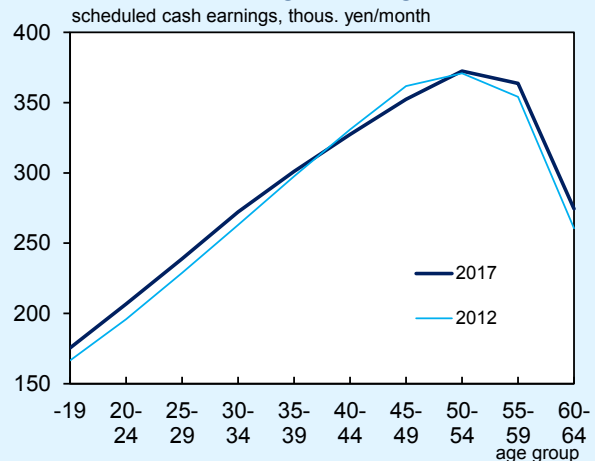


(Box 3) Changes in Wages, Disposable Income, and the Propensity to Consume by Age Group

Looking at scheduled cash earnings of full-time employees by age group, wages of younger and senior employees rose from 2012 through 2017, while wages of middle-aged employees decreased (Charts B3-1 and B3-2).³⁹ This box examines, by age group, how per household disposable income and the propensity to consume have changed, partly reflecting this change in the wage profile.

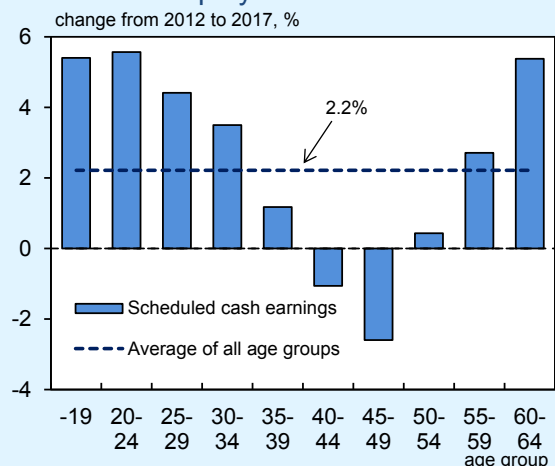
To calculate disposable income by age group, information such as on total income, income tax, and social insurance contributions by age group from the *Comprehensive Survey of Living Conditions* released by the Ministry of Health, Labour and Welfare was used. The results indicate changes from 2010-2012 to 2014-2016, as follows (Chart B3-3). (1) Per household total income (wages and salaries, pension benefits, etc.) of younger age groups, for which the wage profile shifted upward, has increased. However, (2) despite the downward shift in the wage profile for middle-aged employees, their per household total income also has increased; instead, senior households saw a decrease in per household

Chart B3-1: Change in Wage Profile



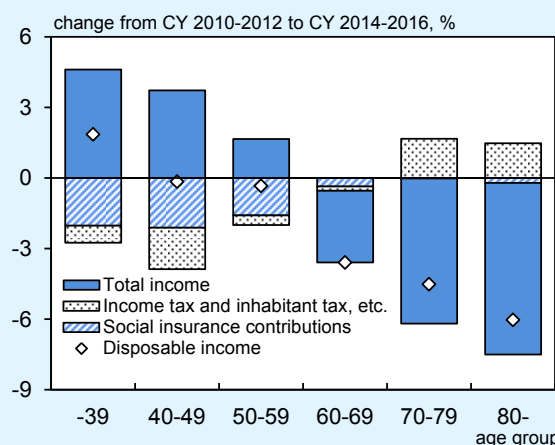
Source: Ministry of Health, Labour and Welfare.

Chart B3-2: Scheduled Cash Earnings of Full-Time Employees



Source: Ministry of Health, Labour and Welfare.

Chart B3-3: Per Household Disposable Income



Sources: Cabinet Office; Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare.

Note: Figures for per household disposable income by age are staff calculations obtained by dividing up aggregate disposable income from the SNA using the "Comprehensive Survey of Living Conditions," the "Monthly Labour Survey," etc.

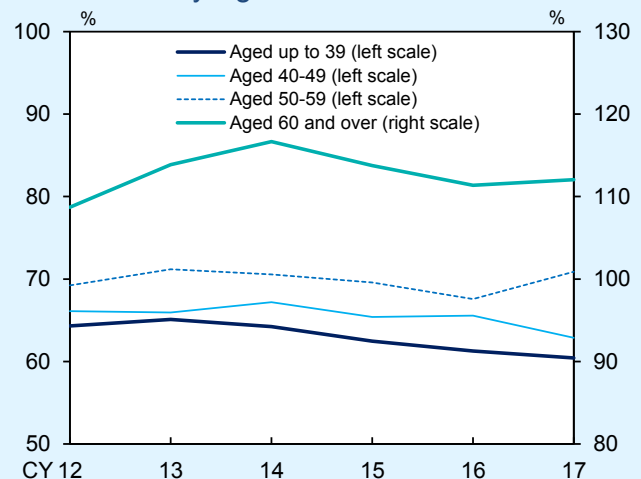
³⁹ For examples of, and the background to, changes in the wage profile, see the annex paper to the *Regional Economic Report*, "Hitode busoku no moto de no chingin dōkō to aratana kyūyo taikai no kōchiku ni muketa torikumi" [Wage developments under labor shortage and efforts toward building a new wage structure] released in December 2018 (available only in Japanese).

total income.⁴⁰ (3) The patterns for per household disposable income, which takes taxes and social security contributions into account, are generally similar.

