

TRADE PARTNERSHIP WORLDWIDE, LLC

Estimated Impacts of Proposed Tariffs on Imports from China: Apparel, Footwear, Toys, Household Appliances, Furniture, Travel Goods and Televisions

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The Trump administration has proposed that the United States impose tariffs of up to 25 percent on imports of approximately \$300 billion in goods imported from China.¹ We assess those impacts below for several consumer products included on the list of goods targeted by tariffs: apparel, footwear, toys and household appliances. We had previously assessed the potential impacts on furniture and travel goods of tariffs ranging from 10 to 25 percent. This report republishes those results since the tariffs were increased to 25 percent.

In summary, we find that the proposed tariffs, especially at 25 percent, would be too large for U.S. retailers to absorb and, once passed on, would result in prices higher than many consumers would be willing to pay. The ability of U.S. retailers to shift sourcing from China to other suppliers is limited and could take years to complete. Retailers engage in a lengthy process to verify that potential new suppliers can produce the volume of products that are needed at the highest quality and at the most competitive price for consumers. These verifications include audits to ensure business partners meet various corporate social responsibility, labor, environmental, security and U.S. regulatory requirements. We employed a model, described in Appendix A, that identifies the potential shifts that would occur from China to other sources of supply were the United States to impose tariffs on imports from China. The results are presented below.

They show that, even after possible changes in sourcing, the proposed tariffs would have a substantial negative impact on American consumers for the targeted products. Consumers would pay \$4.4 billion more for apparel, \$2.5 billion more for footwear, \$3.7 billion more for toys and \$1.6 billion more for household appliances. The rise in tariffs to 25 percent forces purchasers of furniture to pay \$4.6 billion more, and of travel goods, \$1.2 billion more.

Apparel (HTS items 6101.20.00 through 6217.90.90)

The proposed retaliation list would add a range of apparel items to those facing higher duties, on top of the high duties American consumers already pay for these goods. It includes over 500 Harmonized Tariff System (HTS) items of clothing, from tops and

¹ Office of the United States Trade Representative, "Request for Comments Concerning Proposed Modification of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation," 84 Federal Register 22564, May 17, 2019, <https://www.federalregister.gov/documents/2019/05/17/2019-10191/request-for-comments-concerning-proposed-modification-of-action-pursuant-to-section-301-chinas-acts>.

bottoms to underwear and outerwear, from swimwear to ski suits and from ties and gloves to socks and hosiery.

China is an important source of supply for many apparel goods purchased by consumers. It accounted for 35 percent of the total apparel imports of products on List 4. Even though there are some alternative sources of supply, both domestic and foreign, it takes time for these producers to be able to meet the large quantity demands that Chinese suppliers are able to provide, at the same level of quality and “time to market.” The total value of imports from China of apparel products on List 4 is more than 2.5 times greater than the total value of apparel imports from the next largest foreign source of supply, Vietnam. And in nearly all cases, these alternative sources of supply for products now sourced from China cost more, absent the tariffs. If they did not, sourcing would have shifted already.

Our analysis of the likely impacts of the imposition of 25 percent duties on the apparel items in List 4 found that prices for apparel rise across the board. Prices of apparel from China would increase by 22 percent, and by 2 percent for products from U.S. suppliers. Overall U.S. prices for apparel generally (from all sources combined) would rise by 5 percent. As a result, U.S. consumers are forced to reduce overall purchases by 11 percent.

The biggest winners from tariffs on Chinese apparel are producers in other countries. Manufacturers in Vietnam would see annual export revenues grow by about \$660 million. Producers in Indonesia, Mexico, India, Honduras, Bangladesh and El Salvador each would see annual export revenues grow by about \$150 million to \$300 million per year.

American consumers, on the other hand, would be forced to pay more for apparel; low-income families would be particularly affected. The value of this extra cost would exceed \$4.4 billion. Low-income households spend 3 times as much of their after-tax income on apparel and services as do high-income households.² While U.S. apparel manufacturers would see revenues grow by about \$620 million, each new dollar of revenue costs consumers more than \$7 in new out of pocket expenses. After accounting for domestic manufacturing gains and new tariff revenue, the result is a net \$2.2 billion loss for the U.S. economy, with the burden carried by U.S. consumers.

