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## **ABSTRACT**

This paper describes the updating of the NBER trade dataset, which now provides U.S. import and export values to the year 2001, disaggregated by Harmonized System (HS), Standard International Trade Classification (SITC), and the U.S. Standard Industrial Classification (SIC) categories. In addition, U.S. tariff data at the HS level have been added for the years 1989-2001. Earlier CD-ROMs distributed by the NBER described data on U.S. imports and exports from 1972-1994, and these values have been slightly modified for 1989-1994 and then updated to 2001. Together with the earlier data, there are now 30 years of disaggregate U.S. trade data available to researchers. These data, along with the tariff information for 1989-2001, are all available over the internet at www.nber.org/data/.

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#### 1. Introduction

This paper describes the updating of the NBER trade dataset, which now provides U.S. import and export values to the year 2001, disaggregated by Harmonized System (HS), Standard International Trade Classification (SITC), and the U.S. Standard Industrial Classification (SIC) categories. In addition, U.S. tariff data at the HS level have been added for the years 1989-2001. Earlier CD-ROMs distributed by the NBER (see Feenstra, 1996, 1997) described data on U.S. imports and exports from 1972-1994, and these values have been slightly modified for 1989-1994 and then updated to 2001. Together with the earlier data, there are now 30 years of disaggregate U.S. trade data available to researchers. These data, along with the tariff information for 1989-2001, are all available over the internet at <a href="https://www.nber.org/data/">www.nber.org/data/</a>.

This paper has five parts. First, we describe the updating of the U.S. HS imports and exports. The import data for 1989-2001 is now reported as both "general imports" and "imports for consumption," and the distinction between these is discussed in section 2. In section 3, we describe how the HS trade data has been aggregated to the 1987 version 4-digit SIC industries. This aggregation was performed by Peter Schott, using (unpublished) concordances. However, there are 73 (out of 459) 4-digit SIC industries for which we are not able to compute imports or exports at the present time. This will be corrected when updated U.S. production data becomes available. The U.S. tariff data at the HS level for 1989-2001 is described in section 4, and these data have been collected and made available by John Romalis. Finally, in section 5 and the Appendices we provide documentation for all the data.

We thank Jack Barna and J. Bradford Jensen at the U.S. Census Bureau for their help in securing the concordances used to aggregate from the HS to the U.S. SIC categories. The 1987-based SIC trade data

concordances used to aggregate from the HS to the U.S. SIC categories. The 1987-based SIC trade data computed by Peter Schott is available at <a href="https://www.som.yale.edu/faculty/pks4/sub\_international.htm">www.som.yale.edu/faculty/pks4/sub\_international.htm</a>.

The revised 1987-based SIC trade data, that imputes trade within the "missing" SIC categories, will be made available at a future date at Robert Feenstra's website, <a href="https://www.internationaldata.org">www.internationaldata.org</a>.

The tariff data is available at gsbwww.uchicago.edu/fac/john.romalis/research/.

## 2. U.S. Imports and Exports

U.S. merchandise imports are collected under two methods. "General imports" are imports as they come off the dock. They reflect the total arrival of merchandise from foreign countries that immediately enter consumption channels, bonded warehouses, or foreign trade zones. In contrast, "imports for consumption" are a combination of entries for immediate consumption, including those coming from U.S. foreign trade zones and withdrawals from warehouses for consumption. Since April 1995, the National Trade Databank CD-ROMs that are distributed by the U.S. Department of Commerce have reported "general imports" rather than "imports for consumption." Likewise, recent issues of the *Economic Report of the President* report U.S. "general imports" at the aggregate level.

The earlier U.S. import data distributed by Feenstra (1996) for 1972-1994 was for "imports for consumption," but the updated data for 1989-2001 described herein also includes "general imports." As noted, these data will differ for goods used in foreign trade zones or entering into bonded warehouses. Examples include automobiles and their parts, where in 1993 the volume of automobile trade entering U.S. foreign trade zones was over \$12 billion (Swenson, 1997, p. 37). It is expected that the use of "general imports" rather than "imports for consumption" will give a more accurate picture of the import of these goods in the U.S. prior to their further manufacture in the foreign trade zones.

For this update to the U.S. import and export dataset described in Feenstra (1996, 1997), we have recomputed U.S. imports and exports at the HS level for the six years 1989-1994 (which overlap with the earlier 1972-1994 dataset) and then provide new data for six additional years, 1995-2001. Researchers interested in the full 30 years of data will therefore be using the 1972-1988 files from the earlier dataset, and the 1989-2001 files from this updated dataset. As noted

in the introduction, all data are available over the internet at <a href="www.nber.org/data/">www.nber.org/data/</a>, and also <a href="www.internationaldata.org">www.internationaldata.org</a> at the University of California, Davis.

In Tables 1 and 2, we report the total values of merchandise imports and exports for the updated years, 1989-2001, and for comparison, we also report the values from the *Economic Report of the President (ERP)*. For imports, "general imports" from the database and the ERP are quite close in all years (Table 1). For exports, the database includes only "domestic exports," but *excludes* re-exports of foreign goods passing through the United States. In 2000, for example, domestic exports were \$712,287 million, and the disaggregate HS, SITC and SIC data on these exports are reported in the database. Re-exports in 2000 were \$68,131 million, or nearly 10% of domestic exports. These sum to \$780,419 million, which is close to the value of total exports reported in the ERP (Table 2).

The disaggregate HS data for both imports and exports include the corresponding SITC code (5-digit, revision 2 and 3), SIC code (4-digit, 1987 version), and the new North American Classification System (NAICS) code (6-digit, 1997 version). The NAICS codes are now being used to classify domestic industry data in the U.S. <sup>4</sup> However, for most statistical work, the U.S. SIC classification will continue to be used rather than the new NAICS classification.

Accordingly, in this database we provide the U.S. imports and exports according to the 4-digit SIC classification (1987 basis). In Table 1 and 2 we also report total values of *manufactured* imports and exports (SIC codes starting with 2 or 3) for the updated years, 1989-2001, and for comparison, the values for 1989-1994 from Feenstra (1996, 1997). In these overlapping years, the total value of manufactured imports and exports are quite close in the two datasets.

Information on the NAICS codes are available at <a href="http://www.census.gov/epcd/www/naics.html">http://www.census.gov/epcd/www/naics.html</a>.

<sup>&</sup>lt;sup>5</sup> Feenstra (1996, 1997) reported 1972-revision SIC imports and exports up to 1992, and these were later extended to 1994 and made available on the website <a href="www.internationaldata.org">www.internationaldata.org</a>.

**Table 1: U.S. Merchandise Imports (\$ million)** 

|      | From Database:            |                                   |                         | <b>ERP</b> <sup>a</sup> | Manufactur                    | ed Imports:                     |
|------|---------------------------|-----------------------------------|-------------------------|-------------------------|-------------------------------|---------------------------------|
| Year | (1)<br>General<br>Imports | (2)<br>Imports for<br>Consumption | (1) – (2)<br>Difference | General<br>Imports      | From<br>Database <sup>b</sup> | Feenstra<br>(1996) <sup>c</sup> |
| 1989 | 473,397                   | 468,012                           | 5,384                   | 473,200                 | 396,108                       | 395,949                         |
| 1990 | 495,260                   | 490,553                           | 4,707                   | 495,300                 | 406,068                       | 405,912                         |
| 1991 | 487,129                   | 482,083                           | 5,046                   | 488,500                 | 404,828                       | 405,279                         |
| 1992 | 532,352                   | 525,091                           | 7,261                   | 532,700                 | 443,951                       | 443,555                         |
| 1993 | 580,469                   | 574,863                           | 5,606                   | 580,700                 | 490,289                       | 488,714                         |
| 1994 | 663,830                   | 657,885                           | 5,945                   | 663,300                 | 567,052                       | 565,204                         |
| 1995 | 743,505                   | 739,660                           | 3,845                   | 743,500                 | 639,728                       | na                              |
| 1996 | 791,315                   | 790,470                           | 845                     | 795,300                 | 679,712                       | na                              |
| 1997 | 869,874                   | 862,426                           | 7,448                   | 869,700                 | 749,333                       | na                              |
| 1998 | 913,885                   | 907,647                           | 6,238                   | 911,900                 | 802,594                       | na                              |
| 1999 | 1,024,766                 | 1,017,435                         | 7,331                   | 1,024,600               | 894,684                       | na                              |
| 2000 | 1,216,888                 | 1,205,339                         | 11,549                  | 1,218,000               | 1,040,464                     | na                              |
| 2001 | 1,141,959                 | 1,132,635                         | 9,324                   | na                      | 972,822                       | na                              |

**Table 2: U.S. Merchandise Exports (\$ million)** 

|      | (1)                 | (2)                  | (1)+(2)          | <b>ERP</b> <sup>a</sup> | Manufacture                   | ed Exports:                     |
|------|---------------------|----------------------|------------------|-------------------------|-------------------------------|---------------------------------|
| Year | Database<br>Exports | Census<br>Re-exports | Total<br>Exports | Total<br>Exports        | From<br>Database <sup>b</sup> | Feenstra<br>(1997) <sup>c</sup> |
| 1989 | 349,421             | 14,333               | 363,754          | 363,800                 | 279,381                       | 280,820                         |
| 1990 | 374,537             | 18,439               | 392,976          | 393,600                 | 320,236                       | 321,717                         |
| 1991 | 400,842             | 21,011               | 421,854          | 421,700                 | 348,759                       | 350,444                         |
| 1992 | 424,971             | 22,500               | 447,471          | 448,200                 | 371,785                       | 373,877                         |
| 1993 | 439,295             | 25,563               | 464,858          | 465,100                 | 388,987                       | 390,566                         |
| 1994 | 481,887             | 30,528               | 512,416          | 512,600                 | 428,388                       | 430,071                         |
| 1995 | 546,465             | 36,566               | 583,031          | 584,700                 | 481,435                       | na                              |
| 1996 | 582,137             | 40,690               | 622,827          | 625,100                 | 512,975                       | na                              |
| 1997 | 643,222             | 44,376               | 687,598          | 689,200                 | 576,000                       | na                              |
| 1998 | 634,705             | 45,769               | 680,474          | 682,100                 | 573,528                       | na                              |
| 1999 | 642,189             | 50,632               | 692,821          | 695,800                 | 582,698                       | na                              |
| 2000 | 712,287             | 68,131               | 780,419          | 781,900                 | 646,637                       | na                              |
| 2001 | 666,021             | 65,005               | 731,026          | na                      | 599,140                       | na                              |

## **Notes:**

- a. From Economic Report of the President, 2002, Table B-106, Census values.
- b. Imports for consumption or exports computed from database with MSIC and XSIC codes starting with  $2\ \mathrm{or}\ 3$ , excluding  $3\mathrm{XXX}$ .
- b. Computed from SIC import and export data at <a href="www.internationaldata.org">www.internationaldata.org</a>. These values differ slightly from those in Feenstra (1996, Table 1) and (1997, Table 3).

At the disaggregate level, making the transition from the 10-digit HS codes to the 4-digit SIC system is difficult, for the following reasons. The SIC codes commonly reported in the U.S. import and export data do not correspond to the true *domestic-based* SIC codes. Rather, they are so-called *import-based* SIC (MSIC) and *export-based* SIC (XSIC) codes. This distinction is needed because the domestic-based SIC codes often depend on the method of processing for a good, and this information is not available for imports and exports. For example, SIC industry 2011, meat packing plants, and industry 2013, sausages and other prepared meats, produce many of the same products. What distinguishes them is that industry 2011 slaughters while industry 2013 uses purchased carcasses. There is no way to determine the source of materials for imported meat products, and this is also not known for exports, so both imports and exports are classified into the *single* MSIC and XSIC code 2011, with no trade at all in code 2013.<sup>6</sup>

The fact that there is no trade reported in industry 2013 is an artifact of the classification system, of course: there is positive domestic production in that industry, and it faces import competition and also exports some of its output. So in order to measure the import competition and export opportunities, it is necessary to make the transition from the MSIC, XSIC codes to the *domestic* SIC codes. Feenstra (1996, 1997) made this transition for the trade data in 1972-1992 (later updated to 1994), so as to report U.S. imports and export according to the 4-digit SIC (1972 version). Under the new database described in this paper, we shall report U.S. imports and export according to the 4-digit SIC (1987 version), for 1989-2001. These were computed using a new concordance that mapped directly from the HS categories to the 4-digit domestic SIC codes, as described in the next section.

