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## Japan's Economy: Monthly Outlook (August 2019)

1. **The statistical trick in the superior GDP results: last-minute shipping**
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Economic Research Dept.  
**Shunsuke Kobayashi**  
**Yutaro Suzuki**

### Summary

- **The statistical trick in the superior GDP results is last-minute shipping:** Last-minute demand prior to the consumption tax hike has yet to be seen as of this point if we base our observation on household purchasing. However, it appears that the anticipated last-minute demand has become manifest in the form of last-minute shipping. This is especially the case for last-minute shipments of automobiles, which gave a major push to GDP in the Apr-Jun period. Last-minute shipments were also notable in consumer electronics, pulp, paper and paper products, chemicals, and housing (as expressed in housing starts). The effect that this has on improving growth will disappear after the consumption tax has been raised, and there will likely be a reactionary decline at that time.
- **The consumption tax hike and free education: some age groups will be winners, while others will lose out:** Assuming that increase in financial burden as a result of the raising of the consumption tax rate will be offset by benefits in the form of free education, the fiscal austerity effect on a net basis can be estimated at around 2.0 tril yen. However, the package of measures is expected to make growth in benefits much larger than growth in financial burden for two age groups – households consisting of two or more persons age 29 and under and age 30 to 39. On the other hand, households consisting of two persons age 50 or older, as well as one-person households will see their financial burden become larger in relative terms. The uneven effects of benefits vs. burden depending on age group will also have an effect on consumption trends by item.
- **Revised economic outlook: FY2019 +0.9%, FY2020 +0.4%:** In light of the announcement of Apr-Jun period GDP results, we have revised our outlook for the Japanese economy. We now expect FY2019 to record growth of +0.9% in comparison with the same period of the previous year, while FY2020 is seen at +0.4%. As for the future of Japan's economy, we see positive growth continuing through the Jul-Sep period of 2019 while there is still a possibility of last-minute demand occurring, after which it will likely slow down to a low level of growth just below the potential growth rate due to the following factors: (1) exports will be stagnant due to the slowdown in the global economy, (2) inventory adjustment is still taking place, (3) growth in capex spending is slowing down due to the decline in factory operating rates, (4) consumption will mark time in association with the slowing pace of growth in employment, and (5) the effects of the consumption tax hike.

## 1. The statistical trick in the superior GDP results: last-minute shipping

*Overseas demand was weak, but domestic demand was superb, helping Apr-Jun period GDP to achieve a growth rate exceeding the upper limit of market consensus*

The real GDP growth rate for Apr-Jun 2019 achieved growth of +1.8% q/q annualized (+0.4% q/q). Following in the footsteps of the Jan-Mar period, growth exceeded the upper limit of market consensus in the third consecutive quarter of GDP growth. Looking at the breakdown of contribution to q/q growth, we see that domestic demand was prominent, contributing +0.7%pt, while net exports showed a negative contribution at -0.3%pt<sup>1</sup>.

### *Four special factors behind superb domestic demand*

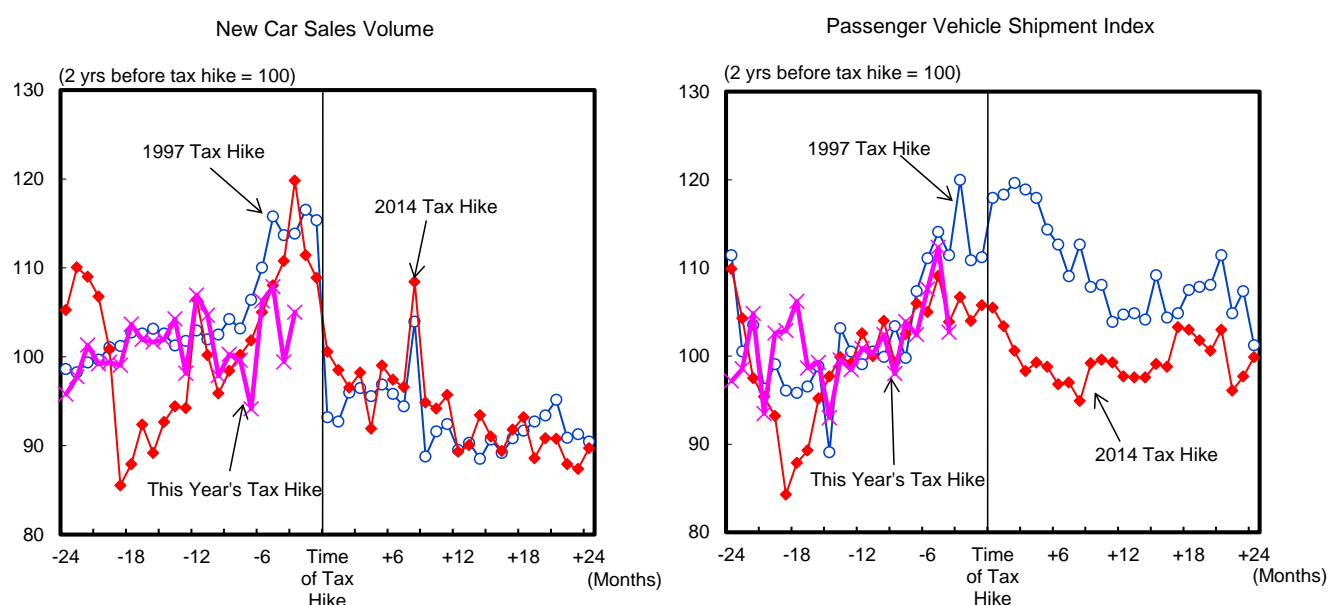
There are several points that should be noted, however, about the statistical values in the recent GDP announcement, which may have acted as special factors effecting results. These are (1) the effect of the long holiday during the period, (2) last-minute shipments of motor vehicles, (3) effects of the changeover to a new fiscal year in which there was a step up to a new level of research & development investment, and (4) there was also a step up to a new level in government consumption expenditure. Factor (1) of course goes without saying – the longer than usual spring holiday known as “Golden Week” in Japan had the effect of encouraging a rise in consumption.

### *Consumption of durable goods grew dramatically due to last-minute shipments*

In relation to factor (2) mentioned above, the Apr-Jun period experienced a major upswing in shipments of motor vehicles. On the other hand, sales were weaker than shipments (see Chart 1). This of course goes without saying. When purchasing an automobile, there are various practical decisions to be made including the question of the upcoming tax hike, but there is actually not much incentive in the last-minute purchase of an automobile before the consumption tax increase (see Chart 5). With the complexity of the government’s tax hike countermeasures, depending on the level of awareness of the individual consumer, there are certain items concerning which last-minute purchase actually may not make sense. It has been indicated that in expectation of last-minute demand prior to the consumption tax hike in October, automobile manufacturers may be shipping more items than is warranted, in other words more than actual demand can handle.

**Trends in Motor Vehicle Sales Volume (Left) and Motor Vehicle Shipments (Right)**

**Chart 1**



Source: Japan Automobile Dealers Association, Ministry of Economy, Trade and Industry; compiled by DIR.

Note: Seasonally adjusted. Seasonal adjustment of new car sales volume by DIR.

<sup>1</sup> For details see the DIR Report dated 9 August 2019, *Apr-Jun 2019 1st Preliminary GDP Estimate: Third consecutive quarter of growth achieved. Demand is favorable, with annualized growth of +1.8%, exceeding upper limit of market consensus*, by Shunsuke Kobayashi.

The problem here is that in estimating GDP, the figure used in estimating motor vehicle consumption is dependent on the figure for shipments of motor vehicles. The sales amount appearing in METI's Current Survey of Production is used in estimating motor vehicle consumption. This figure is actually the figure for sales to auto dealers. Hence it does not necessarily match information on purchasing by households. Conceptually speaking it is the equivalent of shipments.

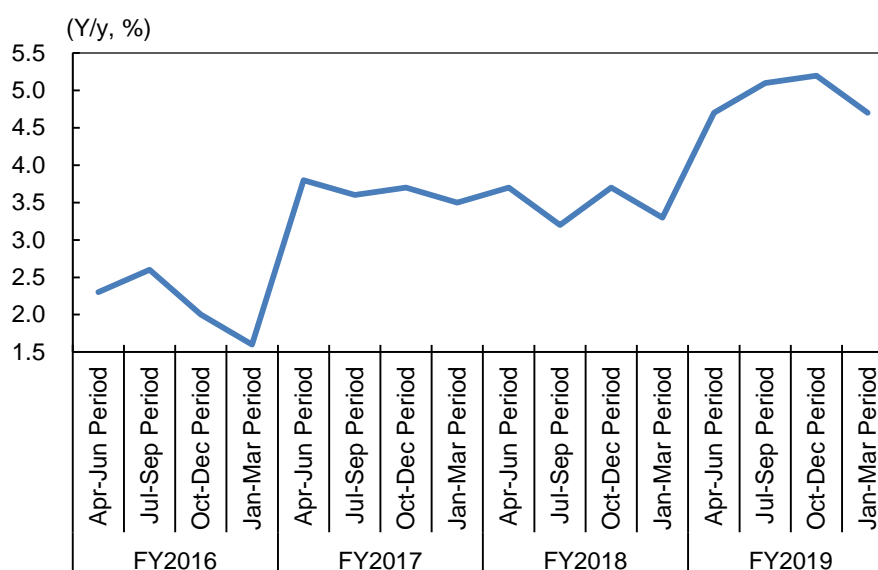
The results of calculations using these fundamental statistics appear in the Apr-Jun period figures as growth of +18.2% q/q annualized (+4.3% q/q) in consumption of durable goods. Looking at extent of contribution to the GDP growth rate, we see that consumption of durables alone accounted for +0.2pt on a q/q basis, or half of the overall figure (+0.4%). Activity in consumption components other than durables was minor. Semi-durables recorded -0.5%, while non-durables were at +0.3% and services were at +0.4%. Household consumption may actually have gained somewhat on the plus side.

