Quantifying GATT Trade Liberalization

Kristy Buzard, Ross Jestrab and Zeyuan (Victor) Xiong

May 20, 2021

1 Introduction

#{r child = 'intro.Rmd'} #

2 Literature

- There is a large qualitative literature on what happened through the GATT
  - Go back and list some of the books we read on, e.g., each round
  - "Tariff negotiations and renegotiations under the GATT and the WTO"
    - What is Matt's status with this?
  - USITC history papers (two of them)
  - Irwin's big book
    - 1994 Irwin NBER working paper
    - Irwin (2020)?
  - Petros' chapter on tariffs
- Three strands of quantitative literature
  - Old stuff
    - Krause 1962, etc
      - Go through reference list
    - Dur, Balassa, Kreinin
  - BSY (is there a second one?)

  - Data since HS (some TSUS from Feenstra?)
    * Bown and Irwin (2017)
    * But what about "30 years of trade policy"?
- Need to include TOT literature if going to include TOT analysis

3 Institutional Context

- Background, general info on GATT
  - RTAA reductions between Smoot Hawley and 1946
    * How do the two different documents we have relate to each other

```
#{r child = 'context.Rmd'} #
```

4 Data

- Where we got these files
  - Victor to update source data table, will include in appendix
- How we digitized the data
  - Dealing with paragraph splitting, new lines
  - Dealing with two changes in coding
    * Historical context on those changes
    * The 1962 document we have represent the US tariff rate under TSUSA for the Dillon B round (I assume we will include this round data in the analysis, namely 1962->Kennedy->Tokyo)
- Other issues that arose
  - Specific vs. ad valorem vs. compound (both specific and ad valorem)
    * Teti (2020) reports that 8% of U.S. tariffs were specific in 1988-2017
    * Teti (2020) also reports: "Mixed tariffs are expressed as either a specific or an ad valorem rate, depending on which generates the most (or sometimes the least) revenue. Then there are technical tariffs that depend on certain

product characteristics for example duties might be 8% for butter with fat content between 9-40%. Tariff rate quotas are made up of a low tariff rate on the initial imports (the within-quota quantity) and a very high tariff rate on imports entering above the initial amount (outside-quota quantity).

- Variation in units for specific tariffs, how we standardized them
  - Within the Smoot_Hawley tariff system, we have identified 59 types of units (based on the description showing up in the original document), we have done the normalization process to narrow down the total number to 27 units keys.
    - The normalization process contains steps including integrating units that have similar descriptive meanings, integrating units that have different basic units (cents per each, cents per 100 and cents per 1000), and finally transform all dollars based units to cents based units. The units keys system we created for Smoot-Hawley system also applies for the TSUSA system in later rounds.
- Tariff intervals
- Free list
- Staging (starting with Geneva A/B/C)
- Ad valorem equivalents (AVE) and trade weighting
  - See Appedix C of Teti (2020)

We have been able to locate the original documents that contain the consolidated GATT tariff schedules at the end of each of the eight round of negotiations. To date, we have digitalized and standardized the tariff data for the first five GATT rounds for the United States. We have done the same for the tariff schedule that was in effect in the United States before the start of the GATT—the so-called Smoot Hawley tariffs.

We are currently adding the Kennedy, Tokyo and Uruguay rounds for the U.S. and all rounds for several other countries. The sketch of preliminary findings reported herein is on the U.S. data on Smoot Hawley tariffs through the Dillon round.

In standardizing the tariff lines across rounds, we end up with 3031 lines. The changes through time that require this standardization effort are often interesting in themselves. For instance, Paragraph 353, which covers "electrical articles' ' such as motors, tools, telegraphs, telephones and xray apparatus, is one line with a common 35 percent *ad valorem* tariff in

1930. By the end of the Dillon Round in 1964, this paragraph has been split into 30 distinct lines with tariffs ranging from 5.5% (xray: other) to 17.5% (wiring).

