

Survey Design of Japanese Panel Study of Employment Dynamics

1. Outline of the Survey

Purpose of the Survey	Reveal dynamics and variation of employment and non-employment all over the country
Items surveyed	Status of employment, Living dynamics, Status of initial and previous employment, Attribute of individual person of the Previous one year
Survey volume	about 100 questions Survey 2016: 92 questions

2. Period of the Survey

Survey period	Survey period is fixed as every January January 14 ~ January 25, 2016
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3. Coverage of the Survey

Survey districts	All over the country
Conditions of persons	Male and female 15 years old and over to be surveyed
Exclusion conditions	None (no condition on occupation/survey cooperation records)

4. Method of the Survey

Survey technique	Internet monitoring survey (Sample survey)
Sampling method	Extract persons satisfied the conditions by the monitor (Mighty monitor) possessed by Intage Inc.
Sample design	Based on “Labour force survey” data of Statistics Bureau, Ministry of Internal Affairs and Communications, allocation was implemented by gender, stratified age group, type of employment, district block, education background. The allocation was set to reflect the population. However, as for 10s of non-labour force, and 65 years old and over, the allocation was adjusted less than actual count of persons.
Effective collection count/effective collection rate	Survey 2016: 49,131 samples * Persons requested: 145,102 Effective collection rate: 33.9%

5. Aggregation Method

Weighted sampling aggregation	Weighted sampling aggregation is necessary to implement aggregation according to the population construction since the collection was conducted with less allocation than actual count of persons for 10s of non-labour force, and 65 years old and over.
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1. Outline of the Survey

In Japanese Panel Study of Employment Dynamics, following items were questioned in survey 2016 for the purpose of grasping status of employment, living dynamics, etc. during the previous one year prior to the survey (in case of survey 2016, one year period of 2015).

Attribute		Status of the Previous One Year	
Q1	Gender	Q44	Life satisfaction
Q2	Age	Q45	Annual events and living
Q3	Birth month and year	Q46	Annual occupational events
Q4	Present residential place	Q47	Self-development activities
Q5	Marital status	Q48	Holiday acquisition condition
Q6	With or without a child/children	Q49	Rate of taking paid leaves
Q7	Number of children	Q50	Stress
Q8	Age of child	Q51	Income source of living expenses
Q9	Cohabiter	Q52	How to cover the living expenses
Q10	Principal household income earner	Q53	Job upskilling
Q11	Type of residence	Q54	On-the-Job-Training opportunity
Q12	Final educational background	Q55	Off-the-Job-Training opportunity
Q13	Present school year	Q56	With or without self-development
Q14	Dropout experience	Q57	Work place status
Q15-1	Labour force status of January 2015~April 2015	Q58	Nature of work
Q15-2	Labour force status of May 2015~August 2015	Q59	Job satisfaction
Q15-3	Labour force status of September 2015~November 2015	Q60	Stress of taking balance of work and family life
Q16	Labour force status of December 2015	Q61	Reasons of stress
Status as in Last December		Status of Initial Employment	
Q17	Type of working	Q62	Type of working of initial employment
Q18	Type of employment	Q63	Industry of initial employment
Q19	Reasons of being engaged in work as in December	Q64	Number of employees of initial employment
Q20	Reasons of absence from work	Q65	Occupation of initial employment
Q21	Could be engaged in work upon availability?	Status of Previous Employment	
Q22	Desire to work	Q66	Type of working of previous employment
Q23	Degree of desire to work	Q67	Industry of initial employment
Q24	With or without job seeking	Q68	Number of employees of previous employment
Q25	Reasons of seeking no job	Q69	Work location of previous employment
Q26	Reasons of unemployment	Q70	Occupation of previous employment
Q27	The reason of no desire to work	Q71	Number of working days/hours in previous employment
Q28	Industry	Q72	Annual income of previous employment
Q29	Number of employees	Q73	Channels to find current place of work
Q30	Occupation	Q74	Order of timing between the last resignation and adoption of current employment
Q31	With or without employment contract term	Q75	Reasons of the resignation
Q32	Employment contract term , Number of renewal times of employment contract	Q76	With or without job seeking
Q33	Status of employment (unemployment) insurance coverage	Status around the Delivery of the Youngest Child	
Q34	Working days and hours per week	Q77	Status of Working around the Youngest Child Delivery
Q35	Position title	Q78	Social system used at the birth of the Youngest Child Delivery
Q36	Overtime work status	Q79	Resignation experience around the youngest child delivery
Q37	Salary payment method	Q80	Reasons of resignation around the youngest child delivery
Q38	Hourly rate	Others	
Q39	Commuting methods	Q81	Residential place
Q40	Time spent in commuting	Q82	Academic achievement at the last junior high school year
Q41	Work flexibility	Q83	Month and year of school graduation, month and year of entry to and resignation from the initial employment, month and year of entry to the current employment
Q42	Working hours per week of the second jobs	Q84	Month and year of entry to and resignation from the current employment
Q43	Number of resignation times in the past	Q85	Annual income of the previous year (main job, second job, non-occupational)
		Q86	Type of working of the spouse
		Q87	Annual income of the spouse
		Q88	Savings per household , Amount of security holdings per household
		Q89	Job-hunting experience
		Q90	Desired future plan after graduation
		Q91	Decision of occupation after graduation
		Q92	Desire for changing or hunting job

