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 and Okayama-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（Cities 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 of the number of survey unit areas allocated in b. are selected randomly from each stratum. The municipalities where selected survey unit areas locate are sample municipalities.

ii) Since the survey is conducted for five years in the sample municipalities , a sample municipality is divided into five regions. A municipality where two or more EDs locate in i) is divided into regions 5 times the number of EDs. A municipality is devided into regions which contain nearly equal number of households.

iii) One region of divided regions in ii) is divided into four regions again. A region is devided into regions which contain nearly equal number of households.

ⅳ) An area composed with EDs is

selected randomly   as a survey unit area from   each regions divided in iii).

ⅴ) After the survey at a   survey unit area selected in ⅳ), another survey unit area is selected to alternate survey unit area in another region divided in ii).

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 resister (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. ii).

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.

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

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

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

$\overline{X}$: 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 2011 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.

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

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

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

$\overline{X}$: Estimation value by all samples

α : Number of the monthly sub-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
$$r_X = \hat{\sigma}(\overline{X}) \div \overline{X} \times 100$$

e. Effective response rate

The effective response rate of 2011 is 70.3%.

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).

2011 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)	2.48	0.00	0.0	3.10	0.01	0.3	1.00	0.00	0.0
Number of earners per household (persons)	1.22	0.00	0.0	1.50	0.00	0.0	0.53	0.01	1.9
Age of household head (years old)	58.3	0.1	0.2	59.0	0.1	0.2	56.5	0.3	0.5
01 Mobile telephone (cell phone, PHS) charges	8,585	51	0.6	10,391	60	0.6	4,221	74	1.8
02 Telephone charges	2,486	10	0.4	2,744	11	0.4	1,861	22	1.2
03 Internet connection charges	1,886	12	0.6	2,102	9	0.4	1,367	32	2.3
04 CATV licence fees (viewing and internet connection)	742	8	1.1	923	8	0.9	302	15	5.0
05 CATV licence fees (viewing only)	425	5	1.2	462	5	1.1	336	14	4.2
06 Digital satellite broadcast viewing fees	262	4	1.5	298	3	1.0	175	10	5.7
07 Chests of drawers	115	9	7.8	134	12	9.0	68	13	19.1
08 Beds	209	18	8.6	255	22	8.6	97	26	26.8
09 Quilts	394	17	4.3	454	15	3.3	251	40	15.9
10 Desks and chairs (for work or study)	141	9	6.4	172	9	5.2	66	20	30.3
11 Sideboards	120	17	14.2	122	9	7.4	115	53	46.1
12 Drawing room suites	206	15	7.3	263	20	7.6	68	19	27.9
13 Musical instruments (including parts of instruments)	180	22	12.2	206	23	11.2	117	58	49.6
14 Men's suits	674	23	3.4	803	23	2.9	362	50	13.8
15 Women's one-piece dresses and suits	944	19	2.0	1,064	22	2.1	654	48	7.3
16 Japanese clothing (for men and women)	496	40	8.1	567	46	8.1	325	89	27.4
17 Wrist watches	279	29	10.4	269	18	6.7	304	87	28.6
18 Accessories	801	36	4.5	836	38	4.5	714	95	13.3
19 Automobiles (new)	8,635	348	4.0	10,793	393	3.6	3,421	842	24.6