4.1 Data sources

We collected our data from various sources: the US GATT tariff schedule data is collected from the United Nation Treaty Collection (UNTC) website [1], which offers detailed tariff schedule of every country of each round of GATT negotiation from the first round of Geneva to the last Uruaguay round.We also collected data and background documents to support the coding process, some of them are from the Government public information, some of them are from Hathitrust online library. More details of the data source can be found in the appendix (adding hyperlink here).

4.1.1 Digitization process

The tariff schedules of United States went through two systematically tariff schedules changes from the first round of GATT negotiation, Geneva 1947, to the last round of negotiation, Uruguay 1992. The initial tariff schedule that US adopted is the Smoot-Hawley system developed in 1930, it was used in the first five rounds of the GATT negotiation. In the year of 1962, the US government shifted its tariff system from Smoot-Hawley to Tariff Schedule of United States Annotated (henceforth TSUSA) through the Tariff Act of 1962. Later before the Uruguay round, the Harmonized system was adopted for the negotiation. The periods of system in each round are listed below:

- Smoot-Hawley system: Geneva 1947, Annecy 1948, Torquay 1950, Geneva 1956 and Dillon 1960, altogether 5 rounds;
- TSUSA system: Kennedy 1964, Tokyo 1979, altogether two rounds;
- Harmonized system: Uruguay 1992

So far we have fully digitized all the rounds for the Smoot-Hawley system and the TSUSA system. The following subsection explains detailed steps of the digitization process.

4.1.1.1 Smoot-Hawley system

1. The first file we found is **"Torquay (consolidated)"**, which is from a hard copy borrowed from Library of University of Texas. We scanned the hard copy, conducted optical character recognition (OCR) and digitized file in R. By running the R packages

[1] https://treaties.un.org/pages/AdvanceSearch.aspx?tab=UNTS&clang=_en

pdftools[2], we obtain an editable excel file that consists of detailed product description and their corresponding tax rates. Since the **"Torquay (consolidated)"** we obtained is a consolidated version that contains the schedules of all three rounds till Torquay (Geneva47, Annecy and Torquay), we were able to construct a benchmark schedule that includes most of the products, in Smoot-Hawley and also in later rounds.

2. We later found more systematic data sources (the UNTC series) of each individual round (through Geneva 1947 round to Uruguay round), we then manually entered the tax rate data of each round line by line based on the framework we constructed. To check the reliability of our benchmark file, we compared the three individual rounds we have from the UNTC website: **"Geneva47_UNTC"**, **"Annecy_UNTC"**, and **"Torquay_UNTC"** with the consolidated version we initially found, namely **"Torquay (black white)"** and found no differences in tax rate value.

3. Next, since we found the original 1930 Tariff Act document, we are able to identify the Pre-GATT US tariff level. We enter the tax rate for Smoot-Hawley schedule of 1930. Given the fact that in all rounds from Geneva 1947 to Dillon, the US government applied the S-H schedules for negotiation, intuitively we made sure that the initial Smoot-Hawley schedule should have tax rates for all products, that is even if some products did not show up in later rounds, we still included them for completeness.

4. To further investigate the real magnitude reduction of the first round GATT negotiation (Geneva 1947), we also digitized the US tariff schedule of the year 1946, using the file **"United State Import Duties June 1946"**. The file contains all the intermediate tariff changes, both unilaterally and through bilateral negotiation between the year of 1930 and 1946. Therefore with all the information above, we are able to identify the tariff reduction magnitude of EVERY GATT round of the negotiation under Smoot-Hawley tariff system.

5. Finally after data cleaning and units normalization the Excel file is then saved as csv (UTF-8) format and imported in R for analysis.

