

New Estimates of the Average Tariff of the United States, 1790–1820

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The first order of business for the new Congress under the Constitution of 1787 was raising revenue to fund the government's operation and to service the public debt. On 8 April 1789, two days after the first Congress achieved a quorum, James Madison introduced a proposal to levy duties on imported goods. This tariff proposal became one of the first pieces of legislation passed by Congress and was signed by President George Washington on 4 July 1789.

Import duties played a critical role in the fiscal, trade, and foreign policies of the new United States, yet there are significant gaps in our understanding of tariff policy during this period. One basic question that remains unanswered is the average height of the tariffs that Congress enacted in the three decades after 1789. To shed some light on U.S. trade policy during the first three decades of the republic, this note constructs new estimates of the average tariff on total and dutiable U.S. imports from 1790 to 1820. These previously unavailable series are comparable to the tariff figures available from 1821 in the Historical Statistics of the United States. This note also stresses the importance of deducting drawbacks (tariff rebates on imported goods that are subsequently re-exported) from total customs revenue in calculating the average tariff and briefly examines the structure of tariffs across goods.

EARLY U.S. TARIFF STATISTICS

The U.S. government began the systematic collection of statistics on international trade in 1821. From these statistics, the "average tariff" on imports has been calculated as the ratio of revenue from import duties to the value of imports for domestic consumption.¹ Such figures, presented in the Historical Statistics of the United States (HSUS) as series U 211-212, are commonly used as an indicator of U.S. trade policy because tariffs usually have been the government's most important type of trade intervention.

Sufficient data exist to construct a comparable tariff series for years prior to 1821. Before that year, the federal government published data on the value of exports and the value of imports paying ad valorem duties, but not the total value of imports. In 1835, drawing on unpublished records and other sources, the Treasury Department compiled estimates of the total value of imports from 1790 to 1820. Using these data in conjunction with government reports on customs receipts permits the construction of an average tariff series from 1790 to 1820.²

Table 1 presents the underlying data for the new tariff estimates. The values of imports, re-exports, imports for consumption, and duty free imports prior to 1821 are derived from Douglass North's improvements to the original estimates presented in the 1835 Treasury

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¹ Imports for domestic consumption are those retained by the United States and is calculated by deducting re-exports (i.e., imports subsequently shipped to other countries) from total imports.

² I have been able to find only two other tariff series for the pre-1821 period, one starting in 1791 in Young, *Special Report*, p. 113 and another starting in 1802 in U.S. Senate, "Rates of Duty," p. 305. Young understates the tariff by using the net amount of customs revenue raised after deducting the cost of collection. (Many government documents of this period report net revenue; the cost of collecting the tariff was roughly 4 percent of the gross revenue raised by import duties.) The Senate series is more consistent with the series developed here, although it omits the years prior to 1802 and differs in the reported value of imports.

report.³ Following the convention in the HSUS and elsewhere, exports of foreign products (re-exports, column 2) are deducted from total imports (column 1) to arrive at imports for domestic consumption (column 3). The 1835 Treasury report and North also provide separate figures for the value of duty-free imports for consumption (column 4).

The figures for the gross revenue raised by customs duties on imported merchandise (column 5) are drawn from a Treasury Department compilation in 1838. These data allow the calculation of the average tariff on total imports for consumption (column 6) and on dutiable imports (column 7) starting in 1790.⁴ Unlike later periods in U.S. history, the gap between the average tariff on total imports and the average tariff on dutiable imports is very small before 1821. This is because few commodities received duty-free treatment in early tariff legislation.

These measures of the average tariff are directly comparable with those in the HSUS that begin in 1821. Yet the average tariff jumps sharply from 1820 to 1821; according to the government's statistics, the value of imports fell sharply in 1821 from the previous year, but customs revenue was actually higher. The consistency of the 1838 Treasury revenue series and the HSUS revenue series (U 210) from 1821 is assured by the nearly identical figures in overlapping years. Although there were no legislative changes in import duties during these years, import prices fell 11 percent in 1821, which may have contributed to the rise in the tariff by increasing the ad valorem equivalent of the specific duties.⁵

Although consistent with the HSUS series, this average tariff calculation gives a misleading view of the height of import duties during this period in American history. The reason is that the revenue figures are derived from tariffs imposed on all imports, not just imports for consumption. This distinction is critical when re-exports are an important part of trade, as they were for the United States during this period. The tariff revenue collected on imports that were later re-exported was returned to merchants in the form of a drawback.⁶ Thus, using revenue from total imports *overstates* the average tariff since some of the revenue was rebated back to merchants and therefore was not collected on goods sold to domestic consumers; i.e., the numerator is revenue from duties on total imports while the denominator is imports for domestic consumption (total imports minus re-exports).

