Outline of the Survey of Household Economy

Ⅰ Outline of the Survey

1. Survey Objectives

This survey is intended to grasp conditions surrounding consumption in terms of a) products related to information technology, which have shown major increases in recent years, 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 nationwide households in Japan, and sample households are selected based on the stratified two-stage random sampling.

  a. Sampling of survey points

The entire country is stratified into districts and urban areas, and a total of approximately 3,000 survey points (enumeration districts of the Population Census) are selected from the sampled municipalities.

  b. Sampling of households

Ten households are selected from each survey point, making a total of some 30,000 households.

One of the 10 selected households is a one-person household.

3. Survey items

The following items are surveyed:

a. Items related to the household conditions (Questionnaire A)
- Items related to the household
- Ownership and utilization of equipments and services related to information technology
- Utilization of the Internet
- 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.

From January 2002 to March 2006, enumerators collected the questionnaires of the first month, the 4th, the 8th and the 12th of the survey period, respectively. From April 2006 to May 2008, enumerators collected the questionnaires of the first month, the 6th and 11th of the survey period, respectively. From June 2008, 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. Rotation of sample households

The sample households are continuously surveyed for one year, and then substituted with other households.

All sample households are divided into 12 groups, which are rotated periodically. Accordingly, each group is replaced to another group after one year. Each group is made up of 2,500 households, which are one-twelfth of all sample households. The survey is conducted for one new group every month.

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

Some households for which the survey had been started between May 2006 and March 2007, however, were surveyed for two years.

7. Tabulation

  a. Major tabulation items

- Items related to the household
- Items related to ownership and utilization of equipments and services on information technology
- Items related to utilization of the Internet
- 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 total expenditure of monthly average

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

  $\overline{X}$: Total expenditure
  X_{ijkp} : Sum of 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 2009 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 12 sub-samples by the beginning month of survey.

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

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

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

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

  $\hat{\sigma}_{year}(\overline{X})$: Standard error of yearly average
  $\hat{\sigma}(\overline{X})_m$: Standard error of m month

   Calculation of the ratio of standard error is as follows.

Standard error ratio

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

8. 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.

9. Notes

The survey was conducted as a collection of statistical reports in compliance with the Statistical Reports Coordination Act (Act No. 148, 1952) until March 31, 2009 and as a general statistical survey in compliance with the Statistics Act (Act No. 53, 2007) from April 2009.

Table   Standard error and Standard error ratio   (All Japan)