***Private sector capital expenditure and government final consumption expenditure on the upswing reflecting effects of the changeover to a new fiscal year***

Factors (3) and (4) mentioned in the previous section are related to a fundamental problem in the GDP statistics. Research & development expenses, counted as a part of capital expenditure, and government final consumption expenditure are estimated on the fiscal year's planning and budget in quarterly apportionments. This estimating process is carried out in an almost mechanical manner since actual performance has not yet been calculated at that stage. As a result, it is not unusual for a major level of difference to appear during the Apr-Jun period when the changeover to a new fiscal year occurs. This is exactly what occurred this year as mentioned in factor (3) in the previous section. Research & development investment, which is only calculated once a year at the beginning of the fiscal year, experienced a major upswing in comparison to the previous fiscal year (the figure appears in the fundamental statistics published by the Development Bank of Japan) (Chart 2). A discrepancy on the plus side occurred in comparison to the Jan-Mar period figure. The effect which was operating in causing this upswing on the Apr-Jun period results cannot be ignored. Government final consumption expenditure (factor (4) in the previous section) experienced the same effect. Extensive content was included on the FY2019 budget, and this may have been the cause of government final consumption expenditure experiencing such an upswing on the Apr-Jun period results in comparison to the Jan-Mar period.

**Change in R&D Output Amount (Total of Private Sector and Public Sector Companies)**

**Chart 2**



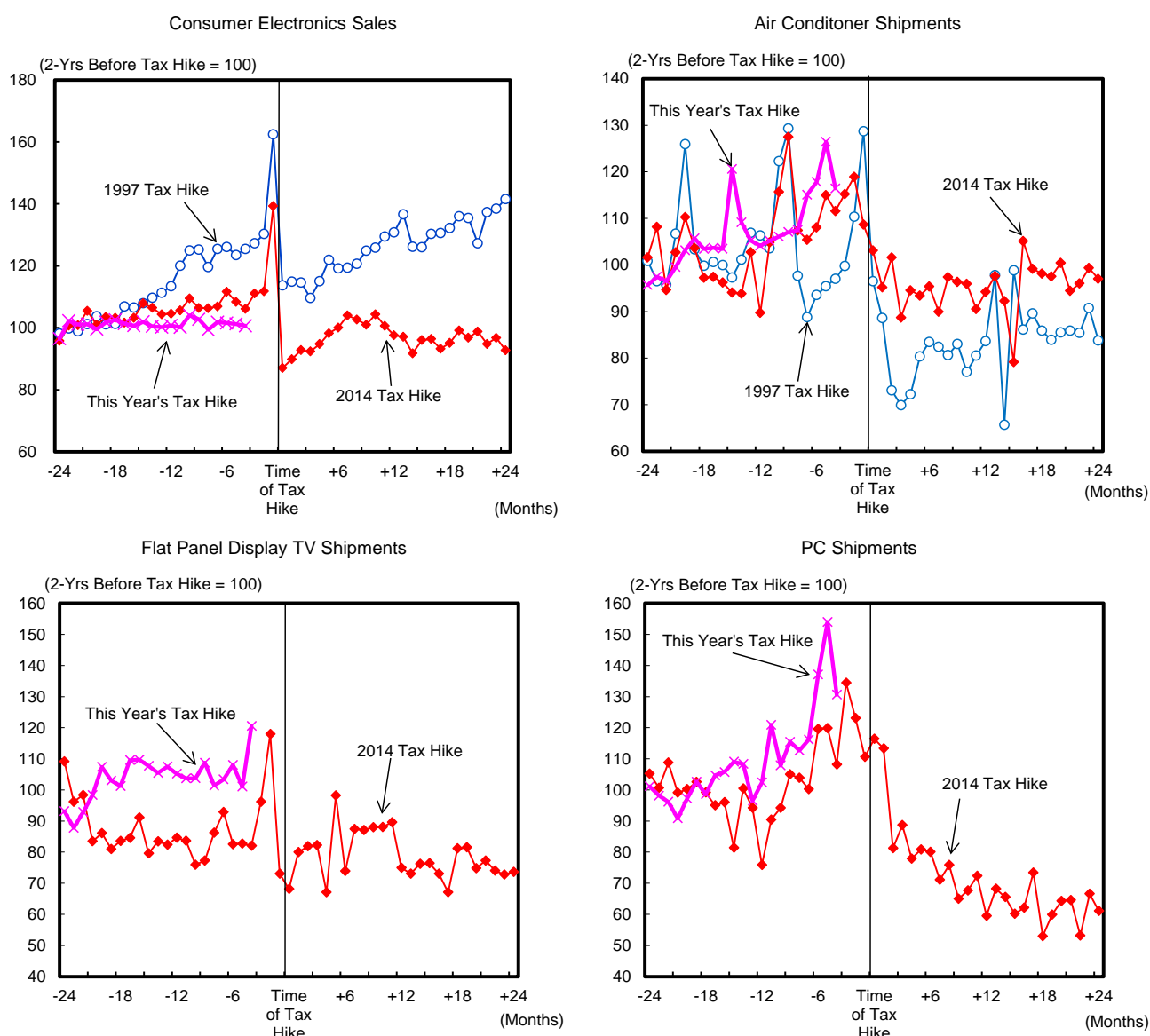
Source: Cabinet Office; compiled by DIR.

Note: Based on planning at beginning of fiscal year. Does not match with revised final value reflected later in actual performance.

**Reactionary decline feared in last-minute shipments, which have occurred in consumer electronics also**

Of the four factors previously listed, the most important to take note of is factor (2) last-minute shipments of motor vehicles. Factor (1) consists of consumption which has already taken place. Meanwhile, factors (3) and (4) may be due mostly to questions of statistics, and in the final analysis, is only a temporary issue. However, factor (2) includes effects such as last-minute shipments, which means accumulation of inventory at the distribution level. Meanwhile, as is indicated in Chart 3, though no problems have been generated on the level of statistics, last-minute shipments have occurred in the area of consumer electronics as well. As will be explained in more detail later, the Japanese economy is currently in an inventory adjustment phase in terms of the inventory cycle<sup>2</sup>. Last-minute shipments could therefore cause the problem of inventory adjustment to become even more serious.

**Consumer Electronics Sales (Actual Tax Performance) and Shipments (Air Conditioners, TVs, and PCs)**  
**Chart 3**



Source: Ministry of Economy, Trade and Industry, Ministry of Internal Affairs and Communications, Japan Refrigeration and Air Conditioning Industry Association, Japan Electronics and Information Technology Industries Association; compiled by DIR.

Note: Seasonally adjusted. Figures for air conditioners, flat panel display TVs, and PCs were seasonally adjusted by DIR. Consumer electronics sales is a real value obtained using CPI and then deflating.

<sup>2</sup> See section 3 of this report, “Revised economic outlook: FY2019 +0.9%, FY2020 +0.4%.”

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***Pulp, paper and paper products, and chemicals (excluding medicine) also moving toward inventory accumulation***

In this section, as was previously done for motor vehicles and consumer electronics, we look at production, shipments, and inventory by industry as shown in Chart 4, and determine whether last-minute shipments have occurred, and if so to what extent.

The first industry that catches the eye is pulp, paper and paper products. Inventory has gradually accumulated in this industry over the past few months, and plans for production in the future are extremely confident. Inventory accumulation is apparently in anticipation of last-minute demand prior to the October increase in consumption tax centering on tissue and toilet paper.

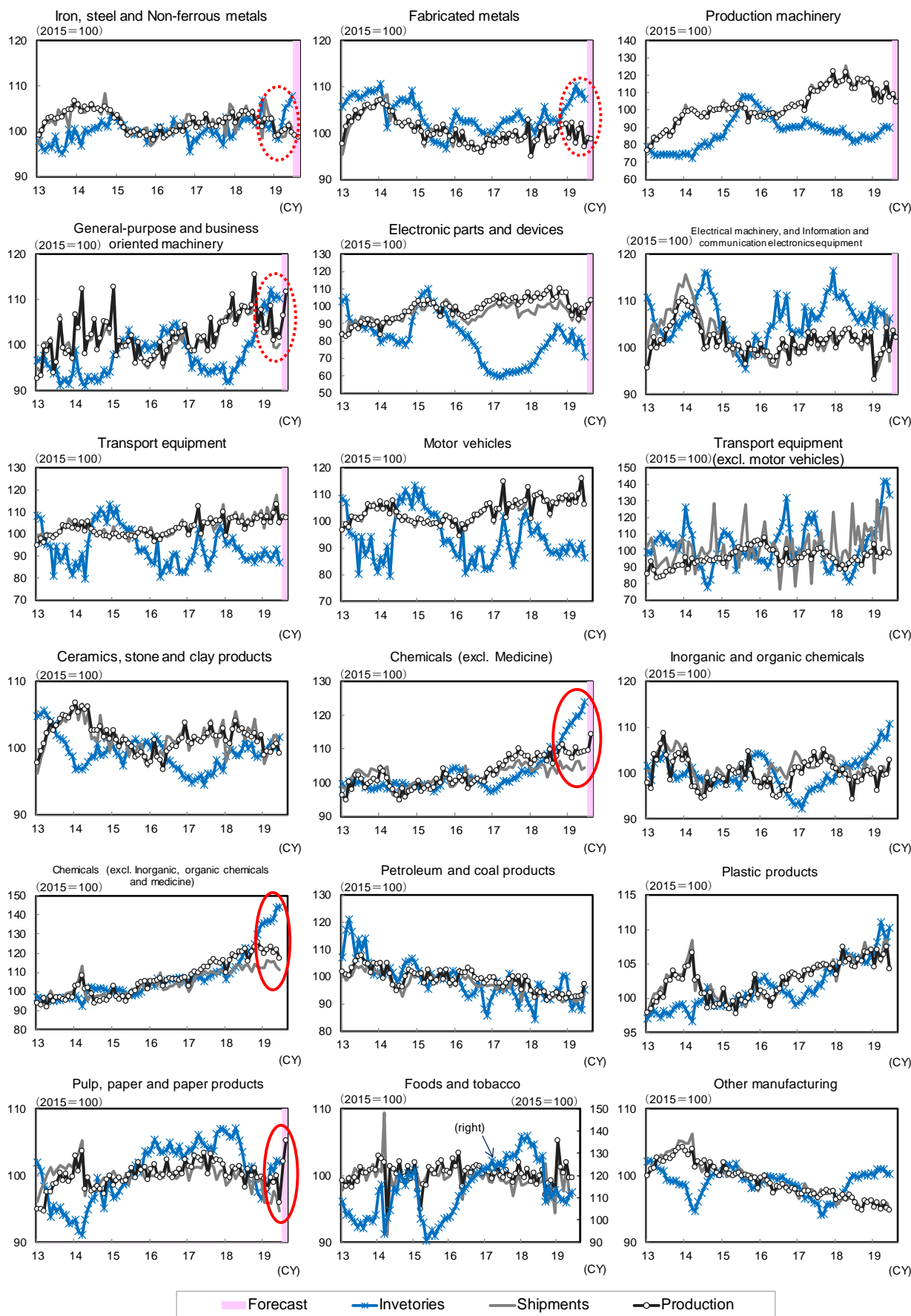
Another industry which catches the eye for the same reasons is chemicals (excluding medicine). The area in this industry which is experiencing inventory accumulation is cosmetics, and it has been pointed out that this may be due to the handling of last-minute demand prior to the increase in consumption tax. However, inventory growth in this industry began in 2017, and since 2018 the process has actually accelerated. Behind this development is the fact that demand for cosmetics products was strong in inbound consumption and in e-commerce (this indicates stock build-up, or intentional inventory accumulation). Since 2018, growth in demand of this sort has come to a standstill (unintentional stock build-up is most likely the reason here). In other words, inventory growth in this industry is due to more than just measures to handle last-minute demand.

