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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**

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Summary

- The US-China tariff battle has moved into extra innings. Especially notable is the fact that US President Trump has announced plans to put additional tariffs in place, and uncertainty remains regarding what may take place in the future. However, as of this point, the only policy measures which have actually been decided upon are as follows: (1) US tariff hike on iron & steel and aluminum, (2) US tariff hike on 50 billion dollars' worth of products imported from China, (3) China to place retaliatory tariffs equivalent to the above amount, and (4) China to cut tariffs on some items including automobiles, etc.

- In this report, we thoroughly examine the impact of trade policies which are currently planned on Japan's economy and on Japanese corporate earnings. Largely speaking, we expect negative impacts from (1), (2), and (3) above, but a positive result from number (4), which should generally offset the negative effects. Rather than the US-China situation, the moment of truth for Japanese corporations will be the upcoming trade negotiations on automobiles. If tariffs are raised on automobiles as President Trump has stated, the cost of tariffs are expected to literally rise an order of magnitude above two trillion yen.

- Also in this report, we summarize arguments regarding the effects of the planned consumption tax hike in October 2019, along with an estimate of those effects. The consumption tax hike will effect consumption and the real economy through the substitution effect and the income effect. Arguments regarding the income effect turned out to be insufficient after the last consumption tax hike. Meanwhile, in estimating the income effect, we have found it most appropriate to make use of the average propensity to consume, rather than the marginal propensity to consume. We estimate that in association with the next consumption tax hike, the degree of 3.2 trillion yen in a permanent consumption reduction effect will be brought on. We have found that many estimates one sees floating around mistakenly use the concept of marginal propensity to consume, which can lead to the underestimating of the effects of the consumption tax hike.

- In light of the 2nd preliminary Jan-Mar 2018 GDP release we have revised our economic growth outlook. We now forecast real GDP growth of +1.0% in comparison with the previous year for FY18 (+1.0% in the previous forecast), and +0.8% in comparison with the previous year for FY19 (+0.8% in the previous forecast). Japan's economy is expected to enter a temporary lull, with the positive factors which came together in FY17 now falling away. From the midterm point of view, the capital stock cycle is maturing in the US, Japan, and China, while in addition, a negative income effect is expected when the planned increase in the consumption tax comes along in October 2019. The outlook for Japan's economy in FY19 is hence a continued slowdown throughout the year.

1. US-China tariff battle moves into extra innings: how will Japan's economy and corporate earnings fare?

US-China trade policy dispute runs into overtime

The governments of both countries issued a joint statement on May 19 regarding the reduction of trade deficit which the US has with China. The result appeared to be that they would forgo tariffs for the time being. It is indeed a fact that China has racked up a huge positive trade balance with the US (Chart 1). Whenever the problem surfaced, China would make a verbal promise to increase imports from the US or relax restrictions on foreign investment, thereby avoiding further pressure from the US at least for the time being. This approach raised few suspicions. However, this time around, after China issued the joint statement it actually did announce that it would cut tariffs in a concrete way (details on this later in this chapter). Hence it would be difficult to claim that progress was not being made at all. Unusual enough for China, one can say that it actually did make a few concessions.

However, US President Trump suddenly announced on May 29 that tariffs would be imposed on China as of June 15, thereby withdrawing all reservations regarding the imposition of tariffs. (More detail on this later.) In response, China announced retaliatory tariffs in regard to which President Trump announced additional tariffs on 200 billion dollars' worth of Chinese products.

The reason President Trump held onto his hardline stance despite China's concessions is known only to him. However, it is possible to deduce three reasons for this decision. First of all there are the upcoming midterm elections in November, and Trump feels the need to make a showing of some success in the area of trade policy before that time in order to fulfill a campaign promise, the last one left undone. There is most likely little doubt regarding this argument. However, some members of the Republican Party are voicing concern regarding the recent measures. Hence we can't say for sure that these actions will bring positive results in the midterm elections.

US Trade Balance by Major Trading Partner and by Item (data from 2017) **Chart 1**

(Unit: Mil Dlrs)	Sum Total	China	Japan	Eurozone	Canada	Mexico
Total	-796,172	-375,228	-68,848	-132,558	-17,504	-71,057
Beverages, Spirits and Vinegar	-15,307	81	153	-10,052	1,517	-4,590
Mineral Fuel/Oil/Bitumen Substances/Mineral Wax	-57,015	7,949	4,951	6,221	-54,336	15,032
Pharmaceutical Products	-50,846	994	1,413	-30,590	-153	853
Rubber and Articles Thereof	-13,142	-2,770	-1,772	-1,331	1,341	992
Leather Articles/Saddlery/Handbags/ Gut Articles	-11,423	-7,272	117	-1,900	539	-5
Wood and Articles of Wood, Wood Charcoal	-10,260	-739	690	-676	-8,314	427
Apparel Articles and Accessories/Knit Or Crochet	-112,725	-49,304	171	-3,633	2,099	-3,723
Iron and Steel	-11,399	434	-1,136	-2,909	-296	2,830
Articles of Iron or Steel	-18,645	-10,776	-1,264	-3,066	2,178	736
Aluminum and Articles Thereof	-11,091	-1,855	29	-969	-5,393	2,819
Nuclear Reactors, Boilers, Machinery & Parts	-140,115	-96,762	-23,250	-31,795	20,796	-11,119
Electric Machinery/Sound Equipment/Tv Equipment	-177,154	-134,864	-12,316	-3,346	17,680	-20,652
Vehicles [ex Railway/Tramway], Parts, Etc	-159,838	-1,477	-49,265	-28,758	-4,534	-62,500
Aircraft, Spacecraft, and Parts Thereof	100,407	15,758	2,544	16,522	2,952	2,641
Furniture/Bedding/Lamps/ Prefabricated Buildings	-51,935	-31,639	-15	-2,589	240	-8,592
Toys/Games/Sport Equipment/Parts & Accessories	-24,414	-25,333	87	60	1,805	-254

Source: Haver Analytics; compiled by DIR.

The second possible reason is that the very fact of China's concessions may have made President Trump feel all the more like hitting back even harder. The decrease in tariffs mentioned above has already been announced by the Chinese government and is to be implemented on July 1. To turn right around after confirming this decision and increase the pressure further so as to strengthen his position and obtain an even more advantageous deal can perhaps be said to be the Trump negotiating style. And perhaps one could also say that the Chinese government should have been more prepared.

However, aside from the fact of this kind of short-sighted political and economic situation, we cannot ignore the fact that there is a long-term structural factor behind the Trump administration's trade policy. Amongst the hardliners on trade policy in the White House are those with an acute awareness not only of economic rationality, but questions of national security and defense. China is an emerging power which is challenging US hegemony, and has been steadily increasing its strength and prestige both economically and militarily. Meanwhile, President Xi Jinping has recently strengthened his position through a revision to the constitution, which could ensure that his administration keeps hold of the reins of power in China for the long-term. Because of these developments there are not a few White House insiders whose approach to foreign relations is based on the philosophy of using trade policy as a means of protecting US interests with the final goal being the upholding of American hegemony.

As long as trade policy is designed to serve this other long-term goal, there is always the possibility that strict tariff measures will be taken in regard to major products with strategic value in China's industrial development. The focus is therefore expected to remain on these items, which include those areas leading China's economic growth, such as machinery and parts, and electrical machinery. These are the items which are prioritized in China's long-term vision, "Made in China 2025." The legal basis of US tariff measures taken against these items is Section 301 of the 1974 Trade Act, which makes it fairly easy to put tariffs in place as a sanction against China's technology transfer policy.