2009 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)	2.50	0.00	0.0	3.12	0.00	0.0	1.00	0.00	0.0
Number of earners per household (persons)	1.21	0.00	0.0	1.49	0.00	0.0	0.56	0.00	0.0
Age of household head (years old)	57.9	0.10	0.2	58.8	0.1	0.2	55.7	0.2	0.4
01 Mobile telephone (cell phone, PHS) charges	8,216	45	0.5	9,917	47	0.5	4,147	67	1.6
02 Telephone charges	2,597	9	0.3	2,884	10	0.3	1,909	16	0.8
03 Internet connection fees (provider fees and line usage charges)	1,646	12	0.7	1,839	9	0.5	1,182	26	2.2
04 Internet connection fees (provider fees)	123	2	1.6	147	3	2.0	65	6	9.2
05 CATV license fees (viewing and internet connection)	650	5	0.8	822	6	0.7	239	10	4.2
06 CATV license fees (viewing only)	448	6	1.3	504	6	1.2	314	14	4.5
07 Digital satellite broadcast viewing fees	211	3	1.4	239	3	1.3	143	8	5.6
08 Chests of drawers	120	10	8.3	147	13	8.8	55	14	25.5
09 Beds	200	13	6.5	237	13	5.5	112	32	28.6
10 Quilts	367	10	2.7	447	13	2.9	176	21	11.9
11 Desks and chairs (for work or study)	163	7	4.3	212	9	4.2	43	10	23.3
12 Sideboards	120	8	6.7	154	10	6.5	40	9	22.5
13 Drawing room suites	209	16	7.7	268	20	7.5	67	18	26.9
14 Musical instruments (including parts of instrument)	195	18	9.2	245	24	9.8	74	22	29.7
15 Men's suits	733	19	2.6	889	18	2.0	361	46	12.7
16 Women's one-piece dresses and suits	1,045	23	2.2	1,166	22	1.9	754	60	8.0
17 Japanese clothing (for men and women)	621	42	6.8	717	40	5.6	389	88	22.6
18 Automobiles (new)	10,408	438	4.2	12,661	389	3.1	5,022	1,035	20.6
19 Automobiles (second-hand)	2,412	125	5.2	3,136	149	4.8	678	219	32.3
20 Automotive insurance premium (compulsion)	976	14	1.4	1,178	16	1.4	491	34	6.9
21 Automotive insurance premium (option)	2,851	32	1.1	3,438	32	0.9	1,445	71	4.9
22 Motorized vehicles other than automobiles	395	38	9.6	457	36	7.9	246	106	43.1
23 Automotive maintenance and repairs	3,563	43	1.2	4,287	44	1.0	1,829	104	5.7
24 House-related equipping/ construction/ repair costs (interior)	4,209	189	4.5	4,977	193	3.9	2,372	456	19.2
25 House-related equipping/ construction/ repair costs (exterior)	4,489	184	4.1	5,327	207	3.9	2,482	369	14.9
26 Water supply and drainage construction costs	1,681	69	4.1	2,023	80	4.0	865	103	11.9
27 Gardens, trees and plants tending costs	824	24	2.9	883	30	3.4	681	44	6.5
28 Rents for dwelling	11,501	105	0.9	8,684	91	1.0	18,243	222	1.2
29 Rents for land	574	24	4.2	642	24	3.7	413	43	10.4
30 Refrigerators	658	23	3.5	788	24	3.0	349	52	14.9
31 Washing machines	395	16	4.1	483	15	3.1	185	37	20.0
32 Air conditioners	839	31	3.7	958	30	3.1	558	82	14.7
33 Sewing machines	58	5	8.6	66	5	7.6	40	13	32.5
34 Stereo phonograph sets	68	9	13.2	68	6	8.8	70	29	41.4
35 Personal computers	919	34	3.7	1,071	31	2.9	555	84	15.1
36 Personal computer peripherals and software	265	18	6.8	269	8	3.0	254	57	22.4
37 Mobile telephone (cell phone, PHS unit prices and entry fees)	412	12	2.9	489	13	2.7	227	32	14.1
38 Fax	65	3	4.6	80	3	3.8	31	6	19.4
39 TV (with built-in digital broadcast tuner)	2,610	60	2.3	3,040	55	1.8	1,583	151	9.5
40 TV (without digital broadcast tuner)	60	4	6.7	67	4	6.0	44	10	22.7
41 Digital broadcast tuner and antenna	116	6	5.2	138	6	4.3	63	11	17.5
42 Video recorders (DVD recorder, player, etc. are included)	422	15	3.6	505	14	2.8	224	36	16.1
43 Video games with Internet connection function	69	5	7.2	77	3	3.9	48	15	31.3
44 Cameras (excluding disposable camera)	347	13	3.7	399	12	3.0	224	36	16.1
45 Video cameras	120	8	6.7	152	8	5.3	42	18	42.9
46 Car navigation systems	196	13	6.6	242	14	5.8	85	30	35.3
47 Dental treatment	2,015	54	2.7	2,385	48	2.0	1,128	139	12.3
48 Medical treatment (excluding dental)	4,811	31	0.6	5,839	33	0.6	2,350	57	2.4
49 Delivery fees	307	23	7.5	435	33	7.6	-	0	-
50 Hospital charges (excluding delivery)	2,079	64	3.1	2,573	58	2.3	895	159	17.8
51 Tuition (kindergarten-university) (public)	2,385	49	2.1	3,272	57	1.7	264	94	35.6
52 Tuition (kindergarten-university) (private)	6,904	179	2.6	9,638	242	2.5	356	100	28.1
53 Tutorial fees	2,389	38	1.6	3,296	44	1.3	216	69	31.9
54 Highway fares (using ETC)	840	8	1.0	1,024	7	0.7	400	23	5.8
55 Highway fares (excluding ETC)	209	4	1.9	242	4	1.7	131	10	7.6
56 Lesson fees, driving school	489	28	5.7	648	32	4.9	108	56	51.9
57 Air fares	947	35	3.7	980	25	2.6	868	106	12.2
58 Accommodation costs	2,059	36	1.7	2,385	30	1.3	1,281	93	7.3
59 Package tour costs (domestic)	3,075	42	1.4	3,630	49	1.3	1,745	82	4.7
60 Package tour costs (overseas)	1,904	71	3.7	2,306	74	3.2	940	150	16.0
61 Rental fees for sports facilities	1,100	18	1.6	1,281	17	1.3	666	47	7.1
62 Wedding ceremony and reception costs	1,799	130	7.2	2,407	171	7.1	347	134	38.6
63 Funeral service costs	3,937	193	4.9	4,118	205	5.0	3,503	385	11.0
64 Religion-related costs	2,416	92	3.8	2,647	103	3.9	1,864	193	10.4
(Reference) Households filling in total expenditure									
Total expenditure	302,676	943	0.3	349,086	943	0.3	190,449	1,590	0.8
Remittance	5,503	120	2.2	6,064	71	1.2	4,152	362	8.7
Money gifts	10,536	179	1.7	11,457	124	1.1	8,300	524	6.3
Total expenditure on goods and services ordered over the Internet	3,736	63	1.7	3,935	49	1.2	3,255	190	5.8

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