<sup>&</sup>lt;sup>6</sup> The MSIC and XSIC code 2013 was not used at all between 1989 and 2001, though it was used for a small amount of trade in earlier years. Feenstra (1996, 1997) uses this example to describe the trade flows in 1978, when there was a very small amount of trade in MSIC and XSIC 2013.

# 3. Concording HS Products to SIC Industries

The US began recording international trade transactions using the ten digit Harmonized System (HS10) in 1989. More recently, both the Census Bureau, which administers the export codes, and the US International Trade Commission (USITC), which manages the import codes, have posted concordances between the HS10 and 1987 version 4-digit SIC (SIC4) industries on their websites. <sup>7,8</sup> Neither agency, however, makes available a comprehensive concordance that includes all product codes which have been used since 1989.<sup>9</sup>

By piecing together data from a variety of sources, Peter Schott created a master HS10 to SIC4 concordance for product trade between 1989 and 2001. This master list is imperfect in two ways. First, it does not cover all HS10 products. Second, all SIC4 industries are not included in the concordance. We outline how each of these problems are dealt with in turn.

## 3.1 Not All Products Are Assigned an SIC4 Code by Census

Of the 26,277 HS10 product codes used to track US imports and exports between 1989 and 2001, we cannot find an SIC4 code for 1,222.<sup>10</sup> Of these 1,222 product codes, 898 can be assigned to an SIC4 via the HS10 to 1987 Import SIC4 (MSIC4) concordance provided by Feenstra (1996). Though in principle MSIC4 codes differ from SIC4 codes, a number of MSIC

<sup>&</sup>lt;sup>7</sup> See Feenstra (1996) for an algorithm for concording seven digit Tariff System of the US (TSUSA) product codes to US industries for 1972 through 1988. Feenstra (1996) also contains an alternate aggregation scheme for HS to SIC for 1989 to 1994. The results of that procedure are compared to the results from this paper's procedure in Section 2.3 below.

<sup>&</sup>lt;sup>8</sup> Technically, import codes use the Harmonized System while export codes use a system referred to as Schedule B. Schedule B codes are based upon the HS, but are typically less detailed than import codes. Though this can complicate a matching of imports and exports at the product level, it does not prevent such a matching at the industry level.

<sup>&</sup>lt;sup>9</sup> Import and export concordances are available for 1992 at <a href="http://www.census.gov/epcd/www/intronet.html">http://www.census.gov/epcd/www/intronet.html</a>. A search engine for looking up a given current product's SIC4 industry is available at <a href="http://dataweb.usitc.gov/">http://dataweb.usitc.gov/</a>. Finally, a subset of past import concordances is available at <a href="http://www.eiit.org/">http://www.eiit.org/</a>.

<sup>&</sup>lt;sup>10</sup> The primary reason for this, we believe, is that we have been unable to obtain Census' HS10 to SIC4 concordance for years 1989 to 1991. It is possible that the missing HS10 codes are located in these files.

codes map directly into regular SIC4 codes. This direct mapping can be used to assign SIC4 industries to 898 products.

We assign the remaining 324 products to industries via the following algorithm. First, if other HS10 products within the target's HS8 code are assigned an industry, use that industry for the target. If there are no such neighbors, or the neighbors have not been assigned a code, keep going up levels of aggregation (e.g. HS7, HS6, etc.) until a match can be made.

Of the 1,222 products classified via MSIC4 industries or via the SIC4's of their neighbors, 1,087 are in manufacturing. Schott's version of the master HS10 to SIC4 concordance is contained in HS10\_SIC4\_8901.ASC.

## 3.2 Not All SIC4 Industries are Included in Census' HS10 to SIC4 Concordance

Table 3 lists the 73 SIC4 industries that are not captured by Census' HS10 to SIC4 concordance. As noted in Feenstra (1996), some HS10 products cannot be assigned a unique SIC4 industry because industry classifications are based upon the process by which goods are made as well as their end use. Because the process is not known for imports and some exports, the census places questionable goods into one or more alternate SIC4 industries. Table 3 lists the excluded industries as well as the alternate industries into which they are bundled. Products in 64 of the 73 problem industries can be assigned to alternate industries: of these 64 products, 52 map to a unique alternate industry and the remaining 12 map to more than one industry. The first example in Table 3 is industry 2013, sausages and other prepared meats, which produces

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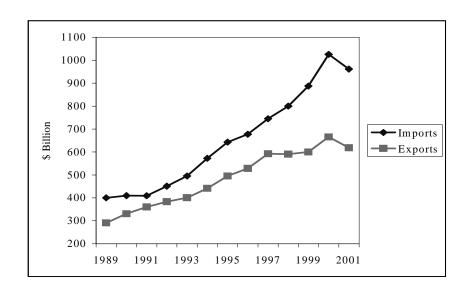
<sup>&</sup>lt;sup>11</sup> The mapping of excluded to alternate industries detailed in Table 3 is according to Census' internal "Principal Differences" file, provided by Jack Barna of Census. It is very similar to Appendix D of Census' US Commodity Exports and Imports as Related to Output (OEI), available at <a href="http://www.census.gov/epcd/www/intronet.html">http://www.census.gov/epcd/www/intronet.html</a>. Appendix D itself is entitled Concordance of the SIC-Based Publication Codes to the Five-Digit SIC Product Codes and is available at <a href="http://www.census.gov/epcd/oei/view/appndxd.txt">http://www.census.gov/epcd/oei/view/appndxd.txt</a>.

Table 3: SIC4 Industries Not Captured by the Census' HS10 to SIC4 Concordance

| Excluded | 1                                    | Destination of Products in | Excluded |                                      | Destination of Products in |
|----------|--------------------------------------|----------------------------|----------|--------------------------------------|----------------------------|
| Industry | Description                          | Excluded Industries        | Industry | Description                          | Excluded Industries        |
| 2013     | Sausages and other prepared meats    | 2011                       | 3084     | Plastics pipe                        | 3084                       |
| 2038     | Frozen specialties, nec              | 2099                       | 3086     | Plastics foam products               | 3089                       |
| 2052     | Cookies and crackers                 | 2051                       | 3087     | Custom compound purchased resins     | 3089                       |
| 2053     | Frozen bakery products, except bread | 2051                       | 3263     | Semivitreous table + kitchenware     | 3269                       |
| 2061     | Raw cane sugar                       | 2062                       | 3316     | Cold finishing of steel shapes       | 3312                       |
| 2063     | Beet sugar                           | 2062                       | 3317     | Steel pipe and tubes                 | 3312                       |
| 2092     | Fresh or frozen prepared fish        | 912 913                    | 3322     | Malleable iron foundries             | 3321                       |
| 2141     | Tobacco stemming and redrying        |                            | 3324     | Steel investment foundries           | 3321                       |
| 2251     | Women's hosiery, except socks        | 2252                       | 3325     | Steel foundries, nec                 | 3321                       |
| 2253     | Knit outerwear mills                 | 2321 2329 2331 2369        | 3355     | Aluminum rolling and drawing, nec    | 3334 3354 3357             |
| 2254     | Knit underwear mills                 | 2322 2341                  | 3363     | Aluminum die-castings                | 3499                       |
| 2259     | Knitting mills, nec                  | 2399                       | 3364     | Nonferrous die-casting exc. aluminum | 3499                       |
| 2261     | Finishing plants, cotton             | 2211                       | 3366     | Copper foundries                     | 3499                       |
| 2262     | Finishing plants, manmade            | 2221                       | 3369     | Nonferrous foundries, nec            | 3499                       |
| 2269     | Finishing plants, nec                |                            | 3398     | Metal heat treating                  |                            |
| 2282     | Throwing and winding mills           | 2824                       | 3451     | Screw machine products               | 3499                       |
| 2326     | Men's and boys' work clothing        | 2321 2325                  | 3462     | Iron and steel forgings              | 3499                       |
| 2361     | Girls' + children's dresses, blouses | 2331 2335                  | 3463     | Nonferrous forgings                  | 3499                       |
| 2387     | Apparel belts                        | 2387 2389                  | 3471     | Plating and polishing                |                            |
| 2397     | Schiffli machine embroideries        | 2395                       | 3479     | Metal coating and allied services    |                            |
| 2441     | Nailed wood boxes and shook          | 2449                       | 3483     | Ammunition, exc. for small arms, nec | 3482                       |
| 2511     | Wood household furniture             | 2599                       | 3491     | Industrial valves                    | 3491                       |
| 2512     | Upholstered household furniture      | 2512                       | 3495     | Wire springs                         | 3493 3569                  |
| 2519     | Household furniture, nec             | 2599                       | 3498     | Fabricated pipe and fittings         |                            |
| 2521     | Wood office furniture                | 2599                       | 3549     | Metalworking machinery, nec          | 3542                       |
| 2531     | Public building + related furniture  | 2599                       | 3575     | Computer terminals                   | 3577                       |
| 2541     | Wood partitions and fixtures         | 2599                       | 3582     | Commercial laundry equipment         | 3633                       |
| 2671     | Paper coated + laminated, packaging  | 2621 2671                  | 3592     | Carburetors, pistons, rings, valves  | 3714                       |
| 2732     | Book printing                        | 2731                       | 3645     | Residential lighting fixtures        | 3645                       |
| 2754     | Commercial printing, gravure         | 2721 2741 2752             | 3646     | Commercial lighting fixtures         | 3648                       |
| 2759     | Commercial printing, nec             | 2721 2741 2752             | 3716     | Motor homes                          | 3716                       |
| 2789     | Bookbinding and related work         |                            | 3731     | Ship building and repairing          |                            |
| 2791     | Typesetting                          | 2796                       | 3769     | Space vehicle equipment, nec         | 3769                       |
| 2875     | Fertilizers, mixing only             | 2874                       | 3821     | Laboratory apparatus and furniture   | 3829 3499                  |
| 2992     | Lubricating oils and greases         | 2911                       | 3953     | Marking devices                      |                            |
| 3061     | Mechanical rubber goods              | 3069                       | 3995     | Burial caskets                       | 2499                       |
| 3083     | Laminated plastics plate + sheet     | 2671                       |          |                                      |                            |

Notes: The Census' HS10 to SIC4 concordance excludes 73 SIC4 industries for reasons noted in the text. Products in these excluded industries are allocated to one of the noted industries according to the Census Bureaus' internal "Principal Differences" file. Source: Jack Barna, US Census Bureau.

Figure 1: US Manufacturing Imports and Exports, 1989 to 2001



many of the same products as industry 2011, meat packing plants, and industry. As noted above, what distinguishes these industries is that 2011 slaughters while 2013 uses purchased carcasses. There is no way to determine the source of materials for imported meat products, and this is also not known for exports, so both imports and exports are classified into the *single* SIC and SIC code 2011, with no trade at all in code 2013.

Feenstra (1996, 1997) solved this problem of "missing" trade in SIC industries by taking the *combined* industry (e.g. 2011), computing the ratio of imports or exports to U.S. domestic production in this combined industry, and then using this ratio to impute trade in the "missing" industries (i.e. as equal to U.S. production in that industry times the import or export ratio for the combined industry). In other words, imports or exports in any combined industry is allocated its separate industries *using the same proportions as U.S. domestic production*. We have not yet been able to make this calculation for the 1987-based SIC import and export data, however, because the domestic U.S. production is not known for years after 1996. So the 1987-based SIC trade data included in the database has missing values for 73 (out of 459) SIC industries. This will be corrected when the updated U.S. production data becomes available. <sup>12</sup>

Despite these "missing" trade values, it is possible to compare the trade values with other industry data by suming up the industry-level to match "super SIC4" trade categories (i.e. those for which trade values are available), with the help of Table 3. Bernard *et al* (2002a and 2002b), for example, aggregate plant-level US manufacturing data in excluded industries to match the "super SIC4" trade data created by the HS10 to SIC4 concordance detailed above.

