

Outline of the Survey of Household Economy

I Outline of the Survey

1. Survey Objectives

This survey is intended of grasp conditions surrounding consumption in terms of a) products related to information and communication technology, and b) expensive products and services with low frequency of consumption, in order to gain a more accurate understanding of personal consumption trends.

2. Universe and sampling

The survey unit is household except institutional households in the entire area of Japan. The sample households are selected as follows based on the result of 2005 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 of the 2005 Population Census (abbreviated as ED hereinafter)), and secondly the household.

b. Stratification and Allocation of Survey Unit Areas to Strata

i) The entire land of Japan is stratified according to districts (9 districts) and city groups (4 city groups). The number of strata is 35, because there is no city that corresponds to Major cities in the Shikoku district. The criteria of the districts and the city groups is as follows

- a) Districts ... Hokkaido(Hokkaido), Tohoku (Aomori-ken, Iwate-ken, Miyagi-ken , Akita-ken , Yamagata-ken , Fukushima-ken) , Kanto (Ibaraki-ken, Tochigi-ken, Gunma-ken, Saitama-ken, Chiba-ken, Tokyo-to , Kanagawa-ken , Yamanashi-ken , Nagano-ken) , Hokuriku (Niigata-ken, Toyama-ken, Ishikawa-ken, Fukui-ken) , Tokai (Gifu-ken , Shizuoka-ken , Aichi-ken , Mie-ken) , Kinki (Shiga-ken, Kyoto-fu, Osaka-fu, Hyogo-ken , Nara-ken ,

Wakayama-ken) , Chugoku (Tottori-ken , Shimane-ken , Okayama-ken , Hiroshima-ken , Yamaguchi-ken) , Shikoku (Tokushima-ken , Kagawa-ken , Ehime-ken, Kochi-ken) , Kyushu and Okinawa (Fukuoka-ken, Saga-ken, Nagasaki-ken , Kumamoto-ken , Oita-ken , Miyazaki-ken , Kagoshima-ken, Okinawa-ken)

b) City groups ... Major cities (Designated cities under article 252-19 of the Local Autonomy Law and Ku-area of Tokyo (excluding Sagamihara-shi , Okayama-shi and Kumamoto-shi)) , 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 (Citises with population of less than 50,000, Towns and villages)

ii) The number of the survey unit areas is 3,000 in the entire area of Japan. The allocation of survey unit areas to strata is determined according to the number of households.

c. Sampling the Survey Unit Areas

i) EDs of 1/4 (abbreviated as standard area hereinafter) of the number of survey unit areas allocated in b. are selected randomly from each stratum. The municipalities where selected standard areas locate are sample municipalities.

ii) When the standard area in selected municipalities is only one, selected municipality is survey block. When the standard area in selected municipalities is two or more, EDs is divided into the number of the standard area. The area that was divided is survey block. A municipality is divided into blocks which contain nearly equal number of households. The survey block shows the range which one enumerator takes charge of, and sets up the survey block of 750 in japan.

iii) Since the survey is conducted for five years in the survey block. The EDs contained in a block is divided into five, the survey block is according to the survey year. A municipality is divided into blocks which contain nearly equal number of households.

iv) A enumerator takes charge of four survey unit area from which the survey start month differ, a survey block of divided in iii) is divided into four again, EDs is selected randomly as a survey unit area.

d. Sampling the Sample Households

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

e. The Rotation of sample

The sample households are continuously surveyed for 12 months, and then substituted with other households in another region divided 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 made up of 2,500 households which are one-twelfth of all sample households.

Any household that cannot continue with the survey due to moving or some other reason and for which the remaining survey period is 3 month or more is replaced by the substitute household for the remaining months.

3. Survey items

The following items are surveyed:

- a. Items related to the household conditions (Questionnaire A)
 - Items related to the household
 - Utilization of electronic money etc.
- b. Items related to consumption of specific goods and services each month (Questionnaire B)
 - Items related to the household (changes from previous month)
 - Total purchase price over one month for specific goods and services

- Total expenditure of the household
- Use of the Internet in terms of consumption

4. Survey method

The survey is entrusted to a private survey agency. Questionnaires are delivered to the households by enumerators. Either collection by enumerators or mail-in by the households is used to collect the questionnaires.

Enumerators collect the questionnaires of the first and 6th month of the survey period, respectively.

5. Survey period

The survey is conducted every month.

