a third in 1989-2000, were allocated to 4-digit subgroups in several steps.

For those countries that reported exports to the UN, which did not include the USSR or the GDR, the distributions of exports to Poland at the 4-digit level for each country in each year were used to allocate Polish imports reported from each country at more aggregated levels to the 4-digit level. Most import groups were distributed in this way. Most of the remaining aggregated imports were allocated by using the 4-digit distributions of imports from the same countries in nearby years. The 4-digit export distribution for the Federal Republic of Germany came closer than the distributions of other countries to resembling that of the GDR, where they could be compared. They were therefore used to allocate Polish imports from the GDR that were reported on a more aggregated basis. A small number of remaining aggregated groups of imports were allocated by using distributions of exports to Poland by the world.

The 4-digit totals of Polish imports in 1993 and 1997 fell short of national total imports. The country sources of the omitted imports could be identified, as well as their concentration in SITC 3 and 7. Differences between reported exports and reported imports at the 4-digit level were used as guides to allocating these imports to 4-digit subgroups.

In 1995, 1996, and 1998, there were large imports from unidentified partners at the 4-digit level, although total imports by partner were complete. The 4-digit imports by identified partner were scaled up to eliminate these differences.

In 1994 and 2000, the unidentified partners appeared in the data by partner, as well as in the 4- digit SITC subgroup data. The unidentified partners appeared to be mainly the same ones as in the 4-digit data of 1995, 1996, and 1998. The imports from unidentified partners were allocated to partners in proportion to the differences between partner totals and 4-digit partner imports in 1995 (for 1994) and 1998 for 2000).

There were large jumps in reported imports under SITC Division 9 (Commodities and Transactions, n.c.e.) in 1995 and 1998. These were allocated to the other Divisions by the distributions among the Divisions in 1996 and 2000, respectively.

5.24 Russian Federation imports

The Russian Federation reported very large imports from unidentified partners, as much as $15 billion per year. These imports were mostly reported under SITC 9310, "Special Categories," and thus did not reveal the commodity composition. In addition, some imports were reported at only the SITC 3-digit level.

Of the 139 SITC by partner combinations reported at the 3-digit level, more than half could be subdivided into 4-digit subgroups by using data on exports to the Russian Federation in the same 3-digit grouping the same years. For most of the remaining 3-digit data, the 4-digit distribution of 3-digit imports from the same partner in a nearby year was used. For the few remaining cases, the 4-digit distribution of imports in each 3-digit group from all partners combined was used.

The larger problem is that of unidentified partners and products. The closest match between the total of reported exports to the Russian Federation (as modified) and imports by the Russian Federation, by partner, at the 4-digit SITC subgroup level, was for 1997. The modification of export data was to use Russian Federation import data for countries that did not report exports and also for SITC 4-digit subgroups in which reported exports by a country to the Russian Federation were larger than reported imports by the Russian Federation from the country. The distributions for 1997 were therefore used as the benchmarks for the adjustments in 1996 and 1998-2000.

For 1997, the distribution of exports to the Russian Federation could be used to distribute the Special Category (90839) imports from unidentified partners to identified ones. For other years, even the modified export totals were smaller than the import totals. Therefore, after the modified export data for each year were used to estimate imports to the Russian Federation, the remaining unallocated imports were allocated to partners by the 1997 distribution. Four-digit imports into the Russian Federation were matched to 4-digit exports by each partner to the Russian Federation. Where the reported imports were equal to or larger than the reported exports, the import data were accepted. Where the reported exports were larger, the difference from reported imports was used to distribute the imports from unidentified partners among the identified partners. For partners with no export data, or all reported exports smaller than reported imports, the imports from unidentified partners were distributed proportionally among the 4-digit subgroups for which imports were reported.

5.25 Saudi Arabian imports

Import data for Saudi Arabia suffer from two main problems. One is that in 1984-87 and 1990, a substantial part of imports were reported only at the 3-digit level (shown as 4-digit with 0 as the last). Another is that Saudi Arabia did not report imports at all in 1997. A smaller problem is the listing of imports with unidentified partners. Most of these are classified as SITC 9310, essentially unidentified by SITC. However, the imports from unidentified partners never exceed $350 million.

Most of the items (1916 partner-SITC 3-digit combinations) reported at the 3-digit group level by partner were distributed to 4-digit subgroups on the basis of the distribution reported by partners (exporters to Saudi Arabia) for the same years. Another 753 combinations were distributed on the basis of the breakdown in the most recent year for that partner. The 53

remaining partner-SITC 3-digit combinations were distributed on the basis of the breakdown of each 3-digit group for all available partners.

For 1997, data on imports to Saudi Arabia from larger partners were obtained from United Nations (2003). For partner countries that reported exports to Saudi Arabia in that year, the distribution by SITC was estimated from the export distribution. For five countries listed as import partners, with no exports reported, the import distribution for 1996 and 1998 combined was substituted for the nonexistent detailed import reports.

5.26 Singapore imports

Singapore does not report its trade with Indonesia at all, although Indonesia is a major trading partner. The omitted imports, to judge from the Indonesian data, ranged from over $1 billion in the early years to $6.5 billion in 2000. 43 per cent of the exports in 1992 were in SITC Division 6, Manufactured Goods Classified Chiefly by Material, and a third were divided almost equally among SITC Division 2, Crude Materials, Inedible, except Foods, SITC 7, Machinery and Transport Equipment, and SITC Division 8, Miscellaneous Manufactured Articles.

In addition to the omission of trade with Indonesia, other problems are that there are some imports from unidentified partners and imports of petroleum and products, SITC 334, are reported at only the 3-digit level. The main imports from unidentified partners were from “Other Africa, n.e.s.” The change in 1995 after the embargo was lifted showed that the source of those imports was mainly South Africa, and that partner was substituted for the catch-all group. Imports from other unidentified partners were small and were dropped from the data set.

Imports from Indonesia were taken entirely from Indonesian export data. They are lower than they would be if reported by Singapore, because Singapore reports on a General Trade basis, including imports for re-export, while Indonesia reports on a Special Trade basis.

Almost half of imports in SITC group 334 were allocated to 4-digit subgroups by export distributions in the same years for countries that reported them. Almost all the rest were allocated using import distributions for nearby years and the last few were allocated by the distributions for all partners combined.

5.27 South African imports

There are no import data for South Africa by country or commodity in the UN data set from 1986 to 1991, presumably because the country was the subject of various United Nations sanctions, particularly a prohibition on the exporting of petroleum products to South Africa. In years when imports were reported, there were often large amounts, as much as $6 billion, not identified by partner, but reported as 90839 (Special Categories) or 90899 (Not Specified). In addition, some small amounts were reported only at the 3-digit SITC level. In years when import data were reported by SITC, a large part of the imports from unidentified partners were in SITC 333 (Petroleum oils, crude, and crude oils obtained from bituminous materials), confirming the use of unidentified partners to conceal the sources of oil.

In 1984-85 and 1992-94, large imports were reported in the UN data set from unidentified partners under SITC 9310 (Special transactions and commodities not classified according to kind.). For 1986-1991, large imports of unidentified commodities from the world were reported in United Nations (1993) and (1994), similar in magnitude to the imports from unidentified partners under SITC 9310 in earlier and later years. We suspect that it was largely or entirely crude oil.

A report on the workings of the sanctions (Hengeveld and Rodenburg, Editors, 1995) provided estimates of the tonnage of oil shipments to South Africa during the period of sanctions, and these, multiplied by estimated prices from U.S. Energy Information Administration (2004a),

came fairly close to the values of imports of unidentified products or from unidentified partners reported by South Africa. We have therefore assumed that the unidentified imports were imports of petroleum.

Hengeveld and Rodenburg, Editors (1995) gives estimates of imports through the embargo period from individual countries and regions. We have used the estimates of imports from the UAE, Saudi Arabia, Iran, Oman, Qatar, Kuwait, unknown countries in the Persian Gulf, Egypt, unknown countries in the Middle East, Brunei, the Netherlands, the UK, and the Netherlands Antilles, which account for 95 per cent of their total. We assigned exports from unknown countries in the Middle East to Egypt, and allocated the exports from unknown countries in the Persian Gulf to the identified countries there in proportion to their identified exports. The unidentified imports were allocated to these countries in proportion to their shares in estimated export tonnage to South Africa.

For imports other than oil in 1986-1991, the partner totals were estimated by assuming that the partner distribution of the imports from the world from U.N. Yearbooks for 1986-88 was that of 1985, and the partner distribution of 1989-91 was that of 1992. For those partners with reported exports covering 80% or more of estimated imports, the export distribution was used to allocate imports by SITC. For partners with exports reported, but no imports estimated, the export amounts by SITC were allocated as imports directly. For partners with estimated imports but no reported exports, the reported import distributions of 1985 (for 1986-88) and 1992 (for 1989-91), were used to allocate import totals to SITC subgroups, and the same was done for partners with export data covering less than 80%f estimated imports. Virtually all the remaining estimated partner import totals were allocated by the distributions of imports in the closest years available. A few cases were allocated by the SITC distribution for all countries combined.

