# Latest in US-China Trade War: <br> Thorough analysis on additional tariff by product 

Beyond model analysis (China -0.17\%, US -0.15\%, and Japan -0.01\%)

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## Summary

- President Trump decided to levy additional tariffs on the equivalent of around 200 billion dollars in Chinese imports. Meanwhile, China has decided to implement retaliatory tariffs on the equivalent of approximately 60 billion dollars in American products. In this report we examine additional tariff rates per item and the total amounts in tariffs associated with tariff policies which have already been publicly announced (US 50 bil dlrs +200 bil dirs, and China 50 bil dlrs +60 bil dlrs).
- According to our analysis, US tariffs on Chinese products effect a total of 235.3 billion dollars in imported items. Tariffs totaled 30.5 billion dollars in 2018, and are expected to reach a total of 58.8 billion dollars in 2019. The average additional tariff rate imposed per product was $13.0 \%$ in 2018 , and is expected to reach $25.0 \%$ by 2019 . As for types of products affected, the greatest weight goes to various types of machinery and electronic devices. On the other hand, Chinese tariffs imposed on US products total 115.8 billion dollars in imported items. The total amount in tariffs is 17.5 billion dollars with the average tariff rate per item at $15.1 \%$. As for types of products affected, the greatest weight goes to automobiles, soy beans, machinery of various kinds, electrical generators, and control devices as well as other electrical devices.
- We have taken into consideration changing assumptions as this situation develops, and using the DIR macro model, have re-estimated the effects of tariffs on the Japanese, Chinese, and US economies Looking at the results of our estimate of economic effects assuming the US freezes its additional tariff rate on 200 billion dollars at $10 \%$, we see that the negative effect on GDP would be as follows: China $-0.17 \%$, US $-0.15 \%$, and Japan $-0.01 \%$. Meanwhile, if the US raises its additional tariff rate to $25 \%$, negative effects are estimated to be as follows: China $0.22 \%$, US -0.28\%, and Japan -0.02\%.
- It should be kept in mind, however, that these are merely estimated values according to our computation model. The model cannot illustrate the ripple effects when a particular item or a particular industry is especially severely affected by tariffs. According to OECD estimates, as of the year 2011, Japan provided value-added input on a total of as much as 24 billion dollars' worth of items ultimately exported from China to the US. Of this, 15.2 billion dollars were accounted for by items associated with computers and electronic parts. As for this industry in particular, the situation does not allow for much optimism.

On September 17, President Trump decided to levy additional tariffs on the equivalent of around 200 billion dollars in Chinese imports. The tariff rate was set at $10 \%$ within the year 2018, with the intension of raising it to $25 \%$ in 2019. This most recent $25 \%$ tariff decision to be imposed on the equivalent of 50 billion dollars in imported products is to be added to existing ones, so that the number of items effected by tariffs and the total amount taxed has ballooned,

Meanwhile, China has decided to implement retaliatory tariffs on the equivalent of approximately 60 billion dollars in American products. (Both of these policy decisions are to go into effect as of September 24.) However, tariffs that were previously announced were cut from $10-25 \%$ to $5-10 \%$. One possible reason for the change is that China may be rethinking its strategy in relation to the US. Retaliatory tariffs as a countermeasure may have a certain validity from the viewpoint of China's domestic politics since it maintains China’s authority. However, when we compare amounts in imports and exports between the US and China, it becomes clear that China is the one that loses the most from this tit for tat in imposing tariffs. The other day, President Trump threatened that if China imposes retaliatory tariffs on US products, the US will place tariffs on virtually all Chinese products. China may be keeping countermeasures to the minimum, and setting tariff rates to a level that avoids provoking the US.

## US-China trade war: Detailed list of tariff rates and tariff amounts by product

The status of US-China trade friction is highly fluid. Meanwhile, trade negotiations between the US and Japan, the EU, and Canada, have yet to reach a conclusion. Therefore the situation is unpredictable. In this report we examine tariff rates per item and the total amounts in tariffs associated with tariff policies which have already been publicly announced (US 50 bil dlrs + 200 bil dlrs, and China 50 bil dlrs +60 bil dlrs).

Chart 1 provides import value, additional tariff amount, and additional tariff rate per item, with reference to publicized lists of products ${ }^{1}$ on which tariffs are imposed. The additional tariff rates according to this estimate, in cases where a more detailed product category was used in calculating total tariff amount, were calculated using the weighted average of import value per product.