6. Tabulation

- a. Major tabulation items
 - Items related to the household
 - Items related to utilization of electronic money etc.
 - Item related to monthly expenditure for specific goods and service per household

b. Process for tabulation

The data of questionnaires collected are tabulated at the National Statistics Center.

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.

However, in the case of one-person households, "1" was used for the linear multiplication ratio.

The quarterly and annual averages were obtained by calculating the simple mean values from the monthly findings

Monthly average values 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 districts i and city group j

C_{ik} : Correction coefficient by districts 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, number of members in household members k and household p (one-person households by sex and age)

d. Sampling error of estimate

The result of estimation of the sampling error for 2012 annual average by using monthly tabulated data is shown in the following table titled “Standard error and standard error ratio”.

The estimation method of the standard error is as follows.

i) The monthly standard error

The sample was calculated per month by the following formula, regard as it was compared of plural sub-sample by the beginning month of survey.

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

$\hat{\sigma}(\bar{X})$: The monthly standard error

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

\bar{X} : Estimation value by all samples

ii) Standard error of yearly average

It was calculated by the following formula using the standard error of the 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 yearly average

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

Standard error of m monthly average

Calculation of the ratio of standard error is as follows.

Standard error ratio

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

e. Effective response rate

The effective response rate of 2012 is 68.2%.

7. Utilization of the results

The results of this survey are utilized as basic data for the Quarterly Estimation of GDP and estimation of Composite Index of Consumption Expenditure 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

(All Japan)