For 1995, imports of SITC 333 from the UK and Argentina, and in 1996, those from the UK, were estimated from the reported exports to South Africa by these countries, and the values were subtracted from the imports reported from unidentified partners. The remaining imports from unidentified partners in those two years were allocated to the other partners in proportion to their reported exports. For 1997-1998, imports of SITC 333 from the UK were assumed equal to reported UK exports to South Africa, and these amounts were subtracted from South Africa's imports from unidentified partners. The remaining imports of SITC 333 from unidentified partners were allocated by the distribution by partners in 1999, recognizing the apparent effort by South Africa to diversify its sources of oil (U.S. Energy Information Administration, 2004b).

Other imports from unidentified partners in these years, reported by SITC, were allocated to partners in proportion to the distribution of sources in each SITC in each year. Imports under SITC 9310, not identified by partner or commodity, were allocated to partners and SITC subgroups by the distribution of positive differences between reported exports and reported imports.

5.28 Spanish imports

Spanish import data are relatively complete, although there are some large imports reported at only the 3-digit level and smaller amounts reported from unidentified partners. The latter items never reached $700 million in total and were dropped from the data set. The more than 650 country by SITC group combinations reported at the 3-digit level were mostly allocated to 4-digit subgroups using the 4-digit breakdowns of exports by the same partners to Spain in the same years. Almost all the rest were allocated in proportion to imports from the same partners in nearby years and a small number were allocated on the basis of imports from all other partners in the same year.

5.29 Swedish imports

The main problem with Swedish import data is the reporting in some categories at only the 3-digit SITC level. There are also some imports unidentified by SITC and partner, but they are relatively small and have been dropped from the data set.

Most of the 513 country by SITC imports at the 3-digit level could be allocated to 4-digit subgroups by using the distribution reported in the partner countries' export data for the same years. Almost all the rest of the groups were allocated to subgroups using the distributions of Swedish imports in nearby years. The last few cases were allocated by the 4-digit distributions for the reporting exporters as a group.

5.30 Swiss imports

There are some imports reported from unidentified partners, but they are small and occur in only four years, and we have therefore dropped them from the data set. A more serious problem is the more than 650 import by partner groups reported only at the 3-digit level. Almost two thirds of these are allocated to 4-digit SITC subgroups in proportion to the same partners' reported exports to Switzerland in the same SITC groups in the same years. Almost all the rest are allocated to 4-digit subgroups on the basis of the distributions of imports from the same partners in nearby years, and the last few are divided according to the distributions of imports from all other partners in the same groups in the same years.

5.31 Taiwan imports

Taiwan is not included in the UN data set as a reporter and appears there only as an export partner designated "Other Asia, n.e.s." The NBER data set is constructed mainly from three sources. One is official Republic of China or ROC (Taiwan) import data for 1991 to 2000, on a 4-digit Harmonized System (HS) classification. A second is the UN data from partner

countries on exports to "Other Asia, n.e.s." The third is official Republic of China (Taiwan) published import data for total imports and also for imports on a very detailed HS basis.

For the HS data in 1991-2000, the imports at the 4-digit HS level add up to the totals reported in the ROC Yearbooks, such as China, Republic of China (1999). We therefore accept them as complete. The main problem is the translation into the 4-digit SITC Revision 2 subgroups. The translation here starts with the UN concordance between 6-digit HS and 5-digit SITC. These were truncated to 4-digit HS and SITC subgroups, producing 1,014 unambiguous matches, but also 555 cases where 4-digit HS subgroups were matched to two or more 4-digit SITC subgroups.

U.S. export and import data were used to assign the HS subgroups with multiple SITC matches to single SITC assignments. The 10-digit HS data, with their 4-digit SITC assignments, and the 5-digit SITC data were truncated to 4-digit data, revealing the SITC distribution for each 4-digit HS group in U.S. exports and in U.S. imports. In the more than 500 cases where the U.S. export and U.S. import data revealed the same predominant match, these were used at the 4-digit level. The 50 or so remaining cases were almost all assigned by using the 10-digit import breakdown provided in China, Republic of China (1990). The predominant import in each 4-digit HS group was assigned to a 4-digit SITC group by using the detailed descriptions of these groups in United Nations (1963) and (1975).

Some imports, particularly SITC 334, were reported at only the 3-digit level in 1992-2000. These were allocated to 4-digit SITCs by the export distributions from the partner countries in the same years. For 1984-1990 there are no import data except the totals from all countries and the partner totals reported by Taiwan, although there are extremely detailed data published in print form by Taiwan, which were not usable on any large scale. Mostly, our data

set must be derived from export data.

There are no reported exports from Saudi Arabia, except one doubtful figure for 1990, which is many times the partner import total reported by Taiwan. There are also no data for exports by the UAE, Kuwait, and apparently missing or understated exports by Oman. The partner import totals for these countries, except Oman, were allocated to SITC subgroups on the basis of reported exports in 1991. For Oman, the export distribution in 1987 and the import distribution in 1991 were used.

Sweden, South Korea in 1989-1990, and South Africa also did not report exports to Taiwan. The reported partner totals were allocated to SITC subgroups by the distribution in 1991. The partner totals are from China, Republic of China (1989), (1991), (1999), and (2002), except for South Africa in 1984 and 1985, taken from the Statistics Canada World Trade Data Base. All of these calculations leave more than 1800 commodity by country pairs for which data are reported at 1-, 2-, or 3-digit levels in the whole period from 1984 to 2000. Most of these are estimated at the 4-digit SITC level by using the distribution for the same partner in the closest year available. The remaining entries at above the 4-digit level, fewer than 50, are allocated by using the distributions for all partners combined as the guide.

There are substantial imports throughout the 1990s from unidentified partners, especially in 1997-2000, and also small amounts of imports from country combinations such as Other Africa, n.e.s., Caribbean, n.e.s., and Europe, n.e.s. The import values from the country combinations are small and they were removed from the data set. Imports from unidentified partners were concentrated in SITC 7524 (Digital Centered Storage Units) and 7764 (Electronic Microcircuits). These numbers are similar to the differences between export total values and import total values for Japan, and they were therefore assigned to that country. The other

imports from unidentified partners were allocated to those for which reported exports exceeded reported imports, in proportion to the excess exports

5.32 Thai imports.

Thailand's reported imports include substantial amounts from unidentified partners, listed as 90899 ("Not specified)," 90838 (Free zones), or 90839 (Special categories)." There are also minor imports from 16577 (Other Africa, n.e.s.).

Imports under 16577 were dropped from the data set. The much larger imports from unidentified partners in SITC subgroup 7599 (Parts,, n.e.s. of and accessories for calculating machines and automatic data processing machines…) were distributed to partners in proportion to differences between reported exports to Thailand by and reported imports by Thailand from partners for which these reported exports exceeded the reported imports. For SITC subgroup 7929 (Parts, n.e.s. of aircraft and associated equipment), import values from individual partners were replaced by partner export values when the export values were larger. The remaining imports from unidentified partners were allocated to partners in proportion to the distribution of excess amounts of exports to Thailand relative to imports by Thailand by each partner in SITC group 792 (Aircraft and associated equipment). In the remaining SITC subgroups, except those of Division 9, imports from unidentified partners were distributed to partners in proportion to reported imports in each subgroup. Imports from unidentified partners in Division 9 were allocated to the 10 partners with the largest positive gaps between reported exports to Thailand and reported imports from Thailand.

5.33 Turkish imports.

The two main problems with the Turkish import data in our data set are the total absence of data for 1984 and the listing of large imports as coming from unidentified sources.

For 1984, data on total imports to Turkey by major partner were published in the International Trade Statistics Yearbook (United Nations, 1990). For partners with reported exports to Turkey that were over 80 per cent of imports reported by Turkey, export distributions were used to estimate the corresponding import data. For the rest of partners with reported import totals, the totals were added to the data set and allocated among SITC 4-digit subgroups by the distribution of Turkish imports from each country in the closest available year. For partners with reported exports but no reported import totals, the export data were used and scaled to match the totals to the reported Turkish imports from the world.

The imports from unidentified partners were listed under 90899 "Not specified" and 90838, "Free zones." In 1997 to 2000, large imports under 3330 were reported as from unidentified partners. However, the volume of Turkish imports from Iraq can be estimated from OECD data reported in U.S. Energy Information Administration (2004c), Table 4.17, and world market prices are published in U.S. Energy Information Administration (2004a) and (2004d). The combination of the two can be used to estimate the value of imports by each country from Iraq. In the case of Turkey, the value estimated came close to the reported Turkish imports from unidentified partners, and the estimated values were therefore attributed to Iraq. For SITC subgroup 3344, reported export values were substituted for the reported import values when the export values were larger, and the additional import values were subtracted from the unidentified partner import totals. The remaining reported imports from unidentified partners were discarded.