First of all, US tariffs on Chinese goods total 235.3 billion dollars in imports of taxed items. The total amount in tariffs was 30.5 billion dollars in 2018, and is to be raised to 58.8 billion dollars in 2019. The average additional tariff rate on items subject to tariffs in 2018 was $13.0 \%$, to be raised to $25.0 \%$ in 2019. Looking at the breakdown we can see that electronic devices and machinery of various kinds are subject to the largest total tariff amounts.

[^0]| $\underset{\text { 2-Digits }}{\text { HS }}$ | Product Name | ariffs on Chinese Goods |  |  |  |  | Chinese Tariffs on US Goods |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Amount in Imports from China (subject items, mil dirs) | Amount in Additional <br> Tariffs (mil dirs) <br> $2018 \quad 2019$ |  | Additional  <br> Tariff Rate (\%)  <br> 2018 2019 |  | Amount in Imports from US (subject items, mil dirs) | Amount in Additional Tariffs (mil dirs) | Additional <br> Tariff Rate (\%) |
| 01 | Live Animals | 0 | 0 | 0 | 0.0 | 0.0 |  |  |  |
| 02 | Meat And Edible Meat Offal | 16 | 2 | 4 | 10.0 | 25.0 | 1,187 | 297 | 25.0 |
| 03 | Fish, Crustaceans \& Aquatic Invertebrates | 1,605 | 161 | 401 | 10.0 | 25.0 | 1,315 | 329 | 25.0 |
| 04 | Dairy Prods; Birds Eggs; Honey; Ed Animal Pr Nesoi | 12 | 1 | 3 | 10.0 | 25.0 | 428 | 107 | 24.9 |
| 05 | Products Of Animal Origin, Nesoi | 170 | 17 | 42 | 10.0 | 25.0 | 166 | 27 | 16.1 |
| 06 | Live Trees, Plants, Bulbs Etc.; Cut Flowers Etc. | 0 | 0 | 0 | 0.0 | 0.0 | 4 | 0 | 10.0 |
| 07 | Edible Vegetables \& Certain Roots \& Tubers | 445 | 45 | 111 | 10.0 | 25.0 | 45 | 7 | 16.6 |
| 08 | Edible Fruit \& Nuts; Citrus Fruit Or Melon Peel | 88 | 9 | 22 | 10.0 | 25.0 | 766 | 191 | 24.9 |
| 09 | Coffee, Tea, Mate \& Spices | 0 | 0 | 0 | 0.0 | 0.0 | 18 | 2 | 10.0 |
| 10 | Cereals | 11 | 1 | 3 | 10.0 | 25.0 | 1,507 | 377 | 25.0 |
| 11 | Milling Products; Malt; Starch; Inulin; Wht Gluten | 47 | 5 | 12 | 10.0 | 25.0 | 24 | 1 | 6.2 |
| 12 | Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc | 264 | 26 | 66 | 10.0 | 25.0 | 14,431 | 3,591 | 24.9 |
| 13 | Lac; Gums, Resins \& Other Vegetable Sap \& Extract | 0 | 0 | 0 | 0.0 | 0.0 | 21 | 2 | 9.1 |
| 14 | Vegetable Plaiting Materials \& Products Nesoi | 26 | 3 | 7 | 10.0 | 25.0 | 9 | 2 | 24.1 |
| 15 | Animal Or Vegetable Fats, Oils Etc. \& Waxes | 13 | 1 | 3 | 10.0 | 25.0 | 139 | 14 | 9.9 |
| 16 | Edible Preparations Of Meat, Fish, Crustaceans Etc | 736 | 74 | 184 | 10.0 | 25.0 | 5 | 1 | 24.7 |
| 17 | Sugars And Sugar Confectionary | 136 | 14 | 34 | 10.0 | 25.0 | 79 | 5 | 6.1 |