Change in Cost of Chinese Imports	+22.1%
Change in Chinese Production	-4.3%
Change in U.S. Production	+3.8%
Change in Cost of U.S.-Produced Apparel	+1.9%
Change in Prices to U.S. Consumers	+4.9%

² Bureau of Labor Statistics, “Quintiles of Income before Taxes: Average Annual Expenditures and Characteristics, Consumer Expenditure Survey, 2017,” <https://www.bls.gov/cex/csxresearchtables.htm#allnew>. “Low-income families” are those in the lowest 20 percent quintile; “high-income families” are those in the highest 20 percent quintile.

Impact on Consumption	-11.2%
Higher Prices Paid by Consumers	\$4.4 bill.
Net Loss to U.S. Economy	-\$2.2 bill.

Footwear (HTS Items 6401.10.00 through 6406.90.90)

The proposed retaliation list includes a large number of imported footwear products, which already face U.S. duties in some cases exceeding 40 percent. More than 150 HTS items of footwear, including leather, rubber and plastic footwear, as well as sports and athletic footwear, ski boots, waterproof footwear and sandals for adults and children. It also notably contains parts of footwear used by U.S. manufacturers to make finished products in the United States.

China is a major supplier of footwear to the United States. It accounted for 58 percent of the total footwear imports of products on List 4. Even though there are alternative sources of supply, both domestic and foreign, as with apparel it takes time for these producers to be able to meet the large quantity demands that Chinese suppliers are able to provide, at the same level of quality and “time to market.” The total value of imports from China of footwear products on List 4 is more than three times greater the total value of footwear imports from the next largest foreign source of supply, Vietnam. And in nearly all cases, these alternative sources of supply for products now sourced from China cost more, absent the tariffs; if they did not, sourcing would have shifted already.

Our analysis of the likely impacts of the imposition of 25 percent duties on the footwear items in List 4 found that prices for footwear rise across the board. Prices of footwear from China would rise by 21 percent, and by 3 percent for products from U.S. suppliers. Overall U.S. prices for footwear generally (from all sources combined) would rise by 8 percent. As a result, U.S. consumers are forced to reduce overall purchases by 15 percent.

Like apparel, the big winner from tariffs on Chinese footwear would be manufacturers in other countries. Vietnam would capture nearly half of the \$1.5 billion in expected revenue gains for non-Chinese sources. Indonesia and Italy would account for another 21 percent of revenue gains. American consumers would pay over \$2.5 billion more for footwear, or about \$14 in new out of pocket expenses for each \$1 in new revenue for American manufacturers. Also, like apparel, the impact of these costs would fall heaviest on the lower-income households, who spend nearly four times as much of their income on footwear as higher-income households. The result, even after accounting for domestic manufacturing gains and new tariff revenue, is a net \$1.2 billion loss for the U.S. economy, with the burden carried by U.S. consumers.

Change in Cost of Chinese Imports	+21.1%
Change in Chinese Production	-6.1%

Change in U.S. Production	+5.0%
Change in Cost of U.S.-Produced Footwear	+3.3%
Change in Prices to U.S. Consumers	+8.3%
Impact on Consumption	-15.1%
Higher Prices Paid by Consumers	\$2.5 bill.
Net Loss to U.S. Economy	-\$1.2 bill.

Toys (HTS 9503.00.00)

The proposed retaliation list includes toys — specifically, “toys, including riding toys other than bicycles, puzzles, reduced scale models.”

China is the largest supplier. It accounts for most of the supply of toys to the U.S. market — over 88 percent of total imports. U.S. producers are estimated to account for less than 1 percent of the U.S. market. The total value of toy imports from China is 25 times greater than the total value of toy imports from the next largest foreign source of supply, Mexico.

Our analysis of the likely impacts of the imposition of 25 percent duties on the toys items in List 4 found that prices for toys rise. The cost of toys imported from China would increase by 21 percent, and by 1 percent for products from U.S. suppliers. Overall U.S. prices for toys generally (from all sources combined) would rise by 17 percent. As a result, U.S. consumers are forced to reduce overall purchases by 32 percent.