The appropriate measure of the tariff would use customs revenue *net* of drawbacks as the numerator. The 1838 Treasury compilation distinguishes the gross amount of revenue raised by tariffs on merchandise and the amount rebated on re-exported goods (drawbacks) starting in 1790. Column 8 of Table 1 presents government figures on the value of drawbacks. Columns 9 and 10 calculate the average tariff using the net proceeds from customs receipts, i.e., gross tariff revenue minus drawbacks (column 5–column 8) through the year 1836.

A comparison of columns 6 and 9 demonstrates that, when re-exports are large, the tariff calculated with gross customs revenue can significantly overstate the actual tariff (adjusted for drawbacks). This overstatement was as large as 14 percentage points; in 1801, for example, the average tariff using gross revenue was 35 percent, whereas the average tariff using net revenue was 21 percent. The discrepancy is substantial even in the 1820s. According to the standard calculation using gross revenue, the so-called Tariff of Abomina-

³ North, "Balance of Payments."

⁴ One source of error, however, relates to the time period of the data: trade statistics were collected for fiscal years ending September 30 of each year, whereas the revenue collected from duties were reported on a calendar year basis. This mismatch also appears to affect the HSUS series.

⁵ Import prices are from North, *Economic Growth*, p. 243. Better enforcement of customs collections and shifts in the composition of imports across the schedule of duties might also have contributed to the tariff increase.

⁶ A provision for drawbacks was included in the first tariff act. The provision permitted the rebate of all import duties paid (except 1 percent, which was charged for customs expenses) of goods sent to any other country within 12 months of having been imported.

TABLE I
NEW ESTIMATES OF U.S. TARIFFS, 1790–1836
(figures in millions of dollars)

Year	Value of Imports (1)	Value of Re-exports (2)	Value of Imports for Consumption		Revenue from Import Duties (5)	Average Tariff (percentage)			Average Tariff – Net Revenue (percentage)	
			Total (3)	Duty Free (4)		Total Imports (6)	Dutiable Imports (7)	Drawbacks (8)	Total Imports (9)	Dutiable Imports (10)
1790	23.8	0.3	23.5	1.0	3.0	12.8	13.3	0.0	12.8	13.3
1791	30.5	0.5	30.0	1.0	3.4	11.7	12.1	0.1	11.3	11.7
1792	32.5	1.0	31.5	1.5	4.9	15.6	16.3	0.1	15.2	16.0
1793	32.6	1.8	30.8	1.5	6.6	21.4	22.5	0.3	20.5	21.6
1794	36.0	6.5	29.5	1.5	8.6	29.2	30.7	1.6	23.6	24.9
1795	71.3	8.3	63.0	1.5	11.2	17.8	18.2	2.9	13.1	13.4
1796	82.9	26.3	56.6	1.5	12.6	22.3	22.9	4.8	13.8	14.2
1797	77.4	27.0	50.4	2.0	12.9	24.2	25.2	4.2	17.2	17.9
1798	70.6	33.0	37.6	2.0	11.5	30.3	32.0	4.8	17.8	18.9
1799	81.1	45.5	35.6	2.0	15.5	38.2	40.5	5.8	27.2	28.8
1800	93.3	39.1	54.2	2.0	16.2	28.2	29.3	6.2	18.4	19.1
1801	113.4	46.6	66.8	2.0	20.1	30.1	31.0	6.8	19.9	20.5
1802	78.3	35.8	42.5	2.0	14.8	34.8	36.5	6.1	20.6	21.6
1803	65.7	13.6	52.1	2.0	14.3	27.3	28.3	2.6	22.4	23.3
1804	87.0	36.2	50.8	2.0	20.5	39.4	41.4	5.1	30.3	31.5
1805	125.5	53.2	72.3	4.9	23.5	32.5	34.9	8.2	21.3	22.8
1806	136.6	60.3	76.3	7.2	26.2	34.3	37.9	9.7	21.6	23.9
1807	144.7	59.6	85.1	6.2	27.0	31.4	33.8	10.0	20.0	21.5
1808	58.1	13.0	45.1	1.1	11.2	24.6	25.2	3.4	17.1	17.6
1809	61.0	20.8	40.2	1.6	11.6	28.9	30.1	4.1	18.5	19.2
1810	89.4	24.4	65.0	4.0	16.6	25.5	27.2	3.7	19.8	21.1
1811	57.9	16.0	41.9	4.5	10.4	25.1	28.1	2.4	19.3	21.6
1812	78.8	8.5	70.3	1.8	15.0	21.2	21.8	1.8	18.8	19.3