| 18 | Cocoa And Cocoa Preparations | 0 | 0 | 0 | 0.0 | 0.0 | 29 | 3 | 9.5 |
| 19 | Prep Cereal, Flour, Starch Or Milk; Bakers Wares | 181 | 18 | 45 | 10.0 | 25.0 | 120 | 10 | 8.5 |
| 20 | Prep Vegetables, Fruit, Nuts Or Other Plant Parts | 1,138 | 114 | 285 | 10.0 | 25.0 | 272 | 26 | 9.4 |
| 21 | Miscellaneous Edible Preparations | 115 | 12 | 29 | 10.0 | 25.0 | 442 | 33 | 7.6 |
| 22 | Beverages, Spirits And Vinegar | 40 | 4 | 10 | 10.0 | 25.0 | 138 | 15 | 10.8 |
| 23 | Food Industry Residues \& Waste; Prep Animal Feed | 273 | 27 | 68 | 10.0 | 25.0 | 522 | 53 | 10.2 |
| 24 | Tobacco And Manufactured Tobacco Substitutes | 30 | 3 | 8 | 10.0 | 25.0 | 170 | 43 | 25.0 |
| 25 | Salt; Sulfur; Earth \& Stone; Lime \& Cement Plaster | 170 | 17 | 42 | 10.0 | 25.0 | 321 | 22 | 6.9 |
| 26 | Ores, Slag And Ash | 19 | 2 | 5 | 10.0 | 25.0 | 1,513 | 131 | 8.7 |
| 27 | Mineral Fuel, Oil Etc.; Bitumin Subst; Mineral Wax | 530 | 53 | 132 | 10.0 | 25.0 | 7,279 | 1,724 | 23.7 |
| 28 | Inorg Chem; Prec \& Rare-earth Met \& Radioact Compd | 895 | 90 | 224 | 10.1 | 25.0 | 900 | 58 | 6.4 |
| 29 | Organic Chemicals | 3,119 | 312 | 780 | 10.0 | 25.0 | 3,198 | 264 | 8.3 |
| 30 | Pharmaceutical Products | 0 | 0 | 0 | 0.0 | 0.0 | 211 | 12 | 5.5 |
| 31 | Fertilizers | 172 | 17 | 43 | 10.0 | 25.0 | 56 | 3 | 5.8 |
| 32 | Tanning \& Dye Ext Etc; Dye, Paint, Putty Etc; Inks | 518 | 52 | 129 | 10.0 | 25.0 | 501 | 38 | 7.6 |
| 33 | Essential Oils Etc; Perfumery, Cosmetic Etc Preps | 1,335 | 134 | 334 | 10.0 | 25.0 | 896 | 85 | 9.5 |
| 34 | Soap Etc; Waxes, Polish Etc; Candles; Dental Preps | 233 | 24 | 58 | 10.3 | 25.0 | 878 | 137 | 15.6 |
| 35 | Albuminoidal Subst; Modified Starch; Glue; Enzymes | 256 | 26 | 64 | 10.0 | 25.0 | 711 | 80 | 11.3 |
| 36 | Explosives; Pyrotechnics; Matches; Pyro Alloys Etc | 4 | 0 | 1 | 10.0 | 25.0 | 58 | 3 | 5.0 |
| 37 | Photographic Or Cinematographic Goods | 38 | 4 | 9 | 10.0 | 25.0 | 461 | 43 | 9.2 |
| 38 | Miscellaneous Chemical Products | 996 | 101 | 249 | 10.1 | 25.0 | 4,052 | 687 | 16.9 |
| 39 | Plastics And Articles Thereof | 7,806 | 1,106 | 1,951 | 14.2 | 25.0 | 8,530 | 1,381 | 16.2 |
| 40 | Rubber And Articles Thereof | 3,181 | 318 | 795 | 10.0 | 25.0 | 1,327 | 114 | 8.6 |
| 41 | Raw Hides And Skins (no Furskins) And Leather | 28 | 3 | 7 | 10.0 | 25.0 | 1,199 | 63 | 5.2 |
| 42 | Leather Art; Saddlery Etc; Handbags Etc; Gut Art | 7,339 | 734 | 1,835 | 10.0 | 25.0 | 18 | 2 | 10.0 |
| 43 | Furskins And Artificial Fur; Manufactures Thereof | 77 | 8 | 19 | 10.0 | 25.0 | 41 | 4 | 9.6 |
| 44 | Wood And Articles Of Wood; Wood Charcoal | 3,133 | 313 | 783 | 10.0 | 25.0 | 3,069 | 276 | 9.0 |