2. Period of the Survey

As the purpose is to grasp the status of the previous one year prior to the survey period, the survey period is fixed as every January. The survey 2016 was actually implemented from January 14 to January 25, 2016.

3. Coverage of the Survey

The subjected persons are male and female of 15 years old and over, and without upper age limit. The survey was implemented not as a complete census but sample survey. (Refer to “4. Method of the Survey”)

4. Method of the Survey

Internet monitoring survey was used as the technique of survey by asking the monitors for the survey after extracting male and female of 15 years old and over. The survey applied the system to receive answers on internet screens.

When monitors are surveyed, discrepancy would be seen in age and occupation construction between monitors and the population subject to survey. In order to conduct the survey with representativeness reflecting the population as much as possible, necessary sample numbers were calculated by gender, stratified age group, type of employment, district block and education background, then collected answers aiming these numbers (allocation).

On this stage, if the samples are allocated according to the population construction, total volume of unworking groups of 10s and 65 years old and over increases and results decrease of sample numbers of working people groups on the target for the desired close analysis. Therefore, the survey was designed to obtain larger number of working people samples by allocating less figures to non-labour force of 10s, and 65 years old and over.

(Refer to Reference (1) “Production method of population value data and allocation by gender, stratified age group, type of employment, district block and education background”)

In survey 2016, out of the requested 145,102 persons, number of effective samples was 49,131. (Refer to “Reference (2) Allocation and collection count”)

5. Aggregation Method

Weighted sampling aggregation is necessary to implement aggregation according to the population construction so that the number of the samples can get near to the population value calculated in the stage of sample design in “4. Method of the Survey”, since less figures than actual count of persons were allocated to 10s of non-labour force, and 65 years old and over.

(Refer to “Reference (3) Calculation method of weighted values”)

It is verified that big bias can be eliminated from the survey results even compared with official statistics by allocation with smaller segmentation under consideration of the representativeness in the stage of sample design, then making correction by weighted aggregation.

(Refer to “Reference (4) Comparison of the survey results and official statistics”)

Reference (1) Production method of population value data and allocation by gender, stratified age group, type of employment, district block and education background

<Data production procedures>

- I. Produce population data: Produce population data using multiple official data adapting to the targeted allocation cells
- II. Correct population data for allocation: Adjust number of persons in the population
- III. Produce allocation: Make allocation adapting to the population data construction after correction

<Data production procedures in detail>

I. Produce population data:

Produce population data using multiple official data adapting to the targeted cells for allocation

I-i. Produce basic data

<Data used>

“Table II Population aged 15 years old and over by status of employment, position of employment, type of employment, marital status, and age group” from 2014 version “Labour Force Survey (Basic Tabulation) by Region” issued by Statistics Bureau, Ministry of Internal Affairs and Communications

- Extract number of persons of self-employed workers, family workers, executives of company or corporation, regular employees, non-regular employees, unemployment and non-labour force by gender age group (divided by 10s) for each area of whole Japan (divided by 11 areas), from “Table II Population aged 15 years old and over by status of employment, position of employment, type of employment, marital status, and age group” of 2014 version “Labour Force Survey (Basic Tabulation) by Region”
 - * The latest yearly data are used
- Data are produced by following cells x 11 areas

		Labour force						Non-labour force
		Self employed worker	Family worker	Executive of company or corporation	Regular employee	Non-regular employee	Unemployment	
Male	15 - 24 years old							
	25 - 34 years old							
	35 - 44 years old							
	45 - 54 years old							
	55 - 64 years old							
	65 years old and over							
Female	15 - 24 years old							
	25 - 34 years old							
	35 - 44 years old							
	45 - 54 years old							
	55 - 64 years old							
	65 years old and over							

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I-ii. Age group division change (by 5 from 10 years)

