

GATT Analysis

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Importing and cleaning the data

Importing and cleaning the data is currently done with program “Cleaning the data in R .rmd” . It need to be reprogrammed before being added here because it is nearly 1000 lines long. The chunk below calls that program to make the processed data available to the rest of the commands in this document.

```
source("C:/Users/krist/Github/Gradualism/data_cleaning.rmd", local = knitr::knit_global())
```

Basic summary statistics

Specific tariffs

We see below that the specific tariffs come down by roughly half from Smoot Hawley.

- About half came in Geneva, the rest through Dillon. That is, Geneva did half the work and the following four rounds did the other half

But this could be deceptive since different lines use different units

- Victor has standardized everything to be in cents (per U.S. dollar) – add UnitsKey.rmd code here so that it is accessible when needed within the knitr session

Summary Statistics of Specific Tariffs by Round							
	Min	1st Quartile	Mean	Median	3rd Quartile	Max	N
Smoot Hawley	0	2.00	47.68	6.00	25.0	3000	1497
Geneva	0	1.25	32.87	4.50	22.5	2000	1503
Annecy	0	1.00	31.83	4.00	20.0	2000	1502
Torquay	0	1.00	27.59	3.00	20.0	2000	1499
GenevaA	0	1.00	27.24	3.25	19.0	2000	1501
GenevaB	0	1.00	26.83	3.00	18.5	2000	1501
GenevaC	0	1.00	26.48	3.00	18.5	2000	1498
DillonA	0	1.00	25.05	3.00	17.5	2000	1504
DillonB	0	1.00	24.40	3.00	16.0	2000	1501

Ad valorem tariffs

Strikingly, the reductions look to be of the same magnitude for Ad valorem, again with Geneva doing about half the work.

Summary Statistics of Ad Valorem Tariffs by Round							
	Min	1st Quartile	Mean	Median	3rd Quartile	Max	N
Smoot Hawley	5	25.00	38.56	35.0	50.0	90	1932
Geneva	0	15.00	27.50	25.0	35.0	90	1918
Annecy	0	12.50	26.36	22.5	35.0	90	1921
Torquay	0	12.50	22.42	20.0	30.0	90	1920
GenevaA	0	11.50	21.88	17.5	28.5	90	1919
GenevaB	0	11.00	21.65	17.5	27.5	118	1919
GenevaC	0	10.50	21.37	17.5	27.5	90	1920
DillonA	0	10.12	19.49	15.5	25.0	90	1918
DillonB	0	10.00	18.96	15.0	25.0	90	1921

- Roughly 2/3 of the lines have an ad valorem tariff. In Dillon, NA rows out of 2972 are missing, so 2972 ad valorem tariffs. NA/0 (NA%) test2

How did liberalization vary across Schedules?

Summary stats for specific tariffs

Sched	SH_mean	DB_mean	SH_med	DB_med	SH_max	DB_max	SH_obs	DB_obs	n
1	24.52	13.51	5.00	2.50	750	720.0	256	264	397
2	44.82	28.21	10.00	5.55	840	840.0	113	106	242
3	55.44	25.68	3.25	2.00	1000	500.0	312	297	657
4	53.55	27.00	60.00	25.00	100	50.0	6	5	52
5	24.42	23.28	0.38	0.15	250	250.0	11	11	17
6	147.50	62.19	52.50	23.50	450	191.0	12	12	12
7	28.53	15.74	3.00	1.50	3000	2000.0	349	348	461
8	277.42	79.23	125.00	41.00	600	250.0	31	32	34
9	8.60	21.60	6.50	15.00	30	150.0	8	15	116
10	12.63	5.04	2.00	1.50	300	75.0	37	37	84
11	38.60	30.29	40.00	30.00	50	113.5	111	113	132
12	NaN	NaN	NA	NA	-Inf	-Inf	0	0	36
13	41.03	25.58	45.00	25.00	45	55.0	34	40	53
14	11.31	12.93	5.00	2.00	125	500.0	85	85	146
15	110.98	53.20	10.00	8.00	1600	680.0	132	136	533