The biggest winners from tariffs on Chinese toys are producers in Mexico — absent additional duties imposed on imports from Mexico. Producers there would see annual export revenues grow by about \$130 million. Yet due to China’s dominant supplier position, there are few other “winners.” Revenue growth for the rest of the world combined is negative. Americans don’t buy more non-Chinese toys — they just buy less toys.

This is due to the fact that toys will cost so much more. American consumers, while buying less, still would pay \$3.7 billion more for toys. The costs represent about \$64 in new out of pocket expenses for each \$1 in new revenue for American manufacturers — higher than any other category modeled. Proportionate to their income, lower-income households spend nearly three times more of their income on toys, compared with higher-income households. After accounting for domestic manufacturing gains and new tariff revenue, the result is a net \$1.4 billion loss for the U.S. economy, with the burden carried by U.S. consumers.

Change in Cost of Chinese Imports	+20.6%
Change in Chinese Production	-6.9%
Change in U.S. Production	+2.5%
Change in Cost of U.S.-Produced Toys	+1.3%

Change in Prices to U.S. Consumers	+16.9%
Impact on Consumption	-32.3%
Higher Prices Paid by Consumers	\$3.7 bill.
Net Loss to U.S. Economy	-\$1.4 bill.

Household Appliances

The proposed retaliation list adds to the household appliances subject to 25 percent tariffs that were included on List 1 and List 3. List 4 covers an additional 30 items, including gas stoves, fans, washing machines, clothes dryers, dishwashers, trash compactors, food processors, floor polishers, shavers, toasters, coffee makers, irons, microwave ovens and hair dryers, among others.³

Again, China is the most important foreign supplier. It accounts for 73 percent of total imports of these items. The total value of household appliance imports from China on List 4 is 10 times greater than the total value of appliance imports from the next largest foreign source of supply, Mexico.

Our analysis of the likely impacts of the imposition of 25 percent duties on household appliances⁴ found that prices for appliances rise for goods manufactured by all suppliers. They increase by 23 percent for products from China, and by 2 percent for products from U.S. suppliers. Overall U.S. prices for appliances generally (from all sources combined) would rise by 3 percent. As a result, U.S. consumers are forced to reduce overall purchases by 6 percent.

While some sourcing would shift back to American producers, it comes at a heavy cost to consumers. American producers would see revenues grow by about \$930 million, while producers in Mexico would see revenues grow by about \$385 million. American consumers, on the other hand, would pay nearly \$1.6 billion more for appliances, or about \$5 in new out of pocket expenses for each \$3 in new revenue for American manufacturers. Proportionate to their income, low-income households spend over three times more of their income on appliances compared with high-income households. The result, even after accounting for new tariff revenue, is a net \$887 million loss for the U.S. economy, with the burden carried by U.S. consumers.

³ They are: 6301.10, 7321.12, 7321.19, 7418.10, 8414.51, 8421.12, 8421.91, 8422.11, 8422.90, 8450.11, 8450.12, 8450.19, 8450.20, 8450.90

⁴ We focused our analysis on the broad category of "household appliances" as defined by the four-digit NAICS category for that sector. This is the broader category of household appliances than those HTS items on List 4. In other words, it includes products on earlier retaliation lists (e.g., List 1). However, the price and production impact results for the broader category of household appliances is applicable to the products on List 4 as well.

Perhaps surprisingly, the overall economic losses in the United States are *higher* than economic losses in China. While U.S. imports from China decline significantly, Chinese producers become more competitive in third country markets — often at the expense of American exporters. As a result, gains of U.S. producers in the domestic market are largely offset by export losses. Combined with higher consumer prices, the American economy is harmed more than the Chinese economy by appliance tariffs.

Change in Cost of Chinese Imports	+23.1%
Change in Chinese Production	-3.0%
Change in U.S. Production	+2.5%
Change in Cost of U.S.-Produced Household Appliances	+1.7%
Change in Prices to U.S. Consumers	+3.2%
Impact on Consumption	-6.2%
Higher Prices Paid by Consumers	\$1.6 bill.
Net Loss to U.S. Economy	-\$887.2 mill.