4.1.1.2 TSUSA system

1. The TSUSA system was first adopted in GATT negotiation in 1964 in Kennedy round. To incorporate this new system, we started our digitization of the TSUSA system by digitizing the schedule in the Tariff Act of 1962 which was effective on August 31, 1963. In our data structure the 1962 Tariff Act, although not directly related to the GATT

[2]https://cran.r-project.org/web/packages/pdftools/pdftools.pdf

negotiation, provides a comprehensive framework for the new system, and further fulfill the gap between the last round under Smoot-Hawley system (Dillon round) and the first round under TSUSA system. We believe that the Tariff Act 1962 tariff schedule represents the US tariff level after Dillon round but organized under TSUSA system [3].

2. We applied similar approach for digitization. We began with the document **"Tariff Act 1962"** from United States International Trade Commission [4]. Again we applied the optical character recognition tools and constructed the framework of the tariff schedule system in excel.

3. We then used the tariff schedule files of Kennedy round and Tokyo round we collected from the UNTC website to manually enter the tax rate data for each product line by line. Notice that in Tokyo round there are some old lines getting replaced and new lines introduced, so we also created an "exit and entry" column to incorporate the changes of lines.

4. Finally we conducted the same data cleaning and units normalization process, save the document as csv file and import it in R.

4.1.1.3 Units Within the Smoot_Hawley tariff system, we have identified 59 types of units (based on the description showing up in the original document), we have done the normalization process to narrow down the total number to 27 units keys. The reason of normalization has two layers: first we want to keep the framework as simple as possible, second we want to make sure the values of tax rate are comparable so that statistical inference based on the specific tax rates will not be affected by the units. The normalization process contains steps including integrating units that have similar descriptive meanings, integrating units that have different basic units (cents per each, cents per 100 and cents per 1000), and finally transform all dollars based units to cents based units. The units keys system we created for Smoot-Hawley system also applies for the TSUSA system in later rounds. The detailed mappings of normalization process can be found in our data package.

4.1.1.4 Other issues Some other issues arose during the digitization process, including dealing with tax intervals, more specified product description and staging process for certain

[3]There are mainly two facts to support our belief: (1) we observe that the tax rates for similar products are exactly the same in Tariff Act 1962 and the second stage in Dillon round; (2) the time span between the effective dates of two documents is really short: the Tariff Act was effective on August 31, 1963 and the second stage of Dillon round was effective in 1962.

[4]there are several pages missing in this version, so we also used files from Hathitrust Online Library to complete the whole schedule

products facing tax reduction through multiple stages. Since these issues are mostly related to the robustness and completeness check of our data and relatively trivial, we include the detailed explanation, examples and corresponding solutions in the data appendix section.

4.1.2 Concordance

We built our concordance work between the TSUSA system and Smoot-Hawley system mainly in two steps: first we construct line by line keyword match method across the two schedules we have, this gives us good matches for many lines, especially for the products that have relative short and specific description; the second step is to use the cross-reference table in the **Tariff Classification Study** file [5]. The cross-reference table provides linkage information between the paragraphs in Smoot-Hawley and the tariff item code in TSUSA, and through this way we are able to assign TSUSA code(s) to each product in the Smoot-Hawley system schedule[6].

5 Results

5.1 Basic Facts

- Total tariff cuts from Smoot Hawley to last round we have
  - Specific vs. ad valorem
    - Overlap in ad valorem and specific
- How many lines were simply bound at the Smoot Hawley level
  - This is in contrast in particular to lines that are free under Smoot Hawley but do not show up in a later negotiation–they are not *bound* to be free.
- Addition of new lines round-by-round
- Round by round cuts (focus on end of round)
- Magnitude and speed of liberalization across types of products
  - Any obvious patterns to which lines have largest/smallest cuts?