Revised estimate of impact on Japan's economy and corporations

Uncertainty remains as to how this situation will develop in the future. In this report we thoroughly examine the impact of trade policies which are currently planned or which may be implemented on Japan's economy and on Japanese corporate earnings.

It will be primarily American importers who will have to carry this burden, and assuming that price pass-through to the final consumer is carried out, the burden will ultimately fall on corporations and households, and will hence become a drag on the US economy. And if US domestic demand declines as a result of rising prices, Japanese corporations will take a beating in the form of a decline in export volume. On the other hand, if the Japanese iron & steel and fabricated metals industries are forced to absorb price cuts associated with tariff measures, a noticeable amount of downward pressure on Japanese corporate earnings will occur. In light of these issues, the following section takes a look at what the total increase in tariff costs associated with these policies may be.

Tariffs on iron & steel, and aluminum to increase costs by around 100 billion yen

First of all, the impact of tariffs recently implemented on iron & steel and aluminum, and which were directed against Japan as well, is expected to be limited.[1] Japan exports a total of 213.4 billion yen per year in iron & steel to the US. The amount of aluminum and aluminum alloys exported is 25 billion yen (both of these numbers are from 2017 trade statistics). Tariffs of 25% and 10% respectively are placed on top of these amounts, making the total increase in tax approximately 53.3 billion yen and 2.5 billion yen respectively

Using the METI Survey on Overseas Business Activities, we can confirm sales of overseas subsidiaries of Japanese corporations. Then we look at sales from these third party countries to North America. The proportion of these sales accounted for by iron & steel is 296.9 billion yen, with non-ferrous metals at 47.6 billion yen, and fabricated metal products at 42.2 billion yen (data from FY2016). Of these amounts the leading figure is accounted for by items shipped from the EU, which like Japan, is also the subject of tariff hikes (the amounts are iron & steel 223.4 billion yen, non-ferrous metals 2.9 billion yen, and fabricated metal products 1.6 billion yen). Considering that these items are also the subject of tariff hikes, added to direct exports mentioned above, costs are expected to increase by around 100 billion yen.

Third-Country Sales of Iron & Steel and Fabricated Metal Products from Overseas Japanese Corporations to North America (data from FY2016) **Chart 2**

(Unit: Y100 Mil)	Total	North America ⇒ North America	Central America ⇒ North America	Asia ⇒ North America	EU ⇒ North America	Middle East ⇒ North America	Africa ⇒ North America
Iron & Steel	2,969	91	175	420	2,234	35	13
Non-Ferrous Metals	476	188	107	151	29	-	-
Fabricated Metals	422	82	23	301	16	-	-

Source: Ministry of Economy, Trade, and Industry; compiled by DIR.

US-China retaliatory tariffs to lead to 33.4 billion yen in increased costs

Next we consider the impact of tariff hikes which have already been decided upon between the US and China. Checking the list of items on which the US plans on placing tariffs, the 1,102 items comes to the equivalent of 50 billion dollars in tariff measures against China. Of these, 818 items will have additional tariffs of 25% imposed starting on July 6, or the equivalent of 34 billion dollars in tariff measures against China. The remaining items are being considered for further investigation or public comment in the future.

In response to the US announcement of these tariffs, the Chinese government immediately announced retaliatory tariffs. These will also be effected by additional tariffs starting on July 6, the equivalent of 34 billion dollars in American products imported by China. Meanwhile, another 16 billion dollars in tariffs against US imports is being considered, effecting items centering on agricultural products and foods.

[1] For details see the Daiwa Research Report dated 20 April 2018, *Japan's Economy: Monthly Outlook (Apr 2018): How will Japan's economy and corporate performance fare in US-China tariff dispute? Root cause of turmoil in the financial markets*, by Shunsuke Kobayashi and Yota Hirono.

The impact of these measures on Japanese corporations is also expected to be limited. As is shown in Chart 3, subsidiaries of Japanese corporations export 47.2 billion yen in electrical machinery from China to North America, as well as 52.9 billion yen in information communications equipment. Subsidiaries of Japanese corporations also export products from the US to Asia. The latter includes 33.3 billion yen in foodstuffs, and 300 million yen in agriculture, forestry, and fishery products. (All of the above figures are from FY2016.)[2]

If tariffs of 25% were imposed on these items, assuming associated Japanese corporations take on a portion of the burden, the impact is fairly small,[3] totaling a maximum of approximately 11.8 billion yen, 13.2 billion yen, 8.3 billion yen, and 100 million yen respectively. Meanwhile, if the US imposes 200 billion dollars in addition tariffs on Chinese imports, items affected would likely be limited to machinery and parts, and electrical machinery, in which case the direct impact on Japanese corporations would be limited.

US-China Trade Structure of Overseas Subsidiaries of Japanese Corporations (Left); Effect of US Corporate Tax Cut on Amount of Tax Paid by Subsidiaries of Japanese Corporations (Right) Chart 3

(Unit: Ybil)	China->North America	US->Asia	Current Profit	Net Profit	Corporate Tax	Effective Tax Rate	Estimated Amount of Tax Cut
Total	5,822	14,026	26,182	20,350	7,223	35%	3,418
Manufacturing Industry	3,275	4,760	12,318	9,520	3,007	32%	1,451
Beverage Products	38	333	x	889	180	20%	155
Textiles	77	0	48	45	12	27%	7
Wood, Paper & Pulp	3	51	-105	-149	12	0%	-
Chemicals	58	857	x	4,257	409	10%	316
Petroleum & Coal Products	-	14	44	28	12	44%	6
Ceramics, Stone & Clay Products	36	18	x	x	x	-	18
Iron & Steel	75	-	363	286	134	47%	51
Non-Ferrous Metals	66	76	x	x	x	-	13
Fabricated Metals	183	17	x	x	37	-	22
General Machinery	222	71	390	269	118	44%	55
Production Machinery	59	239	402	480	x	26%	56
Office Oriented Machinery	86	435	340	257	x	-	48
Electrical Machinery	472	197	115	-66	x	-	16
Information & Communications Equipment	529	411	x	x	x	-	156
Transport Equipment	1,112	796	3,463	2,520	1,135	45%	485
Other Manufacturing	261	1,244	x	x	x	-	47
Non-Manufacturing Industry	2,548	9,266	13,864	10,830	4,216	39%	1,966
Agriculture, Forestry and Fisheries	1	3	x	x	x	-	2
Mining	-	-	-110	-236	x	-	-
Construction	-	1	99	58	x	53%	14
Information Communication	3	402	65	45	47	103%	9
Transportation & Postal Activities	19	37	x	x	x	26%	49
Wholesale Trade	2,505	8,766	5,972	4,687	2,349	50%	836
Retail Trade	4	25	630	477	57	12%	88
Services	16	30	4,136	3,739	583	16%	579
Other Non-Manufacturing	0	3	2,842	1,920	x	x	398

Source: Produced by DIR using METI statistics. Estimated values reflect FY2016 results. In some cases, figures from previous fiscal year are used.

[2] It should be noted that in cases where a business consigns the export of its products to a distribution and trading firm, the tariffs are not added to its statistics.

[3] As is shown on the right side of Chart 3, US subsidiaries of Japanese companies will also receive the benefit of US corporate tax cuts to the tune of around 341.8 billion yen, which significantly exceeds the negative effect of tariffs.