* * *

The proposed tariffs on List 4 would add to the number of consumer goods imported from China and subject to penalty tariffs. These include two product categories examined for NRF last August: furniture and travel goods.⁵ Tariffs on those products, which appeared on List 3, have now increased from 10 to 25 percent. In addition, we looked at the impact of 25 percent tariffs on imports from China of televisions⁶ — which were ultimately exempted from the final List 1 — but have been added back to the proposed List 4. Below, we report again our previous analyses of the potential impact of 25 percent duties on those products (for ease of reference).

Furniture

The furniture products upon which 25 percent tariffs have now been imposed (up from 10 percent on May 10) include both finished furniture and parts assembled into finished furniture in the United States by manufacturers or retailers.⁷ The tariffs are expected to

⁵ Trade Partnership Worldwide, LLC, “Estimated Impacts of Proposed Tariffs on Imports from China: Furniture and Travel Goods,” prepared for National Retail Federation, August 17, 2018.

⁶ Trade Partnership Worldwide, LLC, “Estimated Impacts of Proposed Tariffs on Imports from China: Televisions, Monitors, Batteries and Printer Cartridges,” prepared for Consumer Technology Association and National Retail Federation, April 11, 2018.

⁷ The HTS items subject to this analysis are: 7616.99; 8302.41, .50; 8418.91; 9401.30, .40, .52, .53, .59, .61, .69, .71, .79, .80, .90; 9403.10, .20, .30, .40, .50, .60, .70, .82, .83, .89, .90; 9404.10, .21, .29 (Note: we exclude HTS8 products within those codes that are classified in other industries, such as parts for auto seats, which are classified as automotive parts).

increase the costs of imported furniture and parts from China, to over 23 percent. This in turn will continue to shift sourcing of goods from China to other countries and U.S. producers, whose goods are often more expensive than current Chinese suppliers. U.S. production is estimated to increase marginally (up 1.2 percent); the prices of U.S.-made furniture also increase as U.S. producers respond to the increase in demand (up 2.1 percent).

Change in Cost of Chinese Imports	+23.4%
Change in Chinese Production	-9.0%
Change in U.S. Production	+1.2%
Change in Cost of U.S.-Produced Furniture	+2.1%
Change in Prices to U.S. Consumers	+4.3%
Impact on Consumption	-8.2%
Higher Prices Paid by Consumers	\$4.6 bill.
Net Loss to U.S. Economy	\$1.0 bill.

On average, prices for furniture overall — including both Chinese-made and U.S.-made products — increase 4.3 percent, and consumers cut back on purchases by 8.2 percent. Higher prices for what they do purchase take \$4.6 billion out of their pockets — money they would have had available to spend on other goods and services. Even considering benefits for U.S. producers and the revenue tariffs would provide to the U.S. Treasury, the losses incurred by consumers and the impact on the economy generally from inefficiencies mean that the result of the tariffs is a net negative: a loss of \$1 billion for every year the tariffs are in effect.

Travel Goods

“Travel goods” generally refer to products like backpacks, handbags, luggage, wallets, phone cases and totes. This product category encompasses items in Harmonized Tariff Schedule 4202, nearly all of which have been hit with 25 percent tariffs. Imposition of the tariffs causes the costs of imported travel goods from China to rise by 23 percent. This in turn shifts some sourcing of goods from China to other countries and U.S. producers, whose goods are often more expensive than current Chinese suppliers. U.S. production increases (3.2 percent); the prices of U.S.-made travel goods also increase as U.S. producers respond to the increase in demand (up 4.3 percent).

Change in Cost of Chinese Imports	+23.0%
Change in Chinese Production	-4.0%
Change in U.S. Production	+3.2%
Change in Cost of U.S.-Made Goods Travel Goods	+4.3%
Change in Prices to U.S. Consumers	+9.9%
Impact on Consumption	-17.7%
Higher prices paid by consumers	\$1.2 bill.
Net Loss to U.S. Economy	\$650.7 mill.