The 1987-based SIC trade data computed by Peter Schott, with the "missing" values, is available at <a href="https://www.som.yale.edu/faculty/pks4/sub\_international.htm">www.som.yale.edu/faculty/pks4/sub\_international.htm</a>. The revised 1987-based SIC trade data, that imputes trade within the "missing" SIC categories, will be made available at a future date at Robert Feenstra's website, www.internationaldata.org.

# 3.3 U.S. Manufacturing Trade, 1989 to 2001

Figure 1 summarizes total US manufacturing imports (general value) and exports for 1989 to 2001. Imports grow from \$401 billion to \$961 billion in this period, while exports grow from \$291 to \$619 billion. Schott's estimates of manufacturing trade via the SIC87 concordance described here are quite similar to those derived by Feenstra (1996, 1997). Tables 4 and 5 provide a reconciliation of the two methods for both imports and exports. The second column of each table reports the sum of manufacturing value in the database across products whose MSIC or XSIC is between 2000 and 3999. The values in this column exclude products falling into the category 3XXX, for which an exact match to a more disaggregate industry was unknown. The value of these 3XXX products are reported in the third column of the table. The fourth and fifth columns report the value of products classified by only one of the two systems, e.g. the value of products classified as manufacturing via MSIC/XSIC but not the new SIC87 concordance discussed above. The sixth column reconciles the MSIC/XSIC system with Schott's: it is the sum of columns 2 through 4, less the values in column 5. Feenstra's (1996, 1997) estimates are provided for comparison in the final column.

## 4. U.S. Tariffs, 1989-2001

The U.S. Tariff database is based on the Harmonized Tariff Schedule of the United States (HTS) for the years 1989 to 2001. It includes *ad valorem*, specific and estimated *ad valorem* equivalent (AVE) tariffs based on the most favored nation (MFN) rate of the HTS. The file also indicates products that are eligible for tariff preferences under free trade agreements such as with

Note that manufacturing exports, like all other merchandise exports in the database, *do not* include re-exports from the United States.

<sup>&</sup>lt;sup>14</sup> Feenstra (1996) describes this aggregation in great detail. For imports, it boils down to the following chain of concordances: HS10 to 1987 MSIC4 to 1972 MSIC4 to 1972 SIC4.

**Table 4: U.S. Manufacturing General Imports (\$ million)** 

|      | (1)                                   | (2)           | (3)                                | (4)                                | (1)+(2)+(3)-(4)                        |                                 |
|------|---------------------------------------|---------------|------------------------------------|------------------------------------|--|---------------------------------|
| Year | Database <sup>a</sup><br>(Using MSIC) | MSIC =  3XXXb | SIC87 but<br>not MSIC <sup>c</sup> | MSIC but<br>not SIC87 <sup>d</sup> | Database <sup>e</sup><br>(Using SIC87) | Feenstra<br>(1996) <sup>f</sup> |
| 1989 | 400,695                               | 2,761         | 0                                  | 2,854                              | 400,601                                | 395,949                         |
| 1990 | 409,953                               | 3,442         | 0                                  | 3,442                              | 409,953                                | 405,912                         |
| 1991 | 409,350                               | 3,424         | 0                                  | 3,424                              | 409,350                                | 405,279                         |
| 1992 | 450,852                               | 3,947         | 0                                  | 3,947                              | 450,852                                | 443,555                         |
| 1993 | 495,636                               | 4,250         | 0                                  | 4,250                              | 495,636                                | 488,714                         |
| 1994 | 572,610                               | 4,568         | 0                                  | 4,568                              | 572,610                                | 565,204                         |
| 1995 | 642,869                               | 5,157         | 1                                  | 5,157                              | 642,870                                | na                              |
| 1996 | 676,405                               | 5,453         | 934                                | 5,490                              | 677,303                                | na                              |
| 1997 | 743,903                               | 5,968         | 918                                | 6,013                              | 744,776                                | na                              |
| 1998 | 799,075                               | 8,526         | 841                                | 8,579                              | 799,863                                | na                              |
| 1999 | 886,224                               | 11,788        | 1,024                              | 11,843                             | 887,193                                | na                              |
| 2000 | 1,024,557                             | 13,818        | 1,021                              | 13,872                             | 1,025,524                              | na                              |
| 2001 | 960,716                               | 13,237        | 821                                | 13,283                             | 961,492                                | na                              |

**Table 5: U.S. Manufacturing Exports (\$ million)** 

|      | (1)                                   | (2)               | (3)                                | <b>(4)</b>                         | (1)+(2)+(3)-(4)                        |                                 |
|------|---------------------------------------|-------------------|------------------------------------|------------------------------------|--|---------------------------------|
| Year | Database <sup>a</sup><br>(Using XSIC) | $XSIC = 3XXX^{b}$ | SIC87 but<br>not MSIC <sup>c</sup> | MSIC but<br>not SIC87 <sup>d</sup> | Database <sup>e</sup><br>(Using SIC87) | Feenstra<br>(1997) <sup>f</sup> |
| 1989 | 279,381                               | 11,443            | 41                                 | 11                                 | 290,854                                | 280,820                         |
| 1990 | 320,236                               | 10,608            | 59                                 | 16                                 | 330,887                                | 321,717                         |
| 1991 | 348,759                               | 11,543            | 42                                 | 19                                 | 360,326                                | 350,444                         |
| 1992 | 371,785                               | 11,717            | 33                                 | 24                                 | 383,512                                | 373,877                         |
| 1993 | 388,987                               | 11,748            | 32                                 | 25                                 | 400,742                                | 390,566                         |
| 1994 | 428,388                               | 12,927            | 26                                 | 29                                 | 441,311                                | 430,071                         |
| 1995 | 481,435                               | 14,048            | 36                                 | 26                                 | 495,493                                | na                              |
| 1996 | 512,975                               | 15,256            | 319                                | 47                                 | 528,504                                | na                              |
| 1997 | 576,000                               | 16,164            | 120                                | 48                                 | 592,236                                | na                              |
| 1998 | 573,528                               | 16,710            | 145                                | 30                                 | 590,353                                | na                              |
| 1999 | 582,698                               | 17,102            | 139                                | 30                                 | 599,910                                | na                              |
| 2000 | 646,637                               | 19,004            | 157                                | 29                                 | 665,768                                | na                              |
| 2001 | 599,140                               | 19,338            | 113                                | 27                                 | 618,563                                | na                              |

## **Notes:**

- a. General imports and exports computed from the database with MSIC and XSIC codes starting with 2 or 3, excluding 3XXX.
- b. Sum of products in database with MSIC or XSIC equal to 3XXX.
- c. Sum of products that are manufacturing according SIC87 but not MSIC or XSIC.
- d. Sum of products that are manufacturing according to MSIC or XSIC but not SIC87.
- e. Computed from Database using new HS to SIC87 concordance.
- f. Computed from SIC import and export data at <a href="www.internationaldata.org">www.internationaldata.org</a>. These values differ slightly from those in Feenstra (1996, Table 1) and (1997, Table 3).

Canada, Mexico and Israel, and indicates products eligible for any preferential programs such as the Generalized System of Preferences (GSP), the Caribbean Basin Initiative (CBI) and the African Growth and Opportunity Act (AGOA). The database provides details of the applicable tariffs under all of these agreements and programs. Tariffs can of course be inferred using data on actual tariffs paid and the value of trade. The main information contained in the tariff schedule that is not available elsewhere is information on applicable tariffs where no trade is observed. While the MFN tariff can almost always be observed in this way the same is not true for many preferential tariffs, because in many cases trade in the product between with the relevant country simply does not take place. The other potential advantage is that the tariff database provides information separately on specific versus ad valorem tariffs.

There are a number of limitations of the tariff database (Romalis, 2002). One big limitation is that it does not include information on quotas, such as quotas under the Multi-Fibre Agreement or special quotas under NAFTA. The database does not include anti-dumping duties or special duties such as those imposed on certain European Union goods. Information on rules of origin which impact on eligibility for tariff programs is also absent. The chief difficulty is in mapping all this additional information on quotas and rules of origin into the HTS. The database also excludes information on almost all "production sharing" arrangements under which tariffs are only levied on foreign value added. The data is also based on the first edition of the US tariff schedule for each year, and any changes within the year will not be captured until the following year. For all these reasons the tariffs in this database often do not coincide with actual tariffs paid.

The database has been organized in two different ways. The format of one set of files (USHTSxx.TXT) is kept as closely as possible to the format now used by the US International Trade Commission (USITC) for summarizing tariff schedules. This allows users to easily update

the database as new information is posted by the USITC.<sup>15</sup> These files are organized by tariff program such as MFN, free trade agreements, GSP, or CBI. Another set of files (USTARxx.ASC) has been created in a format more easily merged with the US trade data described in this paper. These files list the lowest potential applicable AVE tariff for each 8-digit HTS product and each country of origin. For example, the estimated AVE tariff for a product from a country that is potentially eligible for the GSP will be 0 even though not all exports of this product from that country may meet the requirements of the GSP program.

#### 5. Documentation

Links to all the data are available at <a href="www.nber.org/data/">www.nber.org/data/</a>. In addition, the data are available at three sites: <a href="www.internationaldata.org">www.internationaldata.org</a> (for the HS and SITC import and export data), <a href="www.som.yale.edu/faculty/pks4/sub\_international.htm">www.som.yale.edu/faculty/pks4/sub\_international.htm</a> (for the 1987-based SIC trade data) and <a href="mailto:gsbwww.uchicago.edu/fac/john.romalis/research/">gsbwww.uchicago.edu/fac/john.romalis/research/</a> (for the U.S. tariff data choose **Tariff.ZIP**). Documentation for the files available at each of these sites is provided in the following pages.

# **5.1 Harmonized System Imports**

In 1989 and later years, the Harmonized System of commodity classification has been used to measure disaggregate U.S. imports and exports. The particular application of the Harmonized System to U.S. imports is called the Harmonized Tariff Schedule (HTS). These datafiles contains the U.S. import data according to HTS number, distinguished by source country, and including both quantitative information about imports and descriptive information about each commodity.

The files IMPYR\_1.ASC, IMPYR\_2.ASC AND IMPYR\_3.ASC contain U.S. import data for 1989-2001, sorted by HTS numbers, with YR = {a two digit number in the range 89-01}. The first of these files, IMPYR\_1.ASC, includes commodities with a HTS number beginning with the digits 0-4; the second, IMPYR\_2.ASC, contains those includes commodities with an HTS number beginning with 5-7; and the third, IMPYR\_3.ASC, includes those commodities with a HTS number beginning with 8 or 9.