| 45 | Cork And Articles Of Cork | 26 | 3 | 6 | 10.0 | 25.0 | 0 | 0 | 10.0 |
| 46 | Mfr Of Straw, Esparto Etc.; Basketware \& Wickerwrk | 307 | 31 | 77 | 10.0 | 25.0 | 0 | 0 | 10.0 |
| 47 | Wood Pulp Etc; Recovd (waste \& Scrap) ppr \& pprbd | 8 | 1 | 2 | 10.0 | 25.0 | 1,655 | 83 | 5.0 |
| 48 | Paper \& Paperboard \& Articles (inc Papr Pulp Artl) | 2,983 | 298 | 746 | 10.0 | 25.0 | 868 | 57 | 6.5 |
| 49 | Printed Books, Newspapers Etc; Manuscripts Etc | 0 | 0 | 0 | 0.0 | 0.0 | 503 | 32 | 6.4 |
| 50 | Silk, Including Yarns And Woven Fabric Thereof | 22 | 2 | 5 | 10.0 | 25.0 | 0 | 0 | 10.0 |
| 51 | Wool \& Animal Hair, Including Yarn \& Woven Fabric | 22 | 2 | 5 | 10.0 | 25.0 | 17 | 2 | 10.0 |
| 52 | Cotton, Including Yarn And Woven Fabric Thereof | 199 | 20 | 50 | 10.0 | 25.0 | 1,072 | 254 | 23.7 |
| 53 | Veg Text Fib Nesoi; Veg Fib \& Paper Yns \& Wov Fab | 36 | 4 | 9 | 10.0 | 25.0 | 0 | 0 | 10.0 |
| 54 | Manmade Filaments, Including Yarns \& Woven Fabrics | 499 | 50 | 125 | 10.0 | 25.0 | 132 | 10 | 7.4 |
| 55 | Manmade Staple Fibers, Incl Yarns \& Woven Fabrics | 345 | 34 | 86 | 10.0 | 25.0 | 202 | 14 | 6.7 |
| 56 | Wadding, Felt Etc; Sp Yarn; Twine, Ropes Etc. | 608 | 61 | 152 | 10.0 | 25.0 | 181 | 11 | 6.0 |
| 57 | Carpets And Other Textile Floor Coverings | 608 | 61 | 152 | 10.0 | 25.0 | 21 | 1. | 5.6 |
| 58 | Spec Wov Fabrics; Tufted Fab; Lace; Tapestries Etc | 212 | 21 | 53 | 10.0 | 25.0 | 21 | 2 | 9.4 |
| 59 | Impregnated Etc Text Fabrics; Tex Art For Industry | 514 | 51 | 129 | 10.0 | 25.0 | 119 | 9 | 7.6 |
| 60 | Knitted Or Crocheted Fabrics | 384 | 38 | 96 | 10.0 | 25.0 | 13 | 1 | 10.0 |
| 61 | Apparel Articles And Accessories, Knit Or Crochet | 0 | 0 | 0 | 0.0 | 0.0 | 9 | 1 | 9.9 |
| 62 | Apparel Articles And Accessories, Not Knit Etc. | 0 | 0 | 0 | 0.0 | 0.0 | 18 | 2 | 10.0 |
| 63 | Textile Art Nesoi; Needlecraft Sets; Worn Text Art | 0 | 0 | 0 | 0.0 | 0.0 | 32 | 3 | 7.9 |
| 64 | Footwear, Gaiters Etc. And Parts Thereof | 0 | 0 | 0 | 0.0 | 0.0 | 102 | 8 | 7.8 |
| 65 | Headgear And Parts Thereof | 1,237 | 124 | 309 | 10.0 | 25.0 | 5 | 0 | 7.3 |
| 66 | Umbrellas, Walking-sticks, Riding-crops Etc, Parts | 0 | 0 | 0 | 0.0 | 0.0 | 0 | 0 | 7.3 |
| 67 | Prep Feathers, Down Etc; Artif Flowers; H Hair Art | 19 | 2 | 5 | 10.0 | 25.0 | 10 | 1 | 5.8 |
| 68 | Art Of Stone, Plaster, Cement, Asbestos, Mica Etc. | 1,945 | 195 | 486 | 10.0 | 25.0 | 255 | 17 | 6.8 |
| 69 | Ceramic Products | 661 | 66 | 165 | 10.0 | 25.0 | 125 | 7 | 6.0 |
| 70 | Glass And Glassware | 2,340 | 237 | 585 | 10.1 | 25.0 | 872 | 49 | 5.6 |
