

Outline of the Survey of Household Economy

I Outline of the Survey

1. Objectives

This survey is intended to grasp conditions surrounding consumption in terms of products related to information and communication technology, and goods and services ordered over the Internet, and expensive products and services with low frequency of consumption.

2. Universe and sampling

The survey unit is a household in Japan except institutional households. The sample households are selected as follows based on the 2020 Population Census:

a. Sampling Unit

The sample households are selected based on the two-stage stratified sampling method. The sampling units at two stages are namely, primarily the survey unit area composed of the Enumeration District (abbreviated as ED hereinafter) of the 2020 Population Census, and secondly the household.

b. Stratification and Allocation of Survey Unit Areas to Strata

i) Households in Japan are stratified by 9 districts and 4 city groups. The number of strata is 35 because there is no city corresponding to Major cities in the Shikoku district. The criteria of the districts and the city groups are as follows:

a) Districts

Hokkaido: Hokkaido;

Tohoku: Aomori-ken, Iwate-ken, Miyagi-ken, Akita-ken, Yamagata-ken and Fukushima-ken;

Kanto: Ibaraki-ken, Tochigi-ken, Gumma-ken, Saitama-ken, Chiba-ken, Tokyo-to, Kanagawa-ken, Yamanashi-ken and Nagano-ken;

Hokuriku: Niigata-ken, Toyama-ken, Ishikawa-ken and Fukui-ken;

Tokai: Gifu-ken, Shizuoka-ken, Aichi-ken and Mie-ken;

Kinki: Shiga-ken, Kyoto-fu, Osaka-fu, Hyogo-ken, Nara-ken and Wakayama-ken;

Chugoku: Tottori-ken, Shimane-ken, Okayama-ken, Hiroshima-ken and Yamaguchi-ken;

Shikoku: Tokushima-ken, Kagawa-ken, Ehime-ken and Kochi-ken;

Kyushu and Okinawa: Fukuoka-ken, Saga-ken, Nagasaki-ken, Kumamoto-ken, Oita-ken, Miyazaki-ken, Kagoshima-ken and Okinawa-ken

b) City groups

Major cities: designated cities under the article 252-19 of the Local Autonomy Law and Ku-areas (ward) of Tokyo;

Middle cities: cities with population of 150,000 or more, excluding Major cities;

Small cities A: cities with population of 50,000 more but less than 150,000;

Small cities B and Towns and villages: cities with population of less than 50,000, towns and villages

ii) The number of the survey unit areas is 3,000. The survey unit areas are allocated to each stratum in proportion to the number of households in the stratum which is based on the 2020 Population Census.

c. Sampling the Survey Unit Areas

i) The same number of EDs are randomly selected from each stratum (abbreviated as standard area hereinafter) as a quarter of the number of survey unit areas allocated in b. The municipalities with selected standard areas are selected municipalities.

ii) When the standard area in a selected municipality is only one, the selected municipality is a survey block, which is the area one enumerator covers. When two or more, the selected municipality is divided into the same number of survey blocks as the number of the standard areas so that each block contains nearly equal number of households. The number of the survey blocks reaches 750 in

Japan.

iii) Since the survey is conducted for five years in a survey block, the EDs contained in the blocks are divided into five areas, for each survey year so that each area contains nearly equal number of households.

iv) A divided survey block in iii) is divided again into four areas. An enumerator covers four survey unit areas in which the beginning month of the survey differs.

d. Sampling the Households

When sample households are selected from a survey unit area, the list of the households in a survey unit area is prepared from the basic resident register or the electoral roll. Ten households (of the two-or-more-person household is nine, one-person household is one) are randomly sampled from this list. As a result, 30,000 households in total are selected from 3,000 survey unit areas nationwide in Japan.

e. Rotation of sample

The sample households are continuously surveyed for 12 months, and then substituted with other households in another region divided in c. iii) and c. iv).

The sample households are divided into 12 groups. As a rule, one of the groups is replaced every month. Each group is composed of 2,500 households which are one-twelfth of all sample households.

Any household unable to continue with the survey due to moving or some other reasons is replaced by a substitute household for the remaining survey period if it is 3 months or more.