 $^{15}\ Updates,\ including\ the\ 2002\ HTS,\ are\ available\ at\ \underline{http://reportweb.usitc.gov/tariff/tariff\_form.jsp}\ .$ 

# **Record Layout:**

The variables included in IMP\*.ASC are:

| columns 1-10<br>columns 12-17 | <ul><li>Harmonized Tariff System (HTS) number</li><li>Source country code</li></ul> |
|-------------------------------|---|
| COTCHINIS 12 17               | United Nations country codes are used (See COUNTRY.TXT)                             |
| columns 19-26                 | - Country name  |
| column 28                     | - Country Sub-Code  |
|                               | 0 = Country of Origin   |
|                               | 1 = Country of Shipment   |
|                               | 4 = Generalized System of Preferences (GSP) Item                                    |
|                               | 9 = Caribbean Basin Initiative (CBI) Item   |
|                               | B = Automotive Products Trade Act (APTA)  |
|                               | C = Agreement on Trade in Civil Aircraft  |
|                               | D = Africa Growth and Opportunity Act (from 2001)                                   |
|                               | I = US-Israel Free Trade Agreement  |
|                               | J = Andean Trade Preference Act (ATPA) (from 1992)                                  |
|                               | K = Agreement on Trade in Pharmaceutical Products (from 1995)                       |
|                               | L = Uruguay Round Concessions on Chemicals for Dyes (from 1995)                     |
|                               | N = Israeli-Jordanian Qualifying Industrial Zones (from 1999)                       |
|                               | R = US-Caribbean Basin Trade Partnership Act (from 2000)                            |
|                               | W = CBI Item (occurs very rarely, may be a misclassification)                       |
|                               | X = Canada-US Free Trade Agreement (1989-1993)                                      |
|                               | Y = North America Free Trade Agreement (from 1994)                                  |
|                               | Z = Compact of Free Association Act   |
| columns 30-33                 | - 1987 version import-based SIC number (4-digit)                                    |
| columns 35-39                 | - Revision 2 SITC number (5 digit)  |
| columns 41-45                 | - Revision 3 SITC number (5 digit)  |
| columns 47-52                 | - North American Classification System (NAICS) code (6-digit)                       |
| columns 54-56                 | - Units of quantity (see UNIT8901.TXT)  |
| columns 58-69                 | - Quantity, Imports for Consumption   |
| columns 71-82                 | - Quantity, General Imports   |
| columns 84-95                 | - Customs Value, Imports for Consumption (dollars)                                  |
| 001001111115 0 1 70           | (Customs value and Imports for Consumption are defined below)                       |
| columns 97-108                | - Customs Value, General Imports (dollars)  |
| <b>COLUMNIA</b> 5 7 7 100     | (Customs value and General Imports are defined below)                               |
| columns 110-121               | - Dutiable Value (dollars)  |
| columns 123-133               | - Calculated Duties (dollars)   |
| 120 100                       | (The dutiable value and calculated duties are defined below)                        |
| columns 135-145               | - Import Charges, Imports for Consumption (dollars)                                 |
|                               | (Import charges equal freight plus insurance, as defined below)                     |
| columns 147-196               | - Commodity description   |
| 2., 2,0                       | (50 character short description from CONIMP89_01.ASC)                               |
| columns 198-200               | - Year (89 – 101)   |
| 2010111110 170 200            |   |

# Missing Values:

Missing values for any alphabetic variable are indicated by a blank field, as occurs especially for the Units of quantity, indicating that either the units could not be measured, or were simply missing. When the units could not be measured, there will be a zero value for Quantity, but positive entries for consumption or general value. In other cases, a zero value for Quantity and also for the consumption and general values indicates that the commodity was not imported from that country in that year.

The variable *dutiable value* is missing for 1989, which is indicated by a period.

## Variable Definitions:

- 1. *Customs Import Value*. The Customs value reflects the value of imports as appraised by the U.S. Customs Service. This value is generally defined as the price actually paid or payable for merchandise when sold for exportation to the United States, excluding U.S. import duties, freight, insurance and other charges incurred in bringing the merchandise to the United States.
- 2. *Imports for Consumption*. Imports for Consumption measure the total of merchandise that has physically cleared through Customs either entering consumption channels immediately or entering after withdrawal for consumption from bonded warehouses under Customs custody or from Foreign Trade Zones. Many countries use the term "special imports" to designate statistics compiled on this basis.
- 3. *General Imports*. General Imports measure the total physical arrivals of merchandise from foreign countries, whether such merchandise enters consumption channels immediately or is entered into bonded warehouses or Foreign Trade Zones under Customs custody.
- 4. *Dutiable Value of Imports and Calculated Duty*. The dutiable value represents in general, the Customs value of foreign merchandise imported into the United States which is subject to duty. The calculated duty represents the estimated duty collected. Estimated data are calculated by the Census based on the applicable rate(s) of duty as shown in the HTS.
- 5. *Import Charges*. The import charges represent the aggregate cost of all freight, insurance and other charges (excluding import duties) incurred in bringing the merchandise from alongside the carrier at the port of exportation and placing it alongside the carrier at the first port of entry in the United States. The sum of the Customs value and the charges is the c.i.f. (cost, insurance and freight) value.

- 6. The *import-based* SIC (MSIC) codes reported in these files differ from the true *domestic* based SIC numbers, as discussed in the main text of the documentation.
- 7. The NAICS codes were reported by the U.S. Census beginning in 2000. For earlier years, these codes have been imputed based on the commodities with similar descriptions, or SIC, SITC, or End use classifications.

#### **Related Files:**

- 1. A complete list of the commodities, including the HTS number for each, 1987 import-based SIC numbers (4-digit), Rev. 3 SITC number (5-digit), ENDUSE classification, NAICS classification, units of quantity, and the first and last years that the HTS number is used for that commodity, is contained in the concordance CONIMP89\_01.ASC, which is described in CONIMP89\_01.TXT.
- 2. The source country for each imported commodity is identified by a name and United Nations (UN) code. The complete list of names and UN codes, along with a correspondence to the country codes used by the U.S. Census, is provided in COUNTRY.TXT.
- 3. There is a cross-reference between the Harmonized Tariff System (HTS) numbers that are used in the 1989-1994 import files, and the Tariff Schedule of the United States Annotated (TSUSA) codes that are used in the 1972-1988 import files. This cross-reference is contained in HS\_TSUSA.ASC and described in HS\_TSUSA.TXT.

Size: Each file IMP\*.ASC is between 11 and 20 megabytes.

## Sources:

The data for 1989 was obtained from:

National Archives and Record Administration, *Annual Import Databank*, IA245, Record group 29, Washington, D.C. [magnetic tape], 1989.

*U.S. Exports History and U.S. Imports History, Historical Summary* 1989-1992, on CD-ROM [machine-readable data file], prepared by the Bureau of the Census. Washington: The Bureau [producer and distributor], 1993.

Data for 1990 and later years were obtained from:

*U.S. Exports and Imports of Merchandise on CD-ROM* [machine-readable data file], prepared by the Bureau of the Census. Washington: The Bureau [producer and distributor], 1990-2001.

The same data in printed form are reported in:

*U.S. Imports for Consumption, HTSUSA Commodity by Country of Origin,* FT247, Bureau of the Census, Washington, D.C., 1989-2001.

Additional information on the variables listed above can be obtained from:

Guide to Foreign Trade Statistics, Bureau of the Census, Department of Commerce, Washington, D.C., 1991.

Web: <a href="http://www.census.gov/foreign-trade/www/index.html">http://www.census.gov/foreign-trade/www/index.html</a>

http://www.census.gov/foreign-trade/www/schedules.html#C

http://www.census.gov/foreign-trade/guide/index.html

# **5.2 Harmonized System Import Concordance**

In 1989 and later years, the Harmonized System (HS) of commodity classification has been used to measure disaggregate U.S. imports and exports. The HS contains approximately 5000 headings and subheadings covering all articles in trade. The particular application of the Harmonized System to U.S. imports is called the Harmonized Tariff Schedule (HTS).

The file CONIMP89\_01.ASC is a concordance that contains a complete list of the HTS numbers used identify U.S. imports over 1989-2001, along with various information about each of these commodities.

## Record Layout:

| columns 1-10    | - Harmonized Tariff System (HTS) number               |
|-----------------|---|
| columns 12-15   | - 1987 version import-based SIC code (4-digits)       |
| columns 17-21   | - Revision 2 SITC code (5-digits)                     |
| columns 23-27   | - Revision 3 SITC code (5-digits)                     |
| columns 29-33   | - End-Use Classification                              |
| columns 35-40   | - North American Classification System (NAICS) code   |
|                 | (1997 version, 6-digit)                               |
| columns 42-44   | - First year that this HTS number was used (89 – 101) |
| columns 46-48   | - Last year that this HTS number was used (89 – 101)  |
| columns 50-52   | - Units of quantity (see UNIT8901.ASC)                |
| columns 54-103  | - Short HTS commodity description                     |
| columns 105-254 | - Long HTS commodity description                      |
| column 256      | - End of record indicator (the number 1)              |

# Missing Values:

Some units of quantity are missing, which are indicated by a blank.

## Special Considerations:

1. The HTS number can be repeated due to differing commodity descriptions in various years, or changing units of quantity. For example, the file CONIMP89\_01.ASC contains the two lines:

This is an example of a repeated HTS number due to a changing unit of quantity. Note, however, that the range of years over which each HTS number/description/units of quantity applies is non-overlapping (so that the HTS number and first year used is a unique identifier).

- 2. The "first year" is computed as the first year that an HTS number is actually used for imports, while the "last year" is computed as the last year that this HTS number appears in a concordance from the source below. There are a small number of commodities that are never actually imported over 1989 2001, their HTS numbers do not appear in this concordance.
- 3. The *import-based* SIC (MSIC) codes reported in these files differ from the true *domestic-based* SIC numbers, as discussed in the main text of the documentation.
- 4. In the files IMP\*.ASC for 1989-2001 and the concordance CON89\_01.ASC, the SITC Rev. 3 category 95000 has been introduced for "Gold coin and other coin." These are distinguished separately from "Gold numismatic (collector's) coins," which has the SITC Rev. 3 number 89650, and the SITC Rev. 2 number 89605. Accordingly, the SITC Rev. 3 number 95000 has been introduced, with the corresponding SITC Rev. 2 number of 89605.
- 5. The NAICS codes were reported by the U.S. Census beginning in 2000. For earlier years, these codes have been imputed based on the commodities with similar descriptions, or SIC, SITC, or End use classifications.

#### Related Files:

- 1. The HTS description, SIC, SITC, NAICS numbers, and units of quantity in this concordance are identical to those used in the files IMPYR\_1.ASC, IMPYR\_2.ASC, and IMPYR\_3.ASC, for the years YR=89,90,...,00,01.
- 2. For years before 1989, imported commodities are identified by the Tariff Schedule of the United States Annotated (TSUSA) numbers. A concordance of these numbers is contained in

CONIMP72\_88.ASC, as described in CONIMP72\_88.TXT. A cross-reference between the TSUSA and HTS numbers is contained in HS\_TSUSA.ASC, as described in HS\_TSUSA.TXT.

3. The units of quantity are described in UNIT8901.ASC.

Size: CONIMP89\_94.ASC contains 23,234 records.

#### Sources:

Constructed from concordances for 1989-2001 found in:

- *U.S. Exports History and U.S. Imports History, Historical Summary* 1989-1992, on CD-ROM [machine-readable data file], prepared by the Bureau of the Census. Washington: The Bureau [producer and distributor], 1993.
- *U.S. Exports and Imports of Merchandise on CD-ROM* [machine-readable data file], prepared by the Bureau of the Census. Washington: The Bureau [producer and distributor], 1990-2000.

The most recent concordance is also available at: <a href="http://www.census.gov/foreign-trade/www/schedules.html#C">http://www.census.gov/foreign-trade/www/schedules.html#C</a>

## **5.3 Harmonized System Exports**

For 1989-2001, exports to the United States at a disaggregate level were measured according to the Harmonized System (HS) classification. These datafiles contain U.S. export data according to their HS number, distinguished by destination country, and including both quantitative information about exports and descriptive information about each commodity.

The files EXPYR\_1.ASC, EXPYR\_2.ASC, and EXPYR\_3.ASC contain U.S. export data for 1989-2001, sorted by HS number, with YR = {a two digit number in the range 89-01}. The first of these files, EXPYR\_1.ASC, includes commodities with a HS number beginning with 0-3; the second, EXPYR\_2.ASC, contains those commodities with a HS number beginning with 4-7; and the third, EXPYR\_3.ASC, contains those commodities with a HS number beginning with 8 or 9.