| 71 | Nat Etc Pearls, Prec Etc Stones, Pr Met Etc; Coin | 128 | 13 | 32 | 10.0 | 25.0 | 5,306 | 521 | 9.8 |
| 72 | Iron And Steel | 71 | 7 | 18 | 10.0 | 25.0 | 306 | 23 | 7.7 |
| 73 | Articles Of Iron Or Steel | 8,576 | 990 | 2,144 | 11.5 | 25.0 | 1,173 | 75 | 6.4 |
| 74 | Copper And Articles Thereof | 520 | 52 | 130 | 10.0 | 25.0 | 264 | 24 | 9.0 |
| 75 | Nickel And Articles Thereof | 53 | 5 | 13 | 10.0 | 25.0 | 302 | 18 | 5.9 |
| 76 | Aluminum And Articles Thereof | 809 | 82 | 202 | 10.2 | 25.0 | 367 | 25 | 6.7 |
| 77 | (Unused Number) |  |  |  |  |  |  |  |  |
| 78 | Lead And Articles Thereof | 4 | 0 | 1 | 10.0 | 25.0 | 3 | 0 | 5.4 |
| 79 | Zinc And Articles Thereof | 71 | 7 | 18 | 10.0 | 25.0 | 20 | 1 | 6.0 |
| 80 | Tin And Articles Thereof | 18 | 2 | 5 | 10.0 | 25.0 | 3 | 0 | 9.0 |
| 81 | Base Metals Nesoi; Cermets; Articles Thereof | 168 | 17 | 42 | 10.0 | 25.0 | 279 | 20 | 7.1 |
| 82 | Tools, Cutlery Etc. Of Base Metal \& Parts Thereof | 2,924 | 292 | 731 | 10.0 | 25.0 | 272 | 21 | 7.7 |
| 83 | Miscellaneous Articles Of Base Metal | 3,290 | 329 | 822 | 10.0 | 25.0 | 170 | 12 | 6.8 |
| 84 | Nuclear Reactors, Boilers, Machinery Etc.; Parts | 55,542 | 8,235 | 13,886 | 14.8 | 25.0 | 9,796 | 755 | 7.7 |
| 85 | Electric Machinery Etc; Sound Equip; Tv Equip; Pts | 65,511 | 9,119 | 16,378 | 13.9 | 25.0 | 7,177 | 613 | 8.5 |
| 86 | Railway Or Tramway Stock Etc; Traffic Signal Equip | 546 | 137 | 137 | 25.0 | 25.0 | 38 | 3 | 7.7 |
| 87 | Vehicles, Except Railway Or Tramway, And Parts Etc | 13,798 | 1,704 | 3,450 | 12.4 | 25.0 | 14,724 | 3,509 | 23.8 |
| 88 | Aircraft, Spacecraft, And Parts Thereof | 509 | 127 | 127 | 25.0 | 25.0 | 229 | 11 | 5.0 |
| 89 | Ships, Boats And Floating Structures | 134 | 15 | 34 | 11.4 | 25.0 | 26 | 2 | 7.2 |
| 90 | Optic, Photo Etc, Medic Or Surgical Instrments Etc | 6,058 | 1,364 | 1,515 | 22.5 | 25.0 | 11,432 | 953 | 8.3 |
| 91 | Clocks And Watches And Parts Thereof | 64 | 6 | 16 | 10.0 | 25.0 | 3 | 0 | 8.1 |
| 92 | Musical Instruments; Parts And Accessories Thereof | 0 | 0 | 0 | 0.0 | 0.0 | 24 | 2 | 7.0 |
| 93 | Arms And Ammunition; Parts And Accessories Thereof | 0 | 0 | 0 | 0.0 | 0.0 | 1 | 0 | 5.1 |
| 94 | Furniture; Bedding Etc; Lamps Nesoi Etc; Prefab Bd | 28,278 | 2,828 | 7,070 | 10.0 | 25.0 | 272 | 19 | 7.1 |
| 95 | Toys, Games \& Sport Equipment; Parts \& Accessories | 0 | 0 | 0 | 0.0 | 0.0 | 170 | 9 | 5.5 |
| 96 | Miscellaneous Manufactured Articles | 34 | 3 | 9 | 10.0 | 25.0 | 95 | 6 | 6.7 |
| 97 | Works Of Art, Collectors' Pieces And Antiques | 0 | 0 | 0 | 0.0 | 0.0 | 11 | 1. | 6.5 |
|  | Total | 235,277 | 30,484 | 58,819 | 13.0 | 25.0 | 115,757 | 17,450 | 15.1 |