TABLE 1 — continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1813	22.2	2.8	19.4	0.2	7.4	38.7	39.1	1.0	32.9	33.3
1814	13.0	0.1	12.9	0.0	4.4	36.4	36.4	0.1	33.1	33.1
1815	85.4	6.6	78.8	2.3	38.1	48.2	49.7	0.8	47.3	48.7
1816	151.5	17.1	134.4	4.3	32.8	24.4	25.2	4.0	21.5	22.2
1817	101.7	19.4	82.3	2.4	22.1	26.9	27.7	3.8	22.3	23.0
1818	127.1	19.4	107.7	5.4	25.9	24.0	25.2	3.3	20.9	22.0
1819	93.5	19.2	74.3	6.4	21.3	28.7	31.4	3.0	24.7	27.0
1820	74.5	18.0	56.5	n.a.	16.6	29.4	n.a.	3.5	23.2	n.a.
1821	54.5	10.8	43.7	1.7	18.9	43.2	45.0	2.9	36.2	37.7
1822	79.8	11.5	68.3	3.6	24.1	35.3	37.2	2.1	32.2	34.0
1823	72.5	21.2	51.3	2.6	22.4	43.7	46.0	3.8	36.6	38.2
1824	72.2	18.3	53.9	3.1	25.5	47.3	50.2	4.4	39.1	41.5
1825	90.2	23.8	66.4	3.7	31.7	47.7	50.6	5.4	39.6	41.9
1826	78.1	20.4	57.7	4.7	26.1	45.2	49.2	6.2	34.5	37.5
1827	71.3	16.4	54.9	2.9	28.1	51.2	54.0	4.6	42.8	45.2
1828	81.0	14.0	67.0	4.0	30.0	44.8	47.6	4.1	38.7	41.1
1829	67.1	12.3	54.8	3.5	27.7	50.5	54.0	4.2	42.9	45.8
1830	62.7	13.1	49.6	3.5	28.3	57.1	61.4	4.3	48.4	52.1
1831	95.9	13.1	82.8	5.5	36.6	44.2	47.3	4.6	38.6	41.4
1832	95.1	19.8	75.3	7.0	29.4	39.0	43.0	5.3	32.0	35.3
1833	101.0	17.6	83.4	20.2	24.2	29.0	38.3	5.2	22.8	30.1
1834	108.6	21.6	87.0	39.7	19.0	21.8	40.2	3.1	18.3	33.6
1835	136.7	14.8	121.9	57.8	25.9	21.2	40.4	2.4	19.3	36.7
1836	176.6	17.8	158.8	70.1	31.0	19.5	34.9	2.7	17.8	31.9