20 Automobiles (second-hand)	2,510	128	5.1	3,216	158	4.9	803	255	31.8
21 Automotive insurance premium (compulsion)	995	19	1.9	1,206	19	1.6	483	45	9.3
22 Automotive insurance premium (option)	2,829	34	1.2	3,446	36	1.0	1,337	85	6.4
23 Motorized vehicles other than automobiles	263	24	9.1	327	32	9.8	107	38	35.5
24 Automotive maintenance and repairs	4,104	66	1.6	4,958	66	1.3	2,041	155	7.6
25 House-related equipping/ construction/ repair costs (interior)	3,850	159	4.1	4,755	212	4.5	1,663	233	14.0
26 House-related equipping/ construction/ repair costs (exterior)	4,735	191	4.0	5,500	202	3.7	2,888	416	14.4
27 Water supply and drainage construction costs	1,469	60	4.1	1,812	80	4.4	643	91	14.2
28 Gardens, trees and plants tending costs	700	22	3.1	723	23	3.2	643	49	7.6
29 Rents for dwelling	11,314	148	1.3	8,735	111	1.3	17,543	382	2.2
30 Rents for land	404	16	4.0	460	20	4.3	267	35	13.1
31 Refrigerators	631	25	4.0	716	23	3.2	428	61	14.3
32 Washing machines	432	15	3.5	531	16	3.0	194	26	13.4
33 Air conditioners	885	31	3.5	1,036	29	2.8	517	76	14.7
34 Sewing machines	60	6	10.0	67	6	9.0	41	15	36.6
35 Stereo phonograph sets	58	8	13.8	67	8	11.9	37	17	45.9
36 Personal computers	928	44	4.7	1,066	36	3.4	592	109	18.4
37 Personal computer peripherals and softwares	242	9	3.7	244	7	2.9	238	28	11.8
38 Mobile telephones (cell phone, PHS unit prices and entry fees)	379	22	5.8	429	13	3.0	257	64	24.9
39 Fax	64	3	4.7	75	3	4.0	38	7	18.4
40 TV	1,979	52	2.6	2,280	44	1.9	1,252	121	9.7
41 Digital broadcast tuner and antenna	189	7	3.7	213	8	3.8	132	16	12.1
42 Video recorders (DVD recorder, player, etc. are included)	489	19	3.9	562	13	2.3	312	49	15.7
43 Video games, hardwares & softwares	214	11	5.1	220	6	2.7	201	35	17.4
44 Cameras (excluding disposable cameras)	286	26	9.1	293	12	4.1	270	84	31.1
45 Video cameras	102	8	7.8	124	7	5.6	50	19	38.0
46 Car navigation systems	165	11	6.7	219	14	6.4	35	9	25.7
47 Dental treatment	2,107	103	4.9	2,345	68	2.9	1,530	337	22.0
48 Medical treatment (excluding dental)	4,655	48	1.0	5,557	35	0.6	2,478	148	6.0
49 Delivery fees	132	16	12.1	187	22	11.8	-	0	
50 Hospital charges (excluding delivery)	1,848	45	2.4	2,292	50	2.2	775	84	10.8
51 Tuition (kindergarten-university) (public)	1,820	42	2.3	2,551	60	2.4	54	19	35.2
52 Tuition (kindergarten-university) (private)	7,008	158	2.3	9,816	224	2.3	225	97	43.1
53 Tutorial fees	2,501	46	1.8	3,452	61	1.8	205	60	29.3
54 Highway fares (using ETC)	757	10	1.3	927	9	1.0	346	21	6.1
55 Highway fares (excluding ETC)	106	2	1.9	126	3	2.4	55	5	9.1
56 Lesson fees, driving school	463	24	5.2	644	33	5.1	27	14	51.9
57 Airplane fares	851	55	6.5	866	28	3.2	816	181	22.2
58 Accommodation services	1,720	30	1.7	2,024	28	1.4	986	71	7.2
59 Package tour costs (domestic)	2,519	39	1.5	2,995	49	1.6	1,369	82	6.0
60 Package tour costs (overseas)	1,982	74	3.7	2,311	74	3.2	1,185	207	17.5
61 Rental fees for sports facilities	961	18	1.9	1,093	21	1.9	644	33	5.1
62 Wedding ceremony and reception costs	1,370	106	7.7	1,841	140	7.6	232	136	58.6
63 Funeral service costs	3,804	247	6.5	3,534	218	6.2	4,460	664	14.9
64 Religion-related costs	2,206	80	3.6	2,382	90	3.8	1,783	211	11.8
(Reference) Households filling in total expenditure									
Total expenditure	284,287	798	0.3	327,547	898	0.3	177,619	1,440	0.8
Remittance	4,267	78	1.8	4,872	69	1.4	2,770	243	8.8
Money gifts	9,182	151	1.6	10,087	173	1.7	6,956	290	4.2
Total expenditure on goods and services ordered over the Internet	4,103	52	1.3	4,560	47	1.0	2,976	149	5.0

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