## Record Layout:

The variables included in EXP\*.ASC are:

| columns 1-10    | - Harmonized System (HS) number                               |
|-----------------|---|
| columns 12-17   | - Country code  |
|                 | United Nations codes are used (see COUNTRY.TXT)               |
| columns 19-26   | - Country name  |
| columns 28-31   | - 1987 version export-based SIC number (4-digit)              |
| columns 33-37   | - Revision 2 SITC number (5 digit)                            |
| columns 39-43   | - Revision 3 SITC number (5 digit)                            |
| columns 45-50   | - North American Classification System (NAICS) code (6-digit) |
| columns 52-54   | - Units of quantity (see UNIT8901.TXT)                        |
| columns 56-67   | - Quantity  |
| columns 69-80   | - Value of exports (dollars)                                  |
|                 | (The value does not include re-exports, as discussed below)   |
| columns 82-131  | - Description of HS commodity                                 |
|                 | (50 character short description from CONEXP89_01.ASC)         |
| columns 133-135 | - Year (89 – 101)   |

## Missing Values:

Missing values for any alphabetic variable are indicated by a blank field, as occurs especially for the Units of quantity, indicating that either the units could not be measured, or were simply missing. When the units could not be measured, there will be a zero value for Quantity, but positive entries for Value.

## Variable Definitions:

- 1. Export statistics are compiled by the Census according to two types: D (Domestic) or F (Foreign). Domestic exports are defined as merchandise grown, produced, or manufactured (including imported merchandise which has been enhanced in value) in the United States Foreign exports are defined as merchandise that has entered the United States and is being reexported in the same condition as when imported. Only the *Domestic exports* are included in this data; foreign exports, i.e. re-exports, are not included.
- 2. The *export value* is the selling price or cost if not sold, including inland freight, insurance, and other charges to the U.S. port of export, but excluding unconditional discounts and commissions. This value is called the F.a.s. (free alongside ship) value.
- 3. The 1987 *export-based* SIC numbers are not the same as the SIC numbers used to identify U.S. industries. This is because industries in the United States are sometimes defined in terms of the processing that occurs in them, whereas the method of processing may not be known to the exporter. As a result, a condensed set of SIC numbers called *export based* SIC are used, as discussed further in the main documentation.

4. It should be noted that the *HS commodity* numbers for any commodity change over time, so the only sure way to keep track of a given commodity is by its full alphabetic description.

#### Related Files:

- 1. A complete list of the commodities, including the HS number for each, 1987 export-based SIC numbers (4-digit), Rev. 3 SITC number (5-digit), ENDUSE classification, NAICS classification, units of quantity, and the first and last years that the HS number is used for that commodity, is contained in the concordance CONEXP89\_01.ASC, which is described in CONEXP89\_01.TXT.
- 2. The source country for each exported commodity is identified by the name and United Nations (UN) code. The complete list of names and UN codes, along with a correspondence to the country codes used by the U.S. Census, is provided in COUNTRY.TXT.
- 3. For years before 1989, exported commodities are identified by the Schedule B numbers. A concordance of these numbers is contained in CONEXP78\_88.ASC, as described in CONEXP78\_88.TXT. A cross-reference between the Schedule B and HS numbers is contained in HS\_SCH\_B.ASC, as described in HS\_SCH\_B.TXT.

Size: Each file EXP\*.ASC is between 9 and 20 megabytes.

#### Sources:

The data for 1989 was obtained from:

National Archives and Record Administration, *Annual Import Databank*, IA245, Record group 29, Washington, D.C. [magnetic tape], 1989.

*U.S. Exports History and U.S. Imports History, Historical Summary* 1989-1992, on CD-ROM [machine-readable data file], prepared by the Bureau of the Census. Washington: The Bureau [producer and distributor], 1993.

Data for 1990 and later years were obtained from:

*U.S. Exports and Imports of Merchandise on CD-ROM* [machine-readable data file], prepared by the Bureau of the Census. Washington: The Bureau [producer and distributor], 1990-2001.

The same data in printed form are reported in:

*U.S. Exports, Harmonized System, Commodity by Country*, FT447, Bureau of the Census, Washington, D.C., 1989-2001.

Additional information on the variables listed above can be obtained from:

Guide to Foreign Trade Statistics, Bureau of the Census, Department of Commerce,

Washington, D.C., 1991.

Web: <a href="http://www.census.gov/foreign-trade/www/index.html">http://www.census.gov/foreign-trade/www/index.html</a>

http://www.census.gov/foreign-trade/www/schedules.html#C

http://www.census.gov/foreign-trade/guide/index.html

## **5.4 Harmonized System Export Concordance**

In 1989 and later years, the Harmonized System (HS) of commodity classification has been used to measure disaggregate U.S. imports and exports. The HS contains approximately 5000 headings and subheadings covering all articles in trade. It replaces the Schedule B system used in earlier years for exports.

The file CONEXP89\_01.ASC is a concordance that contains a complete list of the HS numbers used identify U.S. exports over 1989-2001, along with various information about each of these commodities.

# Record Layout:

| columns 1-10    | - Harmonized System (HS) number                      |
|-----------------|--|
| columns 12-15   | - 1987 version export-based SIC code (4-digits)      |
| columns 17-21   | - Revision 2 SITC code (5-digits)                    |
| columns 23-27   | - Revision 3 SITC code (5-digits)                    |
| columns 29-33   | - End-Use Classification                             |
| columns 35-40   | - North American Classification System (NAICS) code  |
|                 | (1997 version, 6-digit)                              |
| columns 42-44   | - First year that this HS number was used (89 – 101) |
| columns 46-48   | - Last year that this HS number was used (89 – 101)  |
| columns 50-52   | - Units of quantity (see UNIT8901.ASC)               |
| columns 54-103  | - Short HS commodity description                     |
| columns 105-254 | - Long HS commodity description                      |
| column 256      | - End of record indicator (the number 1)             |
|                 |  |

## Missing Values:

Some units of quantity are missing, which are indicated by a blank.

## **Special Considerations:**

1. The HS number can be repeated due to differing commodity descriptions in various years, or changing units of quantity. For example, the file CONEXP89\_01.ASC contains the two lines:

```
0301920000 0273 03410 03411 01000 112511 1989 1992 EELS (ANGUILLA SPP.), LIVE 0301920000 0273 03410 03411 01000 112511 1993 2001 KG EELS (ANGUILLA SPP.), LIVE
```

This is an example of a repeated HS number due to a changing unit of quantity. Note, however, that the range of years over which each HS number/description/units of quantity applies is non-overlapping (so that the HS number and first year used is a unique identifier).

2. The *first year* is computed as the first year that an HS number is actually used for exports, while the *last year* is computed as the last year that this HS number appears in a concordance from the source below. There are a small number of commodities that are never actually exported over 1989 - 2001, their HS numbers do not appear in this concordance. An important example is fertilizer, where the concordance includes the line:

```
3100000000 2874 56200 56200 12510 325312 1989 2001 FERTILIZERS A FERT MATERIALS
```

However, the concordance does NOT include the following lines, which are particular types of fertilizers, but these HS codes are never used 1989-2001:

```
3101000000 1989 2001 TON ANIMAL/VEG FERTILIZER, MIXED/NT/CHEMICALLY TREATED
3102100000 1989 2001 TON UREA, WHETHER OR NOT IN AQUEOUS SOLUTION
3102210000 1989 2001 TON AMMONIUM SULFATE
3102290000 1989 2001 TON DOUBLE SALTS & MIXTURES OF AMMONIUM SULFATE, NESOI
3102300000 1989 2001 TON AMMONIUM NITRATE, WHETHER/NOT IN AQUEOUS SOLUTION
3102400000 1989 2001 TON MIXTURES OF AMMONIUM NITRATE W/ CALCIUM CARBONATE
3102500000 1989 2001 TON SODIUM NITRATE
3102600000 1989 2001 TON DOUBLE SALTS & MIXTURES CALCIUM & AMMONIUM NITRATE
3102700000 1989 2001 TON CALCIUM CYANAMIDE
3102800000 1989 2001 TON MIXTURES OF UREA AND AMMONIUM NITRATE IN SOLUTION
3102900000 1989 2001 TON MINERAL/CHEMICAL FERTILIZERS, NITROGENOUS, NESOI
3103100010 1989 2001 TON ENRICH SUPERPHOSPHATES, < 40% PHOSPHORUS PENTOXIDE
3103100020 1989 2001 TON SUPERPHOSPHATES, >=40% PHOSPHORUS PENTOXIDE
3103200000 1989 2001 TON BASIC SLAG
3103900000 1989 2001 TON MINERAL OR CHEMICAL FERTILIZERS, PHOSPHATIC, NESOI
3104100000 1989 2001 TON CARNALLITE & OTHER CRUDE NATURAL POTASSIUM SALTS
3104200000 1989 2001 TON POTASSIUM CHLORIDE
3104300000 1989 2001 TON POTASSIUM SULFATE
3104900000 1989 2001 TON MINERAL OR CHEMICAL FERTILIZER, POTASSIC, NESOI
3105100000 1989 2001 TON PRODUCT OF CHPT 31 IN TABLET/IN PACKAGES <=10 KG
3105200000 1989 2001 TON FERTILERS CONTAIN NITROGEN, PHOSPHORUS & POTASSIUM
3105300000 1989 2001 TON DIAMMONIUM HYDROGENORTHOPHOSPHATE (DAP)
3105400000 1989 2001 TON AMMONIUM DIHYDROGENORTHOPHOSPHATE
3105510000 1989 2001 TON FERTILIZERS CONTAIN NITRATES AND PHOSPHATES
3105590000 1989 2001 TON FERTILIZERS CONTAIN NITROGEN AND PHOSPHORUS, NESOI
3105600000 1989 2001 TON FERTILIZERS CONTAIN PHOSPHORUS & POTASSIUM, NESOI
3105900000 1989 2001 TON FERTILIZERS, NESOI
```

The above HS codes are included in the concordances from Census, but since they have no exports, they are not included in CONEXP89\_01.ASC.

- 3. The *export-based* SIC (XSIC) codes reported in these files differ from the true *domestic based* SIC numbers, as discussed in the main text of the documentation.
- 4. The NAICS codes were reported by the U.S. Census beginning in 2000. For earlier years, these codes have been imputed based on the commodities with similar descriptions, or SIC, SITC, or End use classifications.

## Related Files:

- 1. The HS description, SIC, SITC, NAICS numbers, and units of quantity in this concordance are identical to those used in the files EXPYR\_1.ASC, EXPYR\_2.ASC, and EXPYR\_3.ASC, for the years YR=89,90,...,00,01.
- 2. For years before 1989, exported commodities are identified by the Schedule B classification. A concordance of these numbers is contained in CONEXP78\_88.ASC, as described in CONEXP78\_88.TXT. A cross-reference between the Schedule B and HS numbers is contained in HS\_SCH\_B.ASC, as described in HS\_SCH\_B.TXT.
- 3. The units of quantity are described in UNIT8901.ASC.

Size: CONEXP89\_00.ASC contains 10,740 records.

#### Sources:

Constructed from concordances for 1989-2001 found in:

- *U.S. Exports History and U.S. Imports History, Historical Summary* 1989-1992, on CD-ROM [machine-readable data file], prepared by the Bureau of the Census. Washington: The Bureau [producer and distributor], 1993.
- *U.S. Exports and Imports of Merchandise on CD-ROM* [machine-readable data file], prepared by the Bureau of the Census. Washington: The Bureau [producer and distributor], 1990-2000.

The most recent concordance is also available at: <a href="http://www.census.gov/foreign-trade/www/schedules.html#C">http://www.census.gov/foreign-trade/www/schedules.html#C</a>

## 5.5 SITC Import and Export Data

Using the files IMP\*.ASC and EXP\*.ASC for 1972-2001, the import and export data are summed according to the 5-digit Standard International Trade Classification (SITC) codes. The results are stored in IMP\_SITC72.ASC,....,IMP\_SITC01.ASC and EXP\_SITC72.ASC,...., EXP\_SITC01.ASC. Here we describe the features of the 1989-2001 data.