5.34 UAE imports

There are several major problems with UAE import data. One is the reporting of imports from unidentified partners, under the heading "Not specified" or "Special Categories." A second is the total absence of import data for 1987, 1994-1998, and 2000, and the reporting at only a 2-

digit HS level for 1999. A third is the reporting of many import categories at only higher levels of aggregation than 4-digit SITC. For 1984-86 and 1988-93, imports by 3- or 4- digit SITC covered 98-100 per cent of total imports. For 1994 and 2000, even import totals are inconsistent among sources. Partner export data were used directly for those years. However, Taiwan, a major import partner for UAE, was not reported in UN export data, and UAE imports were calculated from China, Republic of China (2002). For 1992 and 2001, UAE import totals by partner were published in United Nations (1993) and United Nations (2003).

For 1999, partner totals were available in the data set. Where export data were available for a partner, they were used to allocate the partner import totals to SITC categories. For partners with no reported import totals, but data on exports to the UAE, the total discrepancy between the UAE import total from the world and totals from reported partners was divided among unreported partners in proportion to their reported exports to the UAE. The reported SITC product distributions of these exports were then used to distribute the estimated import totals across SITCs. For partners for which total imports into the UAE were available, but no distribution by SITC and no export reports for 1999, the export distribution from the closest year was used to estimate the 1999 import distribution. Imports from 18 small partners could not be distributed by SITC by any of these methods and were dropped from the data set.

17,631 entries were reported at only the 1- to 3- digit SITC level. Where 4-digit data were available from partners' export reports, they were used to estimate allocate imports at the broader level to the 4-digit SITC categories. Where 4-digit data were not available for a given year, data for nearby years were used for the allocation. Some remaining 1- or 2-digit import categories were first distributed to the 3-digit level from partner export data for the same year and then to the 4-digit level by partner export distributions for nearby years.

5.35 UK imports

UK import data involve several problems. One is that some imports are reported at only the 3-digit SITC level and the 4- digit breakdown must be estimated. These imports are as large as $US 12 billion in 1997. After the 4-digit estimation, reported imports by 4-digit subgroup fall short of reported total imports by $US 1 to 2 billion in some years and exceed the total by $US 1 to 5 billion in others. Included in these totals are $US 1 to 4 billion reported as SITC 9, concealing the commodity distribution of those imports.

Substantial amounts of UK imports are from unidentified partners, reported as "Special Categories" (90839) or Europe, Other, n.e.s.(57568). One large component of the imports from unidentified partners, to judge from differences between reported and calculated partner totals and from export data, are imports of diamonds, mainly from Belgium and Switzerland in 1984-1990, and these two countries plus South Africa in 1993-95. Data on exports to the UK by partner were used to estimate these imports. The estimated amounts were then subtracted from the reported imports from unidentified partners and also, in 1994 and 1995, from "EU, n.e.s."

Another group with large imports from unidentified partners was SITC 792, "Aircraft and Associated Equipment." In 1993-95, the UK reported the same magnitude of imports under this group from identified partners (3-digit imports without a 4-digit breakdown) as from unidentified partners in a 4-digit breakdown. The 4-digit total of imports exceeded the reported imports from the world by the same magnitude, suggesting that imports under SITC 792 from unidentified partners were duplicated in those years. A similar comparison, along with export information, suggests that imports under SITC 792 from unidentified partners were partially duplicated in 1991-92. For subgroup SITC 7924, "Aircraft, unladen weight exceeding 15,000 kg.," export data suggest that the imports in 1984-88 were almost entirely from the United States, and the

imports were allocated accordingly. For 1989-91 and 1996-2000, the imports from unidentified partners were allocated to partners in proportion to the differences between reported exports and reported imports.

A similar procedure was applied to imports in SITC 7643, "Television," in 1988-1996, using the distribution of differences between reported exports and reported imports. In SITC 7931, "Warships," no guidance could be found for distributing the reported imports from unidentified partners, and they were omitted from the data set.

6. Adjusting the UN Import Trade Data with Value Added from Hong Kong's Re-export

Countries trading with China and Hong Kong treat goods shipped from China through Hong Kong differently than those imported directly from China. This difference in treatment results in a discrepancy in the UN trade data. Specifically, many countries report a higher value of import from China than what China reports as the value of export to the respective countries. The reason is that these countries include the value-added (VA) from Hong Kong (HK) as part of the value of import from China. This value-added should instead be attributed to Hong Kong's export instead of China's.

To achieve this, we first calculated the HK re-export markup (percent) at 1-digit SITC level using an auxiliary dataset containing disaggregate information on Chinese exports to Hong Kong, and Hong Kong re-exports of the same commodities.[7] These markups differ by destination country. In principle, by multiplying the percentage markups by the value of Chinese re-exports through Hong Kong to the destination country (from our auxiliary dataset), we obtain the *value-added* in Hong Kong on that trade flow. However, in very few cases the HK re-export

[7] The data used and markup calculation are described in Feenstra, Hai, Woo and Yao (1999), method A. We exclude disaggregate observations for which the Hong-Kong re-export quantity exceeds the Hong Kong import quantity, which indicates measurement error in one of these observations.

VA is higher than the import value from China as reported in the UN data. Therefore, to avoid this situation, we re-defined the HK VA as:

HK VA = Markup × min{UN country imports from China, China re-exports to UN country}

That is, we use our percentage markup times the minimum of two trade flows: the first is the country imports from China at the 4-digit SITC level, reported in the UN data; and the second is the Chinese re-exports through Hong Kong to that UN country, as available from our auxiliary dataset. With this definition of HK value-added, for each country in the UN dataset the value of imports from China is *reduced* by the calculated HK VA, and the value of imports from HK is *increased* by the same HK VA. Namely, the sum of value of imports from China and HK remains the same in the UN data. The files **CHINA_HK??**, for ??=88,…,00, included with the dataset, provides the revised values of bilateral trade flows when China or Hong Kong is the exporting country.

Table 5A provides examples of the HK VA adjusted imports for four countries – Japan, Canada, U.S., and Germany – for the years 1988, 1992, 1996, and 2000. The first column reports the UN recorded imports from Hong Kong, and the fourth column reports the UN recorded imports from China. Column (2) is the same as column (5), which is the HK VA calculated as described above. The revised import values of these countries from HK are shown in column (3), which is the sum of the original UN recorded imports and the calculated HK VA. On the other hand, subtracting the corresponding HK VA from the original UN recorded imports from China yields the revised import of these countries from China. This is shown in column (6). Column (7) reports the sum of the imports from China and HK for these countries, which are the same as before the HKVA adjustments. Table 5B shows how this adjustment affects the value of the U.S.-China trade deficit, reducing it by 39% in 1988 and 16% in 2000.

Table 5A: UN Imports Adjusted by HK re-export VA for Selected Countries

	Canada imports from HK			Canada imports from China			Canada imports
	Original UN imports	VA of HK re-exports	Revised UN imports	Original UN imports	VA of HK re-exports	Revised UN imports	from China + Hong Kong
1988	937,995	116,252	1,054,247	776,746	116,252	660,494	1,714,741
1992	934,914	446,867	1,381,781	2,021,430	446,867	1,574,563	2,956,344
1996	831,922	579,556	1,411,478	3,613,307	579,556	3,033,751	4,445,229
2000	969,320	890,180	1,859,500	7,590,229	890,180	6,700,049	8,559,549

	US imports from HK			US imports from China			US imports
	Original UN imports	VA of HK re-exports	Revised UN imports	Original UN imports	VA of HK re-exports	Revised UN imports	from China + Hong Kong
1988	10,744,705	1,675,893	12,420,598	9,265,279	1,675,893	7,589,386	20,009,984
1992	10,260,526	6,601,843	16,862,369	27,446,823	6,601,843	20,844,980	37,707,349
1996	10,256,959	9,308,256	19,565,215	54,393,721	9,308,256	45,085,465	64,650,680
2000	11,968,327	13,364,682	25,333,009	107,611,395	13,364,682	94,246,713	119,579,722

	German imports from HK			German imports from China			German imports
	Original UN imports	VA of HK re-exports	Revised UN imports	Original UN imports	VA of HK re-exports	Revised UN imports	from China + Hong Kong
1988	2,597,184	282,571	2,879,755	2,445,061	282,571	2,162,490	5,042,245
1992	3,027,808	1,420,398	4,448,206	7,466,781	1,420,398	6,046,383	10,494,589
1996	2,269,285	2,100,912	4,370,197	11,900,293	2,100,912	9,799,381	14,169,578
2000	2,232,521	2,346,920	4,579,441	16,746,042	2,346,920	14,399,122	18,978,563

Table 5B: Adjusted Trade Balance between the U.S. and China, 1988-2000

year		US imports from China	China imports from US	Trade deficit	% decrease of trade deficit after
1988	UN recorded imports	9,265,279	4,999,888	4,265,391	
1988	HK VA adjusted imports	7,589,386	4,999,888	2,589,498	39%
1992	UN recorded imports	27,446,823	9,579,328	17,867,495	
1992	HK VA adjusted imports	20,844,980	9,579,328	11,265,652	37%
1996	UN recorded imports	54,393,721	17,082,106	37,311,615	
1996	HK VA adjusted imports	45,085,465	17,082,106	28,003,359	25%
2000	UN recorded imports	107,611,395	22,370,953	85,240,442	
2000	HK VA adjusted imports	94,246,713	22,370,953	71,875,760	16%

7. Documentation

The data are stored as SAS and STATA files by year.