3. Survey items

The following items are surveyed:

a. Items related to the household conditions (Questionnaire A)

- Items related to the household
- Use state related to electronic money
- Purchase situation using the internet

b. Items related to consumption of specific goods and services each month (Questionnaire B)

- Items related to the household (changes from the previous month)
- Expenditure over one month for specific goods and services
- Expenditure over one month for goods

and services through the internet

4. Survey method

The survey is entrusted to a private survey institution. Enumerators will leave questionnaires with target households for them to answer, which will be collected later on. (On-line submission is also used.) Questionnaires shall be collected by enumerators, mailed by households, or answered through an on-line survey system by households.

Questionnaires are distributed when cooperation for the survey is requested and questionnaires of the previous month are collected. For paper questionnaires submission, as a rule, enumerators collect questionnaires in the first and sixth months of the survey and households mail private survey institution in the other months. Also, questionnaires are collected in the beginning of the following month of the survey.

5. Survey period

The survey is conducted every month.

6. Tabulation

a. Major tabulation items

- Items related to the household
- Use state related to electronic money
- Purchase situation using the internet
- Amount paid for specific goods and services
- Amount paid purchase of goods and services through the internet (internet shopping)

b. Process for tabulation

The data are tabulated at the National Statistics Center, Japan.

c. Estimate formula

The national and regional averages are estimated as follows: There are differences in the sampling ratios of the covered households by stratum. Therefore, the reciprocals of the sampling ratios are used as the multiplication ratios (linear multiplication ratios) for the tabulation of the items used for the estimation of the household ratios. Using these ratios, the correction coefficients are obtained from the results of the Labour Force Survey. The results are estimated using these two multiplication ratios namely the linear multiplication ratios and the correction coefficients.

In case of one-person households, the linear multiplication ratio is fixed at one.

The quarterly and annual averages are obtained by the simple mean of monthly averages.

Monthly averages are estimated in the following formula:

- The number of households

$$N = \sum_i \sum_j \sum_k \alpha_{ij} C_{ik}$$

N : Number of households

α_{ij} : Linear multiplication ratio of district i and city group j

C_{ik} : Correction coefficient by district i and household members k (one-person households by sex and age)

- The expenditure of monthly average

$$\bar{X} = \frac{\sum_i \sum_j \sum_k \sum_p X_{ijkp} \alpha_{ij} C_{ik}}{N}$$

\bar{X} : Total expenditure

X_{ijkp} : Expenditure on given item by districts i , city group j , household members k and household p (one-person households by sex and age)

d. Sampling error of estimate

The result of the sampling error for 2023 annual average by using monthly tabulated data is shown in the table at the end titled “Standard error and standard error ratio”.

The estimation method of the standard errors is as follows:

i) Standard error of monthly average

Standard error of monthly average is calculated by the following formula, regarding as the sample was composed of 12 sub-samples by the beginning month of the survey:

$$\hat{\sigma}(\bar{X}) = \sqrt{\frac{1}{12 \times (12-1)} \sum_{w=1}^{12} (\hat{X}_w - \bar{X})^2}$$

$\hat{\sigma}(\bar{X})$: Standard error of monthly average

\hat{X}_w : Estimation value by w sub-sample

\bar{X} : Estimation value by all samples

ii) Standard error of annual average

Standard error of annual average is calculated by the following formula using the standard errors of monthly average:

$$\hat{\sigma}_{year}(\bar{X}) = \sqrt{\frac{\sum_{m=1}^{12} \hat{\sigma}(\bar{X})_m^2}{(12)^2}}$$

$\hat{\sigma}_{year}(\bar{X})$: Standard error of annual average

$\hat{\sigma}(\bar{X})_m$: Standard error of monthly average in month m

Calculation of the ratio of standard error is as follows:

$$r_X = \frac{\hat{\sigma}(\bar{X})}{\bar{X}} \times 100$$

r_X : Ratio of standard error

e. Effective response rate

The effective response rate of 2023 is 71.7%.

7. Utilization of the results

The results of this survey are utilized as basic data for the Quarterly Estimates of GDP and the Household Consumption Trend Index for the Family Income and Expenditure Survey.

8. Notes

The survey was conducted as a general statistical survey in compliance with the Statistics Act (Act No. 53, 2007).