Source: Bureau of the Census, USTR, Ministry of Commerce of the People's Republic of China, UN Comtrade; compiled by DIR.
Notes: 1) US: Calculations based on assumption that current tariffs on 50 bil dlrs in imported goods are raised up to an additional $25 \%$, with $10 \%$ in additional tariffs planned on 200 bil dlrs worth of imported goods within the year 2018, and additional tariffs of $25 \%$ planned in 2019.
China: Calculations based on assumption that current tariffs on 50 bil dlrs in imported goods are raised up to an additional 25\%, with $7.4 \%$ in additional tariffs planned on 60 bil dlrs worth of imported goods.
2) Since there are limits to how finely categories can be broken down, total amounts in additional tariffs may not conform completely to the value that was made public.
3) The term "Nesoi" sometimes appearing in the product name column means "Not Elsewhere Specified Or Included."

Looking at the effects of amounts in additional tariffs by product, we first look at previously implemented policy, in which a $25 \%$ tariff was imposed on approximately 50 billion dollars in imported goods. In this case most of the weight fell on machinery and devices, especially storage devices and media such as magnetic disks, as well as electronic parts such as semiconductors and integrated circuits.

As for the additional tariffs imposed on 200 billion dollars in imported goods (to go into effect as of September 24), weight fell especially on electronic devices and their parts such as storage devices and parts, as well as mobile phones. Items which were made exceptions after public comment included pharmaceutical products and plastic molding, which registered the largest amounts. Other items, including consumer electronics such as smart watches, textiles, and agricultural products, were removed from the list.

Meanwhile, Chinese tariffs imposed on goods imported from the US covered a total of 115.8 billion dollars in imported products, with tariffs totaling 17.5 billion dollars, and the average tariff rate per item at $15.1 \%$. Then recently additional tariffs of $25 \%$ were implemented on 50 billion dollars in imported goods, with the largest amounts in tariffs placed on automobiles and soy beans. In addition, an announcement was made on September 18 that additional tariffs of 5-10\% (or an average of around $7 \%$ ) would be imposed on imported goods worth approximately 60 billion dollars. In this case, most of the weight fell on machinery and power generators, as well as electrical devices such as controllers.

## Economic effects; beyond model analysis

As was explained previously, we have taken into consideration changing assumptions as this situation develops, and using the DIR macro model, have re-estimated the effects of tariffs on the Japanese, Chinese, and US economies ${ }^{2}$. Chart 2 (with details in Chart 3) presents our estimate of economic effects assuming the US freezes its additional tariff rate on 200 billion dollars in goods imported from China at $10 \%$. Meanwhile, Chart 4 (details in Chart 5) estimates economic effects assuming the tariff rate is raised to $25 \%$.

Looking at the results of our estimate of economic effects assuming the US freezes its additional tariff rate at $10 \%$ (in this case the government does not use the increase in revenues to increase public spending), we see that the negative effect on GDP would be as follows: China $-0.17 \%$, US $-0.15 \%$, and Japan $-0.01 \%$. (If the government does use the increase in revenues to increase public spending, the negative effects would be less, with China at $-0.01 \%$, and the US \& Japan both at $-0.00 \%$.)

Meanwhile, if the US raises its additional tariff rate to $25 \%$, negative effects are estimated to be as follows (with no increase in government spending as a result of growth in revenue): downward pressure on GDP would be as follows: China $-0.22 \%$, US $-0.28 \%$, and Japan $-0.02 \%$. (If the government does use the increase in revenues to increase public spending, the negative effects would be less, with China at $-0.05 \%$, US $+0.00 \%$, and Japan $-0.00 \%$.)

It should be kept in mind, however, that these are merely estimated values according to our computation model. The model has just one weakness. It cannot illustrate the ripple effects when a particular item or a particular industry is especially severely affected by tariffs.

The one major risk to Japan's economy due to the US-China trade war is related to Chinese exports of electronic devices to the US. In order to produce these items, China has to import components and capital goods from Japan, and the danger is that import value in this area could suffer serious declines.