A. DISAGGREGATE WORLD TRADE FLOWS

The variables included in **WTF??.SAS7DBAT and WTF??.DTA** where **?? = 62, 63,…,00** are:

Variable	Explanation
DOT	Direction of trade (1=Data from importer, 2=Data from exporter)
SITC	Standard International Trade Classification Revision 2
ICode	Importer country code
ECode	Exporter country code
Importer	Importer country name
Exporter	Exporter country name
Unit	Units or measurement (see below)
Year	4-digit year
Quantity	Quantity (only for years 1984 – 2000)
Value	Thousands of US dollars

Quantity Unit Codes (Blank indicates quantity unavailable or less than one-half a unit)

A	Area (1,000 square meters)	H	Energy (1,000 kilowatt hours)
K	Weight (kilograms)	L	Length (1,000 meters)
N	Units (number of items)	P	Pairs (number of pairs)
V	Volume (cubic meters)	W	Weight (metric tons)

B. AGGREGATE BILATERAL TRADE FLOWS

The bilateral trade between countries (i.e., summed across all SITC commodities) is stored as

WTF_BILAT.SAS7DBAT and WTF_BILAT.DTA.

Variable	Explanation
ICode	Importer country code
ECode	Exporter country code
Importer	Importer country name
Exporter	Exporter country name
Value??	Thousands of US dollars where ?? = 62, 63,…,00

C. **HONG KONG AND CHINA TRADE FLOWS ADJUSTMENT**

The Hong Kong value-added adjustment files are included separately from the master data files by years as **China_HK??.SAS7DBAT** and **China_HK??.DTA** where **?? = 88, 89,…,00.**

Variable	**Explanation**
DOT	Direction of trade (1=Data from importer, 2=Data from exporter)
SITC	Standard International Trade Classification Revision 2
ICode	Importer country code
ECode	Exporter country code
Importer	Importer country name
Exporter	Exporter country name
Unit	Units of measurement (see above)
Year	4-digit year
Quantity	Quantity (only for years 1984 – 2000)
Value	Thousands of US dollars **(same as in WTF files)**
Value_adj	Thousands of US dollars **(revised value)**

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Appendix A: NBER-UN Country Codes

The UN data keeps track of a country by a 2-digit region code and a 3-digit specific country code. The NBER-UN code consists of 6 digits where the first 5 digits are the concatenation of the UN region and country codes while the last digit is a specific modifier that equals to zero in almost all the cases (Feenstra, Romalis, and Schott, 2002). The following table gives a complete list of the UN codes and country abbreviation along with the corresponding NBER-UN codes and country abbreviation, the valid period for the codes, and the full description of the UN country.

In some cases, the UN codes are not accounted for by the 6-digit Standard Classification of Customs Areas and Territories used by Statistics Canada in their World Trade Database. Consequently, these UN codes are also new to the NBER-UN codes. For the most part, these codes consist of former countries which dated before the start of this dataset. Three such countries are Former Rhodesia NYAS, Former Tangayika, and Former Zanzibar-Pemb. Other UN codes newly added to the NBER-UN codes correspond to the regions consisting of the Occupied Palestinian Territory, Neutral Zone, and Asia West Not Elsewhere Specified.

UN Codes			NBER-UN			
62-83	**83-00**	**Name**	**Code**	**Name**	**Period**	**Full UN description**
0	00 000	World	100000	World	1962-2061	World
710	11 710	South Africa	117100	South Africa	2000-2061	South Africa
	11 711	S.Afr.Cus.Un	117100	South Africa	1962-1999	South African Customs Union
12	13 012	Algeria	130120	Algeria	1962-2061	Algeria
	13 290	Africa N.NES	138960	North Africa NES	1962-2061	North Africa Not Elsewhere Specified
434	13 434	Libya	134340	Libya	1962-2061	Libyan Arab Jamahiriya
504	13 504	Morocco	135040	Morocco	1962-2061	Morocco
732	13 732	Westn.Sahara	135040	Morocco	1962-2061	Western Sahara
736	13 736	Sudan	137360	Sudan	1962-2061	Sudan
788	13 788	Tunisia	137880	Tunisia	1962-2061	Tunisia
818	13 818	Egypt	138180	Egypt	1962-2061	Egypt
120	14 120	Cameroon	141200	Cameroon	1962-2061	Cameroon
140	14 140	Cent.Afr.Rep	141400	Cent.Afr.Rep	1962-2061	Central African Republic
148	14 148	Chad	141480	Chad	1962-2061	Chad
178	14 178	Congo	141780	Congo	1962-2061	Congo
226	14 226	Eq.Guinea	162260	Eq.Guinea	1962-2061	Equatorial Guinea

266	14 266	Gabon	142660	Gabon	1962-2061	Gabon
	14 472	Afr.CACEU NS	148960	Afr.CACEU NS	1962-2061	Africa CACEU Not Elsewhere Specifie
24	16 024	Angola	160240	Angola	1962-2061	Angola
72	16 072	Botswana	117100	South Africa	2000-2061	Botswana
86	16 086	Br.Ind.Oc.Tr	166900	Seychelles	1962-2061	British Indian Ocean Territories
108	16 108	Burundi	161080	Burundi	1962-2061	Burundi
132	16 132	Cape Verde	166240	GuineaBissau	1962-2061	Cape Verde
174	16 174	Comoros	166380	Fr Ind O	1962-2061	Comoros
180	16 180	Dem.Rp.Congo	161800	Dem.Rp.Congo	1962-2061	Congo Dem. Republic
204	16 204	Benin	162040	Benin	1962-2061	Benin
230	16 230	Fmr Ethiopia	162300	Ethiopia	1962-1992	Frm Ethiopia (until 1992)
	16 231	Ethiopia	162300	Ethiopia	1993-2061	Ethiopia
	16 232	Eritrea	162300	Ethiopia	1993-2061	Eritrea
260	16 260	Fr.So.Ant.Tr	166380	Fr Ind O	1962-2061	French South Antartic Territories
262	16 262	Djibouti	162620	Djibouti	1962-2061	Djibouti
270	16 270	Gambia	162700	Gambia	1962-2061	Gambia
288	16 288	Ghana	162880	Ghana	1962-2061	Ghana
324	16 324	Guinea	163240	Guinea	1962-2061	Guinea
384	16 384	Cote Divoire	163840	Cote Divoire	1962-2061	Cote Divoire
404	16 404	Kenya	164040	Kenya	1962-2061	Kenya
426	16 426	Lesotho	117100	South Africa	2000-2061	Lesotho
430	16 430	Liberia	164300	Liberia	1962-2061	Liberia
450	16 450	Madagascar	164500	Madagascar	1962-2061	Madagascar
454	16 454	Malawi	164540	Malawi	1965-2061	Malawi
466	16 466	Mali	164660	Mali	1962-2061	Mali
478	16 478	Mauritania	164780	Mauritania	1962-2061	Mauritania
480	16 480	Mauritius	164800	Mauritius	1962-2061	Mauritius
508	16 508	Mozambique	165080	Mozambique	1962-2061	Mozambique
516	16 516	Namibia	117100	South Africa	1962-2061	Namibia
562	16 562	Niger	165620	Niger	1962-2061	Niger
566	16 566	Nigeria	165660	Nigeria	1962-2061	Nigeria
	16 577	Afr.Other NS	168960	Afr.Other NS	1962-2061	Other Africa Not Elsewhere Specified
624	16 624	GuineaBissau	166240	GuineaBissau	1962-2061	Guinea Bissau
638	16 638	Reunion	166380	Fr Ind O	1962-1995	Reunion
646	16 646	Rwanda	166460	Rwanda	1962-2061	Rwanda
654	16 654	St.Helena	166540	St.Helena	1962-2061	Saint Helena
678	16 678	Sao Tome Prn	166240	GuineaBissau	1962-2061	Sao Tome and Principe
686	16 686	Senegal	166860	Senegal	1962-2061	Senegal
690	16 690	Seychelles	166900	Seychelles	1962-2061	Seychelles
694	16 694	Sierra Leone	166940	Sierra Leone	1962-2061	Sierra Leone
706	16 706	Somalia	167060	Somalia	1962-2061	Somalia
716	16 716	Zimbabwe	167160	Zimbabwe	1965-2061	Zimbabwe
	16 717	Fm Rhod Nyas	167170	Fm Rhod Nyas	1962-1964	Frm Rhodesia NYAS (until 1964)
748	16 748	Swaziland	117100	South Africa	2000-2061	Swaziland
768	16 768	Togo	167680	Togo	1962-2061	Togo
800	16 800	Uganda	168000	Uganda	1962-2061	Uganda
834	16 834	Tanzania	168340	Tanzania	1965-2061	United Republic of Tanzania
	16 835	Fm Tanganyik	168350	Fm Tanganyik	1962-1964	Frm Tangayika (until 1964)
	16 836	Fm Zanz-Pemb	168360	Fm Zanz-Pemb	1962-1964	Frm Zanzibar-Pemb. (until 1964)
854	16 854	Burkina Faso	168540	Burkina Faso	1962-2061	Burkina Faso
894	16 894	Zambia	168940	Zambia	1965-2061	Zambia
124	21 124	Canada	211240	Canada	1962-2061	Canada
630	21 841	USA, P.Rico	218400	USA	1962-1980	Frm USA ex.US Virgin Islds (until 80)
840	21 842	USA,PR,USVI	218400	USA	1981-2061	USA, incl. Puerto Rico and US Virgin
60	22 060	Bermuda	220600	Bermuda	1962-2061	Bermuda
304	22 304	Greenland	223040	Greenland	1962-2061	Greenland