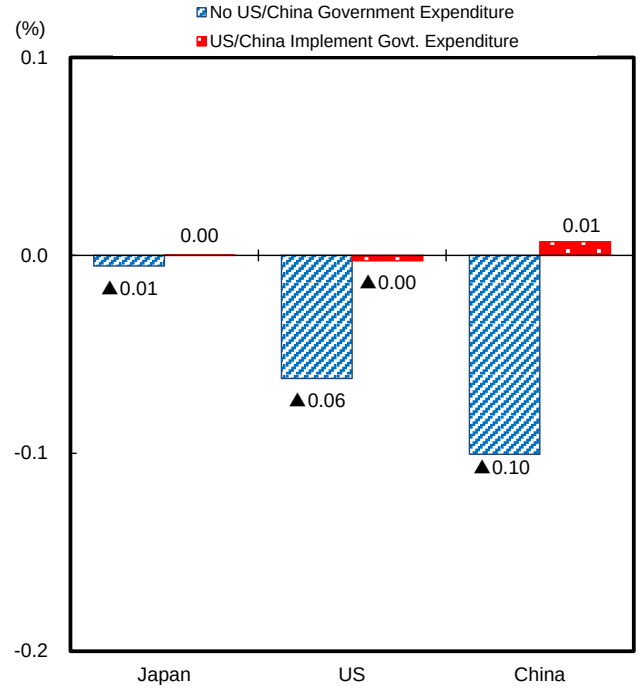
Effect of US-China tariff dispute on GDP: China -0.1%, US -0.06%, Japan -0.01%

In addition to estimating the impact of the tariff dispute on corporate earnings, we also used the DIR macro model to estimate the impact on the Japanese, US, and Chinese economies as well. Results can be found in Chart 4, with more detail in Chart 5. We estimated the impact of the US placing a 25% tariff on goods imported from China totaling 50 billion dollars, with retaliatory tariffs of 25% placed on US goods imported by China totaling 50 billion dollars. To give a simple summary of the model, first we assume that the increase in the tariff rate causes international competitiveness to fluctuate somewhat, and as a result, imports and exports are also caused to fluctuate. At the same time, real disposable income declines due to the rise in import prices bringing downward pressure on personal consumption. As a result of the downturn in domestic production, capex is also restrained. With these as our basic assumptions, we look at two cases – first where growth in government revenue due to the increase in tariffs does not lead to a resolution of the economic problems through increased government expenditure, and a second case where it does.

. As is clear from the results of our estimates, the effects of the US-China tariff dispute on the real economy are not necessarily large. Even in the case where growth in government revenue due to the increase in tariffs does not lead to a resolution of the economic problems through increased government expenditure, downward pressure on GDP would be only -0.1% in China, -0.06% in the US, and -0.01% in Japan. If the government helps out by increasing expenditure the effects will be even smaller, with China at +0.01%, US at -0.00%, and Japan at 0.00%. Of course, we are only looking at the immediate effects on the Japanese, US, and Chinese economies here. There is still a possibility that there could be long-term effects, or that there could be a multiplier effect that becomes larger than our estimates suggest. However, if we consider the fact that while US-China trade could stagnate, Japan could increase substitution exports, thereby gaining the benefits of playing both ends of the game. We cannot ignore the possibility that the negative long-term multiplier effect could be offset by positives such as the substitution effect.

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

Chart 4



Source: Estimates produced using the DIR macro model and the Cabinet Office's short-term macro model.
Note: All figures are real. Rate of deviation from actual value.

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	**▲0.10**	▲0.25	▲0.04	0.00	▲0.12	▲0.22
	Contribution Rate		▲0.10	▲0.02	0.00	▲0.02	0.04
US/China Implement Govt. Expenditure	Deviation Rate	**0.01**	▲0.25	0.00	0.69	▲0.08	▲0.13
	Contribution Rate		▲0.10	0.00	0.10	▲0.02	0.02
Effects on US Economy		**Real GDP**	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	**▲0.06**	▲0.10	▲0.08	0.00	▲0.07	▲0.19
	Contribution Rate		▲0.07	▲0.01	0.00	▲0.01	0.03
US/China Implement Govt. Expenditure	Deviation Rate	**▲0.00**	▲0.10	▲0.00	0.41	▲0.05	▲0.03
	Contribution Rate		▲0.07	▲0.00	0.07	▲0.01	0.00
Effects on Japan's Economy		**Real GDP**	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	**▲0.01**	▲0.00	▲0.00	▲0.04	▲0.06	▲0.05
	Contribution Rate		▲0.00	▲0.00	▲0.01	▲0.01	0.01
US/China Implement Govt. Expenditure	Deviation Rate	**0.00**	0.00	0.00	0.00	0.00	0.00
	Contribution Rate		0.00	0.00	0.00	0.00	▲0.00

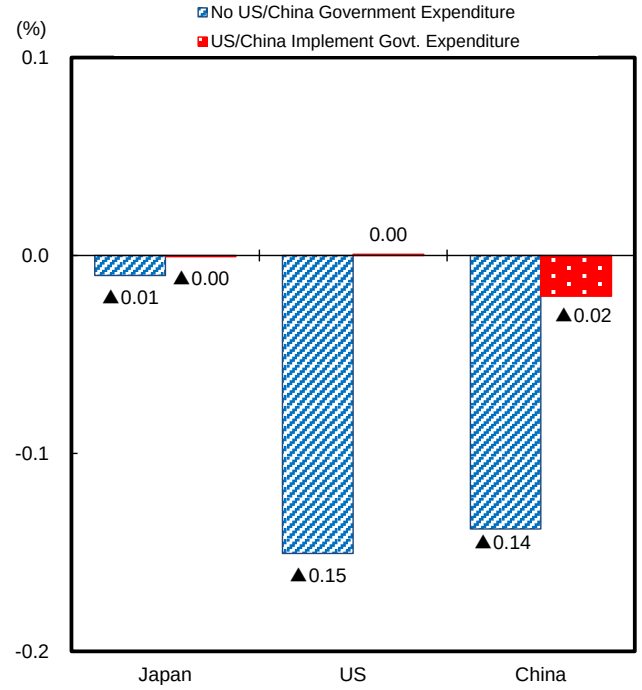
Source: Estimates produced using the DIR macro model and the Cabinet Office's short-term macro model.
Notes: 1) Estimated effects assuming US imposes tariff of 25% on 50 billion dollars' worth of Chinese imports, and China imposes tariff of 25% on 50 billion dollars' worth of imports from the US.
2) All figures are real. Rate of deviation from actual value (%) and rate of contribution to GDP (%pt).

For reference purposes, Chart 6 shows our estimate of the impact of the US imposing tariffs on 250 billion dollars' worth of products imported from China (25% tariff on 50 billion dollars, and 10% tariff on 200 billion dollars' worth of goods), while at the same time China imposes a tariff of 25% on 50 billion dollars' worth of American products imported to China. Chart 7 is the detailed version.

Based on these assumptions, the negative effect on GDP assuming that growth in government revenue due to the increase in tariffs does not lead to increased government expenditure would be -0.14% in China, -0.15% in the US, and -0.01% in Japan. If growth in government revenue due to the increase in tariffs does lead to increased government expenditure, the effect on GDP would be as follows: -0.02% in China, +0.00% in the US, and -0.00% in Japan. The implications here are the same as in the previous chart, in other words, the effects of the US-China tariff dispute on the real economy are not necessarily large.

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

Chart 6



Source: Estimates produced using the DIR macro model.
Note: All figures are real. Rate of deviation from actual value.