[^1]According to OECD estimates, as of the year 2011, Japan provided value-added input on a total of over 24 billion dollars' worth of items ultimately exported from China to the US. Of this, 15.2 billion dollars were accounted for by items associated with computers and electronic parts. Meanwhile, the total amount exported from China to the US has grown considerably since that time. Hence related industries in Japan could suffer from secondary effects from the US-China trade war which would be much larger than they would have in 2011. As for this industry in particular, the situation does not allow for much optimism.

Estimated Effects of Tariffs (Summary)
Chart 2


Source: Estimates produced using the DIR macro model.
Note: All figures are real. Rate of deviation from actual value
Estimated Effects of Tariffs (Summary)
Chart 4


Effects of Tariffs on Japan, US, and China Economies (Detailed Version)

Chart 3

| Effects on Chinese Economy |  | Real GDP | Personal Consumption | Capex | Government Expenditure | Exports | Imports |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No US/China Govt. Expenditure | Deviation Rate | $\triangle 0.17$ | $\triangle 0.34$ | $\triangle 0.06$ | 0.00 | $\triangle 0.30$ | $\triangle 0.32$ |
|  | Contribution Rate |  | $\triangle 0.13$ | $\triangle 0.03$ | 0.00 | $\triangle 0.06$ | 0.06 |
| US/China Implement Govt. Expenditure | Deviation Rate | $\triangle 0.01$ | $\triangle 0.34$ | 40.00 | 0.93 | 40.22 | $\triangle 0.20$ |
|  | Contribution Rate |  | $\triangle 0.13$ | $\triangle 0.00$ | 0.13 | ¢ 0.04 | 0.03 |
| Effects on US Economy |  | Real GDP | Personal Consumption | Capex | Government Expenditure | Exports | Imports |
| No US/China Govt. Expenditure | Deviation Rate | $\triangle 0.15$ | $\triangle 0.26$ | ¢0.20 | 0.00 | ¢ 0.09 | $\triangle 0.47$ |
|  | Contribution Rate |  | 40.18 | $\triangle 0.03$ | 0.00 | $\triangle 0.01$ | 0.08 |
| US/China Implement Govt. Expenditure | $\begin{gathered} \hline \hline \text { Deviation } \\ \text { Rate } \\ \hline \end{gathered}$ | ¢ 0.00 | 40.26 | $\triangle 0.00$ | 1.08 | ¢ 0.07 | $\triangle 0.05$ |
|  | Contribution Rate |  | 40.18 | $\triangle 0.00$ | 0.18 | ¢ 0.01 | 0.01 |
| Effects on Japan's Economy |  | Real GDP | Personal Consumption | Housing Investment | Capex | Exports | Imports |
| No US/China Govt. Expenditure | Deviation Rate | © 0.01 | $\triangle 0.00$ | ¢ 0.00 | $\triangle 0.08$ | $\triangle 0.12$ | $\triangle 0.11$ |
|  | $\begin{gathered} \hline \text { Contribution } \\ \text { Rate } \\ \hline \end{gathered}$ |  | $\triangle 0.00$ | © 0.00 | $\triangle 0.01$ | ¢ 0.02 | 0.02 |
| US/China Implement Govt. Expenditure | Deviation Rate | © 0.00 | $\triangle 0.00$ | © 0.00 | $\triangle 0.00$ | $\triangle 0.00$ | $\triangle 0.00$ |
|  | Contribution Rate |  | 40.00 | 40.00 | ¢ 0.00 | ¢ 0.00 | 0.00 |

Source: Estimates produced using the DIR macro model.
Notes: Estimated effects assuming US imposes tariff of $25 \%$ on 50 billion dollars' worth of Chinese imports, and $10 \%$ on 200 billion dollars' worth. Then China imposes tariff of $25 \%$ on 50 billion dollars' worth of imports from the US, and $7.4 \%$ on $\$ 60$ billion worth.
Effects of Tariffs on Japan, US, and China Economies (Detailed Version)