Schedule 12 must be all ad valorem

Summary stats for ad valorem tariffs

Sched	SH_mean	DB_mean	SH_med	DB_med	SH_max	DB_max	SH_obs	DB_obs	n
1	29.71	14.21	25.00	12.50	80	40.0	206	205	397
2	44.94	24.06	45.00	21.00	85	70.0	154	157	242
3	37.46	17.17	35.00	12.50	85	72.0	462	474	657
4	34.21	15.79	33.33	15.00	60	42.5	46	47	52
5	50.83	31.92	50.00	22.50	75	75.0	6	6	17
6	25.00	7.75	25.00	7.75	25	10.5	2	2	12
7	31.40	14.01	35.00	12.50	50	44.0	116	117	461
8	60.00	30.00	60.00	30.00	60	30.0	1	1	34
9	36.12	22.35	40.00	20.00	75	60.0	110	103	116
10	37.58	15.10	40.00	12.50	55	40.0	55	55	84
11	48.51	25.41	50.00	22.50	75	60.0	85	85	132
12	57.36	23.38	60.00	21.00	70	55.0	36	36	36
13	51.94	26.81	50.00	25.00	70	70.0	49	39	53
14	21.70	8.65	20.00	8.00	50	28.0	125	125	146
15	43.92	22.83	40.00	17.00	90	90.0	479	469	533

What was the total reduction in negotiated tariffs under the GATT in each round?

Mean and median of specific tariffs in each round

	Decrease in specific tariffs by round			
	Mean	% decrease	Median	% decrease
Smoot Hawley	47.68	0.00	6.00	0.00
Geneva	32.87	31.06	4.50	25.00
Annecy	31.83	3.17	4.00	11.11
Torquay	27.59	13.31	3.00	25.00
GenevaA	27.24	1.29	3.25	-8.33
GenevaB	26.83	1.48	3.00	7.69
GenevaC	26.48	1.30	3.00	0.00
DillonA	25.05	5.40	3.00	0.00
DillonB	24.40	2.61	3.00	0.00

	Decrease in ad valorem tariffs by round			
	Mean	% decrease	Median	% decrease
Smoot Hawley	38.56	0.00	35.0	0.00
Geneva	27.50	28.70	25.0	28.57
Annecy	26.36	4.13	22.5	10.00
Torquay	22.42	14.94	20.0	11.11
GenevaA	21.88	2.44	17.5	12.50
GenevaB	21.65	1.02	17.5	0.00
GenevaC	21.37	1.32	17.5	0.00
DillonA	19.49	8.80	15.5	11.43
DillonB	18.96	2.72	15.0	3.23

Which lines were only ad valorem, only specific, or both?

Mixed

Next need to know about the lines that have both ad valorem and specific (or take them out from above); at least quantify them to start

```
## [1] 470
## [1] 458
## [1] 460
## [1] 454
## [1] 455
## [1] 455
## [1] 453
## [1] 457
## [1] 457
```

Victor's intuition on mixed lines

I believe many of the changes from specific tax to ad valorem or otherwise is because of the tax intervals. You could search the keywords “tax boundaries” and “tax interval(s)” in Extra column of every round to locate them.

Proportions of specific, ad valorem, mixed

Smoot Hawley 2956 total lines minus 451 lines with both specific and ad valorem leaves 2505 that have at most one or the other. 1417 ad valorem only; 1013 specific only. This leave 75 with neither. Why?

```
## Sched Product Paragraph
##      2      1      222.d
##      3      1  368.c_15
##      3      1  368.c_18
##      8      2      805
##      8      1      810
##     11      1    1117.c
##     11      1    1119
##     11      2    1119
##     11      3    1119
##     14      1    1408
##     15      2    1532.a
##     15     17    1532.a
##     15     11    1558
```

```
##
##      Crown, cylinder, rolled, and sheet glass, not plate glass, if ground wholly or in part (whether or not
ished) otherwise than for the purpose of ornamentation, or if 1/4 inch or more thick and obscured by color.
##                                     A plate suitable for use as a mirror.
```

```
##      Provided; That whenever the foregoing products are not subject to a Federal tax measured in whole or in part
##                                     When any such product is imported in bulk or in large quantities.
##
##                                     Tapestries and upholstery.
##
##
##
##
##
```

```
## Sched Product Paragraph
##      2      1      222.d
##      3      1  368.c_15
##      3      1  368.c_18
##      8      1      810
##     14      1    1408
##     15     17    1532.a
##     15     11    1558
```

```
##
##      Crown, cylinder, rolled, and sheet glass, not plate glass, if ground wholly or in part (whether or not
ished) otherwise than for the purpose of ornamentation, or if 1/4 inch or more thick and obscured by color.
##                                     A plate suitable for use as a mirror.
##
##                                     When any such product is imported in bulk or in large quantities.
##
##
##
```

Implementation dates

Geneva 1: January 1, 1948 (Irwin 2017, p. 486)