***Unintentional stock build-up in iron, steel and non-ferrous metals, fabricated metals, and general-purpose and business oriented machinery***

Unintentional stock build-up has been observed in the iron, steel and non-ferrous metals industries, as well as the fabricated metals industry and the general-purpose and business oriented machinery industry. This is due to declining demand associated with the global economic slowdown centering on China.

In light of the above arguments, it is highly possible that in addition to motor vehicles, the pulp, paper and paper products industry and the chemical industry (excluding medicine) may be experiencing last-minute inventory growth prior to the increase in consumption tax.

Production, Shipments, and Inventory by Industry Chart 4



Source: Ministry of Economy, Trade and Industry; compiled by DIR.  
 Note: The expected value of the Indices of Industrial Production is from the Manufacturing Industry Production Forecast Survey. The expected value for the chemicals industry (excluding medicine) is from the forecast figures for the entire chemical industry.

### *Last-minute demand cannot be detected using sales statistics alone*

At this time manifestation of last-minute demand on a sales basis is limited. As is shown in Chart 6, at the time of the last consumption tax hike in April 2014, as well as the time before that (April 1997), last-minute demand began to appear in sales of consumer electronics and clothing at department stores and supermarkets around one or two months before the tax hike was implemented. This time around as well, last-minute demand has not yet been observed in statistics available at this time (i.e. as of June).

As was mentioned previously, last-minute demand can be seen in shipments. Looking at the case of automobile sales the last time the consumption tax was increased, as well as the time before that, last-minute demand was seen one to two quarters before tax hike went into effect. However, this time around the government plans “levelling measures” being that the tax increase (or reduction of tax reduction measure) is to occur after April 2019 (see Chart 5), and signs of last-minute demand which can be clearly discerned have not yet been observed on a sales basis.

### *Unambiguous signs of last-minute demand in housing. However, it is limited compared to last two times the consumption tax was raised*

Despite the above described situation, unambiguous signs of last-minute demand have been detected in housing (Chart 6). A variety of housing purchase support measures will be implemented after the consumption tax is raised, but there are many cases in which 2% in consumption tax savings is more than is provided by government assistance. However, the scope of last-minute demand is limited in comparison to the last two times the tax was raised. The various measures being provided by the government may be leveling out the extent of that demand, but in addition to this factor, it appears that households which had been considering the purchase of a new home in the near future the last time the consumption tax was raised purchased their home at that time, and hence have already experienced a round of last minute demand.

Having considered the current status of last-minute demand prior to the consumption tax hike in the above, we now move on to our conclusion. As of this point in time, last-minute demand based on available sales statistics has not yet been observed. However, basing our observations on production and shipments, there are three industries which stand out: transport equipment, pulp, paper and paper products, and chemicals (excluding medicine). Housing is also of note basing our observations on housing starts. It should be noted that the effect this has on improving growth will disappear after the consumption tax has been raised, and there will likely be a reactionary decline at that time.

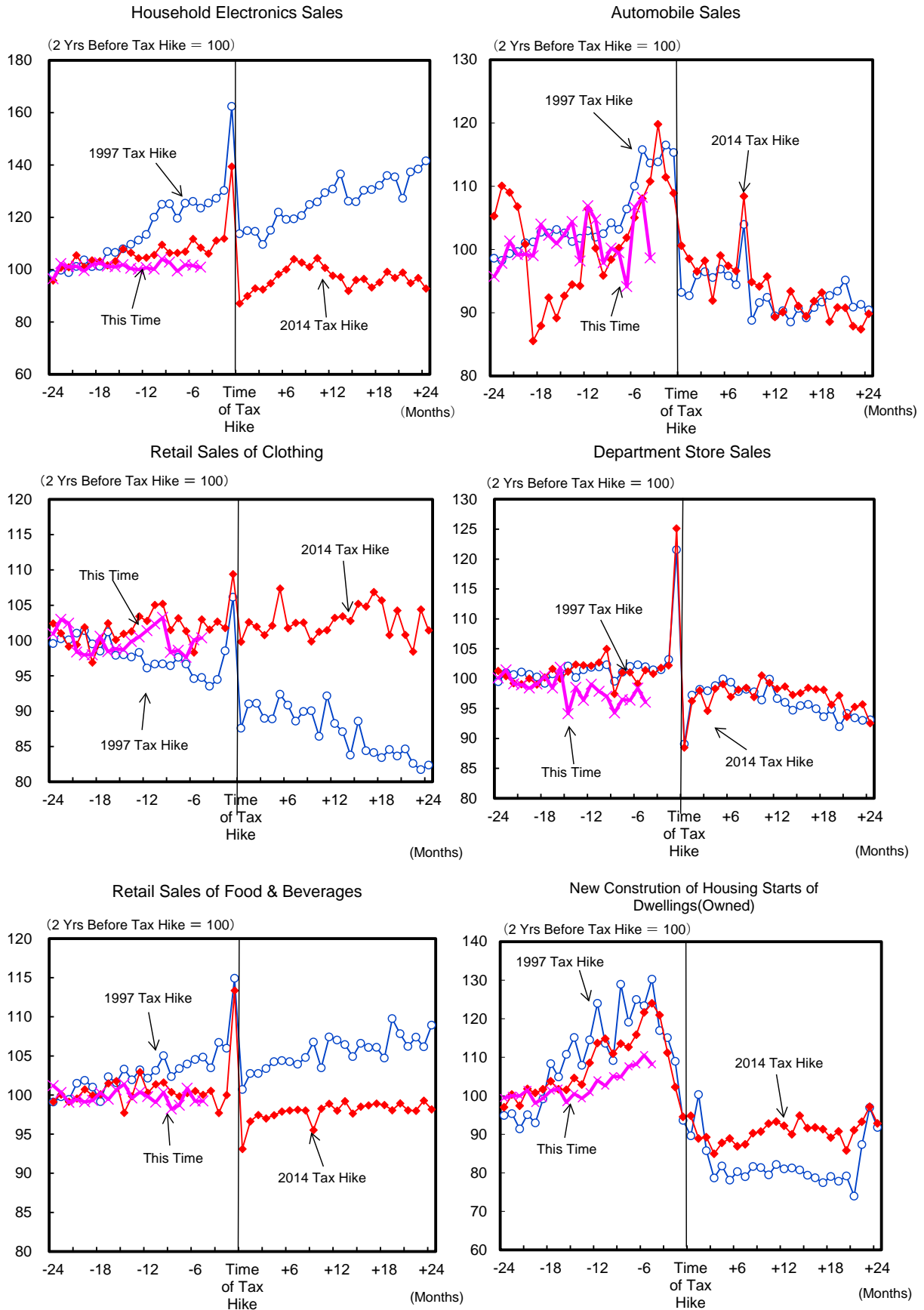
Summary of Consumption Tax Hike Countermeasures			Chart 5
Consumption Tax Hike Countermeasures	Description	Period	Scale (Yen Tril)
Auto Related	Tax Rate Cut for Environmental Tax	Tax rate to be reduced by 1% on motor vehicles including light-weight vehicles purchased for private use during the period.	For period of one year starting at time of tax hike (till Sept. 2020).
	Motor Vehicle Tax Cut	Reduction of tax rate on vehicles not including light-weight vehicles purchased during the period.	Permanent tax reduction starting at time of consumption tax hike.
	Reduction of Eco-Car Tax Break (tax hike)	Reduction of tax break on acquisition tax. Review ratio of reduction of weight tax. Tax-free second car registration to be limited to electrical and hybrid vehicles.	Reduction of tax break on acquisition tax: Apr.-Sept. 2019. Reduction of tax break on weight tax: Starting in May 2019 (Permanent)
Housing Related	Tax Reduction on Housing Loans	Write-off period extended on residences where move-in has taken place between Oct. 1, 2019 and end December 2020.	Current 10-year period extended to 13 years.
	Benefits for Housing Purchase “Sumai Kyu-fu kin”	Maximum benefit increased from current 300,000 yen to 500,000 yen. Annual income guideline increased from under 5.1 mil yen to under 7.75 mil yen.	Two years and three months from time of tax hike on current period (till end December 2021).
	Point Reward System for Promoting Innovative Housing	Points rewarded for remodeling projects oriented toward energy-saving, earthquake safety, barrier-free performance, and improvements for ease of housework and nursing care.	Start-time unknown as no information has appeared in news. Application period lasts through FY2019.
Point Rewards to Consumers via Small and Medium -sized Retail Businesses, etc.	Reward points for users of cashless payment will be 5% at small to middle-sized stores, and 2% at major chain-store franchises.	Period of 9-months starting at time of tax hike (till end June 2020).	0.28
Vouchers with premiums for Low-income and Child-rearing Households	Gift certificates worth 20,000 yen on shopping of up to a maximum of 25,000 yen available to low-income households and households with children age 0-2 who do not have to pay local tax.	Validity period of gift certificates is six months starting at time of tax hike (till end March 2020).	0.17
Local Shopping District Stimulus	Support provided to local shopping districts set up to effectively handle new demand source in inbound tourism.	FY2019	0.01
Public Investment	National land resilience countermeasures against natural disasters.	Implementation focuses on 3-year period beginning in FY2018.	1.35
<b>Total</b>			<b>2.24</b>

Source: Ministry of Finance, News Reports; compiled by DIR.

