



Proposed steel and aluminum tariffs: U.S. GDP gets a trim

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In March 2018, the United States issued a directive announcing that new tariffs would be applied to all steel and aluminum imports, excluding those resulting from the North American Free Trade Agreement. Qualifying steel and aluminum imports would be subject to a 25-and 10-percent duty, respectively. Finished steel products, such as pipes, and stainless steel and aluminum products, such as bars, rods, wires, and foil, would also be affected.

In their article "Steeling the U.S. economy for the impacts of tariffs" (*Economic Letter*, Federal Reserve Bank of Dallas, April 2018), Michael Sposi and Kelvinder Virdi assess the impact proposed tariffs on imported steel and aluminum may have on U.S. industries and the overall economy. Although employment in steel and aluminum industries in 2016 accounted for about 300,000 workers, or 0.2 percent of total U.S. employment, the output from these industries is used as an input to construction and automotive and machinery manufacturing and by other large industries that are critical to the U.S. economy. The authors assert that the proposed tariffs on steel and aluminum could lead to a 0.25-percent loss to U.S. gross domestic product (GDP) over the long term, as higher input prices for durable goods producers typically lead to decreased domestic production and exports.

From the perspective of the United States, increasing the tariffs serves to protect U.S. steel and aluminum industries from foreign competitors, such as the European Union (EU), China, Canada, and Mexico. Sposi and Virdi state that the United States imported \$28.9 billion worth of steel and \$13.6 billion worth of aluminum in 2016, representing approximately 2 percent of U.S. manufacturing imports. The EU accounts for the largest share of U.S. steel imports, at 20 percent, followed by Canada, at 16 percent. Canada is the largest individual exporter to the United States. Canada is also the largest supplier of aluminum to the United States, with a share of 42 percent. China is second, providing the United States with 11 percent of aluminum imports.

Sposi and Virdi assess several impacts the proposed tariffs will have on affected industries as well as on the overall U.S. economy. These include the impact on domestic steel and aluminum prices; prices, production, and demand in U.S. industries that use steel and aluminum as inputs to their products; and the transfer of capital and labor from other industries to support increased domestic production. According to the authors, the tariffs would reduce imports of metals by 5 percent while leading to a more than 15-percent increase in U.S. metal production. The increased cost of U.S. steel and aluminum imports would result in a 21-percent increase in the price of metals. Domestic metal prices would also increase because production costs will increase for domestic producers seeking to take advantage of higher prices. Additionally, because domestic producers will look to hire labor from other industries, labor will command a premium. This premium will result in an inefficient allocation of resources and ultimately lead to about a 3-percent decrease in productivity.



What if a trade war breaks out? Sposi and Virdi describe a scenario in which the United States imposes baseline tariffs on all steel and aluminum imports, with the exception of those from Canada and Mexico. Under this scenario, the United States engages in a trade war with the EU and China that leads to a reduction in U.S. GDP of about 3.5 percent over the long term. Hence, although the authors project a "relatively small impact" from the 25and 10-percent duty, they note the effect of retaliatory, prohibitively high tariffs on U.S. exports could be much larger.