

Decomposition of Contribution Difference between the new and old bases

The contribution to the year-on-year percentage changes of the All items index of each item is as follows:

$$\frac{I_t \times W - I_{t-1} \times W}{I_{t-1,all} \times W_{all}} \times 100 = \left(\frac{I_t - I_{t-1}}{I_{t-1}} \times 100 \right) \times \left(\frac{I_{t-1}}{I_{t-1,all}} \right) \times \left(\frac{W}{W_{all}} \right) = c_t \times i_{t-1} \times w$$

(I: index, W: weight, c: year on year % changes, i: index ratio, w: weight ratio)

From this formula, the formula for obtaining the difference of contribution between the new and old bases can be decomposed as follows.

$$\begin{aligned} c_t^N i_{t-1}^N w^N - c_t^O i_{t-1}^O w^O &= \frac{(i_{t-1}^O c_t^N + i_{t-1}^N c_t^O)}{2} (w^N - w^O) + \frac{(c_t^N w^O + c_t^O w^N)}{2} (i_{t-1}^N - i_{t-1}^O) \\ &+ \frac{(w^O i_{t-1}^N + w^N i_{t-1}^O)}{2} (c_t^N - c_t^O) + (c_t^N - c_t^O)(i_{t-1}^N - i_{t-1}^O)(w^N - w^O) \end{aligned}$$

(N: new base, O: old base)

The explanations for each term are as follows.

- First term indicates the ‘impact of weight change’. If a weight decreases under the new base, the contribution also decreases in absolute terms; if a weight increases under the new base, the contribution also increases in absolute terms.
- Second term indicates the ‘impact of index reset’. If the index under the old standard is higher than that under the new base, the contribution tends to be smaller in absolute terms; conversely, if the index under the old standard is lower than that under the new base, the contribution tends to be larger in absolute terms.
- Third term indicates the ‘impact of revision for calculation models’, including the impact of revision of weights on inner-item, changes of item indices for Japan derived from the update of regional integrating weights, and so on.
- Fourth term indicates the ‘impact of adding/removing items’. It also serves as an adjustment term to ensure that the sum of the individual terms matches the difference in the contribution of the items.

Furthermore, by breaking down the difference in contribution between the old and new base by item and aggregating the results by effect, we can derive a breakdown of the difference in contribution for the upper-level categories. The breakdown of the difference in contribution for the All items index (June 2026) is as follows.

	Contribution difference between new and old base	Impact of weight change	Impact of index reset	Impact of revision for calculation models	impact of adding/removing items
All items	-0.03	0.10	-0.15	0.00	0.02

Under the 2025-base, the method for calculating indices for “Memory cards” and “Ink cartridge for printers ” has been changed from using survey prices obtained through the Retail Price Survey to using POS data.

The impact of this change on the All items index (year-on-year percentage change for June 2026) is as follows.

items	Weights (per 10000)		Year-on-year % changes		Contributions to the y/y % changes of the All items index		Contribution differences between 2025-base and 2020- base*
	2025- base	2020- base	2025- base	2020- base	2025- base	2020- base	
Memory cards	1	2	141.9	29.2	0.02	0.00	0.01
Ink cartridge for printers	4	6	1.1	0.2	0.00	0.00	0.00

* (2025-base) – (2020-base) (% point)