[5] See more details about this document in "data sources", data appendix

[6] The first round of concordance work has been finished and the second round more detailed matching is still in process

5.2 Spotlight on some interesting products

- Round by round graphs for specific, interesting lines
  - To do this the way I want to, need implementation dates
- Which lines from Smoot Hawley don't see any action?
  - Victor says: 1014, 1530e, 1544,1104a, 81, 82,318,412
- Are there differences in which lines get staging once staging starts?
  - Before Kennedy at least, where it was uniform...
    - Was it *really* uniform?
- Can we quantify which types of products get a lot of splitting of lines?
- Metallic magnesium and metallic magnesium scrap, para 375, swiches from specific to ad valorem in Geneva56C; reduced from 50 to 45% in Dillon
  - 1102b (wools nspf) go from ad valorem in every round to specific in Dillon
  - 202.a swiches from specific in S-H to ad valorem in Geneva
- Need to look into bicycles (para 375)–every other one gets a new specific tariff in Geneva, but was ad valorem in S-H?
- Para 209, item 6 has tariff double in Geneva56A
  - 331 item 10 increases specific tariff from 3 to 4 in Torquay
  - 911
  - 1005.a.3 (something to do with hemp) S-H –> Geneva unchanged; then increase
- Para 32, "change of tax formula"? Also 202.a, 232.c,302.d,

5.3 Other things we learned

- How important was RTAA between 1934 and 1946?
- What do Column 2 tariffs really represent (1962)
- Can we test:
  - Trade Expansion Act of 1962 provided for removing the duty on articles for which the July 1, 1962, rate was 5 percent ad valorem or less, and reducing the rates on other articles by 50 percent of the July 1, 1962, rate. (Dobson)

        * **The major trading countries made across-the-board cuts ranging from 36 to 39 percent of previous tariff rate levels on most products**
        * Trade Act of 1974 grants the President a 5-year negotiating authority, allowing him to reduce by as much as 60 percent any tariff rate over 5 percent in force on January 1, 1975, and also allows him to remove the duty on any article for which the existing rate is 5 percent or less.
    - 1945, the executive branch had cut in half–the maximum allowable reduction–the rates for about 40 percent of the dutiable imports

5.4 Analysis

- What can we say about which / why lines have ad valorem vs. specific?
    - Is there variation over time?
- Can we posit an explanation for the variation in both the quantity and speed of liberalization across products?
    - Perhaps the number of countries who are negotiating?
        * Look at correlations between the number of pages for the schedule for each country?

#{r child = 'results.Rmd'} #

6 Non-U.S. Contracting Parties

Need table that Matt is creating with number of pages for each schedule for each round

- remember that time series doesn't make sense

7 Terms of Trade Analysis

At least include our plans, what data we're going to use - proof of concept using modern elasticity data would be great, even in a subset of lines

8 Conclusion

Future plans

- What role did the presence of specific tariffs, combined with inflation, have in reducing the total level of tariff protection?
  - Need trade volume / value / price data

9 References

#{r child = 'references.Rmd'} #

10 Data Appendix

10.1 Data sources

File name	Content	Sources
Geneva47_UNTC	Individual round schedules of Geneva 1947	UNTC official website, Registration number A-814, Volume number 61. [7]
Annecy_UNTC	Individual round schedules of Annecy 1949	UNTC official website, Registration number A-814, Volume number 63. [8]
Torquay_UNTC	Individual round schedules of Torquay 1951	UNTC official website, Registration number A-814, Volume number 144. [9]
Geneva56_UNTC	Individual round schedules of Geneva 1956	UNTC official website, Registration number A-814, Volume number 245. [10]
Dillon_UNTC	Individual round schedules of Dillon 1960	UNTC official website, Registration number A-814, Volume number 440. [11]
Kennedy_UNTC	Individual round schedules of Kennedy 1964	UNTC official website, Registration number A-814, Volume number 624. [12]
Tokyo_UNTC	Individual round schdules of Tokyo 1979	UNTC official website, Registration number A-814, Volume number 1189. [13]