Table Standard error and Standard error ratio (Specific goods and services)

(All Japan)

2023 Average		Total Households			Two-or-more-person Households			One-person Households		
		Expenditure (In yen)	Standard error (In yen)	Standard error ratio (%)	Expenditure (In yen)	Standard error (In yen)	Standard error ratio (%)	Expenditure (In yen)	Standard error (In yen)	Standard error ratio (%)
	Number of persons per household (persons)	2.20	0.00	0.0	2.90	0.00	0.0	1.00	0.00	0.0
	Number of earners per household (persons)	1.17	0.00	0.0	1.50	0.00	0.0	0.60	0.00	0.0
	Age of household head (years old)	59.8	0.1	0.2	61.2	0.0	0.0	57.4	0.2	0.3
	Total expenditure on specific goods and services (50 items)	75,182	732	1.0	94,485	648	0.7	42,221	1,629	3.9
01	Mobile telephones charges	9,274	42	0.5	11,600	45	0.4	5,301	61	1.2
02	Internet connection charges	3,606	13	0.4	4,282	14	0.3	2,451	28	1.1
03	Mobile telephones unit prices	1,404	51	3.6	1,721	37	2.1	863	108	12.5
04	Airplane fares	1,185	49	4.1	1,265	34	2.7	1,050	114	10.9
05	Accommodation services	2,716	55	2.0	3,384	48	1.4	1,578	118	7.5
06	Package tour costs (domestic)	1,627	43	2.6	2,026	42	2.1	945	82	8.7
07	Package tour costs (overseas)	572	46	8.0	710	52	7.3	336	87	25.9
08	Tuition (kindergarten-university) (public)	1,193	35	2.9	1,796	41	2.3	163	71	43.6
09	Tuition (kindergarten-university) (private)	5,204	110	2.1	7,920	165	2.1	565	160	28.3
10	Tutorial fees	2,389	53	2.2	3,638	61	1.7	256	102	39.8
11	Lesson fees, driving school	408	19	4.7	638	30	4.7	15	5	33.3
12	Rental fees for sports facilities	876	14	1.6	1,052	13	1.2	575	28	4.9
13	Men's suits	456	19	4.2	584	15	2.6	238	42	17.6
14	Women's one-piece dresses and suits	528	18	3.4	622	16	2.6	367	34	9.3
15	Japanese clothing	203	16	7.9	263	22	8.4	100	25	25.0
16	Wrist watches	244	17	7.0	307	22	7.2	136	29	21.3
17	Accessories	374	23	6.1	470	27	5.7	211	40	19.0
18	Delivery fees	159	15	9.4	243	21	8.6	15	19	126.7
19	Hospital charges (excluding delivery)	1,443	34	2.4	1,872	36	1.9	709	65	9.2
20	Chests of drawers	69	4	5.8	96	5	5.2	24	5	20.8
21	Beds	225	15	6.7	282	14	5.0	127	32	25.2
22	Quilts	295	12	4.1	351	11	3.1	200	29	14.5
23	Desks and chairs (for work or study)	120	7	5.8	151	7	4.6	68	15	22.1
24	Sideboards	70	6	8.6	97	9	9.3	25	6	24.0
25	Dining tables and chairs	109	8	7.3	149	10	6.7	40	13	32.5
26	Drawing room suites	136	11	8.1	187	14	7.5	49	17	34.7
27	Musical instruments (including parts of instruments)	136	19	14.0	173	14	8.1	73	47	64.4
28	Refrigerators	689	27	3.9	870	31	3.6	380	48	12.6
29	Vacuum cleaners	259	8	3.1	325	9	2.8	145	16	11.0
30	Washing machines	578	19	3.3	782	23	2.9	228	36	15.8
31	Air conditioners	1,311	42	3.2	1,647	45	2.7	738	85	11.5
32	Personal computers (including tablet devices, excluding peripherals and software)	1,009	61	6.0	1,133	30	2.6	797	157	19.7
33	TV	616	25	4.1	744	26	3.5	398	52	13.1
34	Video recorders (DVD or Blu-ray recorder, player, etc.)	91	5	5.5	123	5	4.1	37	9	24.3
35	Video game hardware (excluding software)	163	16	9.8	125	5	4.0	228	41	18.0
36	Cameras (including lenses only, excluding disposable cameras)	101	8	7.9	128	9	7.0	55	16	29.1
37	Video cameras	29	8	27.6	24	3	12.5	39	20	51.3
38	House-related equipping/ construction/ repair costs	6,214	303	4.9	7,400	242	3.3	4,189	701	16.7
39	Water supply and drainage construction costs	1,945	83	4.3	2,371	84	3.5	1,219	167	13.7
40	Gardens, trees and plants tending costs	467	24	5.1	451	18	4.0	495	56	11.3
41	Automobiles (new)	10,480	475	4.5	13,704	426	3.1	4,974	1,072	21.6
42	Automobiles (second-hand)	3,565	203	5.7	4,372	185	4.2	2,187	446	20.4
43	Automotive insurance premium (compulsion)	516	10	1.9	634	9	1.4	314	20	6.4
44	Automotive insurance premium (option)	2,553	32	1.3	3,136	32	1.0	1,556	63	4.0
45	Motorized vehicles other than automobiles	305	65	21.3	302	27	8.9	312	174	55.8
46	Automotive maintenance and repairs	2,918	57	2.0	3,584	44	1.2	1,780	144	8.1
47	Wedding ceremony and reception costs	404	45	11.1	595	69	11.6	78	38	48.7
48	Funeral service costs	2,873	149	5.2	2,746	117	4.3	3,093	368	11.9
49	Religion-related costs	1,014	53	5.2	1,137	54	4.7	803	105	13.1
50	Remittance	2,064	63	3.1	2,278	44	1.9	1,698	150	8.8