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

Chart 7

Effects on Chinese Economy		Real GDP	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	**▲0.14**	▲0.25	▲0.05	0.00	▲0.30	▲0.25
	Contribution Rate		▲0.10	▲0.02	0.00	▲0.06	0.04
US/China Implement Govt. Expenditure	Deviation Rate	**▲0.02**	▲0.25	▲0.01	0.69	▲0.22	▲0.16
	Contribution Rate		▲0.10	▲0.00	0.10	▲0.04	0.03
Effects on US Economy		**Real GDP**	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	**▲0.15**	▲0.26	▲0.20	0.00	▲0.07	▲0.46
	Contribution Rate		▲0.18	▲0.03	0.00	▲0.01	0.08
US/China Implement Govt. Expenditure	Deviation Rate	**0.00**	▲0.26	0.00	1.08	▲0.05	▲0.04
	Contribution Rate		▲0.18	0.00	0.18	▲0.01	0.01
Effects on Japan's Economy		**Real GDP**	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	**▲0.01**	▲0.00	▲0.00	▲0.07	▲0.11	▲0.10
	Contribution Rate		▲0.00	▲0.00	▲0.01	▲0.02	0.02
US/China Implement Govt. Expenditure	Deviation Rate	**▲0.00**	▲0.00	▲0.00	▲0.00	▲0.01	▲0.01
	Contribution Rate		▲0.00	▲0.00	▲0.00	▲0.00	0.00

Source: Estimates produced using the DIR macro model.
Notes: 1) Estimated effects assuming US imposes tariff of 25% on 50 billion dollars' worth of Chinese imports, plus another 10% on 200 billion dollars' worth of Chinese products, while China imposes tariff of 25% on 50 billion dollars' worth of imports from the US.
2) All figures are real. Rate of deviation from actual value (%) and rate of contribution to GDP (%pt).

China reduces some tariffs, bringing costs down by 127.1 billion yen

On the other hand, the negative effects of tariffs are somewhat balanced by the positive effect of concessions made by China in which it reduced tariffs on some goods.

On May 22 the Chinese government announced that it would reduce tariffs on automobiles and automobile parts effective on July 1. Concretely speaking, the existing tariff on automobiles, originally 20-25%, was reduced to 15%, while the tariff on automobile parts, originally 8-25% depending on the type of product, was reduced to 6% across the board. In addition, on March 31, the Chinese government announced that it would reduce tariffs on 1,449 items including sundries to go into effect on July 1.

Chart 8 shows the items which have been announced along with the extent to which their tariffs have been reduced, as well as the amount in exports of each item to China, and the extent to which, on average tariffs have been reduced. Items affected total 1.9 trillion yen, with the average tariff reduction at -6.6%pt, or in monetary terms -127.1 billion yen.

Summary of Chinese Tariff Cuts, and Effects on Japanese Exports to China **Chart 8**

	Target Items Total (Y100 Mil)	Current Average Tariff Rate (%)	Average Tariff Rate After Reduction (%)	Average Reduction Amount (%pt)	Tariff Reduction Amount (Y100 Mil)
Live animals and animal products (mostly marine products)	329	10.2	7.0	▲3.2	▲10.5
Prepared foods, drinks, alcoholic beverages, vinegar, tobacco, and manufactured tobacco substitutes	207	20.7	8.6	▲12.2	▲25.2
Chemical products (including similar industries)	2,168	7.2	2.3	▲4.8	▲104.6
Medical Products	563	4.4	0.0	▲4.4	▲25.0
Cosmetics	1,129	7.4	1.8	▲5.6	▲63.5
Detergents, cleaners	432	10.1	6.5	▲3.6	▲15.3
Plastic, rubber, and their products	66	10.3	6.6	▲3.7	▲2.4
Leather products and harnesses, travel goods, handbags, etc.	10	12.5	6.9	▲5.5	▲0.6
Paper and paper board, paper pulp, paper and paper board products	103	7.5	5.0	▲2.5	▲2.6
Textile fibers and related products	138	14.8	6.2	▲8.6	▲11.9
Footwear, hats, umbrellas, canes, walking sticks and wips, and their parts	27	17.2	7.4	▲9.8	▲2.7
Ceramic products, glass and glass products	45	12.6	7.0	▲5.6	▲2.5
Natural and cultured pearls, and precious metals	27	29.9	9.4	▲20.5	▲5.5
Base metals and their products	57	14.5	7.0	▲7.5	▲4.2
Machinery, electrical devices, and parts	412	18.4	7.4	▲11.0	▲45.2
Vehicles, aircraft, ships, and transport devices and parts	1	18.2	5.9	▲12.3	▲0.1
Precision instruments, watches, and musical instruments, parts and accessories	208	17.0	9.6	▲7.5	▲15.5
Miscellenious articles	1,786	12.0	5.1	▲6.8	▲122.2
Art works, collectors items, and curiose	1	12.5	3.5	▲9.0	▲0.1
Sundries etc. total	**5,584**	**11.1**	**4.7**	**▲6.4**	**▲355.7**
Motor vehicles	5,556	25.0	15.0	▲10.0	▲555.6
Motor vehicle parts	8,113	10.4	6.0	▲4.4	▲359.9
Automotive meters	**13,669**	**16.4**	**9.7**	**▲6.7**	**▲915.5**
Grand Total	**19,253**	**14.8**	**8.2**	**▲6.6**	**▲1,271.1**

Source: JETRO, Ministry of Finance of the People's Republic of China, Japanese Ministry of Finance; compiled by DIR.
Notes: 1) Larger categories from export item statistics used. Some items are not shown.
2) Calculation based on six-digit HS code. Tariff rate calculated using weighted average of 2017 export amount.

US across-the-board tariffs on automobiles would be devastating, increasing costs by 2.2 trillion yen

Considering the above arguments, we can conclude that the effects of tariff measures expected to be implemented soon on Japan's economy and on Japanese corporate earnings should not be very great. Rather than the US-China situation, the moment of truth for Japanese corporations will be the upcoming trade negotiations on automobiles.

In regard to imports of automobiles and automobile parts, US President Trump ordered an investigation to begin on May 23 based on section 232 of the Trade Expansion Act of 1962. Concrete questions such as tariff rates and items affected will not be made known until after the investigation takes place, but according to some news reports, the current tariff rate of 2.5% on passenger vehicles could be raised to as much as 25%.

Items which could be targeted for additional tariffs and amounts in exports to the US are shown in Chart 9. Passenger vehicles, which until just recently have had a tariff of 2.5%, are shown with an amount of 4.5 trillion yen in the chart, while, automobile parts show an amount of 961.4 billion yen (figures based on 2017 results). Together this comes to a total of 5.5 trillion yen in additional tariffs which could be imposed. If an across-the-board tariff of 25% were to be imposed on these items, total tariffs would increase by 1.2 trillion yen.

Meanwhile, Japan's automobile manufacturers also export large amounts in passenger vehicles from third country locations including Canada and Mexico to the US. If NAFTA is renegotiated, products exported to the US from countries that are a part of that agreement may also be hit with additional tariffs. We performed an estimate of export amounts from third countries based on industry statistics. First of all, (1) sales volume of Japanese cars in the domestic US is pretty much covered by production carried out in the domestic US, so we should be able to subtract that amount ((2) Japanese cars produced in the US – (3) Japanese cars exported from the domestic US). Next, (4) if we subtract the number of units exported directly from Japan, the remaining sales volume in the domestic US is the number of units exported from third countries (Chart 10). Then, by multiplying the unit price of passenger vehicles exported to the US from Japan with the volume of exports via third countries obtained from this estimate, we come up with the figure for amount in exports from third countries.