File name	Content	Sources
Uruguay_UNTC_1	Individual round schedules of Uruguay 1988, till chapter 63	UNTC official website, Registration number A-814, Volume number 1632. [14]
Uruguay_UNTC_2	Individual round schedules of Uruguay 1988, rest of the chapters	UNTC official website, Registration number A-814, Volume number 1634. [15]
Torquay (black white)	Consolidated version of rounds: Geneva47, Annecy and Torquay	The hard copy was borrowed from the Library of University of Texas. We then scanned and digitized the copy. [16]
Tariff Act of 1930 cleaner	Initial tariff schedule of 1930 Smoot-Hawley Tariff Act	Citation information: volume: 46 page: 590 npages: 175 file: STATUTE-46-Pg590.pdf congress: 71 type: publaw number: 361 citation: Pub. Law 71-361 topic: Tariff Act of 1930 title: AN ACT To provide revenue, to regulate commerce with foreign countries, to encourage the industries of the United States, to protect American labor, and for other purposes. June 17, 1930 590 Link for the file [17]; link for citation information: [18]

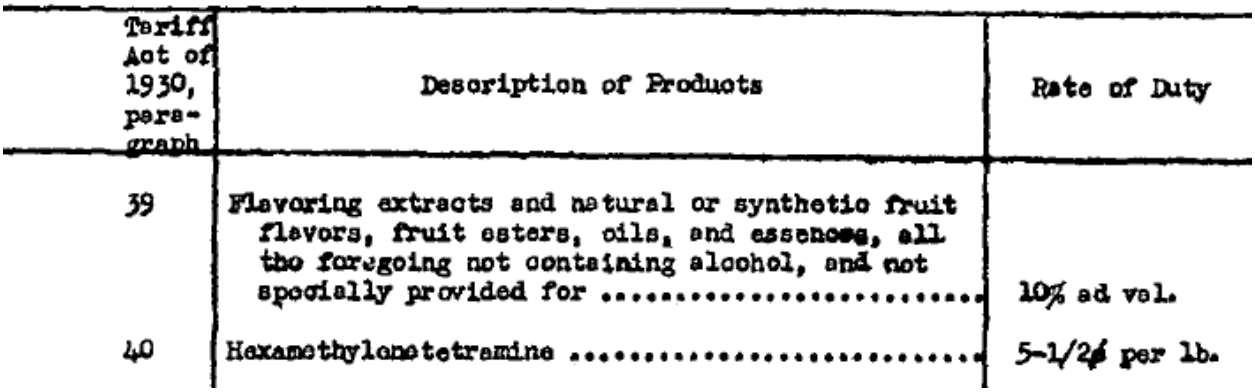
File name	Content	Sources
US pre-GATT tariff schedule	United States Import Duties, June 1946.	University of Minnesota, Hathitrust Online Library: [19] Citation information: United States Tariff Commission. (1946). United States import duties, June 1946. Washington: U.S. Govt. Print. Off.
Tariff Classification Study volume 9	Cross reference schedule between TSUSA system and Smoot-Hawley system in 1962	The Ohio State University, Hathitrust Online Library: [20] Citation information:United States Tariff Commission. (196061). Tariff classification study. Washington: U.S. Govt. Print. Off..
US 1962 Tariff Act	The first TSUSA tariff schedule system that bridged Dillon round and Kennedy round	The document can be found in various sources, the one we used for digitization is uploaded by University of Illinois at Urbana-Champaign, on Hathitrust Online Library [21]

