## (Box 1) Effects of the Consumption Tax Hikes and the Introduction of the Reduced Tax Rate

The consumption tax hikes will affect the real economy by (1) generating a front-loaded increase and subsequent decline in demand prior to and after the consumption tax hikes (i.e., an intertemporal substitution effect) and (2) raising prices and reducing households' real disposable income (Box Chart 1 [1]). The effects of the front-loaded increase and subsequent decline in demand prior to and after the consumption tax hikes are expected to emerge mainly in household spending (i.e., private consumption and housing investment). Such effects are projected to emerge in business fixed investment as well, albeit to a smaller extent, particularly in family-owned firms and small firms that are eligible for the simplified tax system or the tax exemption.[37]

Given the difference in the scale of the tax rate increase, the effects of the scheduled consumption tax hike in April 2017 on the economic growth rate are projected to be only about two-thirds of the estimated effects of the consumption tax hike in April 2014.[38] In addition, the reduced tax rate will be applied to some goods, and the effects of the front-loaded increase and subsequent decline in demand and the decline in real income are expected to be smaller than if the reduced tax rate is not introduced. Estimating the effects of the introduction of the reduced tax rate should be based on the following two conjectures:

[37] Inventories are run down during the period when demand surges, and thus inventory investment lowers GDP. Moreover, a part of this demand increase is met by increased imports, which are deducted when calculating GDP. It should be noted that these movements in inventory investment and imports may contribute to smoothing swings in GDP.

[38] The effects of the consumption tax hike in April 2014 on the economic growth rate are estimated to be as follows. After the front-loaded increase in demand pushed up the growth rate by about 0.5 percentage point in fiscal 2013, both the subsequent decline in demand and the decline in real income pushed down the growth rate by about 1.2 percentage points in fiscal 2014. The growth rate is expected to be pushed up by about 0.3 percentage point in fiscal 2015 as the effects of the subsequent decline in demand will dissipate. It is worth noting that these estimates are subject to a considerable margin of error, since quantitatively extracting the effects of the consumption tax hike in April 2014 is quite difficult. This is because (1) the expiration of some widely used computer operating systems and the strengthening of gas emission regulations also caused demand fluctuations around that time and (2) the price rise including that due to the consumption tax hike is likely to have made household sentiment cautious and affected consumption more negatively than explained by the decline in real income.

(1) food, beverages, and newspapers, to which the reduced tax rate is to be applied, are non-durable goods and the front-loaded increase and subsequent decline in demand for those categories would be limited, and (2) the introduction of the reduced tax rate on some goods will restrain price increases and thus push up households' real disposable income to the same extent as the degree of restraint. In light of those considerations, the negative effects of the scheduled consumption tax hike in April 2017 on the economic growth rate are expected to become somewhat smaller compared to the case where the reduced tax rate on some goods is not introduced, mainly through the smaller decline in real income. Specifically, the consumption tax hike is estimated to push up the real GDP growth rate for fiscal 2016 by about 0.3 percentage point and push down that for fiscal 2017 by about 0.7 percentage point.