Overall, U.S. consumers reduce purchases and pay more for what they do buy. On average, travel goods prices — including both Chinese-made and U.S.-made products — increase 9.9 percent, and consumers cut back significantly on these price-sensitive purchases by 17.7 percent. Higher prices for what they do purchase take \$1.2 billion out of their pockets— money they would have otherwise had available to spend on other goods and services. Even considering benefits for U.S. producers and the revenues tariffs would provide to the U.S. Treasury, the losses incurred by consumers and impact on the economy generally from inefficiencies mean the result of the tariffs is a net negative: a loss of \$650.7 million for every year the tariffs are in effect.

Televisions

Imposition of the tariffs causes U.S. imports from China of televisions to decline, and Chinese production to drop by 2.1 percent. Production in other countries rises to compensate, where possible.⁸ U.S. production also increases, by 1.1 percent.

The tariffs have a negative impact on U.S. television consumers in the form of higher prices. U.S. consumer prices for TVs imported from China jump by 23 percent. Overall, TV prices increase by 4.1 percent, and U.S. consumers cut back on purchases of TVs by 7.8 percent. The tariffs force consumers to pay \$711 million more than they otherwise would for the televisions they continue to buy. The net impact on the economy (the value of U.S. producer gains plus tariff revenues to the U.S. government, minus the value of consumer losses) is a hit of \$322 million.

⁸ It is important to note that the types of TVs currently imported from China differ markedly from TVs imported from other countries. As such, sourcing is not easily transferred to these other countries. In 2016, the average unit value of TVs imported from China was \$192. The average unit value of TVs imported from Japan was \$1,153; Korea, \$939, and Mexico, \$367. Clearly, a consumer shopping in the TV price point met by a Chinese-made TV is not going to switch to a TV in the price point of a Japanese-made TV, for example. Of the leading “alternative” suppliers, the only countries that produced TVs with an average unit value similar to that of China were Thailand, \$145; Hong Kong, \$206, and Taiwan, \$134. We adjusted our substitution elasticities to reflect the limited nature of alternative sources of supply.

Appendix A Methodology

We employed a modeling strategy for industry-focused globally linked partial equilibrium analysis of tariff policy.

Based on the Harmonized Tariff Schedule (HTS) items identified in the *Federal Register* notice as proposed for tariffs 25 percent, when imported from China, we have built a set of product-specific models based on the “global simulation model” framework (GSIM). Francois and Hall (2007) developed GSIM to allow detailed analysis of tariff scenarios across individual products and potentially all major trading countries and blocks. The World Bank and the United Nations adopted the GSIM framework, integrating it into the joint World Bank-UNCTAD trade data portal known as the “World Integrated Trade Solution,” or WITS (see <http://wits.worldbank.org/wits/>).⁹ The basic framework employed here can be implemented with a spreadsheet-based interface. We should stress that, in implementation, this set of models is structurally consistent with the recent class of Eaton-Kortum based structural trade models (see Bekkers *et al*, 2015; Costinot and Rodriguez-Clare, 2014 for example).

The basic approach involves specifying global supply and demand for each set of goods produced by a particular country as the sum of individual (national) sources of supply and demand. This is done for goods produced in all regions in the model. We are then able to reduce the solution set of the model to those global prices that clear global markets. Once we have a global set of equilibrium prices, we can obtain national results (changes in prices and quantities). Based on price and quantity changes, we in turn obtain estimates of changes in production, trade, consumer and producer surplus, and real national income that result from the imposition of tariffs on imports from China. Within this context, we work with a non-linear representation of import demand, combined with generic export-supply equations (see Francois and Hall 2007).

Data Sources

Trade data and tariffs are from “World Integrated Trade Solution,” or WITS (see <http://wits.worldbank.org/wits/>) and the U.S. Census Bureau.

Production data (domestic sales) are from country input/output tables and from the Census Bureau’s Annual Survey of Manufacturers. The latest data from that resource is 2016, so all import data are also for 2016.

⁹ Another application, the MRPE model, is a specialized, scalable extension of the GSIM framework for strategic trade policy assessments at the detailed sector level, developed for the European Commission.

Trade elasticities are from the Global Trade Analysis Project (GTAP).

Country Disaggregation

Canada	Japan
China	Korea
Dominican Republic	Malaysia
El Salvador	Mexico
Germany	Singapore
Honduras	Spain
Hong Kong	Taiwan
India	Thailand
Indonesia	United States
Italy	Vietnam
Rest of World	