[7]https://treaties.un.org/doc/Publication/UNTS/Volume%2061/v61.pdf
[8]https://treaties.un.org/doc/Publication/UNTS/Volume%2063/v63.pdf
[9]https://treaties.un.org/doc/Publication/UNTS/Volume%20144/v144.pdf
[10]https://treaties.un.org/doc/Publication/UNTS/Volume%20245/v245.pdf
[11]https://treaties.un.org/doc/Publication/UNTS/Volume%20440/v440.pdf
[12]https://treaties.un.org/doc/Publication/UNTS/Volume%20624/v624.pdf
[13]https://treaties.un.org/doc/Publication/UNTS/Volume%201189/v1189.pdf
[14]https://treaties.un.org/doc/Publication/UNTS/Volume%201632/v1632.pdf
[15]https://treaties.un.org/doc/Publication/UNTS/Volume%201634/v1634.pdf
[16]https://search.lib.utexas.edu/discovery/fulldisplay?context=L&vid=01UTAU_INST:SEARCH&search_scope=MyInst_and_CI&tab=Everything&docid=alma991056424989706011
[17]https://govtrackus.s3.amazonaws.com/legislink/pdf/stat/46/STATUTE-46-Pg590.pdf
[18]https://github.com/unitedstates/legisworks-historical-statutes/blob/master/data/046.yaml

10.2 Examples

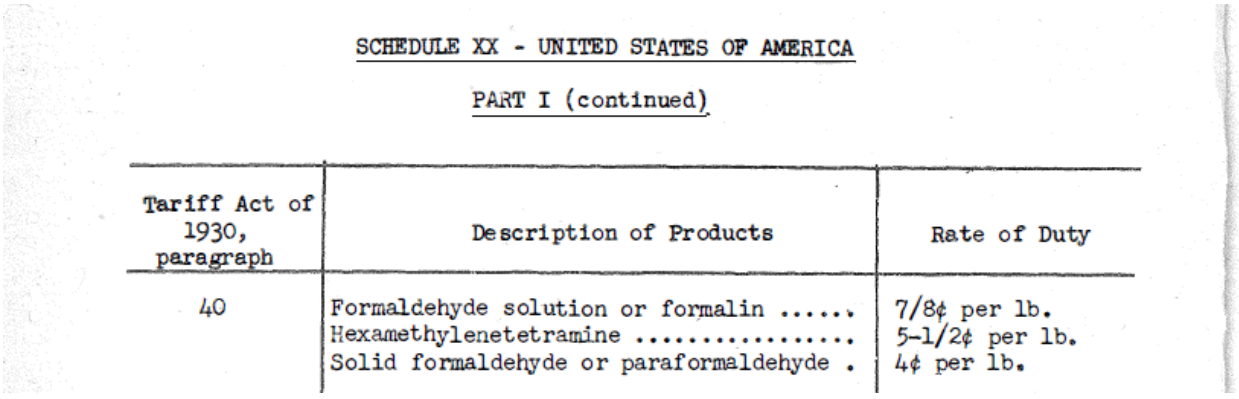
Here we share images of our source files for an illustrative example. The product displayed is the pharmaceutical chemical *Hexamethylenetetramine*. Under the Smoot Hawley enumeration, it is assigned paragraph number 40, as shown in both the Geneva 1947 tariff schedule and the consolidated file from Torquay. Under the TSUSA system, it is assigned code 425.73.

As the figures below illustrate, the schedules usually consist of three parts: the item number (Smoot Hawley paragraph number or TSUSA code), the product description, and the rate of duty. We structure our data to follow this framework.



Tariff Act of 1930, paragraph	Description of Products	Rate of Duty
39	Flavoring extracts and natural or synthetic fruit flavors, fruit esters, oils, and essences, all the foregoing not containing alcohol, and not specially provided for	10% ad val.
40	Hexamethylenetetramine	5-1/2¢ per lb.

Figure 1: Example of an item in Geneva 1947 schedule



SCHEDULE XX - UNITED STATES OF AMERICA

PART I (continued)

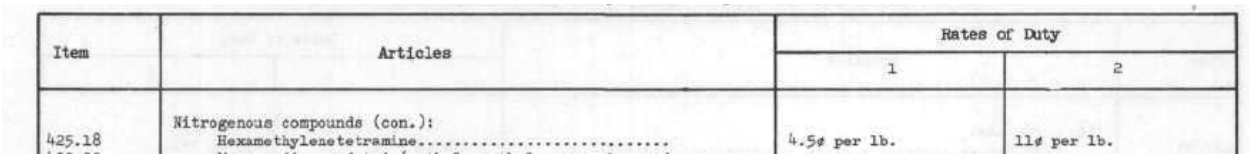
Tariff Act of 1930, paragraph	Description of Products	Rate of Duty
40	Formaldehyde solution or formalin	7/8¢ per lb.
	Hexamethylenetetramine	5-1/2¢ per lb.
	Solid formaldehyde or paraformaldehyde .	4¢ per lb.