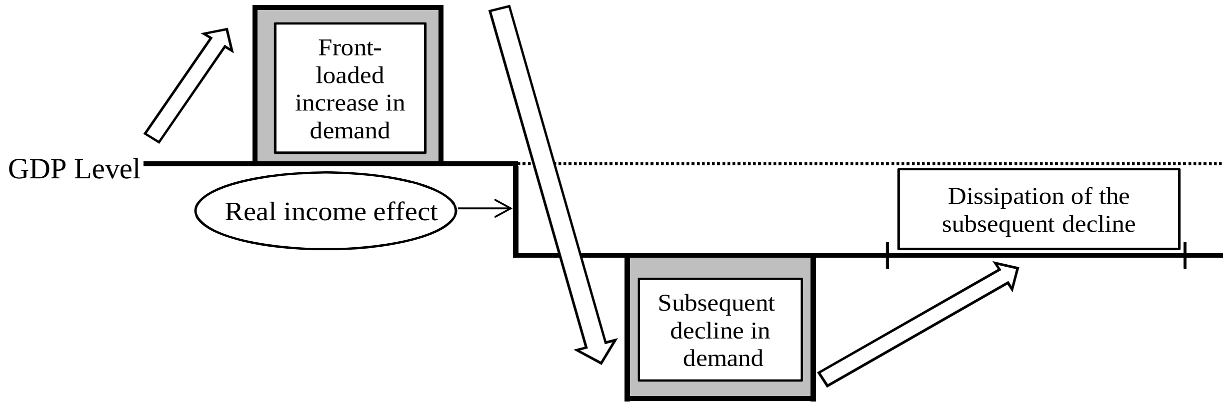
The direct effects of the scheduled consumption tax hike in April 2017 on prices can be mechanically estimated by assuming that the rise in the consumption tax will be fully passed on to taxable items. In fiscal 2017, the year-on-year rate of change in the CPI excluding fresh food and that excluding fresh food and energy will be pushed up by 1.0 percentage point and 0.9 percentage point, respectively (Box Chart 1 [2]). Compared to the case where the reduced tax rate on some goods is not introduced, the effects of the rise in prices will be smaller; the year-on-year rate of change in the CPI excluding fresh food and that excluding fresh food and energy will be smaller by 0.3 percentage point and 0.4 percentage point, respectively.

Box Chart 1

# Effects of the Consumption Tax Hikes and the Introduction of Reduced Tax Rate

## (1) Effects on Real GDP

### (a) Conceptual Diagram (Effects on the Level of Real GDP; Arrows Represent Effects on Growth Rates)




### (b) Estimated Effects of the FY 2014 and FY 2017 Consumption Tax Hikes on GDP Growth Rate

contribution to the real GDP growth rate, % points

| With/without the reduced tax rate | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 |
|---|---|---|---|---|---|
| Without | 0.5 | -1.2 | 0.3 | 0.3 | -0.8 |
| With | | | | 0.3 | -0.7 |

## (2) Effects on Prices

### (a) Share of Items by Tax Rate Applied and Estimated Effects on the CPI

| With/ without the reduced tax rate | Share of items by tax rate applied (%) | | | Effects of the consumption tax hike (from 8% to 10%) on the year-on-year rate of increase in the CPI (% points) | | | |
|---|---|---|---|---|---|---|---|
| | 10% | 8% | Tax-exempt | All items | All items (less fresh food) | All items (less fresh food and energy) | All items (less food and energy) |
| Without | 72 | — | 28 | 1.3 | 1.3 | 1.3 | 1.1 |
| With | 52 | 20 | 28 | 1.0 | 1.0 | 0.9 | 1.1 |

### (b) Categories and Items Not Expected to be Subject to the 10% Consumption Tax Rate

| Reduced tax rate (8%) | Tax-exempt |
|---|---|
| Cereals, fish & seafood, meats, dairy products & eggs, vegetables & seaweeds, fruits, oils, fats & seasonings, cakes & candies, cooked food, beverages (not including alcoholic beverages), newspapers | Rent, medical treatment, delivery fees in national & public hospital, nursing care, school fees (including kindergarten fees and PTA membership fees), school textbooks, package tours to overseas, insurance premiums, charges (registered stamps, permanent registration, passport, driving license) |

Notes: 1. Figures in (2) (a) are calculated using items and weights in the 2010-base CPI and assuming that the tax hike is fully passed on to prices.
2. In addition to categories and items listed as tax-exempt under the Consumption Tax Act, the right column in (2) (b) includes package tours to overseas, since a large part of services making up the price of such tours are not domestic transactions, and PTA membership fees, which are not considered compensation.

Sources: Cabinet Office; Ministry of Internal Affairs and Communications.