Notes: 1) Budget measures are total of FY2019 draft budget proposal. Tax measures are for tax reduction on a fiscal year basis, and on both a national and regional basis.

2) Scale of auto related measures is the net tax reduction amount after subtracting amount of tax increase due to reduction of Eco-Car tax break.

Change in Demand for Items Subject to Tax Increase (Comparison of Past Two Tax Hikes) **Chart 6**



Source: Japan Automobile Dealers Association, Ministry of Economy, Trade and Industry, Ministry of Internal Affairs and Communications, Ministry of Land, Infrastructure, Transport and Tourism; compiled by DIR.

Note: Seasonally adjusted. Seasonal adjustment of new car sales volume by DIR. Other items are real value obtained using CPI and then deflating.



## 2. The consumption tax hike and free education: some age groups will be winners, while others will lose out

### *Negative income effect associated with consumption tax hike expected to hold down consumption throughout FY2020*

In the previous section focused on the issues surrounding last-minute demand prior to the consumption tax hike. However, there is an even more fundamental problem than last minute demand and reactionary decline, and that is the appearance of the negative income effect after an increase in the consumption tax.

The increase in financial burden due to the raising of the consumption tax rate is estimated at around 5.7 tril yen on the national and local (regional) levels. In addition, the increase in financial burden associated with the securing of financial resources such as reviewing the tobacco tax and income tax is said to be at around 0.6 tril yen. The burden is offset somewhat by implementation of a reduced tax rate policy which reduces financial burden by around 1.1 tril yen, which is expected to bring the total amount of tax burden to around 5.2 tril yen.

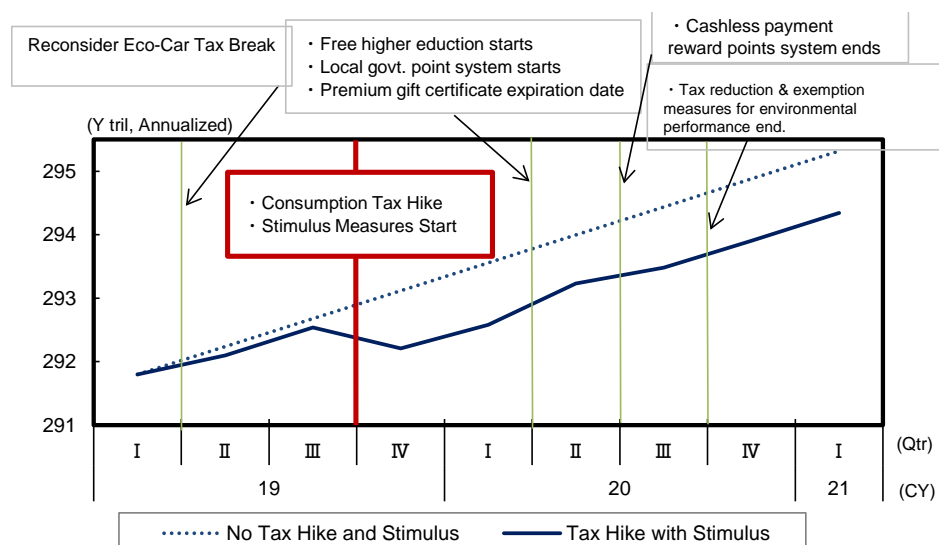
To this is added an expected 3.2 tril yen in increased benefits such as free early childhood education and social security enhancements. To sum it all up, the net reduction in Japan's budget (the fiscal austerity effect) is estimated to be at around 2.0 tril yen. In addition to this, a variety of economic measures will also be implemented. Overall, the amount is expected to be at around 2.3 tril yen – an amount which is larger than six months' worth of the fiscal austerity effect (Oct. 2019 – Mar 2020, approximately 1.0 tril yen).

However, more than half of the consumption tax-hike countermeasures will go toward public investment in areas such as disaster prevention and reduction, and national resilience (a total of 1.35 tril yen). Therefore, the emphasis is expected to be more on construction and related areas rather than on benefits going directly to households.

Considering the above, fiscal factors including the consumption tax hike are expected to have a slightly negative impact on consumption in FY2019, while at the same time having a clearly positive effect on public investment, and a slightly positive effect on overall domestic demand. But of course, the effects of the various consumption tax hike countermeasures will have disappeared by FY2020.

Considering the above arguments, consumption is expected to experience intermittent restraint throughout FY2020 once the effects of consumption tax hike countermeasures disappear. This will also be due to the major negative income effect expected to be generated in association with the consumption tax increase in October 2019.

**Effects of Consumption Tax Hike and Related Countermeasures on Consumption (Illustration) Chart 7**



Source: Cabinet Office, News Reports; compiled by DIR.

Notes: 1) The effect of local government points is assumed to be the same as premium gift certificates.

2) Stimulus Measures associated with tax hike do not take last minute demand or reactionary decline into consideration.

***In balance between consumption tax hike and free education, some age groups will be winners, while others will lose out***

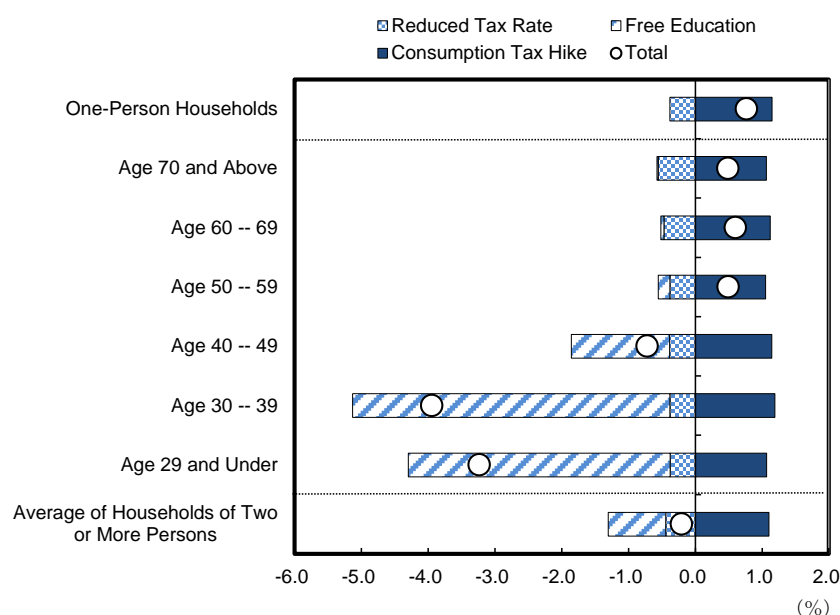
As was mentioned in the previous section, overall, a negative effect will remain on households, and on a macro basis, consumption is expected to be restrained throughout FY2020. However, on the micro level, depending on the situation, some households will actually see an improvement in real income.

In this section we examine the consumption tax hike versus countermeasures to see who will benefit and who will lose out.

Chart 8 shows the results of calculating the extent to which household financial burden will differ based on age group in association with the factors at play – the increase in consumption tax, the reduced tax rate available to households, and free early childhood education (again, affecting only certain households). Data used is from household surveys, with overall rate of change used for consumption expenditure. In regard to early childhood education (for children age 0-2), only households with the local resident tax exemption are eligible, and there is a limit to support if the school is a private one or is unlicensed. The household survey lists two categories – early childhood education fees and childcare fees. The assumptions of our calculations assume that the consumption amount for these two categories is zero. This means that the results of these calculations are a bit on the high side, and therefore should be taken with a certain grain of salt.

The results of our calculations indicate that it would be households of two or more persons under the age of 49, in other words almost equivalent to the age group with children ages 3 to 5, that would benefit the most from free education and avoid overly much financial burden due to the tax increase. Of this general age range, it will be households consisting of two or more persons under age 29 and between ages 30 and 39 that will gain the most in benefits<sup>3</sup>. On the other hand, the age groups which will receive the least in benefits are households of two or more persons age 50 or more, and one-person households. In other words these latter two age groups and types of households will experience increased financial burden.