Figure 2: Example of an item in Torquay_consolidated schedule

[19]https://catalog.hathitrust.org/Record/100721221?type%5B%5D=all&lookfor%5B%5D=united%20states%20import%20duties%20june&ft=

[20]https://catalog.hathitrust.org/Record/102256592

[21]https://babel.hathitrust.org/cgi/pt?id=uiug.30112105143967&view=1up&seq=3



Item	Articles	Rates of Duty	
		1	2
425.18	Nitrogenous compounds (con.): Hexamethylenetetramine.....	4.5¢ per lb.	11¢ per lb.

Figure 3: Example of an item in 1962 Tariff Act

10.3 Smoot-Hawley Industrial Classification System: Schedule

Schedule	Category	Tariff Act of 1930 Paragraph Number
1	Chemicals, Oils, and Paints	1 to 97
2	Earths, Earthenware, and Glassware	201 to 236
3	Metals and Manufactures of	301 to 398
4	Wood and Manufactures of	401 to 412
5	Sugar, Molasses, and Manufactures of	501 to 506
6	Tobacco and Manufactures of	601 to 605
7	Agricultural Products and Provisions	701 to 783
8	Spirits, Wines, and Other Beverages	801 to 815
9	Cotton Manufactures	901 to 924
10	Flax, Hemp, Jute, and Manufactures of	1001 to 1022
11	Wool and Manufactures of	1101 to 1122
12	Silk Manufactures	1201 to 1211
13	Manufactures of Rayon or Other Synthetic Textile	1301 to 1313
14	Papers and Books	1401 to 1413
15	Sundries	1501 to 1559
16	Title II - Free List	1601 to 1814

10.4 TSUSA Industrial Classification System: Section

Section	Category	TSUSA Code Number
1	Animal and Vegetable Products	100.01 to 193.25
2	Wood and Paper; Printed Matter	200.03 to 274.90
3	Textile Fibers and Textile Products	300.10 to 390.60
4	Chemicals and Related Products	401.02 to 495.20
5	Nonmetallic Minerals and Products	511.11 to 548.05
6	Metals and Metal Products	601.03 to 696.60
7	Specified Products: Miscellaneous and Nonemunerated Products	700.05 to 799.00
8	Special Classification Provisions	800 to 870.25

10.5 Free lists

Under the Smoot Hawley classification system, items that were free of duty were gathered together into Schedule 16 instead of being integrated into a schedule with like products. That is, the products in Schedule 16 all are free of duty, and unlike the products in Schedules 1-15, the free list products come from many industries. For now, we have not included Schedule 16 in the main data.

Products free-of-duty were organized differently under the TSUSA system. Using both keyword searches and the cross-reference table in Volume 9 of the 1962 Tariff Classification Study, it appears that almost all of the free-of-duty item from Smoot-Hawley are included in the section of TSUSA that corresponds to the industrial characteristics of the product. We will thus integrate the free-of-duty products once we have finished the concordances to the TSUSA Harmonized System classification systems.

Interestingly, the products in the free-of-duty Schedule 16 under the Smoot Hawley classification system entered the tariff schedule gradually. To be more specific, in each round only some of the free-of-duty products from the Tariff Act of 1930 (Smoot Hawley) are included in the tariff schedule.