Estimated exports from third countries come to 4.0 trillion yen. This is a figure comparable with the amount exported directly from Japan, which is 4.5 trillion yen. If we assume that said third country is a member of NAFTA, that would mean that the tariff rate would be increased from the current 0% to 25%. That would bring us 1.0 trillion yen. Combined with the increase in tariffs on direct exports from Japan, this comes to 2.0 trillion yen (or over 2.2 trillion yen when we include parts). The impact would literally be several orders of magnitude above what we currently experience. Hence the upcoming trade negotiations on automobiles will truly be a moment of truth for Japanese corporations.

Summary of Tariff Hike being Considered by the US, and Export Amount to the US **Chart 9**

	Tariff Rate	Target Item Total (Y100 Mil)	Amount of Tariff Hike (Y100 Mil)
Passenger Vehicles	2.5% ⇒ 25%?	44,792	10,078
Light Trucks	25% ⇒ 25%?	639	0
Automotive Meters		45,431	10,078
Automobile Parts	2.5% ⇒ 25%?	9,614	2,163
Grand Total		**55,045**	**12,241**

Source: Various news reports, Ministry of Finance, US Dept. of Commerce, Census Bureau; compiled by DIR.
Notes: 1) Calculation based on six-digit HS code. Target items total based on 2017 results.
2) Amount of tariff hike assumes a tariff rate increase of 25%.

Japanese Manufacturers Exports to the US (Calculated Using 2017 Results) **Chart 10**

		Volume (Units)	Amount (Y100 Mil)	Amount of Tariff Hike (Y100 Mil)
①	Japanese cars sold in domestic US	6,641,216		
②	Japanese cars produced in domestic US	3,773,993		
③	Japanese cars exported from factories in domestic US	423,415		
④	Direct exports from Japan (excluding parts)	1,743,695	45,431	10,078
①-[②-③]-④=⑤	Exports from third countries	1,546,943	40,305	10,076
④+⑤	**Total automobile exports to the US by Japanese manufacturers**	**3,290,638**	**85,736**	**20,154**

Source: Automotive News, Haver Analytics, JAMA, Ministry of Finance; compiled by DIR.
Notes: 1) Volume and amount based on 2017 results. However, export amount from third countries estimated by multiplying unit price of direct exports with number of units.
2) Amount of tariff hike assumes (4): 2.5% ⇒ 25% and (5): 0% ⇒ 25%.

2. Underestimation rhetoric surrounding effects of consumption tax hike: arguments summarized

Income effect overlooked during consumption tax hike of 2014

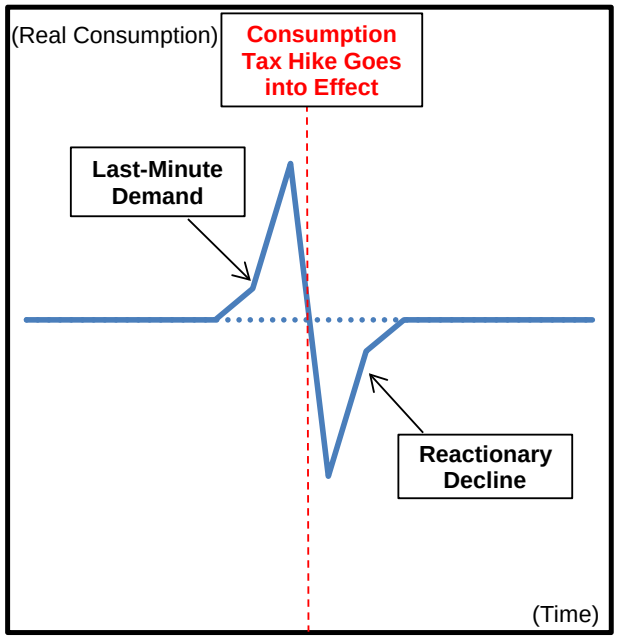
In this section, we take a look at the issues regarding the effects of the upcoming consumption tax hike in October 2019.

First of all, the increase in the consumption tax influences consumption via two effects – the substitution effect and the income effect. The substitution effect can be seen in the phenomenon of last-minute demand before the consumption tax hike and then the reaction (or recoil) that follows. Last-minute demand and reactionary decline are approximately equal to each other. Hence, on average a major effect has not occurred. Rather, it is the income effect which has more substantial importance. It is the effect of suppressing consumption almost indefinitely because of the decline in real income reflecting the amount that prices have risen as a result of the increase in consumption tax.

During the last consumption tax hike in 2014, the discussion focused on the substitution effect, and the question of the income effect was not discussed sufficiently. Then when consumption plunged immediately after the tax hike, it was deemed to be "within expectations" by the majority. However, these arguments began to retreat when the decline exceeded the reaction to last-minute demand, and when observers began to notice how slow the recovery was.

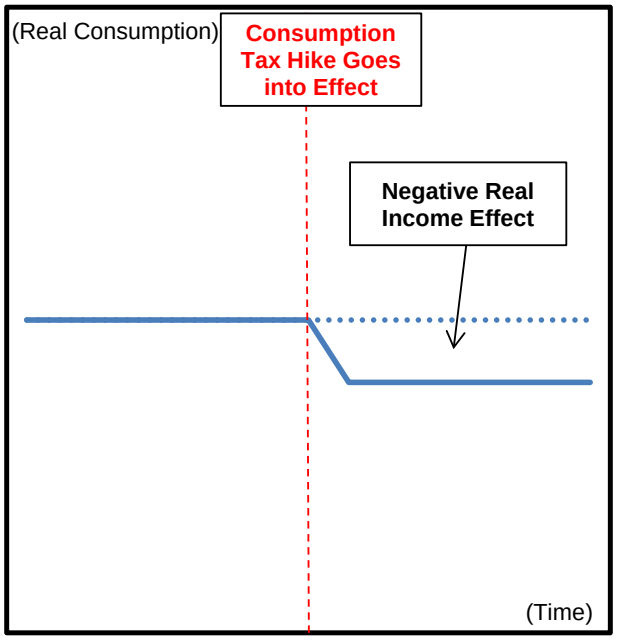
Why was it that the income effect somehow fell "outside expectations?" It doesn't seem possible that it would have gone unnoticed by the well-informed, thinking people of the world. The key to the miscalculation may have been the overly optimistic outlook for the savings rate. When the consumer price index shifts to a higher level, assuming that other factors remain constant, households have two methods by which to deal with higher prices. One is to decrease real consumption, while the other is to draw on savings (thereby reducing the savings rate). Of course, most households handle the decline in real income by doing a little of both. So the most important thing determining the rate of savings is the household's wage outlook.

Substitution Effect Associated with Increase in Consumption Tax
Chart 11



Source: Compiled by DIR.

Income Effect Associated with Increase in Consumption Tax
Chart 12



Source: Compiled by DIR.

If a household can expect either a recovery or an increase in wages in the future (assuming the decline in real income due to the upward shift in the consumer price index is only temporary), it can reduce its savings rate and maintain its previous level of consumption. The result would be to reduce some of the negative effects on the economy overall, and there would be at least a possibility that one might be able to remain hopeful that in the future real wages will recover or increase, allowing one to attain a certain level of self-fulfillment. Perhaps the government and the BOJ were also hopeful at the time, or expected that some verbal intervention might have some effect, placing their bets on the ideal outcome.