<Data used>

“Table I-2 Population aged 15 years old and over by status of employment, position of employment, type of employment (number of employees for non-agricultural/forestry industry employees), main activity status, agriculture/forestry, non-agricultural/forestry, type of household, family type of household and age group” from 2014 version “Labour Force Survey (Basic Tabulation) Whole Japan” issued by Statistics Bureau, Ministry of Internal Affairs and Communications

- The data in I-i are divided into groups of 10 years, therefore the above data are divided so that 15 ~ 24 years old becomes 15 ~ 19 years old/20 ~ 24 years old, and 65 years old and over becomes 65 ~ 69 years old/70 years old and over
(Get the rate of 15 ~ 19 years old out of 15 ~ 24 years old, then multiply the data of 15 ~ 24 years old by the rate to get number of persons. For other age segments, the same procedures are to be followed as above.)
- On this stage, utilise the data corresponding to the segments by self-employed workers, family workers, executives of company or corporation, regular employees, non-regular employees, unemployment, non-labour force that were sorted in I-i
 - * As for executives of company or corporation, the data of regular employees are used
 - * The data uniformed throughout the country are used

In this way, cells will be arranged as follows:

		Labour force						Non-labour force
		Self employed worker	Family worker	Executive of company or corporation	Regular employee	Non-regular employee	Unemployment	
Male	15 · 19 years old							
	20 · 24 years old							
	25 · 34 years old							
	35 · 44 years old							
	45 · 54 years old							
	55 · 64 years old							
	65 · 69 years old							
70 years old and over								
Female	15 · 19 years old							
	20 · 24 years old							
	25 · 34 years old							
	35 · 44 years old							
	45 · 54 years old							
	55 · 64 years old							
	65 · 69 years old							
70 years old and over								

I-iii. Calculation of number of persons attending school

<Data used>

“Table I-2 Population aged 15 years old and over by status of employment, age group, main activity status, agriculture/forestry, non-agricultural/forestry, whether wishing to work, marital status, type of household, relation to the head of household, and education background” from 2014 version “Labour Force Survey (Detailed Tabulation) Whole Japan” issued by Statistics Bureau, Ministry of Internal Affairs and Communications

- From the above data, ratios of “attending schools” for labour force/non-labour force by gender age (divided into groups of 10 years) are calculated. The results are multiplied by the basic data to get the count of persons “attending school” by labour force/non-labour force x gender age (divided into groups of 10 years)
 - * Since there are no data by labour force breakdown (self-employed, regular employees, etc.), the ratio is as uniformed for every type of employment
 - * Since there are no data by each region, whole Japan data are used

In the above way, attending school was extracted and arranged as in following cells:

		Labour force						Non-labour force	
		Self employed worker	Family worker	Executive of company or corporation	Regular employee	Non-regular employee	Unemployment	Attending school	Attending school
Male	15 · 19 years old								
	20 · 24 years old								
	25 · 34 years old								
	35 · 44 years old								
	45 · 54 years old								
	55 · 64 years old								
	65 · 69 years old								
70 years old and over									
Female	15 · 19 years old								
	20 · 24 years old								
	25 · 34 years old								
	35 · 44 years old								
	45 · 54 years old								
	55 · 64 years old								
	65 · 69 years old								
70 years old and over									

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I-iv. Divide persons other than attending school into the groups of below university graduates and university graduates or higher

<Data used>

“Table I-2 Population aged 15 years old and over by status of employment, age group, main activity status, agriculture/forestry, non-agricultural/forestry, whether wishing to work, marital status, type of household, relation to the head of household, and education” from 2014 version “Labour Force Survey (Detailed Tabulation) Whole Japan” issued by Statistics Bureau, Ministry of Internal Affairs and Communications

- Like as in I-iii, ratios of below university graduates and university graduates or higher for the persons “graduated from” by labour force /non-labour force x gender age (divided into groups of 10 years) are calculated. The results are multiplied by the basic data to get the count of persons by education background (below university graduates/university graduates or higher)
 - * Since there are no data by labour force breakdown (self-employed, regular employees, etc.), the ratio is as uniformed for every type of employment
 - * Since there are no data by each region, whole Japan data are used
- Now, the count of persons of the population adapted to the aimed allocation cells is completed. Produce 2,816 cells (cells x 11 areas = 2,816) as below;