## Record Layout for 1989 – 2001 import data, IMP\_SITC??.ASC:

| columns 1-5   | - SITC Rev. 2 number (5-digit)                               |
|---------------|--|
| columns 7-11  | - SITC Rev. 3 number   |
|               | A 5-digit Revision 3 number for 1989-2001                    |
| columns 13-18 | - Country code (UN codes are used, as listed in COUNTRY.TXT) |
| columns 20-27 | - Source country name  |
| columns 29-40 | - Customs value, Imports for Consumption (dollars)           |
| columns 42-53 | - Customs value, General Imports (dollars)                   |
| columns 55-66 | - CIF value (dollars)  |
| columns 68-79 | - Duties paid (dollars)                                      |
| columns 81-83 | - Year   |

# Record Layout for 1989 – 2001 export data, EXP\_SITC??.ASC:

| columns 1-5   | - SITC Rev. 2 number (5-digit)                               |
|---------------|--|
| columns 7-11  | - SITC Rev. 3 number   |
|               | A 5-digit Revision 3 number for 1989-2001                    |
| columns 13-18 | - Country code (UN codes are used, as listed in COUNTRY.TXT) |
| columns 20-27 | - Source country name  |
| columns 29-40 | - Value (dollars)  |
| columns 42-44 | - Year   |

## **Special Considerations:**

- 1. See the file IMP89\_01.TXT and EXP89\_01.TXT for a detailed definition of all variables. CIF import value is computed as the sum of Customs Value, Imports for Consumption, and Import Charges (import charges equal freight plus insurance).
- 2. For 1989-2001, the data are initially organized on a 5-digit SITC Rev. 3 basis. In this case the concordance SITCR3\_2.ASC gives a unique 5-digit SITC Rev. 2 code for each of the Rev. 3 codes. So these Rev. 2 codes were added into the file for each year, and then the records were re-sorted according to the Rev. 2 codes. As is apparent by inspection, each 5-digit Rev. 2 code can appear more than once. Thus, to compute the value of imports by 5-digit Rev. 2 code, it would be necessary to sum over all records for each such code.

3. Also included in these files are the variables listed above summed over all source countries, in which case the Country name is listed as WORLD, and the Country code is 100000.

Size: Each file IMP\_SITC\*.ASC and EXP\_SITC\*.ASC is between 2 and 10 megabytes.

#### Related Files:

- 1. The commodity names corresponding to each SITC code, for each revision of the SITC, are found in SITCREV1.ASC, SITCREV2.ASC, and SITCREV3.ASC.
- 2. Concordances between the various revisions of the SITC are found in SITCR2\_1.ASC, SITCR2\_3.ASC and SITCR3\_2.ASC.

# 5.6 1987-based SIC Import and Export Data

Using the files IMP\*.ASC and EXP\*.ASC for 1972-2001, the import and export data are summed according to the 4-digit Standard Industrial Classification (SIC) codes.

For the years 1972-1994, the bilateral data have been summed according to the 1972 version of the SIC by Robert Feenstra, at <a href="www.internationaldata.org">www.internationaldata.org</a>. For the years 1989-2001, the bilateral data have been summed according to the 1987 version of the SIC by Peter Schott, as documented below and available at at <a href="www.som.yale.edu/faculty/pks4/sub\_international.htm">www.som.yale.edu/faculty/pks4/sub\_international.htm</a>. Schott's master HS10 to SIC4 concordance is contained in HS10\_SIC4\_8901.ASC.

# (1) Record Layout for HS10\_SIC4\_8901:

The variables included in HS10\_SIC4\_8901.ASC are listed below, by column. This file is a space-delimited ASCII file. A STATA version is named HS10\_SIC4\_8901.DTA.

column 1
 digit Harmonized Tariff System (HTS) number, leading zeros suppressed
 4 digit SIC code (1987 revision), leading zeros suppressed

# (2) Record Layout for MULTILATERAL\_8901:

The variables included in MULTILATERAL\_8901.ASC are listed below, by column. This file is a space-delimited ASCII file. A STATA version is named MULTILATERAL\_8901.DTA.

column 1 - Year
 column 2 - 4 digit SIC code (1987 revision), leading zeros suppressed
 Value of exports (dollars)

(The value does not include re-exports, as discussed below)

column 4 - Customs Value, Imports for Consumption (dollars)

(Customs value and Imports for Consumption are defined below)

column 5 - Customs Value, General Imports (dollars)

(Customs value and General Imports are defined below)

column 6Dutiable Value (dollars)Calculated Duties (dollars)

(The dutiable value and calculated duties are defined below)

column 8 - Import Charges (dollars)

(Import charges equal freight plus insurance, as defined below)

## Variable Definitions:

1. The *export value* is the selling price or cost if not sold, including inland freight, insurance, and other charges to the U.S. port of export, but excluding unconditional discounts and commissions. This value is called the F.a.s. (free alongside ship) value.

- 2. *Customs Import Value*. The Customs value reflects the value of imports as appraised by the U.S. Customs Service. This value is generally defined as the price actually paid or payable for merchandise when sold for exportation to the United States, excluding U.S. import duties, freight, insurance and other charges incurred in bringing the merchandise to the United States.
- 3. *Imports for Consumption*. Imports for Consumption measure the total of merchandise that has physically cleared through Customs either entering consumption channels immediately or entering after withdrawal for consumption from bonded warehouses under Customs custody or from Foreign Trade Zones. Many countries use the term "special imports" to designate statistics compiled on this basis.
- 4. *General Imports*. General Imports measure the total physical arrivals of merchandise from foreign countries, whether such merchandise enters consumption channels immediately or is entered into bonded warehouses or Foreign Trade Zones under Customs custody.
- 5. Dutiable Value of Imports and Calculated Duty. The dutiable value represents in general, the Customs value of foreign merchandise imported into the United States which is subject to duty. The calculated duty represents the estimated duty collected. Estimated data are calculated by the Census based on the applicable rate(s) of duty as shown in the HTS.
- 6. *Import Charges*. The import charges represent the aggregate cost of all freight, insurance and other charges (excluding import duties) incurred in bringing the merchandise from alongside the carrier at the port of exportation and placing it alongside the carrier at the first port of entry in the United States. The sum of the Customs value and the charges is the c.i.f. (cost, insurance and freight) value.

## (3) Record Layout for BILATERAL\_8901\_????:

The variables included in BILATERAL\_8901\_????.ASC are listed below, by column. This file is a space-delimited ascii file containing the bilateral data for year ????. A STATA version of this file is named BILATERAL\_8901\_????.DTA.

column 1 - UN Country Code (see COUNTRY.TXT) column 2 - Year column 3 - 4 digit SIC code (1987 revision), leading zeros suppressed column 4 - Value of exports (dollars) (The value does not include re-exports, as discussed below) column 5 - Customs Value, Imports for Consumption (dollars) (Customs value and Imports for Consumption are defined below) column 6 - Customs Value, General Imports (dollars) (Customs value and General Imports are defined below) column 7 - Dutiable Value (dollars) column 8 - Calculated Duties (dollars) (The dutiable value and calculated duties are defined below) column 9 - Import Charges (dollars) (Import charges equal freight plus insurance, as defined below)

## Variable Definitions:

Same as for MULTILATERAL\_8901, as described above.

#### 5.7 U.S. Tariff Database

The tab-delimited text files USHTS89.TXT to USHTS01.TXT contain the items listed in the record layout. Not all items are present in every year. For example, the special rates of duty for Mexico under NAFTA will of course not appear before 1994. The "MFN\_OTHER\_RATE" and "COL2\_OTHER\_RATE" are missing for Chapter 91 of the HTS (watches and clocks) due to the complexity of the tariff lines for most of these items. These two rates are missing for all other products prior to 1997 due to the difficulty of extracting the data from the original tariff files. A small number of additional products are affected in these years; only a dozen such tariffs apply in the year 2001.

## Record Layout for USHTS??.TXT:

Variable Description

HTS8 8-digit HTS number (the legal tariff line)

YEAR Year

BRIEF\_DESCRIPTION Abbreviated product description

QUANTITY\_1\_CODE Abbreviation of first unit of quantity. Units of Quantity are

described in Appendix B.

QUANTITY\_2\_CODE Abbreviation of second unit of quantity

WTO\_BINDING\_CODE B=Bound U=Unbound

MFN\_RATE\_TYPE\_CODE Code for tariff calculation. See Equations below.

MFN\_AVE Estimated ad valorem equivalent of complete MFN rate MFN\_AD\_VAL\_RATE Ad valorem portion of the MFN duty rate (.05 = 5%)

MFN\_SPECIFIC\_RATE Specific portion of the MFN duty rate (.05 = \$.05 per unit of )

quantity)

MFN\_OTHER\_RATE Additional portion of the MFN duty rate (.05 =\$.05 per unit of

quantity)

GSP\_INDICATOR A= regular GSP, A\*= certain countries excluded from GSP,

A+=GSP for imports from least-developed beneficiary countries (duty-free). A list of GSP eligible countries is contained in the file GSP.TXT. A list of least-developed beneficiary countries is contained in GSP\_LDBC.TXT

GSP\_CTRY\_EXCLUDED Code for country excluded from GSP for that item. See

GSPEXCLU.TXT for an explanation of codes

GSP\_AVE Estimated ad valorem equivalent of tariffs for countries

eligible for GSP treatment

APTA\_INDICATOR B= eligible for Automotive Products Trade Act (APTA) tariff

preferences (duty-free)

Trade in Civil Aircraft (duty-free)

NAFTA\_CANADA\_IND CA=eligible for NAFTA\_CANADA tariff preferences (duty-

free)

CANADA\_RATE\_TYPE\_CODE Code for tariff calculation-- see beneath for equations

CANADA\_AVE Estimated ad valorem equivalent of complete Canada rate

CANADA AD VAL RATE Ad valorem portion of the NAFTA-Canada duty rate (.05 =

5%)

CANADA\_SPECIFIC\_RATE Specific portion of the NAFTA-Canada duty rate (.05 = \$.05)

per unit of quantity)

NAFTA\_MEXICO\_IND MX= eligible for NAFTA\_MEXICO tariff preferences

MEXICO\_RATE\_TYPE\_CODE Code for tariff calculation-- see beneath for equations

MEXICO AVE

Estimated ad valorem equivalent of complete Mexico rate

MEXICO\_AD\_VAL\_RATE Ad valorem portion of the NAFTA-Mexico duty rate (.05 =

5%)

MEXICO\_SPECIFIC\_RATE Specific portion of the NAFTA-Mexico duty rate (.05 = \$.05)

per unit of quantity)

CBI INDICATOR E= eligible for Caribbean Basin Initiative (CBI) tariff

preferences, E\*= certain products OR certain countries excluded from CBI on this item. Countries eligible for CBI preferences are listed in the file CBI.TXT. Some CBI

