Terminologies

○ **Terminologies on the survey**

<Items, specifications>

The term "Item" refers to the name or category for commodities and services. The term "Specification" refers to the attributes of each item. For example, in the case of "Pork (belly)", "Pork" indicates the item, and "belly" indicates the specification.

<Basic specification>

It refers to the specification for items surveyed (excluding the items surveyed in the Survey on prices by specification of the Structural survey) that specify the quality, performance and characteristics (features), in order to remove the price differences occurred from the differences of quality and functionality of commodities and services.

<Specification for the Structural Survey>

It refers to the specification for items surveyed in "Survey on prices by specification". This specification differs from the basic specification. See Outline of Survey [1] for details of the Survey on prices by specification.

<Detailed specification>

It refers to the specification of details on the "basic specification" and/or the "specification for the Structural Survey" of items surveyed in each store. The detailed specifications are specified by the symbols "※" and "●". These symbols mean the following.

"※" : The specification that specify the details such as brand/model number and/or brand/part number of items surveyed in each store.
"●" : The specification that specify the brands of items surveyed in each store.

In addition, the detail is also shown in order to clarify the substance of specifications. The following five detailed specifications are used for the items surveyed in the Structural survey.

"●Single variety specification" : The most selling variety is specified in each store.
"●Brand specification" : The most selling brand is specified in each store.
"●Brand/name specification" : The most selling brand/name is specified in each store.
"※Model number specification" : The most selling model number is specified in each store.
"※Part number specification" : The most selling part number is specified in each store.

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[1] Outline of Survey   http://www.stat.go.jp/english/data/kouri/kouzou/k_gaiyo.htm

<Revision of specification>

It refers to the revision of a current basic specification in accordance with its representativeness, marketability, possibility of continuing the survey, and identifiability. Notice that the marketability in "Survey on prices by specification" is determined by the distribution of specifications in Ku-area of Tokyo.

○ **Terminologies on the statistical tables (division categories)**
  ・**Price differences between regions**

<Regional difference index of consumer prices>

It refers to the index based on the average price level of Japan (= 100) in order to indicate the differences of the price levels among regions.

<All items, less imputed rent>

It refers to the comprehensive price level of all items. Notice that the all items in regional difference index of consumer price does not contain the imputed rent.

<Imputed rent>

It refers to the rent paid for the housing services of owner-occupied houses assuming that owned house were rented.

<Ten major groups of items>

It consists of the following ten categories. See "List of Items"[2] for the details of items in each category.

| Food |
| Housing (*) |
| Fuel, light & water charges |
| Furniture & household utensils |
| Clothes & footwear |
| Medical care |
| Transportation & communication |
| Education |
| Culture & recreation |
| Miscellaneous |

* Notice that the category "Housing" does not include imputed rent.

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[2] List of Items
  Excel file   https://www.stat.go.jp/english/data/kouri/kouzou/zuhyou/hinmoku_2020_e.xls
  PDF file   https://www.stat.go.jp/english/data/kouri/kouzou/pdf/hinmoku_2020_e.pdf

<Districts>

Prefectures were grouped into the following 10 districts:

Hokkaido-district	Hokkaido
Tohoku-district	Aomori-ken, Iwate-ken, Miyagi-ken, Akita-ken, Yamagata-ken, Fukushima-ken
Kanto-district	Ibaraki-ken, Tochigi-ken, Gumma-ken, Saitama-ken, Chiba-ken, Tokyo-to, Kanagawa-ken, Yamanashi-ken, Nagano-ken
Hokuriku-district	Niigata-ken, Toyama-ken, Ishikawa-ken, Fukui-ken
Tokai-district	Gifu-ken, Shizuoka-ken, Aichi-ken, Mie-ken
Kinki-district	Shiga-ken, Kyoto-fu, Osaka-fu, Hyogo-ken, Nara-ken, Wakayama-ken
Chugoku-district	Tottori-ken, Shimane-ken, Okayama-ken, Hiroshima-ken, Yamaguchi-ken
Shikoku-district	Tokushima-ken, Kagawa-ken, Ehime-ken, Kochi-ken
Kyushu-district	Fukuoka-ken, Saga-ken, Nagasaki-ken, Kumamoto-ken, Oita-ken, Miyazaki-ken, Kagoshima-ken
Okinawa-district	Okinawa-ken

・**Prices by store type**

<Store types>

Supermarkets	Self-service stores that sell mainly food and daily necessities.
Conventional retail outlets	It corresponds to so-called rice stores, meat shops, delicatessens, and liquor stores, etc.
Discount stores (including drug stores)	It corresponds to so-called drug stores and home improvement centers, which sell daily necessities.