Monthly Expenditure per Household by All Japan

Table Standard error and Standard error ratio (Goods and services ordered over the Internet)

(All Japan)

2023 Average	Total Households			Two-or-more-person Households			One-person Households		
	Expenditure (In yen)	Standard error (In yen)	Standard error ratio (%)	Expenditure (In yen)	Standard error (In yen)	Standard error ratio (%)	Expenditure (In yen)	Standard error (In yen)	Standard error ratio (%)
Number of persons per household (persons)	2.20	0.00	0.0	2.90	0.00	0.0	1.00	0.00	0.0
Number of earners per household (persons)	1.17	0.00	0.0	1.50	0.00	0.0	0.60	0.00	0.0
Age of household head (years old)	59.8	0.1	0.2	61.2	0.0	0.0	57.4	0.2	0.3
Total expenditure on goods and services ordered over the Internet(22 items)	20,132	196	1.0	23,021	133	0.6	15,196	426	2.8
51 Gift items	769	19	2.5	891	13	1.5	560	46	8.2
Total expenditure for home	19,363	191	1.0	22,130	133	0.6	14,636	413	2.8
52 Foods	2,796	32	1.1	3,419	28	0.8	1,733	72	4.2
53 Beverages	744	11	1.5	878	8	0.9	514	26	5.1
54 Deliveries	556	14	2.5	614	9	1.5	458	32	7.0
55 Home electronics	1,182	47	4.0	1,252	31	2.5	1,062	116	10.9
56 Furniture	405	27	6.7	458	11	2.4	315	68	21.6
57 Men's clothing	527	19	3.6	595	11	1.8	410	44	10.7
58 Women's clothing	955	17	1.8	1,200	16	1.3	537	34	6.3
59 Footwear and other clothing	453	9	2.0	599	8	1.3	205	19	9.3
60 Medicines	233	6	2.6	272	4	1.5	167	15	9.0
61 Health foods	646	9	1.4	763	9	1.2	446	18	4.0
62 Cosmetics	701	15	2.1	847	9	1.1	453	34	7.5
63 Private transportation	376	15	4.0	459	13	2.8	233	33	14.2
64 Books and other reading materials	399	11	2.8	413	5	1.2	374	29	7.8
65 Software (music, video, personal computer, TV game)	451	17	3.8	393	6	1.5	550	44	8.0
66 Digital books	280	11	3.9	210	3	1.4	401	29	7.2
67 Download music, video, applications	371	17	4.6	234	4	1.7	603	45	7.5
68 Insurance	809	18	2.2	1,012	21	2.1	463	37	8.0
69 Accommodation services, fares, package tours(payment on the Internet)	2,829	70	2.5	3,377	55	1.6	1,892	158	8.4
70 Accommodation services, fares, package tours(payment on-site)	862	21	2.4	1,121	25	2.2	420	43	10.2
71 Tickets	868	21	2.4	950	12	1.3	727	50	6.9
72 Other goods and services	2,921	61	2.1	3,065	42	1.4	2,675	144	5.4

Monthly Expenditure per Household by All Japan