Between 1930 and when a product enters one of the GATT schedules, the status is not entirely clear. We have not found conclusive evidence to resolve this issue. Given that the Smoot Hawley Act unilaterally set tariff policy free of international commitments, our educated guess is that the U.S. authorities could increase the duty on these products unilaterally. What is clear is that once these products enter a GATT schedule, the U.S. was committed to not subsequently charge a duty on these products. We thus infer that if a product was free of duty in the Tariff Act of 1930 but not included in the free list in the GATT negotiated schedules, the US government either wanted to have more flexibility on this product or had not yet found a negotiating partner who was willing to exchange commitments involving the product.

10.6 Special lines

Here we discuss several issues we encountered while coding the data.

Tariff intervals: When, in addition to the usual ad valorem or specific tariff, a line also has a minimum or maximum tariff, we classify the line as being of the"tariff interval" type. For example Paragraph 210 *Rockingham earthenware* in the Geneva 1947 schedule has its rate description as *"20 cents per doz. articles, but not less 7.5% nor more than 25%."*

To incorporate this type of tariff formula, we followed the approach used in the consolidated Torquay schedule and the TSUSA system, that is to divide the single line for that product into multiple lines according to the values of the minimums and maximums. In the consolidated Torquay schedule, *Rockingham earthenware* is listed as three separate lines: *"Rockingham earthenware, valued per dozen articles: under 80 cents - 25% ad valorem"*, *"Rockingham earthenware, valued per dozen articles: over 80 cents and under 266.67 cents - 20 cents per doz, articles"* and *"Rockingham earthenware, valued per dozen articles: over 266.67 cents - 7.5% ad valorem"*. Notice that the threshold value for each line is calculated based on the minimum and maximum of tariff rate. With this method, we manually transformed all the tariff interval type lines into separate lines based on their values.

One thing to note is that, as the tariff rates were reduced across rounds, some of the threshold values may also change. Usually these changes are trivial and adding more lines for each newly-calculated threshold would induce more distortion to the data than using the original thresholds. Therefore we use the original threshold value unless the tariff interval formula itself changed over time. We created an "Intervals" dummy variable to keep track of lines that are affected by the tariff interval issue.

Line splitting: Another frequent issue in aligning the tariff schedules through time is what we call line splitting. The original product descriptions in the Tariff Act of 1930 paragraphs are often quite general and sometimes ambiguous and we find that the descriptions are often split in later schedules to create product lines whose descriptions are narrower. This seems to happen when the negotiators wanted to apply two different tariffs to what was formerly a single line.

An example of this is Paragraph 24, which is described in the Tariff Act of 1930 as *"Flavoring extracts, and natural or synthetic fruit flavors, fruit esters, oils, and essences, all the foregoing and their combinations."* In the Dillon round tariff schedule, the paragraph is divided into *"Flavoring extracts, and natural or synthetic fruit flavors, fruit esters, oils, and essences, all the foregoing and their combinations: unfit for beverage purposes, containing of alcohol . . . "* and *"Flavoring extracts, and natural or synthetic fruit flavors, fruit esters, oils, and essences, all the foregoing and their combinations: fit for beverage purposes, containing of alcohol . . . "*.

More restrictions on the descriptions or new types of delineation were introduced as the tariff system evolved. To deal with these splitting lines, we create new lines for each split and enter a uniform tariff rate in earlier schedules for any line that was previously included in the more general (un-split) line. In this way we keep the completeness of the schedule and avoid losing information on differentiated products.

Staging: Beginning in the Geneva 1956 round, the tariff reductions were made in multiple stages. In the source documents for Geneva 1956 and Dillon, there is a column for each stage.[22] Typically there is one year between implementation of each stage. Although most products that are negotiated in each round have different tariffs in each stage, some products do have the tariff rate for more than one stage. To deal with staging, we created separate columns for these stages and track the tariff reduction across stages. However, when comparing the tariff reduction across rounds, we focus on the tariff rate in the final stage.

10.7 GATT contracting parties

TO BE ADDED WHEN READY

[22] Geneva 1956 has three stages while Dillon has two stages.