**Effects of Consumption Tax Hike and Free Education by Age Group (CPI Growth Rate) Chart 8**

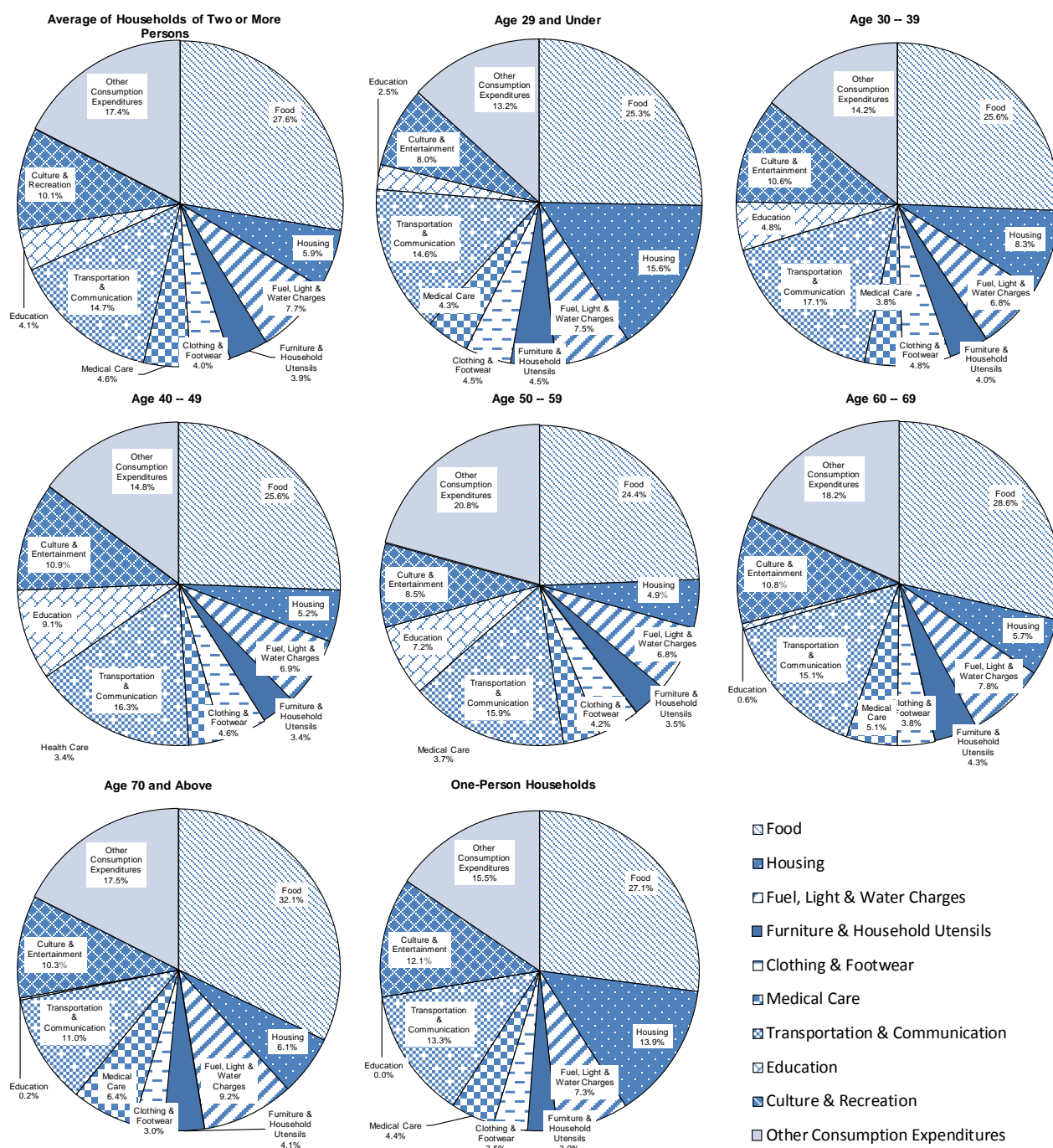


Source: Ministry of Internal Affairs and Communications; compiled by DIR.

<sup>3</sup> In addition, low-income households are eligible for free higher education. There are also vouchers with premiums for low-income households and households with children ages 0 to 2. These households will be eligible for even larger benefits. Meanwhile, there is also support for people purchasing autos or houses, and one should not ignore the point system for use of cashless payment (see Chart 5).

The wide variation between age groups can also be seen in consumer trends by product category. Looking at consumer trends by age group as shown in Chart 9, we see that housing and transportation & communication expenses carry larger weight in consumption expenditure for households of two or more persons age 29 and under, and age 30 -- 39. Consumption in particular areas such as this suggests that activity may remain relatively favorable in comparison to what we find in the overall macro figures, even after the consumption tax is raised<sup>4</sup>.

**Consumption by Age Group and Expense Item** **Chart 9**



Source: Ministry of Internal Affairs and Communications; compiled by DIR.

<sup>4</sup> There is of course a limit to arguments of this sort. First of all, as long as the overall macro figure, which includes all age groups, indicates that the effects of the increase in consumption tax are large, expense items such as housing and transportation & communication expenses cannot avoid negative influence insofar as the overall macro figure is an absolute one. Moreover, the argument that really should be made here is the question of marginal consumption expenditure for these particular age groups. In other words, in what areas will they increase their consumption in the case that their real income experiences growth? However, due to data constraints, this report is forced to rely on where the weight of average consumption expenditure falls.

### 3. Revised economic outlook: FY2019 +0.9%, FY2020 +0.4%

In light of the announcement of Apr-Jun period GDP results, we have revised our outlook for the Japanese economy. We now expect FY2019 to record growth of +0.9% in comparison with the same period of the previous year, while FY2020 is seen at +0.4%. As for the future of Japan's economy, we see positive growth continuing through the Jul-Sep period of 2019 while there is still a possibility of last-minute demand occurring, after which it will likely slow down to a low level of growth just below the potential growth rate.

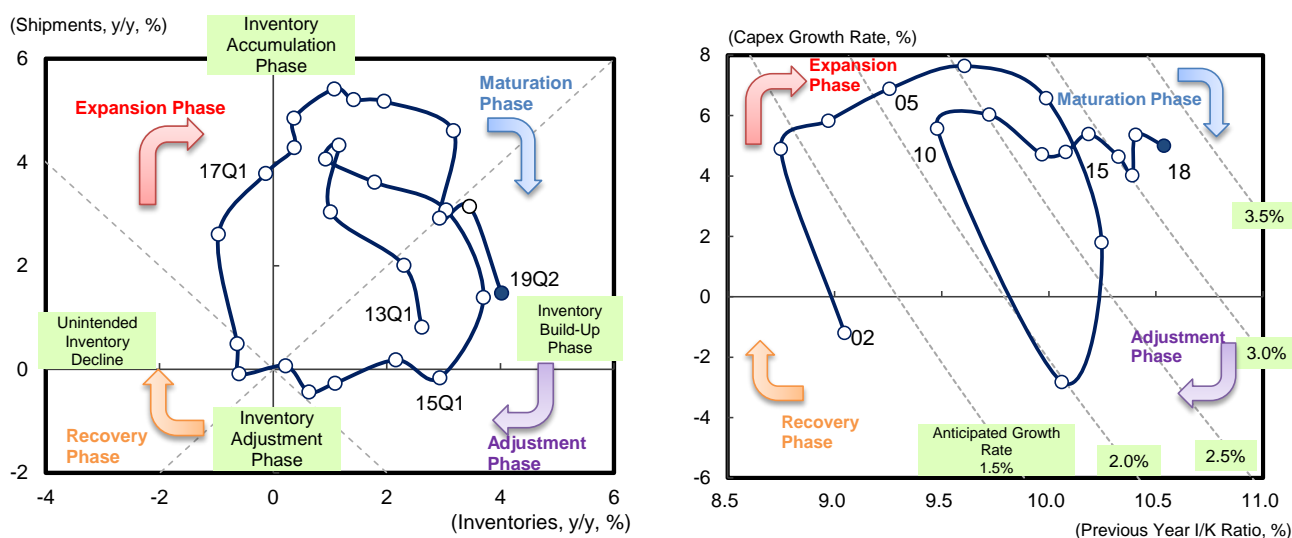
Factors behind this outlook are as follows: (1) exports will be stagnant due to the slowdown in the global economy, (2) inventory adjustment is still taking place, (3) growth in capex spending is slowing down due to the decline in factory operating rates, (4) consumption will mark time in association with the slowing pace of growth in employment, and (5) the effects of the consumption tax hike.

#### *Cyclical slowdown of global economy and intensification of trade friction cause exports to stagnate*

First of all, as far as exports (the pillar of Japan's economic growth) go, it will be difficult to expect a shift into an expansion phase for some time to come. Our monthly reports have been saying as much for some time now<sup>5</sup>. In simple terms, this is due to (1) the global economy being situated in an adjustment phase of the economic cycle, and as will be explained further below, (2) the effects of the intensification of the US-China trade friction, which has brought a slowdown in trade.

The first item mentioned above is illustrated in Chart 10, which shows the short-term Kitchin cycle (the inventory cycle) and the midterm Juglar cycle (the capital stock cycle) both of which demonstrate that the global economy has completed its expansion phase and is now moving from the maturation phase into the adjustment phase. The current situation is such that it would be difficult to expect the global economy to reaccelerate, or for Japanese exports to begin expanding at this time.

**Global (Japan, US, EU, China) Inventory Cycle (Left), and Capital Stock Cycle (Right) Chart 10**



Source: Ministry of Economy, Trade and Industry, US Dept. of Commerce, European Commission, Haver Analytics, National Bureau of Statistics of China, CEIC; compiled by DIR.

Note: Calculated according to weight in GDP. European data uses EU28, DI for inventories, and production figures for shipments. Chinese data uses production figures for shipments, and for inventory, manufacturing industry PPI was used and expressed as real values.

Source: Cabinet Office, Bank of Japan, BEA, European Commission, National Bureau of Statistics of China, Haver Analytics, CEIC; compiled by DIR.

Note: Calculated according to weight in GDP.

<sup>5</sup> See the following two DIR Reports, dated 25 December 2018, *Outlook for Japan's Economy in 2019: Slowing down due to stagnant overseas demand and inventory adjustment. The key to growth in domestic demand is the price of crude oil and consumption tax hike countermeasures*, by Shunsuke Kobayashi and Yota Hirono, and 22 September 2017, *Japan's Economy: Monthly Outlook (Sep 2017): Japan's economy expected to grow by +1.7% in FY2017 and +1.3% in FY2018. How far has global economic expansion come?*, by Shunsuke Kobayashi.

### ***Economic scenario assuming that when overseas demand is slow, domestic demand will provide support comes with an expiration date***

The shrinking contribution of overseas demand to Japan's economic growth is nothing new as of this point. The contribution of overseas demand fell into the negative numbers back in FY2018 in fact, and the only thing that managed to prop up Japan's economy enough so that growth at least moved along just below the potential growth rate was domestic demand, which remained relatively favorable.