|                      | countries also eligible for enhanced CBTPA preferences (below).  |
|----------------------|--|
| CBI_AVE              | Estimated ad valorem equivalent of complete CBI rate   |
| CBI_AD_VAL_RATE      | Ad valorem portion of the CBI duty rate $(.05 = 5\%)$  |
| CBI_SPECIFIC_RATE    | Specific portion of the CBI duty rate $(.05 = 5.05)$ per unit of   |
| CBI_SI ECHTC_RATE    |  |
| AGOA_INDICATOR       | quantity) D= eligible for African Growth and Opportunity Act (AGOA) tariff preferences (duty-free). Countries eligible for AGOA  |
| CDTDA INDICATOD      | preferences are listed in the file AGOA.TXT.   |
| CBTPA_INDICATOR      | R= eligible for Caribbean Basin Trade Partnership Act  |
|                      | (CBTPA) tariff preferences. Current beneficiary countries:   |
|                      | Belize, Costa Rica, Dominican Republic, El Salvador,   |
|                      | Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua,  |
| CDTDA AD WAL DATE    | Panama   |
| CBTPA_AD_VAL_RATE    | Ad valorem portion of the CBTPA duty rate (.05 = 5%)   |
| CBTPA_SPECIFIC_RATE  | Specific portion of the CBTPA duty rate $(.05 = \$.05 \text{ per unit})$   |
| ISRAEL_FTA_INDICATOR | IL=eligible for Israel-United States Free Trade Agreement  |
|                      | tariff preference  |
| ISRAEL_AVE           | Estimated ad valorem equivalent of complete Israel rate  |
| ISRAEL_AD_VAL_RATE   | Ad valorem portion of the Israel duty rate $(.05 = 5\%)$   |
| ISRAEL_SPECIFIC_RATE | Specific portion of the Israel duty rate $(.05 = \$.05 \text{ per unit of})$   |
|                      | quantity)  |
| ATPA_INDICATOR       | J=eligible for Andean Trade Preference Act (ATPA) tariff preference, J*= certain products excluded. Applies to products originating in Bolivia, Colombia, Ecuador and Peru |
| ATPA_AVE             | Estimated ad valorem equivalent of complete ATPA rate  |
| ATPA_AD_VAL_RATE     | Ad valorem portion of the ATPA duty rate $(.05 = 5\%)$   |
|                      | Specific portion of the ATPA duty rate $(.05 = 5.05)$ per unit of  |
| ATPA_SPECIFIC_RATE   | quantity)  |
| PHARMACEUTICAL_IND   | K=eligible for tariff preferences under the Agreement on   |
| DVEC INDICATOR       | Trade in Pharmaceutical Products (duty-free)   |
| DYES_INDICATOR       | L=eligible for tariff preferences under the Uruguay Round  |
|                      | concessions on Intermediate Chemicals for Dyes (duty-free)   |
| COL2_RATE_TYPE_CODE  | Code for Column 2 tariff calculation see beneath for equations   |
| COL2_AVE             | Estimated ad valorem equivalent of complete Column 2 rate.   |
|                      | Countries subjected to Column 2 tariffs are listed in the file   |
|                      | Column2TXT   |
| COL2_AD_VAL_RATE     | Ad valorem portion of the Column 2 duty rate $(.05 = 5\%)$   |
| COL2_SPECIFIC_RATE   | Specific portion of the Column 2 duty rate $(.05 = \$.05 \text{ per unit})$  |
|                      | of quantity)   |
| COL2_OTHER_RATE      | Additional portion of the Column 2 duty rate $(.05 = \$.05 \text{ per})$   |
| <del>-</del>         | unit of quantity)  |
| BEGIN_EFFECT_DATE    | Beginning effective date for every element shown for this  |
|                      | item   |
|                      | ICIII  |

END\_EFFECTIVE\_DATE Ending effective date for at least one element for this item.

There is a new "beginning effective date" whenever a data element for an HTS tariff item is changed. Ending effective dates of 12/31/2100 are tariff items that as of 2001 are not

expected to change in the foreseeable future.

UNITVALUE Customs value of imports divided the number of Quantity\_1

units imported into the country

Size: Each file is approximately 3 MB.

# Tariff Computation Codes:

In each of the following formulas, "Q1" indicates quantity of 1st unit of measure and "Q2" indicates quantity of 2nd unit of measure

| Duty Code | Duty Equation  |
|-----------|--|
| 0         | 0.00   |
| 1         | Specific rate*Q1   |
| 2         | Specific rate*Q2   |
| 3         | (Specific rate*Q1) + ("Other" rate*Q2)                           |
| 4         | (Specific rate*Q1) + (Ad Valorem rate*Value)                     |
| 5         | (Specific rate*Q2) + (Ad Valorem rate*Value)                     |
| 6         | (Specific rate*Q1) + ("Other" rate*Q2) + (Ad Valorem rate*Value) |
| 7         | Ad Valorem rate*Value  |
| 9         | Ad Valorem rate*Derived Duty. Refer to HTS for duty computation. |

## Record Layout USTAR??.ASC:

The ASCII files USTAR89.ASC to USTAR01.ASC include the following variables:

| columns 1-10  | - 8-digit Harmonized System (HS) number         |
|---------------|---|
| columns 11-20 | - Country code                                  |
|               | United Nations codes are used (see COUNTRY.ASC) |
| columns 21-31 | - Country name                                  |
| columns 32-41 | - Estimated Ad Valorem Equivalent tariff        |

*Size:* Each file is between 57MB and 116MB.

#### Sources:

Files from 1997 onwards have been sourced directly from the USITC at <a href="www.usitc.gov">www.usitc.gov</a>. The main modification has been the calculation of Ad Valorem Equivalent (AVE) tariffs under a number of import programs using observed unit import values also sourced from the USITC.

Files prior to 1997 have been extracted from WordPerfect files of the HTS that were at one time, but are no longer, posted on the USITC's website. The major additional change that had to be made to these was for the 1994 file, which did not include tariff preferences for Mexican goods under NAFTA because NAFTA had not been approved when the first edition of the 1994 HTS was written. This information was inferred from the NAFTA staging categories kindly provided by Antoni Estevadeordal of the Inter-American Development Bank.

# Missing Values

Missing values occur where there is a specific tariff, but no observable unit price in that year to enable estimation of the AVE tariff. Missing Values are coded ".".

#### Related Files

GSP.TXT List of countries eligible for regular GSP benefits

GSP\_LDBC.TXT List of least-developed beneficiary countries

GSPEXCLU.TXT Country codes for GSP Exclusions

CBI.TXT List of countries eligible for CBI benefits

AGOA.TXT List of countries eligible for AGOA benefits

COLUMN2.TXT List of countries subjected to Column2 tariff rates

TAR\_PROG.TXT Summary of applicable tariff program for each country

#### References

- Bernard, Andrew B., J. Bradford Jensen and Peter K. Schott, 2002a, "Survival of the Best-Fit: Competition from Low Wage Countries and the (Uneven) Growth of US Manufacturing Plants," NBER Working Paper 9170.
- Bernard, Andrew B., J. Bradford Jensen and Peter K. Schott, 2002b, "Falling Trade Costs, Heterogeneous Firms, and Industry Dynamics," Yale School of Management, mimeo.
- Feenstra, Robert C., 1996, "U.S. Imports, 1972-1994: Data and Concordances," NBER Working Paper 5515.
- Feenstra, Robert C., 1997, "U.S. Exports, 1972-1994: With State Exports and Other U.S. Data," NBER Working Paper 5990.
- Romalis, John, 2002, "NAFTA's and CUSFTA's Impact on North American Trade," University of Chicago Graduate School of Business, mimeo.
- Swenson, Deborah, 1997, "Explaining Domestic Content: Evidence from Japanese and U.S. Automobile Production in the United States," in Robert C. Feenstra, ed. *The Effects of U.S. Trade Protection and Promotion Policies*. Chicago: University of Chicago and NBER, 33-53.

## **Census Publications**

U.S. Exports and Imports of Merchandise on CD-ROM [machine-readable data file] / prepared by the Bureau of the Census. -Washington: The Bureau [producer and distributor], various years.

## **Appendix A: Country Codes and Names (United Nations Basis)**

The U.S. import data collected by the Bureau of the Census keeps track of the source country by certain Census codes. For the import database, the United Nations (UN) country codes and names are used instead. The file COUNTRY.ASC gives a complete list of the UN codes, UN country abbreviations, the corresponding Census codes, and the full name of the Census country. This file is printed on the following two pages.

## Record Layout:

columns 1-6 - United Nations (UN) code columns 8-15 - Abbreviated UN country name columns 17-20 - U.S. Census country code columns 22-50 - Full Census country name

The records are sorted by the six-digit UN codes. The first two-digits of that code are a regional identifier, the next three-digits are a specific country code, and the last digit is a special modifier than equals zero in nearly all cases.

*Special considerations:* There are more Census country codes than UN codes. This means that a given UN code may appear on several subsequent records, followed by the same abbreviated UN country name; on each of these records, a different Census country code and Census county name will appear. For example, South Africa is treated as one country in the UN codes, but is broken down into several smaller regions in the Census codes and names.

**Related Files:** The UN codes and abbreviated country names included in COUNTRY.ASC are identical to those used in the files IMP\*.ASC for 1972-2001.

Size: COUNTRY.ASC has 250 records (including its header).

**Sources:** The UN codes are the six digit Standard Classification of Customs Areas and Territories, and are the same as that used by Statistics Canada in their World Trade Database. The Census codes and country names are taken from the file COUNTRY.DBF contained on:

U.S. Exports and Imports of Merchandise on CD-ROM [machine-readable data file] / prepared by the Bureau of the Census. -Washington: The Bureau [producer and distributor], various years.

