

Policy Brief

Does Import Protection Save Jobs?

The Estimated Impacts of Proposed Tariffs on
Imports of U.S. Steel and Aluminum

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THE TRADE PARTNERSHIP

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This policy brief examines the potential *net* impacts on U.S. jobs across all industries of proposed steel and aluminum tariffs applied to targeted steel and aluminum imports from all countries.

Summary

President Donald Trump announced March 1 his intent to impose tariffs of 25 percent on U.S. imports of steel and 10 percent on U.S. imports of aluminum from all countries. His expressed intent is to boost U.S. production of steel and aluminum. Secretary of Commerce Wilbur Ross and advisor Peter Navarro have argued that the tariffs will have no significant negative impact on consumers who purchase U.S. or imported steel.

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This policy brief examines the potential *net* impacts on U.S. jobs across all industries of the proposed steel and aluminum tariffs applied to targeted steel and aluminum imports from all countries. It does not take into account any potential retaliation against U.S. exports; only of the tariffs themselves.

We find that the tariffs would indeed have positive impacts on U.S. steel and aluminum producers, but negative impacts on producers who use steel and aluminum, both imported and domestically-produced. Those impacts, both positive and negative, would ripple through the economy. We find:

- The tariffs would increase U.S. iron and steel employment and non-ferrous metals (primarily aluminum) employment by 33,464 jobs, but cost 179,334 jobs throughout the rest of the economy, for a net loss of nearly 146,000 jobs;
- More than five jobs would be lost for every one gained;
- Job losses in other manufacturing sectors (-36,076) would cancel out the job gains in the steel- and aluminum producing sectors, with particularly large “hits” to workers in the fabricated metals sector (-12,800), motor vehicles and parts (-5,052), and other transportation equipment (-2,180);
- Two thirds of the lost jobs affect workers in production and low-skill jobs.

Net Number of U.S. Jobs Impacted by Steel and Aluminum Tariffs (Number)

Primary agriculture*	-285
Primary energy	-669
Manufacturing	-2,612
Processed food	-1,173
Beverages and tobacco	-365
Petroleum and coal products	-5
Chemicals, rubber, plastics	-1,220
Iron and steel	29,998
Non-ferrous metals	3,466
Fabricated metals	-12,802
Motor vehicles and parts	-5,052
Other transportation	-2,180
Electronic equipment	-1,579
Other machinery	-5,247
Textiles	-195
Clothing	-37
Footwear, leather, footwear	-3
Wood, paper	-2,142
Other goods*	-4,075
Services	-142,305
Construction	-28,313
Air transport	-353
Water transport	-32
Other transport	1,484
Trade and distribution	-34,065
Communications	-3,675
Financial services	-5,105
Insurance	-1,934
Business and professional services	-22,375
Personal and recreational services	-10,312
Other services	-37,625
TOTAL	-145,870

* Includes forestry products, minerals, and other manufactures.

Source: Authors' estimates.

Results

As shown in the Table, imposing tariffs on steel and aluminum imports would cause a net loss in U.S. employment. While employment increases in sectors making steel and aluminum, it declines in every other sector of the U.S. economy. Employment effects do not take into account any potential retaliation against U.S. exports; only of the tariffs themselves.

Services sectors are hit the hardest for several reasons. First, as the largest component of the U.S. economy, services are key inputs into the output of every U.S. sector, so as manufacturing, agriculture and energy output decline, so too do services output and related jobs. Second, consumers have reduced spending power when they are hit by higher costs (of a new car, a new washing machine, etc.) and, for many, lost wages from unemployment. As a result, households pull back on spending; services like education, entertainment and even healthcare are on the front lines of the spending reduction impacts, with additional attendant job losses.

We are also able to disaggregate the employment effects by skill level. High-skilled jobs (managers, professionals, technicians and related workers) account for one-third of the net job losses. Low-skilled workers (production workers, machine operators, office workers, administrative workers, sales/shops staff, and farm workers) bear the brunt of the tariffs, accounting for two-thirds of the total job losses.

Conclusion

Steel and aluminum tariffs would reverberate throughout the U.S. economy in ways that will, on balance, reduce U.S. employment. While U.S. steel and aluminum jobs would increase, those gains would come at a high cost: over 179,300 job losses across the rest of the economy.

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Methodology

We base our analysis on the Global Trade Analysis Project (GTAP) database. The GTAP database covers international trade and economy-wide inter-industry relationships and national income accounts, as well as tariffs, some nontariff barriers and other taxes. This includes value-chain related linkages across industries and borders. These data are included in a computer-based model of production and trade known as a “computable general equilibrium” (CGE) model. **This is the same model used by the Commerce Department to arrive at the tariff rates it argues will yield increases in U.S. steel production sufficient to bring the industry to 80 percent capacity utilization.**

While our model incorporates the GTAPv10 database, we have updated the data from the 2014 benchmark year to better reflect the U.S. economy in 2016. The base year for our analysis of the imposition of steel and aluminum tariffs is 2016.

In addition to economy-wide impacts, we focused on the impacts of imposing the tariffs on the U.S. workforce. For the analysis conducted here, we treat wages as “sticky,” meaning changes in demand for labor (positive or negative) are first reflected in changes in employment rather than changes in wages. This is appropriate for an examination of the immediate impacts of the tariffs on workers.

We also examined the employment impacts on workers in different occupation/skill categories in the United States.

It is important to emphasize that our employment impact estimates are net. They take into account potential increases as well as decreases in employment as demand increases in some cases for U.S. products, and declines in others. These changes arise not only from the direct impacts of the re-imposition of tariffs, but also the indirect impacts of changes in supply and demand for goods and services generally across the economy.

We applied a 25 percent tariff to U.S. imports of the steel products detailed in the Commerce Department’s steel national security report, and a 10 percent tariff to U.S. imports of the aluminum products detailed in the Commerce Department’s aluminum national security report.

What is covered?

The affected **steel** products fall into one of five categories: (1) carbon and alloy flat products (e.g., sheet, strip, plate); (2) carbon and alloy long products (e.g., bars, rails, rods and beams); (3) carbon and alloy pipe and tube (includes some stainless); (4) carbon and alloy semi-finished products (e.g., slab, ingots, blooms, billets); and (5) stainless products (flat, long, pipe and tube, and semifinished). See U.S. Department of Commerce, Bureau of Industry and Security, Office of Technology Evaluation, “The Effect of Imports of Steel on the National Security,” an Investigation Conducted Under Section 232 of the Trade Expansion Act of 1962, as Amended, January 11, 2018, https://www.commerce.gov/sites/commerce.gov/files/the_effect_of_imports_of_steel_on_the_national_security_-_with_redactions_-_20180111.pdf.

The affected **aluminum** products are: (1) unwrought aluminum; (2) aluminum castings and forgings; (3) aluminum plate, sheet, strip, and foil (flat rolled products); (4) aluminum wire; (5) aluminum bars, rods and profiles; and (6) aluminum tubes and pipes; and (7) aluminum tube and pipe fittings. See U.S. Department of Commerce, Bureau of Industry and Security, Office of Technology Evaluation, “The Effect of Imports of Aluminum on the National Security,” an Investigation Conducted Under Section 232 of the Trade Expansion Act of 1962, as Amended, January 11, 2018, p. 7, https://www.commerce.gov/sites/commerce.gov/files/the_effect_of_imports_of_steel_on_the_national_security_-_with_redactions_-_20180111.pdf.