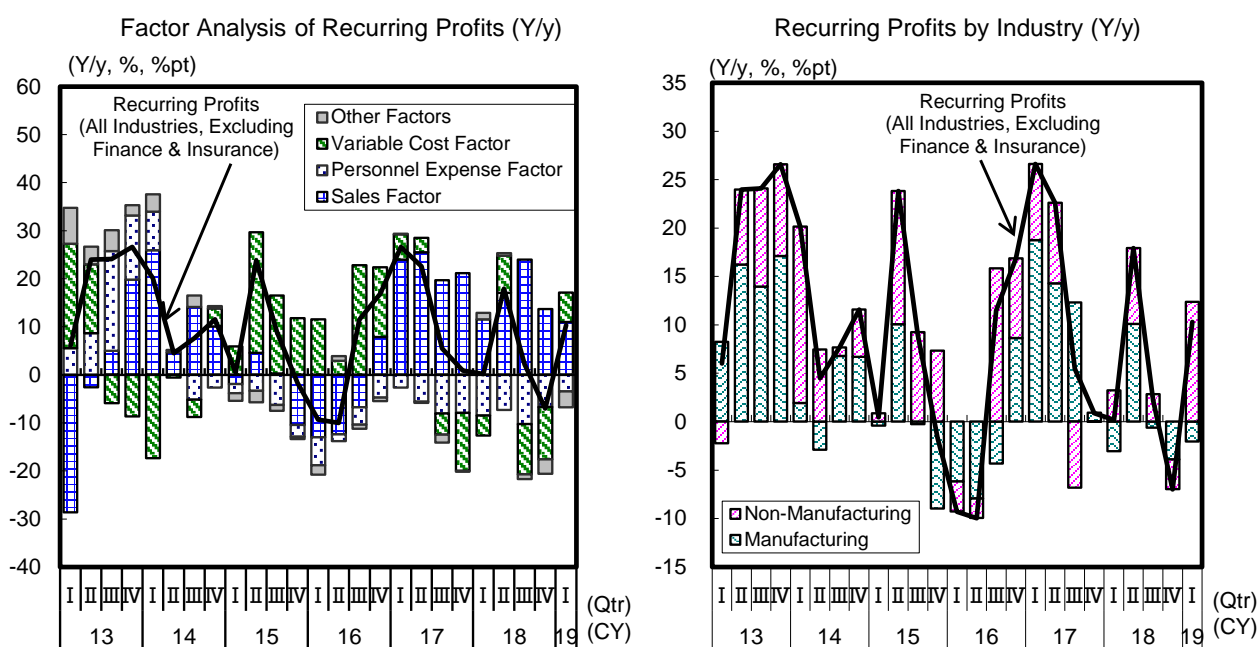
However, the economic scenario that assumes domestic demand will always be there to save the day whenever overseas demand is ailing as it did in FY2018 can no longer be depended on in FY2019. In FY2017 both overseas and domestic demand was favorable, and corporate business performance recorded historic highs in profit growth (Chart 11). These earnings provided the funds for improvements in employment, basic salaries and bonuses in FY2018, and provided a boost for household consumption. At the same time, demand for labor grew and factory operating rates were up. This encouraged expansion in corporate capital expenditure in FY2018 as well.

So now the question is whether this formula – the idea that domestic demand will provide support when overseas demand is weak – can keep working on into the future. Can we depend on the same phenomenon in FY2019? Unfortunately, the honest answer is that that ship has already sailed. In short, growth in domestic demand in FY2018 was possible only because corporate business performance was favorable in FY2017. In other words, it came from the previous fiscal year's savings.

To continue along this line of thinking, we would have to conclude that high growth encouraged by corporate business performance depending on domestic demand is simply not possible in FY2019. The slowdown in overseas demand and corporate business performance in FY2018 has now begun to slow down momentum in FY2019 household consumption and capital expenditure.

**Change in Recurring Profits (Corporations of All Sizes)**

**Chart 11**



Source: Ministry of Finance; compiled by DIR.

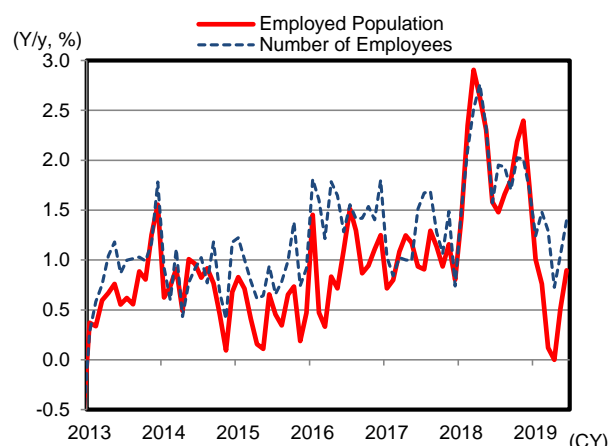
**Growth in number of employees slows, while working hours per person shifts to decline**

Next we take a look at factors making up employee compensation, which has a major effect on fluctuations in household consumption (Chart 12). The growth rate in number of employees was especially high in 2018, but since then has continued to slow down until reaching the current point in time. Meanwhile, Chart 14 indicates that the trend in changing the status of non-regular employees to that of regular employee has come to a halt, centering on male employees. Improvement in terms of employment has also come to a halt.

Looking at working hours per person, Chart 13 suggests that this factor too has continued to decline since the latter half of 2018 due to a variety of factors including the new restrictions on overtime with penalties. The decline in working hours per person is in fact accelerating even as we speak.

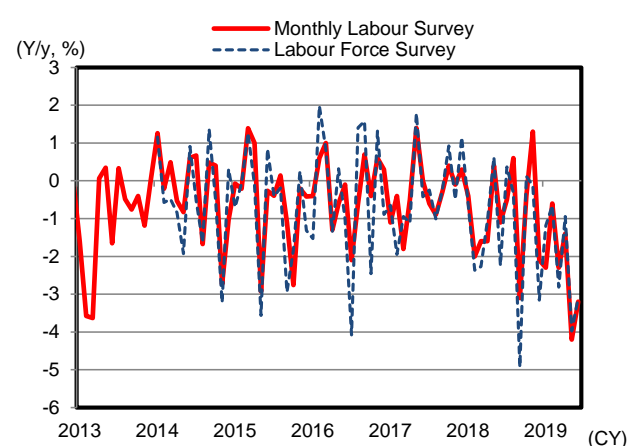
As expectations for employment and income decline in the future, while in the meantime uncertainty grows, the overall mood will put a damper on consumer confidence. Worsening consumer confidence will of course hold down the propensity to consume. Therefore growth in consumption in FY2019 may very well be even more restrained than employee compensation. And as has been mentioned previously, the increase in consumption tax will only make matters worse.

**Change in Number of Employees** Chart 12



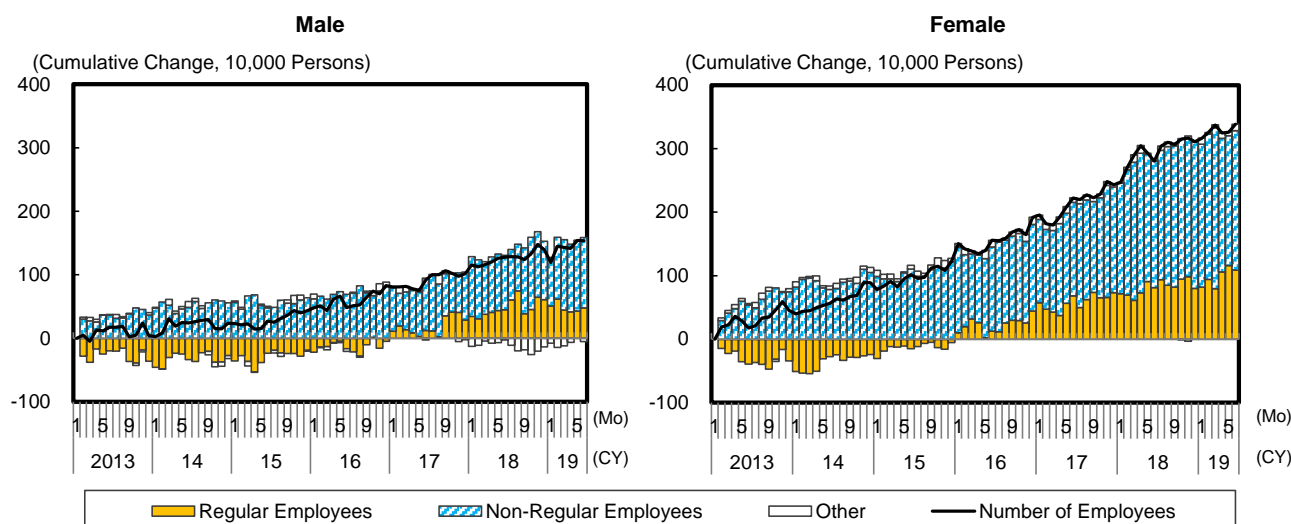
Source: Ministry of Internal Affairs and Communications; compiled by DIR.

**Change in Working Hours per Person** Chart 13



Source: Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare; compiled by DIR.  
Note: Monthly Labour Survey uses common data set.

**Factor Analysis of Growth and Decline in Number of Employees** Chart 14



Source: Ministry of Internal Affairs and Communications; compiled by DIR.  
Note: Seasonal adjustment by DIR.

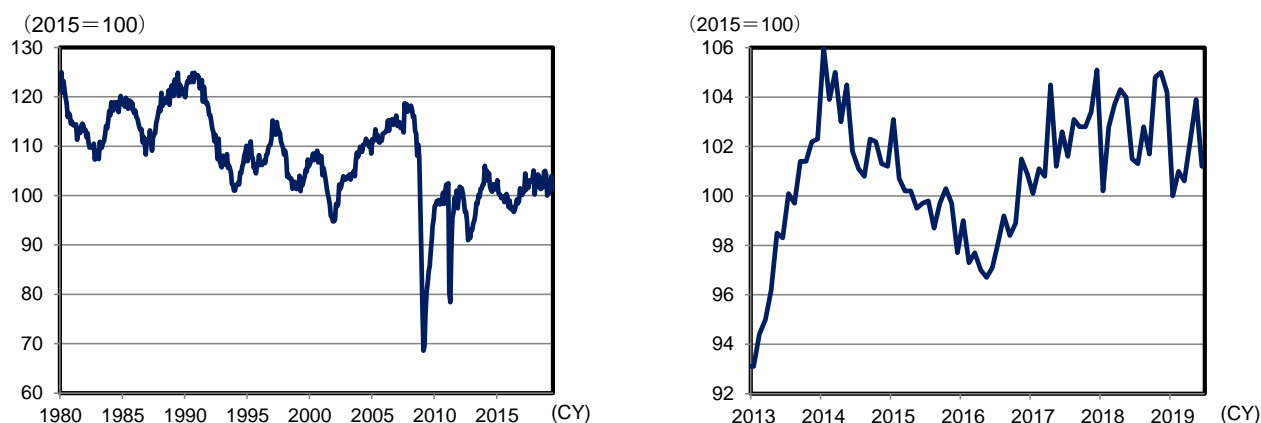
**As demand for labor weakens and factory operating rates decline, dark clouds gather round the expansion scenario for capex as well**

The future looks rough for more than just household consumption. The demand for labor-saving systems and equipment due to the shortage of labor has been providing the main support for expansion of capital expenditure, but with the recent slowdown in demand for labor, there is concern that this area could find itself cast in the shadows too. But yet another support for capital expenditure faces an even more serious reality – the sustainability of capacity increase is becoming more and more doubtful. Since the end of 2018, due to stagnant overseas demand, operating rates in the manufacturing industries have suffered major declines in comparison to the 2017 to 2018 period (Chart 15).