Chart 5

| Effects on Chinese Economy |  | Real GDP | Personal Consumption | Capex | Government Expenditure | Exports | Imports |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No US/China Govt. Expenditure | Deviation Rate | $\Delta 0.22$ | $\triangle 0.34$ | $\triangle 0.08$ | 0.00 | © 0.57 | $\triangle 0.36$ |
|  | Contribution Rate |  | $\triangle 0.13$ | $\triangle 0.03$ | 0.00 | © 0.12 | 0.06 |
| US/China Implement Govt. Expenditure | Deviation Rate | $\triangle 0.05$ | $\triangle 0.34$ | 40.02 | 0.93 | $\triangle 0.41$ | $\triangle 0.24$ |
|  | Contribution Rate |  | $\triangle 0.13$ | 40.01 | 0.13 | 40.09 | 0.04 |
| Effects on US Economy |  | Real GDP | Personal Consumption | Capex | Government Expenditure | Exports | Imports |
| No US/China Govt. Expenditure | Deviation Rate | $\triangle 0.28$ | $\triangle 0.50$ | $\triangle 0.38$ | 0.00 | © 0.10 | $\triangle 0.87$ |
|  | Contribution Rate |  | $\triangle 0.35$ | 40.06 | 0.00 | ¢ 0.01 | 0.14 |
| US/China Implement Govt. Expenditure | Deviation Rate | 0.00 | $\triangle 0.50$ | 0.01 | 2.07 | $\triangle 0.08$ | $\triangle 0.08$ |
|  | $\begin{gathered} \text { Contribution } \\ \text { Rate } \\ \hline \end{gathered}$ |  | $\triangle 0.35$ | 0.00 | 0.35 | © 0.01 | 0.01 |
| Effects on Japan's Economy |  | Real GDP | Personal Consumption | Housing Investment | Capex | Exports | Imports |
| No US/China Govt. Expenditure | Deviation Rate | $\triangle 0.02$ | © 0.01 | $\triangle 0.00$ | ¢0.13 | © 0.19 | $\triangle 0.18$ |
|  | $\begin{gathered} \text { Contribution } \\ \text { Rate } \end{gathered}$ |  | $\triangle 0.00$ | $\triangle 0.00$ | $\triangle 0.02$ | $\triangle 0.03$ | 0.03 |
| US/China Implement Govt. Expenditure | Deviation Rate | $\Delta 0.00$ | $\triangle 0.00$ | 40.00 | $\triangle 0.01$ | $\triangle 0.01$ | $\triangle 0.01$ |
|  | $\begin{gathered} \text { Contribution } \\ \text { Rate } \end{gathered}$ |  | $\triangle 0.00$ | $\triangle 0.00$ | $\triangle 0.00$ | $\triangle 0.00$ | 0.00 |

Source: Estimates produced using the DIR macro model.
Note: Estimated effects assuming US imposes tariff of $25 \%$ on 250 billion dollars' worth of Chinese
imports, and China imposes tariff of $25 \%$ on 50 billion dollars' worth of imports from the US, and $7.4 \%$ on $\$ 60$ billion worth.


[^0]:    ${ }^{1}$ Items on which tariffs are imposed, and tariff rates per item are based on the following sources. US (34 bil dlrs) :
    https://ustr.gov/sites/default/files/enforcement/301Investigations/List\%201.pdf US (16 bil dlrs)
    https://ustr.gov/sites/default/files/enforcement/301Investigations/List\%202.pdf
    US (200 bil dlrs)
    https://ustr.gov/sites/default/files/enforcement/301Investigations/Tariff\%20List_09.17.18.pdf China (34 bil dlrs)
    http://images.mofcom.gov.cn/www/201806/20180616015345014.pdf
    China (16 bil dlrs)
    http://images.mofcom.gov.cn/www/201806/20180616015405568.pdf
    China (60 bil dlrs)
    http://gss.mof.gov.cn/zhengwuxinxi/zhengcefabu/201808/t20180803_2980950.html
    http://gss.mof.gov.cn/zhengwuxinxi/zhengcefabu/201809/t20180918_3022592.html

[^1]:    ${ }^{2}$ For details see the DIR Report dated 26 June 2018, Japan's Economy: Monthly Outlook (June 2018): 1. US-China tariff battle moves into extra innings: how will Japan's economy and corporate earnings fare?, 2. Underestimation rhetoric surrounding effects of consumption tax hike: arguments summarized, 3. Revised economic outlook: $+1.0 \%$ in FY2018, $+0.8 \%$ in FY2019, by Shunsuke Kobayashi and Yota Hirono.