666	22 666	St.Pierre,Mq	226660	St.Pierre Mq	1962-2061	Saint Pierre and Miquelon
32	33 032	Argentina	330320	Argentina	1962-2061	Argentina
68	33 068	Bolivia	330680	Bolivia	1962-2061	Bolivia
76	33 076	Brazil	330760	Brazil	1962-2061	Brazil
152	33 152	Chile	331520	Chile	1962-2061	Chile
170	33 170	Colombia	331700	Colombia	1962-2061	Colombia
218	33 218	Ecuador	332180	Ecuador	1962-2061	Ecuador
	33 473	LAIA NES	338960	LAIA NES	1962-2061	LAIA Not Elsewhere Specified
484	33 484	Mexico	334840	Mexico	1962-2061	Mexico
600	33 600	Paraguay	336000	Paraguay	1962-2061	Paraguay
604	33 604	Peru	336040	Peru	1962-2061	Peru
858	33 858	Uruguay	338580	Uruguay	1962-2061	Uruguay
862	33 862	Venezuela	338620	Venezuela	1962-2061	Venezuela
188	34 188	Costa Rica	341880	Costa Rica	1962-2061	Costa Rica
222	34 222	El Salvador	342220	El Salvador	1962-2061	El Salvador
320	34 320	Guatemala	343200	Guatemala	1962-2061	Guatemala
340	34 340	Honduras	343400	Honduras	1962-2061	Honduras
	34 471	CACM NES	348960	CACM NES	1962-2061	CACM Not Elsewhere Specified
558	34 558	Nicaragua	345580	Nicaragua	1962-2061	Nicaragua
28	35 028	Antigua,Barb	356580	St.Kt-Nev-An	1962-2061	Antigua and Barbuda
44	35 044	Bahamas	350440	Bahamas	1962-2061	Bahamas
52	35 052	Barbados	350520	Barbados	1962-2061	Barbados
92	35 092	Br.Virgin Is	356580	St.Kt-Nev-An	1962-2061	British Virgin Islands
	35 129	Carib. NES	358960	Carib. NES	1962-2061	Caribbean Not Elsewhere Specified
136	35 136	Cayman Is	353880	Jamaica	1962-2061	Cayman Islands
192	35 192	Cuba	351920	Cuba	1962-2061	Cuba
212	35 212	Dominica	356580	St.Kt-Nev-An	1962-2061	Dominica
214	35 214	Dominican Rp	352140	Dominican Rp	1962-2061	Dominican Republic
308	35 308	Grenada	356580	St.Kt-Nev-An	1962-2061	Grenada
312	35 312	Guadeloupe	353120	Guadeloupe	1962-2061	Guadeloupe
332	35 332	Haiti	353320	Haiti	1962-2061	Haiti
388	35 388	Jamaica	353880	Jamaica	1962-2061	Jamaica
474	35 474	Martinique	353120	Guadeloupe	1962-1995	Martinique
500	35 500	Montserrat	356580	St.Kt-Nev-An	1962-2061	Montserrat
	35 530	Neth.Antiles	355320	Neth.Ant.Aru	1988-2061	Netherlands Antilles
532	35 532	Neth.Ant.Aru	355320	Neth.Ant.Aru	1962-1987	Frm Neth. Antilles/ Aruba (until 1988)
	35 533	Aruba	355320	Neth.Ant.Aru	1988-2061	Aruba
658	35 658	St.Kt-Nev-An	356580	St.Kt-Nev-An	1962-1980	Frm St.Kitts/Nev/Anguilla (until 1980)
	35 659	St.Kitts-Nev	356580	St.Kt-Nev-An	1981-2061	Saint Kitts and Nevis
660	35 660	Anguilla	356580	St.Kt-Nev-An	1981-2061	Anguilla
662	35 662	St.Lucia	356580	St.Kt-Nev-An	1962-2061	Saint Lucia
670	35 670	St.Vincent,G	356580	St.Kt-Nev-An	1962-2061	Saint Vincent and the Grenadines
780	35 780	Trinidad Tbg	357800	Trinidad Tbg	1962-2061	Trinidad and Tobago
796	35 796	Turks,Caicos	353880	Jamaica	1962-2061	Turks and Caicos Islands
850	35 850	US.Virgin Is	218400	USA	1962-1980	Frm US Virgin Islands (until 1980)
80	36 080	Br.Antr.Terr	360800	Br.Antr.Terr	1962-2061	British Antartic Territories
84	36 084	Belize	360840	Belize	1962-2061	Belize
238	36 238	Falkland Is	362380	Falkland Is	1962-2061	Falkland Islands
254	36 254	Fr.Guiana	362540	Fr.Guiana	1962-1995	French Guiana
328	36 328	Guyana	363280	Guyana	1962-2061	Guyana
590	36 590	Fm Pan.Ex-CZ	365900	Panama	1962-1977	Frm Panama ex.Canal Zone (until 197
	36 591	Panama	365900	Panama	1978-2061	Panama
592	36 592	Fm Panama CZ	365900	Panama	1962-1977	Frm Panama Canal Zone (until 1977)
	36 636	Amer.Rest NS	368960	US NES	1962-2061	Rest of America Not Elsewhere Specif
740	36 740	Suriname	367400	Suriname	1962-2061	Suriname
376	41 376	Israel	413760	Israel	1962-2061	Israel