However, the reality was different, and households reflected the decline in real income in the form of a decline in real consumption.[4] This is of course completely reasonable. There is nothing to support the expectation that wages will rise because the consumption tax has increased.[5] Much serious thought has been given to raising wages through government guidance, but in actual fact, the growth rate in wages has been quite gradual.[6]

Rhetoric of underestimation repeated in a different form: average propensity to consume vs. marginal propensity to consume

Various estimates looking forward to the next consumption tax hike in 2019 have begun to appear, and at this time, there appears to be fewer overly optimistic outlooks ignoring the question of the income effect as there were last time around. However, new tools have been scrupulously prepared for use in the rhetoric of underestimation. Playing an especially important role here is the use of the concepts of average propensity to consume and marginal propensity to consume depending on situation. Marginal propensity to consume is the index which measures the degree to which consumption is influenced by a temporary increase or decrease in real income. On the other hand, average propensity to consume gives us a sense of the increase or decrease in consumption when there has been a permanent increase or decrease in real income. Looking at Japan overall, marginal propensity to consume is estimated at around 20-50% (the width of the range depends on the method of estimation), while the average propensity to consume is at 98% (based on FY2016 SNA data).

So which of these indices should we use in discussing the effects of increasing the consumption tax, a policy that invariably leads to a decline in real income? It goes without saying that this would logically be the average propensity to consume. However, it just so happens that the tendency of most people publishing estimates, whichever public or private sector they are associated with, is to use the marginal propensity to consume. This has led to the "mass production" of strange and mysterious estimates, such as the claim that "even if tax is increased by 3 trillion yen consumption will decline by only 1 trillion yen." If this estimate is accurate, we would have to assume that the remaining 2 trillion yen will be handled by households gradually drawing on their savings on a yearly basis. Would households fail to reconsider their spending habits even in a situation where this becomes necessary? From a common sense point of view this is highly open to question.[7]

[4] It is also reasonable to assume that price hikes were expected long before the consumption tax hike was actually implemented, and that many practical-minded households therefore would have begun budgeting early on, leaving the possibility that the suppression of real consumption may have begun before the tax hike went into effect in April 2014.

[5] However, the increase in tax does improve the government's ability to continue paying benefits, so if we include the effect of providing support for lifelong income in the broader sense of the term in our sense of what makes up household finances, the decline in real consumption is perhaps offset somewhat, or at least the possibility of this effect is not completely absent.

[6] For further detail see Daiwa Research report dated March 23, 2018, *Japan's Economy: Monthly Outlook (Mar 2018): Will Spring Labor Offensive bring wage hikes, thus leading to growth in consumption?*, by Shunsuke Kobayashi.

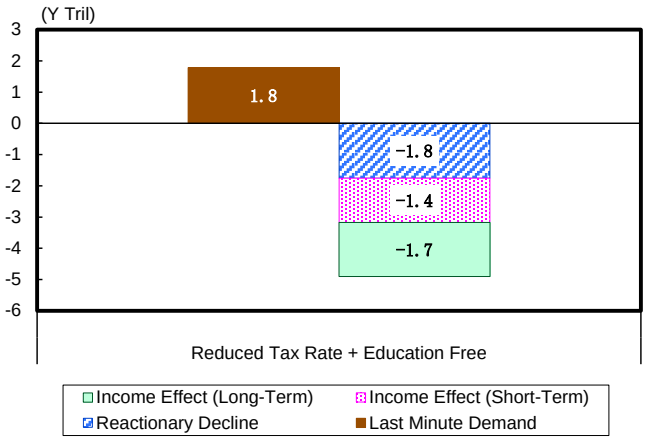
[7] Just to relieve doubts I feel it is important to mention here that this is not an argument against implementing a consumption tax hike altogether. The need to restore fiscal health is a life or death situation for Japan at this time, and so this is a very important policy question. Raising the consumption tax is a realistic policy tool in handling the fiscal issue. The problem simply arises when incorrect information is made public in the process. Producing rhetoric whose purpose is

Using the DIR macro model to estimate effects

Keeping the above arguments in mind, we now consider the effects of the planned October 2019 consumption tax hike on real personal consumption. We performed our estimates using the DIR macro model, and the results are shown in Charts 13 &14. The macro model makes use of a consumption function, estimated from consumption trends seen during past instances of increases in the consumption tax, including the tax hike of April 2014.

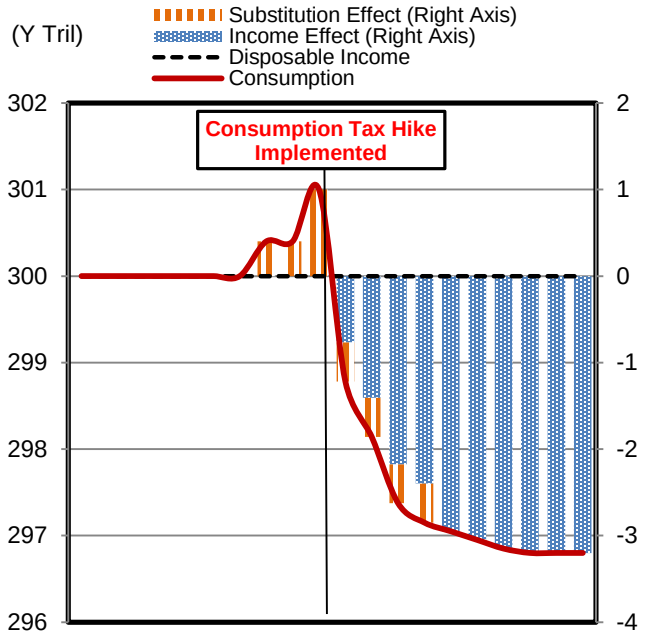
Looking at the results of the estimate, we can see that the effects vary greatly depending on the assumptions used. As of this point the case with the highest probability is "reduced tax rate + education free" with a substitution effect of ±1.8 trillion yen seen. The most important figure in terms of the income effect is -3.2 trillion yen. Of course, the ratchet effect is also operating at the same time, hence households do not immediately reflect the negative real income effect in the consumption figures. The negative effect generated immediately after the tax hike is around -1.4 trillion yen. This means that the FY2019 consumption suppression effect will not appear at full strength, but at the same time, the effect of suppressing consumption is expected to remain at least somewhat of a drag on the economy well into FY2020 or later.

Effects of Consumption Tax Hike
Chart 13



Source: Cabinet Office; compiled by DIR.
Notes: 1) The income effect as estimated here reflects the short-term effects based on marginal propensity to consume. It is possible that a negative income effect will occur which in the long-term is equivalent to tax burden x average propensity to consume - income effect (short-term). For this reason the same effect was used. Meanwhile, the long-term income effect is expressed in real terms making use of the predicted value of prices as of the point when the tax hike occurs (2019Q4).
2) Last-minute demand is generated in 2019 Q1-Q3, and reactionary decline is assumed to be during 2019 Q4-2020 Q3.
3) Preschool education is completely free for ages 3-5, but for ages 0-2 it may be limited to households that exempt from residence taxes. Higher education may also be free for households exempt from residence taxes. For amounts, we referred to the Bank of Japan report "Outlook for Economic Activity and Prices, April 2018."
4) These estimates are based on certain assumptions, and figures should be taken with a certain grain of salt.

Effects of Consumption Tax Hike (Time Series)
Chart 14



Source: Compiled by DIR.

to underestimate the effects of an increase in consumption tax is not a constructive way of building arguments for a policy. Doing so only loses the trust of citizens, which would only make the goal of fiscal health a more distant one.

3. Revised economic outlook: +1.0% in FY2018, +0.8% in FY2019

In light of the 2nd preliminary Jan-Mar 2018 GDP release we have revised our economic growth outlook. We now forecast real GDP growth of +1.0% in comparison with the previous year for FY18 (+1.0% in the previous forecast), and +0.8% in comparison with the previous year for FY19 (+0.8% in the previous forecast). The outlook remains for the most part the same as on the previous month's report[8].