| UN     | Country            | US   | REPUBLIC OF SOUTH AFRICA NAMIBIA BOTSWANA SWAZILAND LESOTHO ALGERIA LIBYA MOROCCO WESTERN SAHARA SUDAN TUNISIA EGYPT CAMEROON CENTRAL AFRICAN REPUBLIC CHAD CONGO GABON ANGOLA BURUNDI ZAIRE BENIN EQUATORIAL GUINEA ETHIOPIA ERITREA ETHIOPIA ETHIOPIA GUINEA IVORY COAST KENYA LIBERIA MADAGASCAR MAYOTTE MALAWI MALI MAURITANIA MAURITANIA MAURITIUS MOZAMBIQUE NIGER NIGERIA GUINEA-BISSAU CAPE VERDE SAO TOME AND PRINCIPE COMOROS REUNION FR SOUTHERN- ANTARTIC LANDS RWANDA ST. HELENA SENEGAL SEYCHELLES BRITISH INDIAN OCEAN TERR. SIERRA LEONE SOMALIA ZIMBABWE TOGO UGANDA | 330320 | ARGENT           | 3570         | ARGENTINA              |
|--------|--------------------|------|---|--------|------------------|--------------|------------------------|
| code   | G 3555             | code | DDD::D: 10 00 00::  | 330680 | BOLIVIA          | 3350         | BOLIVIA                |
| 11/100 | S_AFRICA           | 7910 | AERICA  | 330/60 | CHILE            | 3510<br>3370 | CHILE                  |
| 117100 | S AFRICA           | 7920 | NAMIBIA   | 331700 | COLOMBIA         | 3010         | COLOMBIA               |
| 117100 | S_AFRICA           | 7930 | BOTSWANA  | 332180 | ECUADOR          | 3310         | ECUADOR                |
| 117100 | S_AFRICA           | 7950 | SWAZILAND   | 334840 | MEXICO           | 2010         | MEXICO                 |
| 117100 | S_AFRICA           | 7990 | LESOTHO   | 336000 | PARAGUA          | 3530         | PARAGUAY               |
| 130120 | ALGERIA            | 7210 | ALGERIA   | 336040 | PERU             | 3330         | PERU                   |
| 134340 | MUBUCCO            | 7140 | MOBOCCO   | 338580 | URUGUAY<br>VENE7 | 3000         | URUGUAY<br>VENEZIIET.A |
| 135040 | MOROCCO            | 7370 | WESTERN SAHARA  | 341880 | COS RICA         | 2230         | COSTA RICA             |
| 137360 | SUDAN              | 7320 | SUDAN   | 342220 | SALVADR          | 2110         | EL SALVADOR            |
| 137880 | TUNISIA            | 7230 | TUNISIA   | 343200 | GUATMALA         | 2050         | GUATEMALA              |
| 138180 | EGYPT              | 7290 | EGYPT   | 343400 | HONDURA          | 2150         | HONDURAS               |
| 141200 | CAMEROON           | 7420 | CAMEROON  | 345580 | NICARAGA         | 2190         | NICARAGUA              |
| 141400 | C_AFRICA           | 7540 | REDURAL AFRICAN   | 350440 | BARAMAS          | 2720         | BARANAS<br>BARRADOS    |
| 141480 | CHAD               | 7560 | CHAD  | 351920 | CUBA             | 2390         | CUBA                   |
| 141780 | CONGO              | 7630 | CONGO   | 352140 | DOM_REP          | 2470         | DOMINICAN REPUBLIC     |
| 142660 | GABON              | 7550 | GABON   | 353120 | GUADLPE          | 2831         | GUADELOUPE             |
| 160240 | ANGOLA             | 7620 | ANGOLA  | 353120 | GUADLPE          | 2839         | MARTINIQUE             |
| 161080 | BURUNDI            | 7670 | BURUNDI   | 353320 | HAITI            | 2450         | HAITI                  |
| 162040 | ZAIKE              | 7610 | ZAIKE<br>RENIN  | 353880 | JAMAICA          | 2410         | TIIDKS AND CATCOS      |
| 162260 | EO GNEA            | 7380 | EOUATORIAL GUINEA   | 333000 | UAMAICA          | 2430         | ISLANDS                |
| 162300 | ETHIOPIA           | 7740 | ETHIOPIA  | 353880 | JAMAICA          | 2440         | CAYMAN ISLANDS         |
| 162300 | ETHIOPIA           | 7741 | ERITREA   | 355320 | N_ANTIL          | 2771         | NETHERLANDS            |
| 162300 | ETHIOPIA           | 7749 | ETHIOPIA  |        |                  |              | ANTILLES               |
| 162620 | DJIBOUTI           | 7770 | DJIBOUTI  | 355320 | N_ANTIL          | 2779         | ARUBA                  |
| 162700 | GAMBIA             | 7400 | THE GAMBIA  | 356580 | ST_K_NEV         | 2481         | ANGUILLA               |
| 163240 | GIIINEA            | 7450 | GIITNEA   | 330360 | SI_K_NEV         | 2402         | TSLANDS                |
| 163840 | IVY CST            | 7480 | IVORY COAST   | 356580 | ST K NEV         | 2483         | ST. KITTS-NEVIS        |
| 164040 | KENYA              | 7790 | KENYA   | 356580 | ST_K_NEV         | 2484         | ANTIGUA                |
| 164300 | LIBERIA            | 7650 | LIBERIA   | 356580 | ST_K_NEV         | 2485         | MONTSERRAT             |
| 164500 | MADAGAS            | 7880 | MADAGASCAR  | 356580 | ST_K_NEV         | 2486         | DOMINICA               |
| 164500 | MADAGAS            | 7881 | MAYOTTE   | 356580 | ST_K_NEV         | 2487         | ST. LUCIA              |
| 164660 | MALAWI<br>MAT.T    | 7450 | MALAWI<br>MAI.T   | 356580 | SI_K_NEV         | 2488         | CDENADA                |
| 164780 | MAURITN            | 7410 | MAURITANIA  | 357800 | TRINIDAD         | 2740         | TRINIDAD AND           |
| 164800 | MRITIUS            | 7850 | MAURITIUS   |        |                  |              | TOBAGO                 |
| 165080 | MOZAMBQ            | 7870 | MOZAMBIQUE  | 360840 | BELIZE           | 2080         | BELIZE                 |
| 165620 | NIGER              | 7510 | NIGER   | 362380 | FALK_IS          | 3720         | FALKLAND ISLANDS       |
| 165660 | NIGERIA            | 7530 | NIGERIA   | 362540 | FR_GUIAN         | 3170         | FRENCH GUIANA          |
| 166240 | G_BISAU            | 7642 | CADE VEDDE  | 365000 | GUYANA           | 3120         | DANAMA                 |
| 166240 | G_BISAU            | 7644 | SAO TOME AND  | 367400 | SIIRTNAM         | 3150         | SIIR TNAME             |
| 100210 | 0_D10110           | ,011 | PRINCIPE  | 368960 | US NES           | 6810         | MARSHALL ISLANDS       |
| 166380 | FR_IND_O           | 7890 | COMOROS   | 368960 | US_NES           | 6820         | FEDRATED STATES OF     |
| 166380 | FR_IND_O           | 7904 | REUNION   |        |                  |              | MICRONESIA             |
| 166380 | FR_IND_O           | 7905 | FR SOUTHERN-  | 368960 | US_NES           | 6830         | PALAU                  |
| 166460 |                    | 7600 | ANTARTIC LANDS  | 368960 | US_NES           | 9350         | GUAM                   |
| 166540 | S HELNA            | 7580 | ST HELENA   | 368961 | PRT RICO         | 9000         | PILETO RICO            |
| 166860 | SENEGAL            | 7440 | SENEGAL   | 368961 | PRT RICO         | 9030         | PUERTO RICO            |
| 166900 | SEYCHEL            | 7800 | SEYCHELLES  | 368962 | VGN_ISL          | 9110         | VIRGIN ISLANDS         |
| 166900 | SEYCHEL            | 7810 | BRITISH INDIAN  | 413760 | ISRAEL           | 5080         | ISRAEL                 |
|        |                    |      | OCEAN TERR.   | 413760 | ISRAEL           | 5081         | ISRAEL                 |
| 166940 | SIER_LN<br>SOMALIA | 7470 | SIERRA LEONE  | 413760 | ISRAEL           | 5082         | GAZA STRIP ADMNSTD     |
| 167160 | SUMALIA            | 7960 | SUMALIA<br>7TMD X DWF   | /13760 | TCDAFT           | 5083         | MEGE DYNK YDWNGED      |
| 167680 | TOGO               | 7520 | TOGO  | 413700 | ISKALL           | 3003         | BY ISRAEL              |
| 168000 | UGANDA             | 7780 | UGANDA  | 413920 | JAPAN            | 5880         | JAPAN                  |
| 168340 | TANZANIA           | 7830 | TANZANIA  | 440480 | BAHRAIN          | 5250         | BAHRAIN                |
| 168540 | BURKINA            | 7600 | BURKINA   | 441960 | CYPRUS           | 4910         | CYPRUS                 |
| 168940 | ZAMBIA             | 7940 | ZAMBIA  | 443640 | IRAN             | 5070         | IRAN                   |
| 220600 | CANADA             | 7570 | CANADA<br>BEDMIIDA  | 443680 | TKAQ             | 5050         | TKAŬ                   |
| 223040 | GREENLD            | 1010 | GREENLAND   | 444140 | KUWATT           | 5130         | KUWAIT                 |
| 226660 | SP_MQEL            | 1610 | SIERRA LEUNE SOMALIA ZIMBABWE TOGO UGANDA TANZANIA BURKINA ZAMBIA CANADA BERMUDA GREENLAND ST. PIERRE AND MIQUELON  | 444220 | LEBANON          | 5040         | LEBANON                |
|        |                    |      | MIQUELON  | 445120 | OMAN             | 5230         | OMAN                   |
|        |                    |      |   |        |                  |              |                        |

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      446340 QATAR
      5180 QATAR
      557560 SWITZLD
      4419 SWITZERLAND

      446820 SD_ARAB
      5160 IRAQ-SAUDI AR. NZ
      572920 GILBRALT
      4720 GIBRALTAR

      446820 SD_ARAB
      5170 SAUDI ARABIA
      574700 MALTA
      4730 MALTA AND GOZO

      447200 YEMEN_S
      5220 SOUTH YEMEN
      580080 ALBANIA
      4810 ALBANIA

      447600 SYRIA
      5020 SYRIAN ARAB
      581000 BULGARIA
      4870 BULGARIA

      681130 BULGARIA
      4622 BELABUS

      446340 QATAR
                                                                5180 QATAR
                                                                                                                                                                                557560 SWITZLD 4419 SWITZERLAND
688100 USSR 4610 FORMER USSR
710360 AUSTRAL 6021 AUSTRALIA
710360 AUSTRAL 6022 NORFOLK ISLAND
710360 AUSTRAL 6023 COCOS ISLANDS
710360 AUSTRAL 6024 CHRISTMAS ISLAND
710360 AUSTRAL 6029 HEARD AND MCDONALD
      455240 NEPAL 5360 NEPAL
455860 PAKISTAN 5350 PAKISTAN
      456080 PHIL 5650 PHILIPPINES
457020 SINGAPR 5590 SINGAPORE
    457020 SINGAPR 5590 SINGAPORE
457020 SINGAPR 5590 SINGAPORE
457020 SINGAPR 5590 SINGAPORE
457640 THAILAND 5490 THAILAND 715540 NEW_ZEAL 6141 NEW ZEALAND
458960 TAIWAN 5830 CHINA (TAIWAN) 715540 NEW_ZEAL 6141 NEW ZEALANDS
460310 AZERBAIJ 4632 AZERBAIJAN 715540 NEW_ZEAL 6142 COOK ISLANDS
460310 ARMENIA 4631 ARMENIA 715540 NEW_ZEAL 6144 NIUE
462680 GEORGIA 4633 GEORGIA 722420 FIJI 6862 NAURU
463980 KAZAKHST 4634 KAZAKHSTAN 722420 FIJI 6863 FIJI
464170 KYRGYZST 4635 KYRGYZSTAN 722420 FIJI 6864 TONGA
467620 TAJIKIST 4642 TAJIKISTAN 722960 KIRIBATI 6223 SOLOMON ISLANDS
467950 TURKMENI 4643 TURKMENISTAN 722960 KIRIBATI 6224 VANUATU
468000 UZBEKIST 4644 UZBEKISTAN 722960 KIRIBATI 6224 VANUATU
4881560 CHINA 5700 CHINA (MAINLAND) 722960 KIRIBATI 6225 PITCAIRN ISLAND
484960 MONGOLA 5740 MONGOLIA 725400 NEW_CALE 6412 NEW CALEDONIA
487040 VIETNAM 5520 VIETNAM 725400 NEW_CALE 6412 NEW CALEDONIA
487040 VIETNAM 5520 VIETNAM 725400 NEW_CALE 6414 FRENCH POLYNESIA
530560 BEL_LUX 4231 BELGIUM 725400 NEW_CALE 6414 FRENCH POLYNESIA
530560 BEL_LUX 4231 BELGIUM 725400 NEW_CALE 6414 FRENCH POLYNESIA
532080 DENMARK 4091 FAROE ISLAND 728882 SAMOA 6150 WESTERN SAMOA
532500 FRANCE 4271 ANDORRA 999999 UNKNOWN 8200 UNIDENTIFIED
532500 FRANCE 4272 MONACO 999999 UNKNOWN 8500 UNIDENTIFIED
532500 FRANCE 4279 FRANCE 999999 UNKNOWN 8500 UNIDENTIFIED
532500 FRANCE 4279 FRANCE 999999 UNKNOWN 9610 NORTHERN MARIANA
533000 GREECE 4840 GREECE
                                                                                                                                                                                                                                                            ISLANDS
                                                                            OF GERMANY
                                                                                                                                                                               999999 UNKNOWN 9980 UNIDENTIFIED
      533000 GREECE 4840 GREECE
533720 IRELAND 4190 IRELAND
      533800 ITALY 4751 SAN MARINO
                                                       4752 VATICAN CITY
      533800 ITALY
      533800 ITALY 4759 ITALY
535280 NETHLDS 4210 NETHERLANDS
      536200 PORTUGAL 4710 PORTUGAL
      537240 SPAIN 4700 SPAIN
538260 UKINGDOM 4120 UNITED KINGDOM
      550400 AUSTRIA 4330 AUSTRIA
      552460 FINLAND 4050 FINLAND
553520 ICELAND 4000 ICELAND
555780 NORWAY 4031 SVALBARD, JAN
                                                                             MAYEN IS
      555780 NORWAY 4039 NORWAY
557520 SWEDEN 4010 SWEDEN
557560 SWITZLD 4411 LIECHTENSTEIN
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# **Appendix B: Units for Quantity**

The following units for quantity are used in EXP\*.ASC and IMP\*.ASC for 1989-2001:

- BBL Barrel
- CAR Carat
- CBM Cubic Meters
- CKG Content Kilogram
- CTN Content Metric Ton
- CUR Curie
- CYK Clean Yield Kilogram
- DOZ Dozen
- DPC Dozen Pieces
- DPR Dozen Pair
- FBM Fiber Meter
- GCN Gross Containers
- GKG Kilogram (gross)
- GM Gram
- GRS Gross
- HUN Hundred
- KG Kilograms
- KGS Kilogram Total Sugars
- KWH Kilowatt-hours
- LTR Liters
- M2 Square Meters
- MC Milli-Curie
- MCU Micro-Curie
- MTR Meter
- NO Number
- ODE Ozone Depletion Equivalent
- PCS Pieces
- PFL Proof Liter
- PKS Packs
- PRS Pairs
- RBA Running Bales
- SCM Square Centimeters
- SET Sets
- SQ Square
- SQM Square meters
- TBE Thousand Standard Brick Equivalent
- TCM Thousand Cubic Meter
- THS Thousands
- TON Metric Ton
- (blank) Unknown (or mixed units)