Sources: (1) and (2) North, "Balance of Payments," table A-2, pp. 591–92 for 1790–1820; U.S. Senate, "Rates," pp. 305–06 for 1821–1836. (3) is column (2) – column (1). North reports a figure of \$49.1 million for re-exports in 1800 based on the 1835 Treasury report, whereas several later sources (such as the Treasury Report of 1837) indicate the figure is \$39.1 million. (4) For 1790–1819, North, "Balance of Payments," pp. 591–92; for 1821–1836, U.S. Senate, "Rates," pp. 305–306; (5) For 1790–1791, U.S. House of Representatives, "Duties Received," p. 2; for 1792–1836, U.S. House of Representatives, "Exports," pp. 22–35. Column (6) is column (5) divided by column (3) X 100. Column (7) is column (5) divided by column (3) deducting column (4) X 100. Column (8) is from U.S. House of Representatives, "Exports," pp. 22–35. Column (9) is column (5) – column (8) divided by column (3) X 100. Column (7) is column (5) – column (8) divided by column (3) – column (4) X 100. All trade data (columns 1–4) are based on year ending 30 September; revenue data (columns 5 and 8) are based on calendar year.

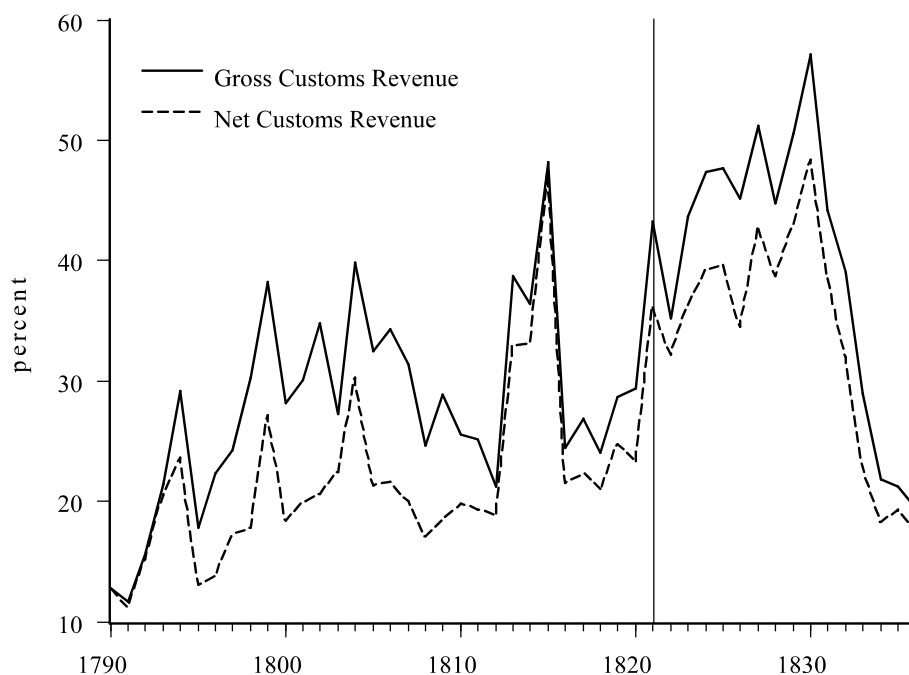


FIGURE 1
AVERAGE U.S. IMPORT TARIFFS, 1790-1836

Note: Customs revenue divided by total imports for consumption.

Source: Table 1.

tions in 1828 helped push the average tariff up to 57 percent by 1830, but adjusting for tariff rebates indicates that the actual tariff was nearly 10 percentage points lower at 48 percent in that year.

Figure 1 depicts the course of the average tariff calculated using gross and net revenue (i.e., using data from columns 6 and 9) relative to total imports for consumption during this period. The gap between the two tariff series is particularly large during the period from 1795 to 1810 when re-exports were a significant feature of U.S. trade. Re-exports surged after war broke out between Britain and France in 1793 as U.S. merchants filled the void left by the warring parties by carrying merchandise to and from Europe. For example, U.S. re-exports jumped from \$8 million in 1795 to \$26 million in 1796 partly for this reason, as well as the greater access given to U.S. shippers to the West Indies as a result of the Jay treaty of 1795.⁷ By 1800, over 40 percent of total U.S. imports were re-exported to other destinations.