392	41 392	Japan	413920	Japan	1962-2061	Japan
48	44 048	Bahrain	440480	Bahrain	1962-2061	Bahrain
196	44 196	Cyprus	441960	Cyprus	1962-2061	Cyprus
274	44 275	Occ.Pal.Terr	442750	Occ.Pal.Terr	2000-2061	Occupied Palestinian Territory
364	44 364	Iran	443640	Iran	1962-2061	Iran, Islamic Republic of
368	44 368	Iraq	443680	Iraq	1962-2061	Iraq
400	44 400	Jordan	444000	Jordan	1962-2061	Jordan
414	44 414	Kuwait	444140	Kuwait	1962-2061	Kuwait
422	44 422	Lebanon	444220	Lebanon	1962-2061	Lebanon
512	44 512	Oman	445120	Oman	1962-2061	Oman
536	44 536	Neutral Zone	445360	Neutral Zone	1962-2061	Neutral Zone
634	44 634	Qatar	446340	Qatar	1962-2061	Qatar
682	44 682	Saudi Arabia	446820	Saudi Arabia	1962-2061	Saudi Arabia
720	44 720	Fm Yemen Dm	447200	Fm Yemen Dm	1962-1990	Frm Democratic Yemen (until 1990)
760	44 760	Syria	447600	Syria	1962-2061	Syrian Arab Republic
784	44 784	Untd Arab Em	447840	Untd Arab Em	1962-2061	United Arab Emirates
792	44 792	Turkey	447920	Turkey	1962-2061	Turkey
	44 879	Asia West NS	448790	Asia West NS	1962-2061	Asia West Not Elsewhere Specified
886	44 886	Fm Yemen AR	448860	Fm Yemen AR	1962-1990	Frm Arab Rep. of Yemen (until 1990)
	44 887	Yemen	448870	Yemen	1991-2061	Yemen
4	45 004	Afghanistan	450040	Afghanistan	1962-2061	Afghanistan
50	45 050	Bangladesh	450500	Bangladesh	1972-2061	Bangladesh
64	45 064	Bhutan	450000	Asia NES	1962-2061	Bhutan
96	45 096	Brunei Darsm	450000	Asia NES	1962-2061	Brunei Darussalam
104	45 104	Myanmar	451040	Myanmar	1962-2061	Myanmar
116	45 116	Cambodia	451160	Cambodia	1962-2061	Cambodia
144	45 144	Sri Lanka	451440	Sri Lanka	1962-2061	Sri Lanka
156	45 156	China	481560	China	1962-2061	China
900	90 838	Free Zones*	481561	China FTZ	1984-2061	China Foreign Trade Zone
908	90 839	Spec Cats*	481562	China SC	1984-2061	China Special Categories
898	90 899	Areas NES*	481563	China NES	1984-2061	China Areas NES
344	45 344	China HK SAR	453440	China HK SAR	1962-2061	Hong Kong Special Administrative Re
356	45 356	India Ex Sik	453560	India	1962-1974	Frm India excl. Sikkim (until 1974)
360	45 360	Indonesia	453600	Indonesia	1962-2061	Indonesia
408	45 408	Korea D P Rp	484080	Korea D P Rp	1962-2061	Korea, Democratic People's Republic c
410	45 410	Korea Rep.	454100	Korea Rep.	1962-2061	Korea, Republic of
418	45 418	Lao P.Dem.R	454180	Lao P.Dem.R	1962-2061	Lao People's Democratic Republic
446	45 446	China MC SAR	454460	China MC SAR	1962-2061	Macau Special Administrative Region
	45 457	Sarawak	454580	Malaysia	1962-1963	Frm Sarawak (until 1963)
458	45 458	Malaysia	454580	Malaysia	1964-2061	Malaysia
	45 459	Pen Malaysia	454580	Malaysia	1962-1963	Frm Peninsula Malaysia (until 63)
	45 461	Sabah	454580	Malaysia	1962-1963	Frm Sabah (until 1963)
462	45 462	Maldives	453600	Indonesia	1962-2061	Maldives
896	45 490	Asia Othr.NS	458960	Taiwan	1962-2061	Asia Other Not Elsewhere Specified
496	45 496	Mongolia	484960	Mongolia	1962-2061	Mongolia
524	45 524	Nepal	455240	Nepal	1962-2061	Nepal
586	45 586	Pakistan	455860	Pakistan	1972-2061	Pakistan
	45 588	Pakistan E/W	455860	Pakistan	1962-1971	Frm Pakistan East/West (until 71)
608	45 608	Philippines	456080	Philippines	1962-2061	Philippines
626	45 626	East Timor	453600	Indonesia	1962-2061	East Timor
650	45 647	Ryukyu Is	413920	Japan	1962-1972	Frm Ryukyu Island (until 1972)
698	45 698	Sikkim	453560	India	1962-1974	Frm Sikkim (until 1974)
	45 699	India	453560	India	1975-2061	India
702	45 702	Singapore	457020	Singapore	1962-2061	Singapore
704	45 704	Viet Nam	487040	Viet Nam	1975-2061	Viet Nam
764	45 764	Thailand	457640	Thailand	1962-2061	Thailand

866	45 866	Fm Vietnm DR	487040	Viet Nam	1962-1974	Frm Viet Nam Democratic (until 1974)
868	45 868	Fm Vietnm Rp	487040	Viet Nam	1962-1974	Frm Viet Nam Republic (until 1974)
	46 031	Azerbaijan	460310	Azerbaijan	1992-2061	Azerbaijan
	46 051	Armenia	460510	Armenia	1992-2061	Armenia
	46 268	Georgia	462680	Georgia	1992-2061	Georgia
	46 398	Kazakhstan	463980	Kazakhstan	1992-2061	Kazakhstan
	46 417	Kyrgyzstan	464170	Kyrgyzstan	1992-2061	Kyrgyzstan
	46 762	Tajikistan	467620	Tajikistan	1992-2061	Tajikistan
	46 795	Turkmenistan	467950	Turkmenistan	1992-2061	Turkmenistan
	46 860	Uzbekistan	468600	Uzbekistan	1992-2061	Uzbekistan
40	53 040	Austria	550400	Austria	1962-2061	Austria
	53 056	Belgium	530560	Belgium-Lux	1999-2061	Belgium
56	53 058	Belgium-Lux	530560	Belgium-Lux	1962-2061	Belgium, Luxembourg
208	53 208	Denmark	532080	Denmark	1973-2061	Denmark
	53 246	Finland	552460	Finland	1995-2061	Finland
250	53 251	France,Monac	532500	France,Monac	1962-2061	France, Monaco and Overseas territorie
	53 276	Germany	532760	Germany	1991-2061	Germany
280	53 280	Fm German FR	532800	Fm German FR	1962-1990	Frm Germany, Federal (until 1990)
300	53 300	Greece	533000	Greece	1981-2061	Greece
372	53 372	Ireland	533720	Ireland	1973-2061	Ireland
674	53 381	Italy	533800	Italy	1962-2061	Italy, incl. San Marino and the Holy Se
380	53 381	Italy	533800	Italy	1962-2061	Italy, incl. San Marino and the Holy Se
442	53 442	Luxembourg	530560	Belgium-Lux	1999-2061	Luxembourg
	53 492	Europe EU NS	538960	EEC NES	1962-2061	European Union Not Elsewhere Specif
528	53 528	Netherlands	535280	Netherlands	1962-2061	Netherlands
620	53 620	Portugal	536200	Portugal	1986-2061	Portugal
724	53 724	Spain	537240	Spain	1986-2061	Spain
752	53 752	Sweden	557520	Sweden	1962-2061	Sweden
826	53 826	UK	538260	UK	1973-2061	United Kingdom
246	55 246	Finland	552460	Finland	1962-1994	Finland
352	55 352	Iceland	553520	Iceland	1971-2061	Iceland
578	55 579	Norway,Sb,JM	555780	Norway	1962-2061	Norway
	55 697	Eur. EFTA NS	558960	Eur. EFTA NS	1962-2061	Europe EFTA Not Elsewhere Specifiec
438	55 757	Switz.Liecht	557560	Switz.Liecht	1962-2061	Switzerland, Liechtenstein
756	55 757	Switz.Liecht	557560	Switz.Liecht	1962-2061	Switzerland, Liechtenstein
8	56 008	Albania	580080	Albania	1962-2061	Albania
100	56 100	Bulgaria	581000	Bulgaria	1962-2061	Bulgaria
200	56 200	Czechoslovak	582000	Czechoslovak	1962-1992	Frm Czechoslovakia (until 1992)
	56 203	Czech Rep	582030	Czech Rep	1993-2061	Czech Republic
	56 221	Eur. East NS	582210	E Europe NES	1962-2061	Europe East Not Elsewhere Specified
278	56 278	Fm German DR	582780	Fm German DR	1962-1990	Frm Germany, Democratic (until 90)
348	56 348	Hungary	583480	Hungary	1962-2061	Hungary
616	56 616	Poland	586160	Poland	1962-2061	Poland
642	56 642	Romania	586420	Romania	1962-2061	Romania
	56 703	Slovakia	587030	Slovakia	1993-2061	Slovakia
20	57 020	Andorra	532500	France,Monac	1962-2061	Andorra
234	57 234	Faeroe Is	532080	Denmark	1962-2061	Faeroe Islands
292	57 292	Gibraltar	572920	Gibraltar	1962-2061	Gibraltar
470	57 470	Malta	574700	Malta	1962-2061	Malta
	57 568	Eur. Othr.NS	578960	Eur. Other NES	1962-2061	Europe Other Not Elsewhere Specified
890	57 890	Fm Yugoslav	598900	Fm Yugoslav	1962-1991	Frm SFR Yugoslavia (until 1991)
	58 112	Belarus	581120	Belarus	1992-2061	Belarus
	58 233	Estonia	582330	Estonia	1992-2061	Estonia
	58 428	Latvia	584280	Latvia	1992-2061	Latvia
	58 440	Lithuania	584400	Lithuania	1992-2061	Lithuania
	58 498	Rep Moldova	584980	Rep Moldova	1992-2061	Republic of Moldova