Japan's economy is expected to enter a temporary lull, with the positive factors which came together in FY17 now falling away. From the midterm point of view, the capital stock cycle is maturing in the US, Japan, and China, while in addition, a negative income effect is expected when the planned increase in the consumption tax comes along in October 2019. The outlook for Japan's economy in FY19 is hence a continued slowdown throughout the year.

In addition to slowdown in exports, major domestic demand components fall into decline

Looking at individual demand components based on the results of the 2nd preliminary Jan-Mar 2018 GDP release shows private sector final consumption expenditure suffering a decline for the first time in two quarters by -0.1% q/q. As for trends in goods and services, performance was generally weak, with durable goods down by -0.9% q/q, semi-durables -1.8%, and non-durables -0.3%, while services grew by +0.2%. Looking back on the consumption environment during the Jan-Mar 2018 period, consumer confidence was maintained at a favorable level backed by improvements in the employment and income environments, but factors bringing downward pressure on consumption were also present, including the increase in prices of fresh foods due to damage incurred from typhoons last fall, and heavy snowfall in certain regions in January and February this year. Meanwhile, the replacement cycle centering on passenger vehicles vanished after the end of last year. All of these factors contributed to consumption moving into the negative numbers.

Housing investment declined for the third consecutive quarter at -1.8% q/q. The positive effects of strategies in dealing with inheritance tax are disappearing, and rising prices have begun to put a damper on demand. Meanwhile, housing inventory continues to accumulate.

Capital expenditure grew for the sixth consecutive quarter at +0.3% q/q, but the growth rate is slowing. From a short-term point of view, the slowing of the growth rate can be attributed to stagnating production activity accompanying the decline in exports. Another factor acting as an undercurrent is the maturation of the capital stock cycle and the limits of supply of capital goods. As for the former, capital stock went into a long-term accumulation phase in FY2010, and the need to accumulate more is now weakening. As for the latter, this factor demonstrates that demand for capital expenditure is nearing the limits of supply as can be seen in the balance of machinery orders which continue to accumulate at an unprecedented rate. Looking at these factors comprehensively, it indicates that the growth rate in quantitative capital expenditure (in real terms) will likely remain at a more moderate rate for the time being.

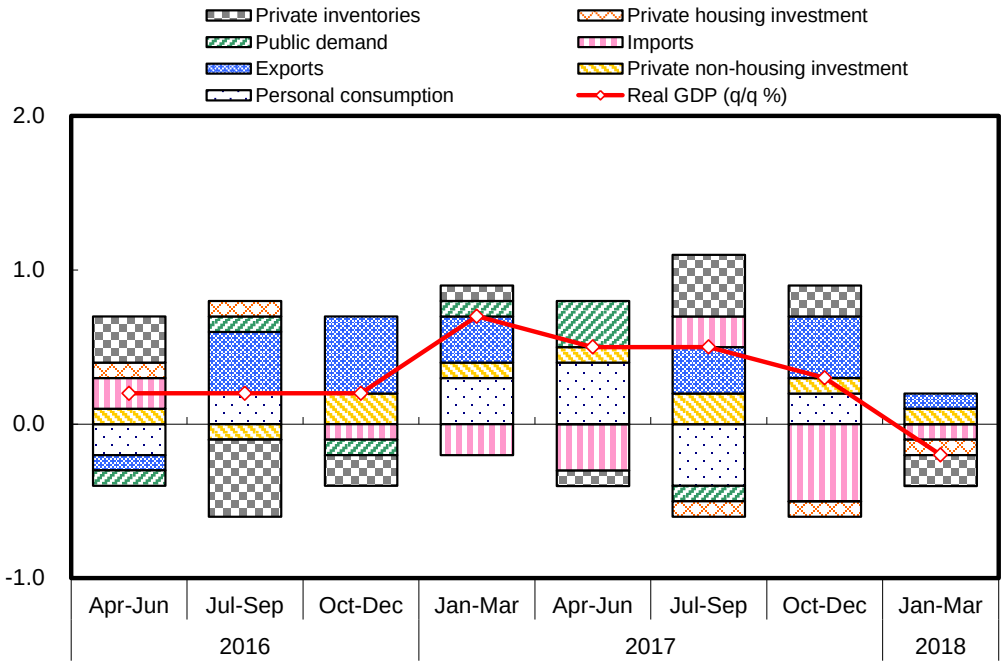
Private sector inventory recorded a decline in its contribution to GDP growth for the first time in three quarters at -0.2%pt. The breakdown is material & supplies inventory -0.2%pt, work in progress inventory +0.0%pt, finished goods -0.0%pt, and distribution inventory +0.1%pt.

[8] For details see the Daiwa Research Report dated 25 May 2018, *Japan's Economy: Monthly Outlook (May 2018): Japan's economy to enter a temporary lull; our estimates of the effects of the rising price of crude oil on Japan's economy and corporate earnings*, by Shunsuke Kobayashi and Yota Hirono.

Public investment pretty much marked time at -0.1% q/q. The balance of orders maintained a high level, but with the FY2016 supplementary budget carried out mostly during the Apr-Jun period, public investment has been marking time since the Jul-Sep period of 2017.

Exports grew for the third consecutive quarter at +0.6% q/q, but has slowed down since the Oct-Dec period of last year. According to trade statistics for the 2018 Jan-Mar period, exports to the US recovered due to the tax cut there, while exports to Asia, centering on China, and the EU declined. As for exports to China, electrical machinery, including electronic parts, which had been maintaining favorable performance until now, were weak.

Changes in Real GDP and Rate of Contribution by Demand Component (Seasonally Adjusted, y/y) **Chart 15**



Source: Cabinet Office; compiled by DIR.

2018 Jan-Mar Period Real GDP (2nd Preliminary Results) **Chart 16**

		2017				2018	
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	
						First	Second
Real GDP	Q/q %	0.7	0.5	0.5	0.3	-0.2	-0.2
Annualized	Q/q %	2.7	2.1	2.0	1.0	-0.6	-0.6
Personal consumption	Q/q %	0.6	0.7	-0.7	0.3	-0.0	-0.1
Private housing investment	Q/q %	1.1	0.9	-1.6	-2.7	-2.1	-1.8
Private non-housing investment	Q/q %	0.4	0.9	1.0	0.7	-0.1	0.3
Change in private inventories (contribution to real GDP growth)	Q/q % pts	0.1	-0.1	0.4	0.2	-0.1	-0.2
Government consumption	Q/q %	0.3	0.4	0.1	0.1	0.0	0.1
Public investment	Q/q %	0.0	4.7	-2.6	-0.4	0.0	-0.1
Exports of goods and services	Q/q %	2.1	-0.1	2.0	2.2	0.6	0.6
Imports of goods and services	Q/q %	1.6	1.8	-1.3	3.1	0.3	0.3
Domestic demand (contribution to real GDP growth)	Q/q % pts	0.6	0.8	-0.0	0.4	-0.2	-0.2
Foreign demand (contribution to real GDP growth)	Q/q % pts	0.1	-0.3	0.5	-0.1	0.1	0.1
Nominal GDP	Q/q %	0.1	0.9	0.8	0.2	-0.4	-0.4
Annualized	Q/q %	0.5	3.8	3.0	0.9	-1.5	-1.6
GDP deflator	Q/q %	-0.5	0.4	0.3	-0.0	-0.2	-0.3
	Y/y %	-0.8	-0.3	0.1	0.1	0.5	0.5

Source: Cabinet Office; compiled by DIR.
Notes: 1) Due to rounding, contributions do not necessarily conform to calculations based on figures shown.
2) Q/q figures seasonally adjusted basis.