Meanwhile, as was noted earlier, it is highly possible that the expansion in household consumption will come to a temporary halt. As is shown in Chart 16, it is also very possible that pressure to carry out adjustment of inventories which have accumulated will continue to occur in the future. It is difficult to hope for a dramatic improvement in operating rates under these circumstances, and this in turn leads directly to decline in capital expenditure for the purpose of capacity increase.

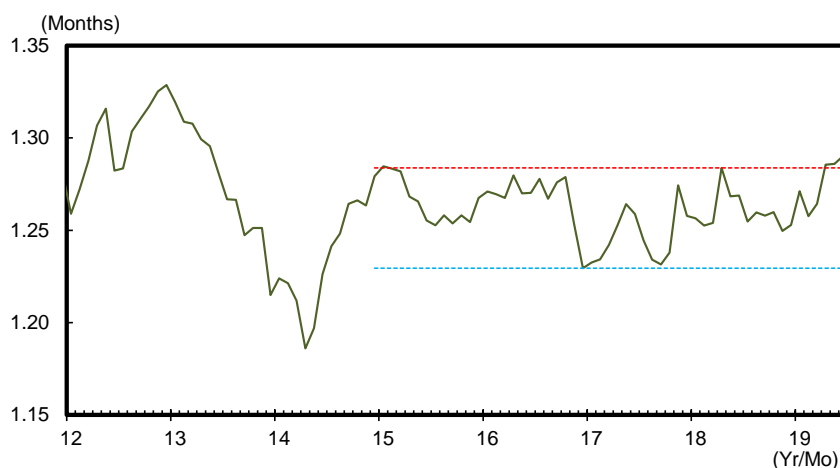
In conclusion, ignoring the question of a time lag for the moment, it is difficult in today’s Japan to picture a scenario in which domestic demand achieves recovery without a return to growth in overseas demand. Our outlook for the Japanese economy therefore remains unchanged, in that we expect a continuation of the current slowdown.

**Changes in Manufacturing Industry Operating Rates (Left: Long-Term, Right: Since 2013) Chart 15**



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

**Number of Inventory Months in the Manufacturing Industry Chart 16**



Source: Ministry of Economy, Trade and Industry; compiled by DIR.  
 Notes: 1) Minimum stock months = real inventory value (month-end balance) / real shipment value (monthly amount, 12-month backward moving average).  
 2) Real inventory value and real shipment value were calculated by extending figures in METI industrial statistics (2015) using the Indices of Industrial Production.

#### **4. US-China negotiations break down again: moving toward additional tariff of 10% on remaining 300 billion dollars**

US President Donald Trump announced on August 1 that there will be an additional tariff of 10% imposed on products imported from China totaling 300 bil dlr. The new tariff was to have gone into effect as of September 1, but then on August 13 it was announced that the implementation of tariffs on mobile phones, computers, toys, and clothing, and other items will be delayed until December 15. In either case, when placed together with additional tariffs of 25% on approximately 250 billion dollars in goods which have already been implemented, this amounts to the US imposing additional tariffs on pretty much all items imported from China.

##### ***Effects of additional tariff measures: China -0.05%pt, US -0.11%pt, and Japan -0.04%pt***

Using a macro model to perform an estimate, this round of additional tariffs is expected to hit the interested parties with declines in GDP as follows: China -0.05%pt, US -0.11%pt, and Japan -0.04%pt (see Charts 17-18). The cumulative effect of tariffs including this new round is estimated as follows: China -0.30%pt, US -0.40%pt, and Japan -0.17%pt (see Charts 19-20). The difference between these two sets of numbers corresponds with the new tariff measure: China -0.05%pt, US -0.11%pt, and Japan -0.04%pt.

##### ***Concerns that this new tariff will have a bigger effect on American consumers than the first three rounds***

However, on a micro basis it is not necessarily possible to draw a direct line between the change in tariff rates and economic effects as it is in the macro model. But it is important to note that in the fourth round of tariffs, consumer goods carry the most weight amongst the items affected. Moreover, finding substitution imports from sources other than China is difficult. For this reason, this latest round of additional tariffs may have a relatively bigger effect on American consumers than on past ones.

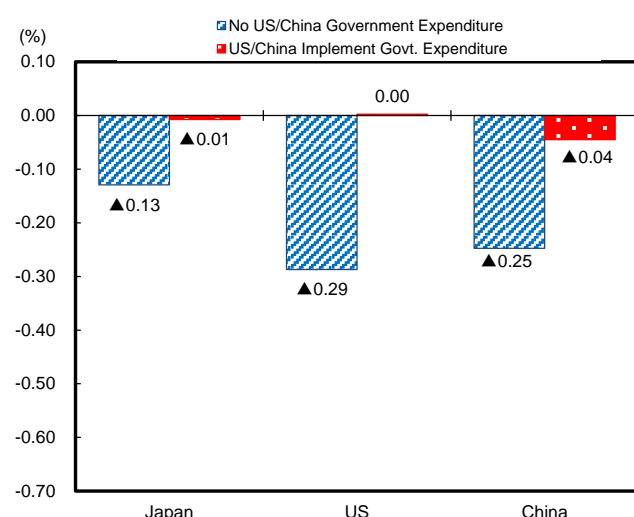
##### ***US-China “cold war” expected to be a structurally protracted one***

The US-China “cold war” is expected to continue to get worse, with the occasional temporary cease-fire. The China-bashing question appears to transcend the differences between the two political parties in the US. The reasons for going along with the approach are many, and it is like two people cohabitating but living in different worlds. The main concerns regarding China and anti-China groups are as follows: maintaining military supremacy (a Pentagon concern), conservative Christians (Vice-President Pence, etc.), human rights concerns (the Democratic Party), and the trade war (US Trade Representative Lighthizer, etc.). The major event which brought these very different interests together in one anti-China group was the propaganda leading up to the 2017 National Congress of the Communist Party of China, including programs and slogans such as “Made in China 2025” and the “Belt and Road” initiative. At the same time it was also a well-known fact that it was China’s President Xi Jinping who personally came up with these goals.

Of course, the hardline approach to China is something that will likely come and go in the future, as it depends on the US election cycle, the state of the economy and the financial markets, and how much political support there is for policies (this is perhaps the greatest weakness of a democratic nation). However, if that is the case, these instances will merely amount to temporary cease-fires. Even though there may be the possibility of short-term easing of these tensions, in the long-term they will most likely return. Xi Jinping himself has said that China would most likely have to endure a long period of what he calls “The New Long March” (alluding to Mao Tse-tung’s revolutionary struggle in the 1930s). And it is also very likely that Japan’s economy will have to endure cumulative growth in damage associated with this situation.



**Estimation of Effects of Tariffs (Rounds 1 - 3)<sup>6</sup>**  
**Chart 17**



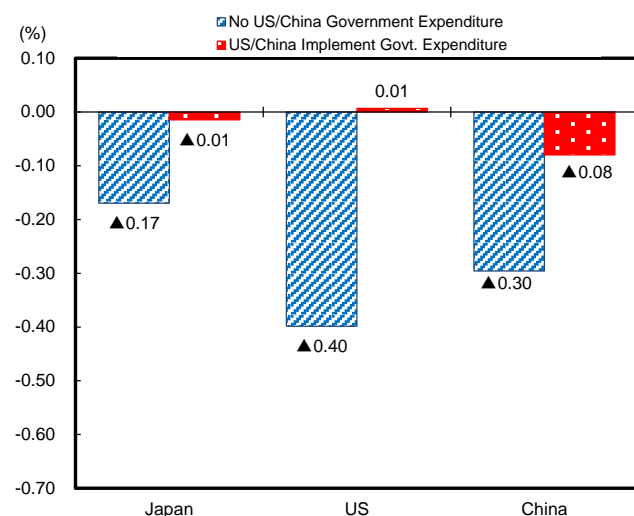
Source: Estimates produced using the DIR macro model.  
 Notes: 1) Estimated effects assuming US imposes additional tariff of 25% on all Chinese imports excluding pharmaceuticals and rare earth, and China imposes tariff of 25% on 50 billion dollars' worth of imports from the US, and average 14.5% on \$60 billion worth.  
 2) All figures are real. Rate of deviation from actual value (%) and rate of contribution to GDP (%pt).

**Effects of Tariffs on Japan, US, and China (Detailed Version)**  
**Chart 18**

Effects on Chinese Economy		Real GDP	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲0.25	▲0.43	▲0.09	0.00	▲0.57	▲0.43
	Contribution Rate		▲0.17	▲0.04	0.00	▲0.12	0.08
US/China Implement Govt. Expenditure	Deviation Rate	▲0.04	▲0.43	▲0.02	1.16	▲0.41	▲0.27
	Contribution Rate		▲0.17	▲0.01	0.17	▲0.09	0.05
Effects on US Economy		Real GDP	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲0.29	▲0.50	▲0.38	0.00	▲0.13	▲0.89
	Contribution Rate		▲0.35	▲0.06	0.00	▲0.02	0.14
US/China Implement Govt. Expenditure	Deviation Rate	0.00	▲0.50	0.00	2.07	▲0.09	▲0.08
	Contribution Rate		▲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	▲0.13	▲0.01	▲0.01	▲0.47	▲0.96	▲0.60
	Contribution Rate		▲0.01	▲0.00	▲0.08	▲0.18	0.11
US/China Implement Govt. Expenditure	Deviation Rate	▲0.01	▲0.00	▲0.00	▲0.03	▲0.06	▲0.04
	Contribution Rate		▲0.00	▲0.00	▲0.00	▲0.01	0.01

Source: Estimates produced using the DIR macro model.  
 Notes: 1) Estimated effects assuming US imposes additional tariff of 25% on all Chinese imports excluding pharmaceuticals and rare earth, and China imposes tariff of 25% on 50 billion dollars' worth of imports from the US, and average 14.5% on \$60 billion worth.  
 2) All figures are real. Rate of deviation from baseline (%) and rate of contribution to GDP (%pt).