This re-export trade essentially vanished when the United States was at war with Britain between 1812 and 1814. With almost no drawbacks to be paid, the gap between the two tariff measures disappears during this period. The re-export trade was renewed after the conclusion of the War of 1812, but never again played as large a role in U.S. trade as it had during the special circumstances of the Napoleonic wars. Still, re-exports were not inconsiderable even as late as the 1820s. The share of total U.S. imports re-exported was 22 percent, on average, during the 1820s, but by 1850 had dropped to 5 percent. Thus, as

⁷ Adams, "American Neutrality"; and Goldin and Lewis, "Role of Exports," examine the contribution of re-exports and shipping services to U.S. economic growth during this period.

Figure 1 illustrates, the discrepancy between the two tariff calculations diminished rapidly in the early 1830s as re-exports became a smaller component of U.S. foreign trade.

What does the new tariff series in column 9 imply about the height of U.S. tariffs in the pre-1821 period? Although import tariffs were relatively low in 1790 and 1791, at around 12 percent, legislative revisions to the initial duties quickly brought the tariff up to about 20 percent. Over the thirty-one year period from 1790 to 1820, the mean of the average tariff was 21.5 percent with a standard deviation of 7.1 percentage points. The tariff appear to be quite volatile, due to legislative changes in the rates of duty, the influence of import price movements on the ad valorem equivalent of the specific duties, and the shifting composition of imports across different rates of duty. Each of the early tariff spikes—in 1794, 1799, and 1804—are proximately related to legislation that raised duties. The period from 1812 to 1815 stands out as a period of particularly high tariffs because Congress doubled tariff rates in 1812 to help finance the war against Britain.

THE STRUCTURE OF EARLY U.S. TARIFFS

These tariff estimates indicate the relative height of import duties over time, but reveal nothing about the structure of those duties. This section briefly considers the structure of import duties during the 1790s and early 1800s.

The first tariff act of the United States consisted of three parts: specific duties on a select number of commodities, ad valorem duties on most other goods, and duty-free treatment for a small number of items. Specific duties were initially imposed on 36 goods, including beer, wine, and spirits, molasses, salt, and sugar, tobacco, tea, and coffee. The specific duties were viewed as a tax on luxuries consumed mainly by the wealthy and their main purpose was revenue.⁸ Many of the commodities subject to specific duties (such as wine, sugar, tea, and coffee) were not generally produced in the United States during this time. Some of the duties provided incidental protection to some producers; although domestic spirits were subject to an excise tax, for example, it was much less than the import tariff. And a small number of specific duties were explicitly imposed for the benefit of domestic producers, such as those on boots and shoes, nails and spikes, fish and hemp.

Ad valorem duties were imposed on almost all other imports, including manufactures of wool, cotton, silk, hemp, and flax, manufactures of metals (except nails and spikes), and manufactures of earth, stone and leather (except boots and shoes). The ad valorem tariffs were initially set at four levels: 15 percent (on carriages and parts), 10 percent (on china, stone, and glassware, among a few others), 7.5 percent (on clothing, hats, hammered or rolled iron, tin manufactures, leather manufactures, among others), and 5 percent duties on all articles not enumerated. Finally, 17 goods were placed on the duty-free list, including saltpeter, brass, tinplates, iron and brass wire, cotton and wool, hides, furs, and skins.

⁸ As Secretary of the Treasury Alexander Hamilton wrote in 1790 his report on public credit, “The Secretary conceives that it will be sound policy to carry the duties [on wine, spirits (including those manufactured within the United States), teas, and coffee] as high as will be consistent with the practicability of a safe collection [of revenue]. . . . That the articles which have been enumerated will, better than most others, bear high duties, can hardly be questioned. They are all of them in reality luxuries; the greatest part of them foreign luxuries; some of them, in the excess in which they are used, pernicious luxuries. . . . Should the increase of duties tend to a decrease of the consumption of those articles, the effect would be, in every respect, desirable. It is not, however probable that this decrease would be in a degree which would frustrate the expected benefit of the revenue from raising the duties. Experience has shown that luxuries of every kind lay the strongest hold on the attachment of mankind, which, especially when confirmed by habit, are not easily alienated from them.” *American State Papers, Finance*, Vol. 1, pp. 22–23.