○ **Terminologies on the explanation**

・**Prices by store type**

<Percentile>

It refers to a measure indicating the value below which a given percent of observations in a group of observations fall. For example, the 25th percentile is the value below which 25 percent of the observations fall.

<Interquartile range>

Interquartile range is equal to the 25th percentile subtracted from the 75th percentile.

< Quartile dispersion coefficient >

Quartile dispersion coefficient is equal to the half of Interquartile range divided by 50th percentile. It makes possible to compare the degree of distribution of data between groups of observations.

○ **Terminologies on the calculation**

<Quasi-Laspeyres formula>

The indices for the "All items, less imputed rent" and "Ten major groups" are calculated as a weighted arithmetic mean of item prices for a comparative region using the average prices for Japan as the base prices and weights for Japan. The item prices used to calculate the index are average prices by weighted arithmetic mean.

The average price of each item for each region (Japan, districts, prefectures) is obtained as a weighted arithmetic mean of the average price for each municipality with respect to all items weight in municipality.

<Quasi-Paasche formula>

The indices for the "All items, less imputed rent" and "Ten major groups" are calculated as a weighted harmonic mean of item prices for a comparative region using the average prices for Japan as base prices and weights for a comparative region. The item prices used to calculate the index are average prices by weighted harmonic mean.

The average price of each item for each region (Japan, districts, prefectures) is obtained as a weighted harmonic mean of the average price for each municipality with respect to weights for item in municipality.

<Quasi-Fischer formula>

The index for the "All items, less imputed rent" and "Ten major groups" are calculated as the geometrical mean of the index obtained by a quasi-Laspeyres formula and that obtained by a quasi- Paasche formula.

<Weights>

It refers to the average monthly expenditures by item in each municipality, and is calculated by using the expenditures obtained from the Family Income and Expenditure Survey in the last five years.

The weights are used to calculate the average prices by the arithmetic mean and the harmonic mean, and to calculate the regional difference index for the "All items, less imputed rent" and ten major groups.

<Adjustment coefficient>

It refers to the coefficient in order to consider the number of households in each municipality for calculating weights, and is calculated from the number of households consisting of two or more persons in each municipality obtained from the latest Population Census.

<Model items>

Some items such as house rent, electricity, water charges, and sewerage charges are not appropriate to calculate its average price with the basic formula, since they have various fare structures, with prices that vary according to the purchased conditions. The average prices for those items are calculated with special formulae, called model formulae, which is designed by using a typical utilization case of each item as a model. (See "List of Items" for details.)

<Contribution>

Contribution shows impact of the price level of each item or group to the total price level. The formula used in this aggregation is Quasi- Fisher formula defined by the simple arithmetic mean of Quasi- Laspeyres formula and Quasi- Paasche formula. Since the Quasi- Fisher formula used in this aggregation is approximation formula, the total of the contribution of each item does not necessarily equal to the contribution to the "All items, less imputed rent" index (All items, less imputed rent Index － 100).

The contribution of an item or group g for a region a is obtained by the following:

・Contribution

$$\text{Contribution of } g = \frac{(\text{Contribution of } g \text{ by type L} + \text{Contribution of } g \text{ by type P})}{2}$$

where, the Contribution of g by type L, which correspond to Quasi-Laspeyres formula, and the Contribution of g by type P, which correspond to Quasi-Paasche formula, are obtained by the following formulae:

・Contribution of g by type L

$$\text{Contribution of } g = \frac{(\text{The index of } g \text{ by Type L} － 100) * \text{The weight of } g \text{ for Japan}}{\text{The total weight for Japan}}$$

・Contribution of g by type P

$$\text{Contribution of } g = \frac{\{1－1/(\text{The index of } g \text{ by Type P}/100)\} * \text{The weight of } g \text{ for the region } a * 100}{\text{The total weight for the region } a /(\text{The total index for the region } a /100)}$$