**Estimation of Effects of Tariffs (Rounds 1 - 4, 10%)**  
**Chart 19**



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, and China imposes tariff of 25% on 50 billion dollars' worth of imports from the US, and 7.4% on \$60 billion worth.  
 2) All figures are real. Rate of deviation from actual value.

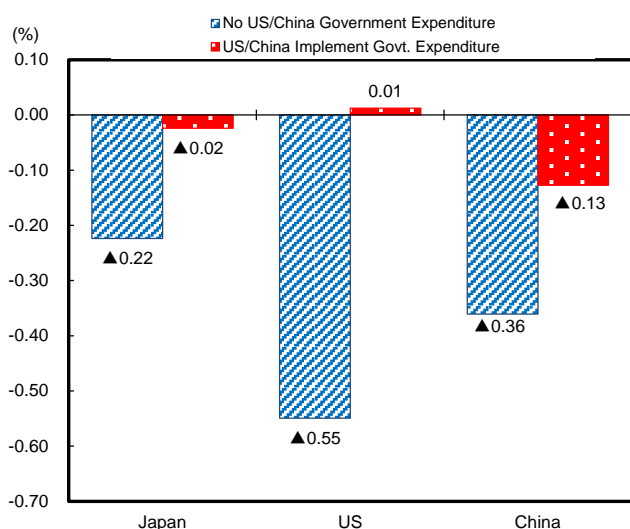
**Effects of Tariffs on Japan, US, and China (Detailed Version)**  
**Chart 20**

Effects on Chinese Economy		Real GDP	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲0.30	▲0.43	▲0.10	0.00	▲0.80	▲0.47
	Contribution Rate		▲0.17	▲0.04	0.00	▲0.17	0.08
US/China Implement Govt. Expenditure	Deviation Rate	▲0.08	▲0.43	▲0.03	1.16	▲0.58	▲0.31
	Contribution Rate		▲0.17	▲0.01	0.17	▲0.12	0.05
Effects on US Economy		Real GDP	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲0.40	▲0.71	▲0.53	0.00	▲0.13	▲1.23
	Contribution Rate		▲0.49	▲0.09	0.00	▲0.02	0.20
US/China Implement Govt. Expenditure	Deviation Rate	0.01	▲0.71	0.01	2.90	▲0.10	▲0.10
	Contribution Rate		▲0.49	0.00	0.49	▲0.01	0.02
Effects on Japan's Economy		Real GDP	Personal Consumption	Housing Investment	Capex	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲0.17	▲0.02	▲0.01	▲0.61	▲1.26	▲0.79
	Contribution Rate		▲0.01	▲0.00	▲0.10	▲0.23	0.14
US/China Implement Govt. Expenditure	Deviation Rate	▲0.01	▲0.00	▲0.00	▲0.05	▲0.11	▲0.07
	Contribution Rate		▲0.00	▲0.00	▲0.01	▲0.02	0.01

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, and China imposes tariff of 25% on 50 billion dollars' worth of imports from the US, and 7.4% on \$60 billion worth.  
 2) All figures are real. Rate of deviation from actual value (%) and rate of contribution to GDP (%pt).

<sup>6</sup> For details on assumptions behind estimates, refer to the following report. DIR Report dated 26 October 2018, *Japan's Economy: Monthly Outlook (October 2018): The true nature of the US-China Trade War: The end of "the end of history" (or a new beginning?)*, by Shunsuke Kobayashi & Yota Hirono.

**Estimation of Effects of Tariffs (Rounds 1 – 4, 25%)**  
Chart 21



Source: Estimates produced using the DIR macro model.  
Notes: 1) Estimated effects assuming US imposes additional tariff of 25% on all Chinese imports excluding pharmaceuticals and rare earth, and China imposes tariff of 25% on 50 billion dollars' worth of imports from the US, and average 14.5% on \$60 billion worth.  
2) All figures are real. Rate of deviation from baseline (%).

**Effects of Tariffs on Japan, US, and China (Detailed Version)**  
Chart 22

Effects on Chinese Economy		Real GDP	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲ 0.36	▲ 0.43	▲ 0.12	0.00	▲ 1.11	▲ 0.51
	Contribution Rate		▲ 0.17	▲ 0.05	0.00	▲ 0.23	0.09
US/China Implement Govt. Expenditure	Deviation Rate	▲ 0.13	▲ 0.43	▲ 0.05	1.16	▲ 0.81	▲ 0.35
	Contribution Rate		▲ 0.17	▲ 0.02	0.17	▲ 0.17	0.06
Effects on US Economy		Real GDP	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲ 0.55	▲ 0.98	▲ 0.73	0.00	▲ 0.14	▲ 1.69
	Contribution Rate		▲ 0.68	▲ 0.12	0.00	▲ 0.02	0.28
US/China Implement Govt. Expenditure	Deviation Rate	0.01	▲ 0.98	0.02	4.03	▲ 0.11	▲ 0.14
	Contribution Rate		▲ 0.68	0.00	0.68	▲ 0.01	0.02
Effects on Japan's Economy		Real GDP	Personal Consumption	Housing Investment	Capex	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲ 0.22	▲ 0.02	▲ 0.02	▲ 0.81	▲ 1.66	▲ 1.04
	Contribution Rate		▲ 0.01	▲ 0.00	▲ 0.13	▲ 0.31	0.19
US/China Implement Govt. Expenditure	Deviation Rate	▲ 0.02	▲ 0.00	▲ 0.00	▲ 0.09	▲ 0.18	▲ 0.11
	Contribution Rate		▲ 0.00	▲ 0.00	▲ 0.01	▲ 0.03	0.02

Source: Estimates produced using the DIR macro model.  
Notes: 1) Estimated effects assuming US imposes additional tariff of 25% on all Chinese imports excluding pharmaceuticals and rare earth, and China imposes tariff of 25% on 50 billion dollars' worth of imports from the US, and average 14.5% on \$60 billion worth.  
2) All figures are real. Rate of deviation from baseline (%) and rate of contribution to GDP (%pt).

## Japan's Economic Outlook No.202

	FY18	FY19 (Estimate)	FY20 (Estimate)	CY18	CY19 (Estimate)	CY20 (Estimate)
<b>Main economic indicators</b>						
Nominal GDP (y/y %)	0.5	1.5	0.8	0.7	1.6	0.8
Real GDP (chained [2011]; y/y %)	0.7	0.9	0.4	0.8	1.1	0.3
Domestic demand (contribution, % pt)	0.8	1.2	0.4	0.7	1.4	0.4
Foreign demand (contribution, % pt)	-0.1	-0.3	-0.0	-0.0	-0.2	-0.1
GDP deflator (y/y %)	-0.2	0.6	0.5	-0.1	0.5	0.5
Index of All-industry Activity (y/y %)*	0.8	0.6	0.5	1.1	0.6	0.5
Index of Industrial Production (y/y %)	0.2	-0.8	1.0	1.1	-1.3	1.0
Index of Tertiary Industry Activity (y/y %)	1.1	0.9	0.4	1.2	1.1	0.4
Corporate Goods Price Index (y/y %)	2.2	1.8	2.0	2.6	1.0	2.8
Consumer Price Index (excl. fresh food; y/y %)	0.8	0.7	0.3	0.8	0.7	0.4
Unemployment rate (%)	2.4	2.4	2.4	2.4	2.4	2.4
Government bond yield (10 year; %)	0.04	-0.16	-0.20	0.07	-0.12	-0.20
Balance of payments						
Trade balance (Y tril)	0.7	-1.1	-1.2	1.2	-0.7	-1.2
Current balance (\$100 mil)	1,735	1,782	1,784	1,741	1,762	1,784
Current balance (Y tril)	19.2	19.3	19.1	19.2	19.1	19.0
(% of nominal GDP)	3.5	3.4	3.4	3.5	3.4	3.4
<b>Real GDP components</b> (Chained [2011]; y/y %; figures in parentheses: contribution, % pt)						
Private final consumption	0.5 (0.3)	0.8 (0.5)	0.3 (0.2)	0.3 (0.2)	0.9 (0.5)	0.3 (0.2)
Private housing investment	-4.4 (-0.1)	0.6 (0.0)	-0.8 (-0.0)	-5.8 (-0.2)	1.2 (0.0)	-1.1 (-0.0)
Private fixed investment	3.5 (0.6)	2.4 (0.4)	0.5 (0.1)	3.9 (0.6)	2.7 (0.4)	0.7 (0.1)
Government final consumption	0.9 (0.2)	1.1 (0.2)	0.6 (0.1)	0.8 (0.2)	1.1 (0.2)	0.7 (0.1)
Public fixed investment	-4.0 (-0.2)	3.2 (0.1)	0.8 (0.0)	-3.3 (-0.2)	1.1 (0.1)	2.2 (0.1)
Exports of goods and services	1.5 (0.3)	-1.9 (-0.3)	0.3 (0.0)	3.4 (0.6)	-2.3 (-0.4)	-0.2 (-0.0)
Imports of goods and services	2.1 (-0.4)	-0.2 (0.0)	0.4 (-0.1)	3.4 (-0.6)	-0.9 (0.2)	0.6 (-0.1)
<b>Major assumptions:</b>						
<b>1. World economy</b>						
Economic growth of major trading partners	3.6	3.1	3.4	3.9	3.1	3.4
Crude oil price (WTI futures; \$/bbl)	62.9	56.4	55.0	64.9	56.4	55.0
<b>2. US economy</b>						
US real GDP (chained [2012]; y/y %)	2.9	2.2	1.9	2.9	2.4	2.0
US Consumer Price Index (y/y %)	2.3	2.0	2.1	2.4	1.8	2.2
<b>3. Japanese economy</b>						
Nominal public fixed investment (y/y %)	-2.3	4.7	1.7	-1.6	2.6	3.4
Exchange rate (Y/\$)	110.9	107.5	106.5	110.4	108.4	106.5
(Y/€)	128.3	120.2	119.0	130.0	121.7	119.0

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.