Looking at the propensity to consume by age group, that of younger age groups, whose disposable income has increased, has declined, while that of seniors, whose disposable income has decreased, has increased (Chart B3-4). At the macro level, not only the increase in the propensity to consume of seniors, but also the increase in the share of seniors, who have a high propensity to consume -- i.e., the composition effect -- have contributed to pushing up the propensity (Chart B3-5).⁴¹ However, the declining propensity to consume of younger age groups has offset this effect.

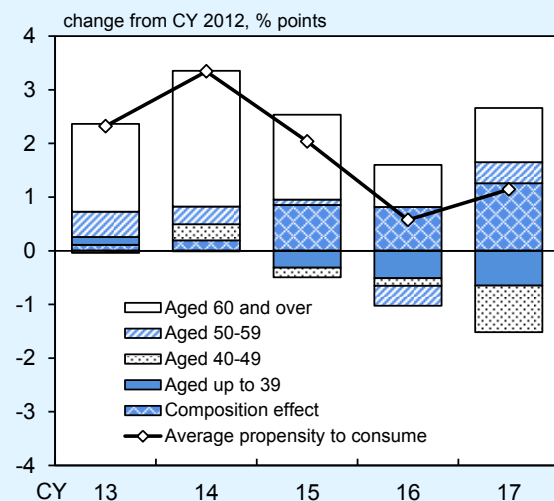
It is no wonder that the propensity to consume of age groups that experienced an increase in disposable income has declined (and vice versa) because of a tendency for consumption to change less than disposable income (the ratchet effect). That said, the decline in the propensity to

Chart B3-4: Average Propensity to Consume by Age



Sources: Ministry of Internal Affairs and Communications; Cabinet Office.
 Notes: 1. The average propensity to consume is private consumption / disposable income. Private consumption is consumption of households excluding imputed rent. Disposable income is based on SNA disposable income.
 2. Private consumption and disposable income by age are calculated using the "Family Income and Expenditure Survey."

Chart B3-5: Average Propensity to Consume



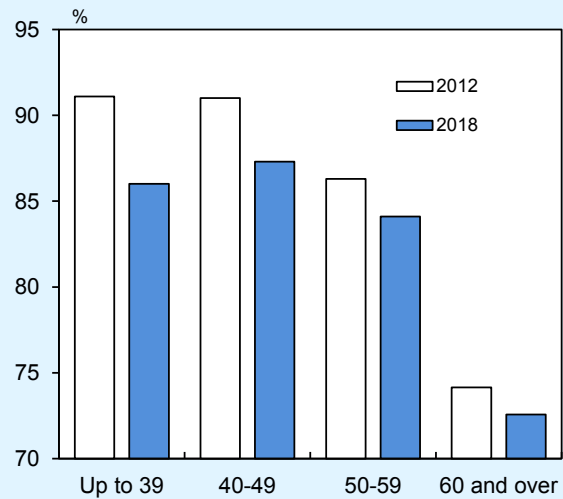
Sources: Ministry of Internal Affairs and Communications; Cabinet Office.
 Note: Figures are calculated using the average propensity to consume by age in Chart B3-4.

⁴⁰ The increase in middle-aged households' total income likely reflects the fact that household income increasingly also includes spouses' income with the spread of dual-income households. Meanwhile, the reason for the decline in the total income of senior households is that, as a result of pension reforms, reductions in pension and other receipts have outweighed the impact of wage increases. Although wages have increased, the increase likely has been insufficient to make up for the reduction in pension receipts, since many seniors are engaged in part-time work that provides low net income.

⁴¹ According to the life-cycle hypothesis, seniors' consumption relative to their income is comparatively high because they can use their savings, although it is more difficult for them to make labor input and their income is low. Thus, based on this hypothesis, it is natural that seniors have a higher propensity to consume than the young or middle-aged.

consume of younger age groups may be attributable to factors that have longer-term effects other than the ratchet effect. For example, there is a possibility that changes in the social structure such as an increase in dual-income households have affected the propensity to consume.^{42,43}

Chart B3-6: Worried about Life in Old Age



Source: The Central Council for Financial Services Information.
 Note: Figures show the percentage of households "worried" about their life in old age.

⁴² Some insist that the young are concerned about the future increase in social security contributions, and that this is a factor that has been restraining their consumption. However, looking at the *Survey of Household Finances*, the percentage of households worried about their life in old age actually has declined in recent years (Chart B3-6).

⁴³ "The Recent Increase in Dual-Income Households and Its Impact on Consumption Expenditure," Bank of Japan Review Series (2017-E-7), suggests that the propensity to consume of dual-income households is lower than that of other households within the same income class.