2012 Average	All 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)	2.47	0.00	0.0	3.09	0.00	0.0	1.00	0.00	0.0
Number of earners per household (persons)	1.20	0.00	0.0	1.49	0.00	0.0	0.52	0.01	1.9
Age of household head (years old)	58.7	0.1	0.2	59.3	0.1	0.2	57.1	0.2	0.4
01 Mobile telephone (cell phone, PHS) charges	8,482	44	0.5	10,398	49	0.5	3,946	64	1.6
02 Telephone charges	2,434	9	0.4	2,728	9	0.3	1,738	18	1.0
03 Internet connection charges	1,832	9	0.5	2,066	7	0.3	1,276	26	2.0
04 CATV licence fees (viewing and internet connection)	755	6	0.8	937	6	0.6	323	13	4.0
05 CATV licence fees (viewing only)	413	5	1.2	452	4	0.9	321	12	3.7
06 Digital satellite broadcast viewing fees	274	4	1.5	305	3	1.0	203	10	4.9
07 Chests of drawers	112	13	11.6	133	9	6.8	61	34	55.7
08 Beds	214	12	5.6	274	14	5.1	72	20	27.8
09 Quilts	393	15	3.8	441	12	2.7	279	40	14.3
10 Desks and chairs (for work or study)	1461	81	5.5	174	9	5.2	81	20	24.7
11 Sideboards	1061	71	6.6	135	9	6.7	37	9	24.3
12 Drawing room suites	215	18	8.4	265	18	6.8	95	39	41.1
13 Musical instruments (including parts of instruments)	155	16	10.3	189	21	11.1	75	21	28.0
14 Men's suits	637	17	2.7	776	16	2.1	307	46	15.0
15 Women's one-piece dresses and suits	941	24	2.6	1,030	19	1.8	731	68	9.3
16 Japanese clothing (for men and women)	402	25	6.2	468	29	6.2	244	46	18.9
17 Wrist watches	366	111	30.3	304	20	6.6	513	344	67.1
18 Accessories	792	53	6.7	837	33	3.9	686	147	21.4
19 Automobiles (new)	12,459	551	4.4	14,958	436	2.9	6,534	1,480	22.7
20 Automobiles (second-hand)	2,650	121	4.6	3,444	151	4.4	771	212	27.5
21 Automotive insurance premium (compulsion)	1,026	16	1.6	1,258	17	1.4	477	35	7.3
22 Automotive insurance premium (option)	3,028	31	1.0	3,671	34	0.9	1,506	76	5.0
23 Motorized vehicles other than automobiles	282	33	11.7	326	27	8.3	176	100	56.8
24 Automotive maintenance and repairs	4,238	50	1.2	5,148	54	1.0	2,084	119	5.7
25 House-related equipping/ construction/ repair costs (interior)	3,601	141	3.9	4,432	185	4.2	1,633	243	14.9
26 House-related equipping/ construction/ repair costs (exterior)	4,630	165	3.6	5,595	203	3.6	2,348	273	11.6
27 Water supply and drainage construction costs	1,535	73	4.8	1,768	71	4.0	984	151	15.3
28 Gardens, trees and plants tending costs	686	19	2.8	728	19	2.6	587	46	7.8
29 Rents for dwelling	9,840	103	1.0	7,704	59	0.8	14,898	276	1.9
30 Rents for land	377	14	3.7	448	16	3.6	207	23	11.1
31 Refrigerators	613	16	2.6	755	20	2.6	276	31	11.2
32 Washing machines	430	18	4.2	525	15	2.9	206	42	20.4
33 Air conditioners	941	28	3.0	1,143	31	2.7	461	55	11.9
34 Sewing machines	51	5	9.8	61	5	8.2	27	10	37.0
35 Stereo phonograph sets	48	4	8.3	49	5	10.2	45	11	24.4
36 Personal computers	771	28	3.6	906	24	2.6	449	73	16.3
37 Personal computer peripherals and softwares	221	10	4.5	236	6	2.5	186	26	14.0
38 Mobile telephones (cell phone, PHS unit prices and entry fees)	418	18	4.3	482	13	2.7	267	53	19.9
39 Fax	53	3	5.7	65	3	4.6	24	5	20.8
40 TV	540	17	3.1	642	18	2.8	298	33	11.1
41 Digital broadcast tuner and antenna	39	3	7.7	45	3	6.7	25	5	20.0
42 Video recorders (DVD recorder, player, etc. are included)	225	9	4.0	251	7	2.8	164	27	16.5
43 Video games, hardwares & softwares	191	10	5.2	209	6	2.9	150	28	18.7
44 Cameras (excluding disposable cameras)	243	14	5.8	287	12	4.2	141	30	21.3
45 Video cameras	90	6	6.7	115	5	4.3	32	14	43.8
46 Car navigation systems	151	11	7.3	188	10	5.3	62	26	41.9
47 Dental treatment	1,810	45	2.5	2,159	51	2.4	983	93	9.5
48 Medical treatment (excluding dental)	4,621	29	0.6	5,573	33	0.6	2,366	48	2.0
49 Delivery fees	103	12	11.7	147	17	11.6	-	0	-
50 Hospital charges (excluding delivery)	1,935	48	2.5	2,336	47	2.0	985	108	11.0
51 Tuition (kindergarten-university) (public)	1,709	37	2.2	2,405	51	2.1	62	18	29.0
52 Tuition (kindergarten-university) (private)	6,641	146	2.2	9,277	180	1.9	400	172	43.0
53 Tutorial fees	2,661	44	1.7	3,734	60	1.6	120	30	25.0
54 Highway fares (using ETC)	897	8	0.9	1,088	8	0.7	445	22	4.9
55 Highway fares (excluding ETC)	118	3	2.5	130	2	1.5	88	8	9.1
56 Lesson fees, driving school	450	20	4.4	617	27	4.4	56	19	33.9
57 Airplane fares	985	60	6.1	971	29	3.0	1,017	188	18.5
58 Accommodation services	1,876	38	2.0	2,194	30	1.4	1,125	108	9.6
59 Package tour costs (domestic)	2,708	42	1.6	3,315	46	1.4	1,272	65	5.1
60 Package tour costs (overseas)	2,216	83	3.7	2,626	92	3.5	1,248	146	11.7
61 Rental fees for sports facilities	1,039	19	1.8	1,129	15	1.3	827	52	6.3
62 Wedding ceremony and reception costs	1,774	455	25.6	1,783	142	8.0	1,752	1,555	88.8
63 Funeral service costs	3,750	190	5.1	3,743	174	4.6	3,764	501	13.3
64 Religion-related costs	2,032	95	4.7	2,180	89	4.1	1,682	244	14.5
(Reference) Households filling in total expenditure									
Total expenditure	288,168	1,100	0.4	333,453	960	0.3	178,546	2,611	1.5
Remittance	4,339	77	1.8	4,819	59	1.2	3,174	216	6.8
Money gifts	8,952	140	1.6	9,828	128	1.3	6,831	334	4.9
Total expenditure on goods and services ordered over the Internet	4,624	74	1.6	5,077	47	0.9	3,529	227	6.4

Monthly expenditure per household by All Japan (including agricultural, forestry, and fisheries households)