

Methodology Statement

This memorandum outlines the methodology used to estimate the effective change in the tariff burden on U.S. manufacturers resulting from changes in applied tariff rates. The analysis incorporates detailed import and tariff data, input-output tables, industrial capacity metrics and state-level manufacturing data to calculate both national and state-specific impacts.

Data Sources

- **U.S. Census Bureau and United States International Trade Commission DataWeb:**
HTS-10 import values and tariff schedules updated daily.
- **Harmonized Tariff Schedule:**
Tariff rates benchmarked to *Dec. 31, 2024*.
- **Bureau of Economic Analysis Make-Use Tables (2023):**
 - i. Use tables used to determine both national and state-level input needs across manufacturing sectors.
 - ii. Make tables used to determine national supply allocated proportionally to states according to calculated need
- **Federal Reserve Board (2023):**
Actual domestic production from BEA make tables and industrial capacity utilization used to estimate projected national supply of inputs at hypothetical full capacity utilization.
- **Bureau of Labor Statistics (March 2025):**
State manufacturing employment figures.
- **BEA State GDP Data (Q4 2024):**
Used to assess relative economic value add of state manufacturing sectors.

Analytical Framework

1. **Tariff Rate Change Calculation:**
Tariff changes are calculated for each HTS-10 input by comparing pre-policy rates with those in effect as of Dec. 31, 2024.
2. **Manufacturing Input Identification:**
Using NAICS classifications and BEA Make-Use Tables, only intermediate inputs relevant to manufacturing are retained for analysis. Intermediate inputs are defined as items with HTS codes which correspond with the industrial goods, capital goods, and automotive parts end use codes in the 2022 U.S. Census Bureau concordance tables.
3. **Weighting by Input Volume Imported:**
Tariff changes are weighted based on the volume of the inputs imported by manufacturers, using BEA Make-Use data. Manufacturing's share of imported inputs is assumed to mirror its share of domestic inputs.

4. Domestic Production Estimation:

National supply is adjusted using 2023 industrial capacity utilization data to estimate total domestic output of manufacturing inputs.

5. Frictionless Domestic Allocation:

Assumes a frictionless domestic market in which domestically produced inputs are proportionally distributed to states according to their share of national input need.

6. State-Level Input Demand:

State-specific manufacturing input needs are calculated using 2023 BEA State Make-Use Tables. These inform each state's exposure to both tariffed imports and domestic substitutes.

7. Treatment of United States–Mexico–Canada Agreement Tariffs:

For imports from Canada and Mexico, prior-year data was used to estimate the share of USMCA-qualifying vs. non-USMCA-qualifying imports:

- The effective tariff rate was applied only to the non-USMCA share of imports from each country.
- This adjustment ensures that duty-free provisions under the USMCA are excluded from burden calculations correctly.

Outputs

The final outputs at both the national and state levels include:

- Effective change in tariff rate on manufacturing inputs; and
- Manufacturing input import requirements assuming full industrial capacity utilization.

Assumptions

- Manufacturing's share of imported inputs is proportional to its share of domestic inputs.
- The domestic market operates without frictions or regional supply constraints.
- Domestic production is allocated proportionally to states based on demand.
- For USMCA partners, only non-USMCA import shares are subject to new tariff rates.
- 2023 industrial structure is held constant for modeling purposes.