US Effective Tariff Rates 2024: Empirical Estimates

This document summarises the empirical estimation of US effective tariff rates at the product level using 2024 USITC trade data.[1] It provides alternative rate options for researchers calibrating applied tariff models.

1. Findings

1.1 Rate Estimation Options

Four empirical rate estimates were calculated for each HS 8-digit product. The table below shows aggregate results.

Rate Option	Total Duties ($bn)	Difference vs Observed	Correlation
Observed (2024)	76.16	—	1.000
Mode (rounded to 0.5%)	58.38	−$17.8 bn (−23%)	0.781
Median	65.04	−$11.1 bn (−15%)	0.493
MFN Schedule	67.86	−$8.3 bn (−11%)	0.477
Mixed (see §2.3)	67.13	−$9.0 bn (−12%)	0.481

Finding: All empirical estimates underestimate observed duties. The MFN Schedule produces the closest aggregate match. The Mode has the highest correlation with observed duties at the product level.

1.2 Gap Between Empirical and Scheduled Rates

The gap between the Mode (empirical) and MFN (scheduled) rate was calculated for each product.

Gap Classification	Criteria	Products	Trade Value ($bn)
Consistent	±1 percentage point	9,935	3,168.9
Below schedule	< −1 pp	548	72.0
Minor above	+1 to +5 pp	87	1.6
Moderate above	+5 to +15 pp	129	7.2
Major above	> +15 pp	174	1.4

Finding: 91% of products (by count) and 97% of trade (by value) show empirical rates within ±1 percentage point of the scheduled MFN rate.

[1] This version: 14 January 2026. Corresponding author is johannes.fritz@sgept.org .

2. Methodology

2.1 Data Source

Parameter	Value
Source	USITC DataWeb monthly imports
Period	January–December 2024
Observation unit	HS 8-digit × Country × Month × Programme
Total observations	1,533,107
After aggregation	1,378,438 (HS × Country × Month)
Minimum value filter	$1,000 customs value

2.2 Summary statistics

Output	Value
Trade-weighted average rate (observed)	2.34%
Products analysed	10,873 HS 8-digit codes
Trade coverage	$3,251.2 billion
Observed duties collected	$76.2 billion

2.2 Rate Calculation

For each observation, the effective rate was calculated as:
effective_rate = (calculated_duties / customs_value) × 100

2.3 Rate Selection Logic for “Mixed” rate

The “Mixed” rate was selected using the following logic:

1. Use Mode if |gap_mode| < 5 pp AND product is not in S232 scope
2. Use MFN Schedule if standard deviation > 5 pp AND product is not in S232 scope
3. Use Median otherwise

Selection Method	Products	Trade Value ($bn)
Mode	9,891	3,148.7
Median	648	61.4
MFN fallback	334	41.2

3. Rate Estimate Options

Four tariff rate estimates are available, each suited to different analytical requirements.

Estimate	Level	Methodology	Mean Rate	Trade-Weighted Rate
HTS Schedule	Product	Statutory HTS rate	3.9%	2.1%
Mixed Schedule	Product	Mode-based with fallbacks	3.9%	2.1%
Observed Bilateral	Product × Origin	Duties collected / customs value	4.0%	2.3%
Observed Product	Product	Trade-weighted average across origins	5.7%	2.3%

MFN Schedule applies the statutory Most Favoured Nation rate from the US Harmonized Tariff Schedule. This estimate reflects the legal rate applicable to WTO members without preferential arrangements. It does not account for preferential programmes, trade defence measures, or non-ad valorem rate conversions.

Mixed Schedule applies a selection algorithm: use the empirical mode (rounded to 0.5 pp) where it falls within 5 pp of the MFN schedule; fall back to the MFN rate for high-variance products; fall back to the median for S232 products. This estimate approximates the statutory rate schedule inclusive of non-ad valorem equivalents.

Observed Bilateral captures the full origin-specific variation in effective rates, including preferential programmes (USMCA, GSP, FTAs), trade defence measures (AD/CVD), and programme-specific tariffs (S301 China). Researchers requiring origin-differentiated rates should use this estimate. Coverage: 225,558 product × origin combinations across 232 trading partners.

Observed Product provides a single trade-weighted effective rate per product, reflecting actual 2024 collection patterns. This estimate is suitable for aggregate calibration but obscures origin-specific tariff heterogeneity. Coverage: 10,873 HS 8-digit products.

4. Limitations

1. Preferential programme aggregation: Observations are aggregated across all programmes (MFN, GSP, FTAs). The Mode captures the most common rate but may not reflect the MFN rate for products with high preferential usage.
2. Non-ad valorem duties: Products with specific rates (e.g., $0.50/kg) show varying ad valorem equivalents depending on unit value. The Mode should capture the typical conversion, but outliers may persist.
3. Trade defence measures: AD/CVD duties are country-specific. Products with high standard deviation (5,065 products) likely have mixed tariff treatment across origins.
4. S232 in 2024: Steel and aluminium faced 25% S232 tariffs throughout 2024. These are reflected in observed duties but not in MFN scheduled rates.