Japan's Economic Outlook No. 197 Update

	FY17	FY18 (Estimate)	FY19 (Estimate)	CY17	CY18 (Estimate)	CY19 (Estimate)
Main economic indicators						
Nominal GDP (y/y %)	1.7	1.3	1.8	1.5	1.2	1.8
Real GDP (chained [2011]; y/y %)	1.6	1.0	0.8	1.7	1.0	1.1
Domestic demand (contribution, % pt)	1.2	0.7	0.6	1.2	0.6	1.0
Foreign demand (contribution, % pt)	0.4	0.3	0.2	0.6	0.3	0.1
GDP deflator (y/y %)	0.1	0.2	1.0	-0.2	0.2	0.8
Index of All-industry Activity (y/y %)*	1.8	1.1	1.0	1.6	1.1	1.3
Index of Industrial Production (y/y %)	4.1	1.9	1.9	4.4	1.8	2.4
Index of Tertiary Industry Activity (y/y %)	1.0	1.0	0.8	0.7	1.0	1.1
Corporate Goods Price Index (y/y %)	2.7	2.7	3.3	2.3	2.7	2.8
Consumer Price Index (excl. fresh food; y/y %)	0.7	1.0	1.4	0.5	1.0	1.2
Unemployment rate (%)	2.7	2.5	2.5	2.8	2.5	2.4
Government bond yield (10 year; %)	0.05	0.06	0.06	0.05	0.06	0.06
Money stock; M2 (end-period; y/y %)	3.7	2.0	1.8	4.0	2.3	1.9
Balance of payments						
Trade balance (Y tril)	4.6	3.4	4.1	5.0	3.2	3.4
Current balance ($100 mil)	1,962	1,746	1,847	1,957	1,731	1,762
Current balance (Y tril)	21.7	19.4	20.5	22.0	18.8	19.2
(% of nominal GDP)	3.9	3.5	3.6	4.0	3.4	3.4
Real GDP components (Chained [2011]; y/y %; figures in parentheses: contribution, % pt)						
Private final consumption	0.9 (0.5)	0.6 (0.3)	0.2 (0.1)	1.0 (0.6)	0.4 (0.2)	0.8 (0.4)
Private housing investment	-0.3 (-0.0)	-2.6 (-0.1)	1.8 (0.1)	2.7 (0.1)	-4.4 (-0.1)	3.2 (0.1)
Private fixed investment	3.2 (0.5)	2.0 (0.3)	1.2 (0.2)	2.9 (0.4)	2.3 (0.4)	1.5 (0.2)
Government final consumption	0.7 (0.1)	0.6 (0.1)	0.8 (0.2)	0.4 (0.1)	0.6 (0.1)	0.8 (0.2)
Public fixed investment	1.4 (0.1)	-2.5 (-0.1)	1.4 (0.1)	1.2 (0.1)	-1.6 (-0.1)	-0.6 (-0.0)
Exports of goods and services	6.2 (1.0)	4.1 (0.7)	2.7 (0.5)	6.7 (1.1)	4.5 (0.8)	3.0 (0.6)
Imports of goods and services	4.0 (-0.6)	2.5 (-0.4)	1.5 (-0.3)	3.4 (-0.5)	2.9 (-0.5)	2.5 (-0.4)
Major assumptions:						
1. World economy						
Economic growth of major trading partners	4.2	3.9	3.7	4.1	4.0	3.8
Crude oil price (WTI futures; $/bbl)	53.6	67.2	67.0	50.9	66.2	67.0
2. US economy						
US real GDP (chained [2009]; y/y %)	2.5	2.7	2.3	2.3	2.7	2.4
US Consumer Price Index (y/y %)	2.1	2.5	2.2	2.1	2.5	2.2
3. Japanese economy						
Nominal public fixed investment (y/y %)	3.2	-1.7	2.2	2.8	-0.4	-0.0
Exchange rate (Y/$)	110.8	109.0	109.0	112.2	108.8	109.0
(Y/€)	130.3	129.2	129.0	127.2	130.0	129.0

Source: Compiled by DIR.
Note: Due to rounding, actual figures may differ from those released by the government.
* Excl. agriculture, forestry, and fisheries.
Estimate: DIR estimate.

Comparison with Previous Outlook

	Current outlook (Outlook 197 Update)		Previous outlook (Outlook 197)		Difference between previous and current outlooks	
	FY18	FY19	FY18	FY19	FY18	FY19
Main economic indicators						
Nominal GDP (y/y %)	1.3	1.8	1.2	1.8	0.0	-0.0
Real GDP (chained [2011]; y/y %)	1.0	0.8	1.0	0.8	0.1	0.0
Domestic demand (contribution, % pt)	0.7	0.6	0.6	0.6	0.1	0.0
Foreign demand (contribution, % pt)	0.3	0.2	0.3	0.2	-0.0	0.0
GDP deflator (y/y %)	0.2	1.0	0.3	1.0	-0.0	-0.0
Index of All-industry Activity (y/y %)*	1.1	1.0	1.3	0.9	-0.2	0.2
Index of Industrial Production (y/y %)	1.9	1.9	2.6	1.4	-0.7	0.5
Index of Tertiary Industry Activity (y/y %)	1.0	0.8	1.1	0.7	-0.1	0.1
Corporate Goods Price Index (y/y %)	2.7	3.3	2.7	3.3	0.0	0.0
Consumer Price Index (excl. fresh food; y/y %)	1.0	1.4	1.0	1.4	0.0	0.0
Unemployment rate (%)	2.5	2.5	2.5	2.5	0.0	0.0
Government bond yield (10 year; %)	0.06	0.06	0.06	0.06	0.00	0.00
Balance of payments						
Trade balance (Y tril)	3.4	4.1	3.2	4.0	0.1	0.1
Current balance ($100 mil)	1,746	1,847	1,731	1,835	15	12
Current balance (Y tril)	19.4	20.5	19.1	20.3	0.3	0.2
(% of nominal GDP)	3.5	3.6	3.5	3.6	0.0	0.0
Real GDP components (chained [2011]; y/y %)						
Private final consumption	0.6	0.2	0.6	0.2	-0.0	-0.0
Private housing investment	-2.6	1.8	-2.8	1.8	0.2	0.0
Private fixed investment	2.0	1.2	1.6	1.2	0.3	0.0
Government final consumption	0.6	0.8	0.5	0.8	0.1	0.0
Public fixed investment	-2.5	1.4	-2.5	1.4	0.0	-0.0
Exports of goods and services	4.1	2.7	4.1	2.7	0.0	0.0
Imports of goods and services	2.5	1.5	2.5	1.5	0.0	0.0
Major assumptions:						
1. World economy						
Economic growth of major trading partners	3.9	3.7	3.8	3.7	0.1	0.0
Crude oil price (WTI futures; $/bbl)	67.2	67.0	69.0	69.0	-1.8	-2.0
2. US economy						
US real GDP (chained [2009]; y/y %)	2.7	2.3	2.7	2.3	0.0	0.0
US Consumer Price Index (y/y %)	2.5	2.2	2.5	2.2	0.0	0.0
3. Japanese economy						
Nominal public fixed investment (y/y %)	-1.7	2.2	-1.8	2.2	0.1	-0.0
Exchange rate (Y/$)	109.0	109.0	109.0	109.0	-0.0	0.0
(Y/€)	129.2	129.0	132.0	132.0	-2.8	-3.0

Source: Compiled by DIR.
Note: Due to rounding, differences do not necessarily conform to calculations based on figures shown.
* Excl. agriculture, forestry, and fisheries.