TABLE 2
AVERAGE AD VALOREM AND SPECIFIC DUTIES FOR SELECTED YEARS
(percentage)

	1790	1794	1798	1802	1806	1810
Ad valorem duties	5.4	9.7	9.4	13.1	15.6	15.5
Specific duties	29.2	65.8	41.9	57.1	46.7	35.0
Average tariff	12.8	29.2	30.3	34.8	34.3	25.5

Source: Calculated from disaggregated statistics on imports in various documents in *American State Papers, Commerce and Navigation*, Vol. 1.

This basic tripartite structure remained a consistent feature of the tariff code throughout this period, although the rates of duty were subject to frequent change. Indeed, given that virtually all government revenue was derived from customs receipts and that the revenue generated by the initial tariffs was uncertain, the specific duties were fine tuned almost immediately in order to provide additional revenue.⁹ In January 1790, in his first report to Congress as Treasury Secretary, Hamilton proposed increasing the duty on Madeira wine from 18 cents to 20 cents, on Hyson tea from 20 cents to 40 cents per pound, on coffee from 2.5 cents to 5 cents per pound, among other adjustments. Congress enacted most of Hamilton's recommendations in the tariff of August 1790. Also acting on Hamilton's advice, Congress increased the duties on spirits in March 1791.

In 1792 import duties were increased to finance expenditures related to the protection of the western frontier.¹⁰ As a "temporary" measure, the ad valorem schedule was advanced 2.5 percentage points, pushing the base ad valorem rate from 5 percent to 7.5 percent. In 1794 the schedule was hiked another 2.5 percentage points, bringing the base rate to 10 percent, in order to pay down the public debt at a faster pace. In 1797 higher specific duties on sugar, molasses, tea, cocoa, and other products were enacted, along with a higher base rate of 12.5 percent. The revenue was again devoted to debt reduction. In 1804 the ad valorem schedule was increased another 2.5 percentage points (bringing the base rate to 15 percent and the top rate to 22.5 percent) to establish a "Mediterranean fund" that would finance naval protection against the Barbary pirates. Finally, in July 1812, tariff rates were doubled with the outbreak of war with Britain. The Tariff of 1816 reduced these rates but kept them higher than they had been prior to the war.

As a general matter, specific duties were largely imposed on beverages (coffee, tea, and alcohol) and consumption items (sugar) whereas ad valorem duties were imposed on most other products. Although revenue was a motivation for both types of duties, ad valorem duties tended to cover imports of manufactured goods (cloth, iron, glass, etc.) for which protection of domestic producers was also an issue. Was the increase in the average tariff after 1790 due to a rise in the ad valorem duties or a rise in the specific duties? Table 2 lends some insight into this question by calculating the average tax on imports subject to ad valorem duties and the average tax on imports subject to specific duties. Although it is difficult without import price data to determine the implicit ad valorem rates of the specific duties, those rates can be backed out of the Treasury reports on the value of imports subject to various ad valorem rates and information on aggregate imports and the average overall tariff. This calculation is subject to the usual bias in that imports subject to high duties receive a lower weight in the index due to the reduced quantities.

⁹ In the first two years of the Washington administration, the federal government was almost completely dependent on import duties for revenue. By 1799, other forms of revenue had only reduced this dependence to 90 percent.

¹⁰ See Clarfield, "Protecting the Frontiers."

The table indicates that the combination of higher specific and ad valorem duties pushed up the average tariff after 1790. The specific duties tended to fall in the range of 30 percent to 60 percent. Ad valorem duties on manufactured and other goods remained relatively low through the 1790s, rising from 5 percent to just over 15 percent by 1810. Although these duties did not provide nominal protection to import-competing producers as high as tariffs later in the nineteenth century, the degree of insulation from world markets was more considerable when the transportation, insurance, and other costs of trade are taken into account.

CONCLUSION

This note provides estimates of the average tariff of the United States for the years 1790 to 1820 that are consistent with the series dating from 1821 in the Historical Statistics of the United States. These early tariffs were much lower, on average, than those imposed later in the nineteenth century. An important feature of the tariff calculation is the adjustment of gross customs revenue by the amount of tariff revenue rebated to merchants in the form of drawbacks. Re-exports were an important component of U.S. international trade during this period, and this adjustment reduces the standard estimates of the average tariff, even as late as the 1820s and early 1830s.

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