	58 643	Russian Fed	586430	Russian Fed	1992-2061	Russian Federation
	58 804	Ukraine	588040	Ukraine	1992-2061	Ukraine
	59 070	Bosnia Herzg	590700	Bosnia Herzg	1992-2061	Bosnia and Herzegovina
	59 191	Croatia	591910	Croatia	1992-2061	Croatia
	59 705	Slovenia	597050	Slovenia	1992-2061	Slovenia
	59 807	TFYR Macedna	598070	TFYR Macedna	1993-2061	TFYR Macedonia
	59 891	Yugoslavia	598910	Yugoslavia	1992-2061	Yugoslavia
810	68 810	Fm USSR	688100	Fm USSR	1962-1991	Frm USSR (until 1991)
36	71 036	Australia	710360	Australia	1962-2061	Australia
554	71 554	New Zealand	715540	New Zealand	1962-2061	New Zealand
90	72 090	Solomon Is	722960	Kiribati	1962-2061	Solomon Islands
162	72 162	Christmas Is	710360	Australia	1962-2061	Christmas Islands
166	72 166	Cocos Is	710360	Australia	1962-2061	Cocos (Keeling) Islands
184	72 184	Cook Is	715540	New Zealand	1962-2061	Cook Islands
242	72 242	Fiji	722420	Fiji	1962-2061	Fiji
258	72 258	Fr.Polynesia	725400	New Calednia	1962-2061	French Polynesia
296	72 296	Kiribati	722960	Kiribati	1962-2061	Kiribati
520	72 520	Nauru	722420	Fiji	1962-2061	Nauru
	72 527	Oceania NES	728960	Oth.Oceania NES	1962-2061	Oceania Not Elsewhere Specified
540	72 540	New Calednia	725400	New Calednia	1962-2061	New Caledonia
548	72 548	Vanuatu	722960	Kiribati	1962-2061	Vanuatu
570	72 570	Niue	715540	New Zealand	1962-2061	Niue
574	72 574	Norfolk Is	710360	Australia	1962-2061	Norfolk Islands
	72 580	N.Mariana Is	728960	Oth.Oceania NES	1992-2061	Northern Mariana Islands
582	72 582	Fm Pacific I	368960	US NES	1962-1991	Frm Pacific Islands (until 1991)
16	72 583	Micronesia	368960	US NES	1992-2061	Micronesia, Federated States of
	72 584	Marshall Is	368960	US NES	1992-2061	Marshall Islands
	72 585	Palau	368960	US NES	1992-2061	Palau
598	72 598	Papua N.Guin	725980	Papua N.Guin	1962-2061	Papua New Guinea
612	72 612	Pitcairn	722960	Kiribati	1962-2061	Pitcairn
772	72 772	Tokelau	715540	New Zealand	1962-2061	Tokelau
776	72 776	Tonga	722420	Fiji	1962-2061	Tonga
798	72 798	Tuvalu	722960	Kiribati	1962-2061	Tuvalu
316	72 849	US Msc.Pac.I	368960	US NES	1962-2061	US Miscellaneous Pacific Islands
876	72 876	Wallis Fut.I	725400	New Calednia	1962-2061	Wallis and Futuna Islands
882	72 882	Samoa	728882	Samoa	1962-2061	Samoa
904	90 837	Bunkers	908960	Areas NES	1962-2061	Bunkers
900	90 838	Free Zones	908960	Areas NES	1962-2061	Free Zones
908	90 839	Spec Cats	908960	Areas NES	1962-2061	Special Categories
898	90 899	Areas NES	908960	Areas NES	1962-2061	Not Specified

*Applies only to the cases where China is the reporting country.

The following 3-digit country codes for years 1962-1983 do not have corresponding NBER-UN country codes and are dropped from the dataset. The table below shows the frequency of these country codes in the data by year.

	Frequency by Year									
Code	**1970**	**1973**	**1974**	**1975**	**1976**	**1977**	**1978**	**1979**	**1980**	**1981**
488			1			12		6		
872	2	4	3	5	6	3	3	3	3	2

Appendix B: NBER-UN Country Code Notation (1962-2000)

1. Cases where UN country codes are revised to match Feenstra, Lipsey, and Bowen (FLB, 1997)

100000 WORLD	(appears as 000000 in UN)

(a) Africa

117100 S AFRICA	(appears as 117110 in UN; incl. Botswana, UN uses 160720; incl. Lesotho, UN uses 164260 until 1988; incl. Namibia, UN uses 165160; incl. Swaziland, UN uses 167480, 2000 and later)
138960 NORTH AFRICA NES	(appears as 132900 in UN)
148960 CEUCA NES	(appears as 144720 in UN)
162260 EQUATORIAL GUINEA	(appears as 142260 in UN, 1996 and later)
162300 ETHIOPIA	(appears as 162310 in UN, 1993 and later; incl. Eritrea, UN uses 162320, 1993 and later)
166240 GUINEA-BISSAU	(incl. Cape Verde, UN uses 161320; incl. Sao Tome Prn, UN uses 160780 until 1975)
168960 AFRICA OTH. NES	(appears as 165770 in UN)
166900 SEYCHELLES	(incl. British Indian Occupied Terr, UN uses 160860)
166380 FR IND O	(incl. Comoros, UN uses 161740; incl. Reunion, UN uses 166380; incl. Fr.So.Ant.Tr, UN uses 162600)
135040 Morocco	(incl. W.Sahara, UN uses 137320)

(b) Americas

218400 USA	(appears as 218410 in UN, w/out Virgin Is until 1980, appears as 218420 in UN, w/ Virgin Is, 1981 and later, both categories incl. Puerto Rico; US Virgin Is appears as 358500 in UN until 1980)
368960 REST AMERICA NES	(appears as 366360 in UN)
365900 PANAMA	(appears as 365910 in UN, 1978 and later; incl. Former Panama Canal, UN uses 365920 until 1977)

(c) Caribbean Islands

338960 LAIA NES	(appears as 334730 in UN)
348960 CACM NES	(appears as 344710 in UN)
353120 GUADELOUPE	(incl. Martinique, UN uses 354740)
355320 NETH.ANT.ARU	(appears as 355300 in UN w/o Aruba 1988 and later; incl. Aruba, UN uses 355330, 1988 and later)
356580 ST KITTS	(incl. Anguilla, UN uses 356600; incl. Dominica, UN uses 352120; incl. Montserrat, UN uses 355000; incl. St Lucia, UN uses 356620; incl. St Vincent, UN uses 356700; incl. Grenada, UN uses 353080, 1981 and later; incl. Br.Virgin Islands, UN uses 350920; incl. Antigua and Barbuda, UN uses 350280)
358960 CARIBBEAN NES	(appears as 351290 in UN)
353880 JAMAICA	(incl. Cayman Is, UN uses 351360; incl. Turks and Caicos, UN uses 357960)

(d) Asia

453560 INDIA	(appears as 456990 in UN, 1975 and later; incl. Sikkim, UN uses 456980 until 1974)
453600 INDONESIA	(incl. Maldives, UN uses 454620; incl. East Timor, UN uses 456260)
455860 PAKISTAN	(appears as 455880 in UN until 1971)
454580 MALAYSIA	(incl. Pen Malaysia, UN uses 454590 until 1963; incl. Sabah, UN uses 454610 until 1963; incl. Sarawak, UN uses 454570 until 1963;)
458960 TAIWAN	(appears as Asia Othr.NS 454900 in UN)
481560 CHINA	(appears as 451560 in UN)
484080 KOREA D P RP	(appears as 454080 in UN)
484960 MONGOLIA	(appears as 454960 in UN)
487040 VIETNAM	(appears as 457040 in UN, 1975 and later; incl. Former Vietnam Dr, UN uses 458660 until 1974; Former Vietnam Rp, UN uses 458680 until 1974)
450000 ASIA NES	(incl. Bhutan, UN uses 450640; incl. Brunei Darsm, UN uses 450960)

(e) Western Europe

532080 DENMARK	(incl. Faeroe Is, UN uses 572340)
532500 FRANCE	(appears as 532510 in UN; incl. Monaco; incl. Andorra, UN uses 570200)
533800 ITALY	(appears as 533810 in UN)
538960 EEC NES	(appears as Europe EU NS 534920 in UN)
550400 AUSTRIA	(appears as 530400 in UN, 1995 and later)
552460 FINLAND	(appears as 532460 in UN, 1995 and later)
555780 NORWAY	(appears as 555790 in UN)
557520 SWEDEN	(appears as 537520 in UN, 1995 and later)
557560 SWITZERLAND	(appears as 557570 in UN, incl. Liechtenstein)
558960 EUR. EFTA NES	(appears as 556970 in UN)
578960 EUR. OTHER NES	(appears as 575680 in UN)

(f) Former East Germany and Eastern Europe: (the FLB, 1997 code 588960 FM EUR CPE NES no longer appears):

580080 ALBANIA	(appears as 560080 in UN)
581000 BULGARIA	(appears as 561000 in UN)
582000 CZECHOSLOVAKIA	(appears as 562000 in UN)
582030 CZECH REPUBLIC	(appears as 562030 in UN, 1993 and later)
587030 SLOVAKIA	(appears as 567030 in UN, 1993 and late)
582210 E EUROPE NES	(appears as 562210 in UN)
583480 HUNGARY	(appears as 563480 in UN)
586160 POLAND	(appears as 566160 in UN)
586420 ROMANIA	(appears as 566420 in UN)
598900 FM YOGOSLAVIA	(appears as 578900 in UN, until 1991)

(g) Oceania

710360 AUSTRALIA	(incl. Christmas Is, UN uses 721620; incl. Norfolk Is, UN uses 725740; incl. Cocos Is, UN uses 721660)

715540 NEW ZEALAND	(incl. Tokelau, UN uses 727720; incl. Niue, UN uses 725700; incl. Cook Is, UN uses 721840)
722420 FIJI	(incl. Nauru, UN uses 725200; incl. Tonga, UN uses 727760)
722960 KIRIBATI	(incl. Solomon Is, UN uses 720900; incl. Tuvalu, UN uses 725480; incl. Pitcairn, UN uses 726120)
725400 NEW CALEDONIA	(incl. Fr Polynesia, UN uses 722580; incl. Wallis Fut.I, UN uses 728760)
728882 SAMOA	(appears as 728820 in UN)
728960 OTH. OCEANIA NES	(appears as 725270 in UN, incl. N.Mariana Is, UN uses 725800)
908960 AREAS NES	(appears as 908990 in UN)

2. Cases where UN country codes are revised for aggregation to match FLB, 1997:

(a) Belgium-Luxembourg

Available in UN but not in **FLB, 1997**, and now aggregated to Belgium-Luxembourg 530560

530580 BELGIUM-LUX	(appears as 530560 in FLB, 1997)
530560 BELGIUM	(appears as 530560 in UN, 1999 and later)
534420 LUXEMBOURG	(appears as 534420 in UN, 1999 and later)

(b) US NES

The following were available in UN but not in FLB, 1997, now aggregated to US NES 368960

725830 MICRONESIA	
725840 MARSHALL ISLAND	
725850 PALAU	
725820 FM PACIFIC ISLANDS	(until 1991)
728490 US MISC PAC I	(US Miscellaneous Pacific Islands)

(c) Miscellaneous

The following were available in UN but not in FLB, 1997, now aggregated to Areas NES 908960

908370 BUNKERS	
908380 FREE ZONES	
908390 SPEC CATS	(Special Categories)

3. Cases where new codes (not already in FLB, 1997) are retained in the revised UN data:

(a) Asia:

454460 MACAU	(merged with Indonesia in FLB, 1997)

(b) Germany:

Former West Germany and unified Germany both listed as 532800 in FLB, 1997, now broken up over the years as:

532800 W GERMANY	(up to 1990)
532760 GERMANY	(unified, 1991 and later)

(c) Former Soviet Union (Europe):

Former USSR (including new countries) listed as 688100 in FLB, 1997, now broken up over the years as:

581120 BELARUS	(1992 and later)
582330 ESTONIA	(1992 and later)
584280 LATVIA	(1992 and later)
584400 LITHUANIA	(1992 and later)
584980 REP MOLDOVA	(1992 and later)
586430 RUSSIA	(1992 and later)
588040 UKRAINE	(1992 and later)
688100 FM USSR	(until 1991)

(d) Former Soviet Union (Asia):

Former USSR (including new countries) listed as 688100 in FLB, 1997, now broken up over the years as:

460310 AZERBAIJAN	(1992 and later)
460510 ARMENIA	(1992 and later)
462680 GEORGIA	(1992 and later)
463980 KAZAKHSTAN	(1992 and later)
464170 KYRGYZSTAN	(1992 and later)
467620 TAJIKISTAN	(1992 and later)
467950 TURKMENISTAN	(1992 and later)
468600 UZBEKISTAN	(1992 and later)

(e) Former Yugoslavia:

Yugoslavia (including Croatia and Slovenia) listed as 598900 in FLB, 1997, now listed as:

598900 FM YUGOSLAVIA	(until 1991)
597050 SLOVENIA	(1992 and later)
598910 YUGOSLAVIA	(1992 and later)
590700 BOSNIA HERZEGOVINA	(1992 and later)
591910 CROATIA	(1992 and later)
598070 TFYR MACEDONIA	(1993 and later, included in Yugoslavia in 1992)

(f) Others – Previously not listed in FLB, 1997 but in UN data

167170 FM RHOD NYAS	(Former Rhodesia NYAS – until 1964)
168350 FM TANGANYIK	(Former Tanganyika – until 1964)
168360 FM ZANZ PEMB	(Former Zanzibar-Pemb. – until 1964)
442750 OCC. PAL. TERR	(Occupied Palestinian Territory, 2000 and later)
448790 ASIA W NES	(appears as ASIA CPE NES, 488960 in FLB, 1997)
445360 NEUTRAL ZONES	
360800 BR.ANTR.TERR	(British Antarctic Territories)

Appendix C: China FTZ and China SC in the UN Import Trade

As mentioned in section 5.1, China records imports from their own trade zones differently from those imported from another country. For years 1984 to 2000, if the reporting country is China (ICode = 481560) and the partner country is characterized as the "Free Zones" (ECode = 908380) then the new partner country is given the name of China FTZ (China Free Trade Zone) with a new ECode of 481561. Next, the value and quantity corresponding to the newly created China FTZ is subtracted from Areas NES (ECode = 908960) by SITC to prevent double counting. An example of the adjustment made to the UN import data is given below. Similar steps are taken for creating China SC (ECode = 481562) from "Special Categories" (ECode = 908390) and creating China NES (Ecode = 481563) from "Areas NES" (ECode = 908990), when China is the importing country.

UN Import Data (value in thousands of dollars)

DOT	SITC	ICode	ECode	Importer	Exporter	Unit	Year	Quantity	Value
1	0342	481560	481561	China	China FTZ	W	1992	237	265
1	0342	481560	908960	China	Areas NES	W	1992	2,333	1,714
1	0360	481560	481561	China	China FTZ	W	1992	42	195
1	0360	481560	908960	China	Areas NES	W	1992	42	195

Adjusted UN Import Data (value in thousands of dollars)

DOT	SITC	ICode	ECode	Importer	Exporter	Unit	Year	Quantity	Value
1	0342	481560	481561	China	China FTZ	W	1992	237	265
1	0342	481560	908960	China	Areas NES	W	1992	2,096	1,449
1	0360	481560	481561	China	China FTZ	W	1992	42	195

The following tables provide information regarding the value of import by China through their free trade zones (China FTZ).

Aggregate Import Value (thousands of dollars)

DOT	ICode	Ecode	Importer	Exporter	Year	Value
1	481560	481561	China	China FTZ	1992	171,720
1	481560	481561	China	China FTZ	1994	1,768,417
1	481560	481561	China	China FTZ	1995	1,602,267
1	481560	481561	China	China FTZ	1997	2,917,495
1	481560	481561	China	China FTZ	1998	3,015,040
1	481560	481561	China	China FTZ	1999	4,133,945
1	481560	481561	China	China FTZ	2000	7,167,590

Top Two Categories by Percent of 2-Digit SITC Value (value in thousands of dollars)

DOT	SITC	ICode	ECode	Importer	Exporter	Year	Value	% of Value
1	65	481560	481561	China	China FTZ	1992	61,506	35.82
1	67	481560	481561	China	China FTZ	1992	11,707	6.82
1	65	481560	481561	China	China FTZ	1994	763,328	43.16
1	77	481560	481561	China	China FTZ	1994	165,570	9.36
1	65	481560	481561	China	China FTZ	1995	969,487	60.51
1	77	481560	481561	China	China FTZ	1995	243,515	15.20
1	65	481560	481561	China	China FTZ	1997	1,070,306	36.69
1	77	481560	481561	China	China FTZ	1997	473,529	16.23
1	65	481560	481561	China	China FTZ	1998	1,041,103	34.53
1	77	481560	481561	China	China FTZ	1998	554,989	18.41
1	65	481560	481561	China	China FTZ	1999	1,007,278	24.37
1	77	481560	481561	China	China FTZ	1999	904,838	21.89
1	77	481560	481561	China	China FTZ	2000	1,656,318	23.11
1	65	481560	481561	China	China FTZ	2000	1,253,816	17.49

Top Two Categories by Percent of 4-Digit SITC Value (value in thousands of dollars)

DOT	SITC	ICode	Ecode	Importer	Exporter	Year	Value	% of Value
1	6513	481560	481561	China	China FTZ	1992	11,558	6.73
1	6522	481560	481561	China	China FTZ	1992	10,821	6.30
1	6522	481560	481561	China	China FTZ	1994	191,870	10.85
1	6513	481560	481561	China	China FTZ	1994	118,572	6.70
1	6522	481560	481561	China	China FTZ	1995	26,1274	11.66
1	6513	481560	481561	China	China FTZ	1995	148,745	6.64
1	6522	481560	481561	China	China FTZ	1997	284,858	9.76
1	7649	481560	481561	China	China FTZ	1997	228,375	7.83
1	7649	481560	481561	China	China FTZ	1998	327,480	10.86
1	6522	481560	481561	China	China FTZ	1998	256,344	8.50
1	7649	481560	481561	China	China FTZ	1999	494,800	11.97
1	6522	481560	481561	China	China FTZ	1999	239,362	5.79
1	7649	481560	481561	China	China FTZ	2000	991,497	13.83
1	7599	481560	481561	China	China FTZ	2000	752,044	10.49