		Hokkaido															
		Labour force													Non-labour force		
		Self employed worker		Family worker		Executive of company or corporation		Regular employee		Non-regular employee		Unemployment		Attending school			
		Below university	University or higher	Below university	University or higher	Below university	University or higher	Below university	University or higher	Below university	University or higher	Below university	University or higher		Below university	University or higher	
		14	5	6	1	11	4	84	40	63	17	8	3	5	166	20	27
Male	15 - 19 years old	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	10
	20 - 24 years old	0	0	0	0	0	0	2	1	2	1	0	0	2	0	0	4
	25 - 34 years old	0	0	1	0	0	0	11	8	2	2	1	0	0	1	0	0
	35 - 44 years old	1	1	0	0	1	1	16	10	2	1	1	0	0	1	0	0
	45 - 54 years old	2	1	0	0	2	1	14	8	2	1	1	0	0	2	0	0
	55 - 64 years old	3	2	0	0	2	1	9	5	5	3	0	0	0	5	1	0
	65 - 69 years old	1	0	0	0	2	0	2	0	3	1	1	0	0	8	2	0
70 years old and over	2	1	0	0	1	0	1	0	1	0	0	0	0	31	6	0	
Female	15 - 19 years old	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	9
	20 - 24 years old	0	0	0	0	0	0	2	1	2	1	0	0	2	0	0	3
	25 - 34 years old	0	0	0	0	0	0	7	3	5	3	1	0	0	6	2	0
	35 - 44 years old	1	0	1	0	1	0	8	2	10	3	1	0	0	9	2	0
	45 - 54 years old	1	0	1	0	1	0	7	1	12	2	1	0	0	8	1	0
	55 - 64 years old	1	0	2	0	1	0	4	0	11	1	1	0	0	18	2	0
	65 - 69 years old	1	0	1	0	1	0	1	0	3	0	0	0	0	16	1	0
70 years old and over	1	0	1	0	0	0	0	0	1	0	0	0	0	61	2	0	

II. Correct population data for allocation: Adjust number of persons in the population

II-i. Reduce the actual count of persons 65 years old and over by half

- Reduce actual data of number of persons for each cell of 65 ~ 69 years old and 70 years old and over by half

II-ii. For generation of 10s and 65 years old and over, make the non-labour force a half of the labour force

- As for age groups 15 ~ 19 years old, 65 ~ 69 years old and 70 years old and over, make the total of non-labour force count a half of the labour force
- The construction of education background (below university graduates/university graduates or higher/attending school) within the non-labour force is to be kept same as of the original population construction.

II-iii. After adjustment, construction ratio of the population is calculated

- Calculate overall construction ratio of each cell for the population data in II-ii

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	Males													Females																		
	Labour force						Non-labour force							Labour force						Non-labour force												
	Self-employed worker	Family worker	Executive of company or corporation	Regular employee	Non-regular employee	Unemployment	Below university	University or higher	Attending school	Below university	University or higher	Attending school	Below university	University or higher	Attending school	Below university	University or higher	Attending school	Below university	University or higher	Attending school											
15-19 years old	47	26	20	3	30	13	310	145	140	42	28	13	20	176	11	39	203	84	13	16	16	368	490	717	201	97	38	71	461	114	120	
20-24 years old	0	0	0	0	0	0	10	3	4	1	3	1	8	1	0	15	0	0	0	0	0	0	34	11	20	4	0	2	20	3	0	51
25-29 years old	3	2	0	0	0	0	30	20	6	4	3	2	9	7	3	2	130	103	30	22	21	60	50	50	22	6	2	19	5	4	4	
30-34 years old	7	4	0	0	3	2	109	35	7	4	3	2	10	4	1	0	21	14	3	2	13	8	101	111	23	11	10	0	13	2	1	
35-39 years old	7	4	0	0	7	4	46	28	7	4	3	2	9	4	1	0	30	18	3	2	13	8	141	96	16	10	7	4	0	21	5	0
40-44 years old	17	9	0	0	7	4	25	14	7	3	2	0	20	6	0	0	43	27	0	0	0	11	132	64	56	28	30	4	0	61	17	0
45-49 years old	6	2	0	0	3	1	3	1	4	1	0	0	0	10	0	0	13	4	1	0	7	2	7	2	14	4	2	0	0	20	5	0
50 years old and over	2	3	0	0	1	0	1	0	3	1	0	0	0	0	0	0	25	0	0	0	3	1	2	1	2	1	0	0	2	3	0	0
20-24 years old	0	0	0	0	0	0	6	3	0	2	0	0	7	1	0	13	0	0	0	0	0	0	33	10	25	6	5	2	29	4	0	47
25-29 years old	0	0	0	0	0	0	28	11	17	9	3	2	0	16	5	0	3	2	3	2	0	0	81	46	80	40	7	4	1	62	20	2
30-34 years old	4	1	4	1	0	0	38	9	38	9	4	1	0	25	7	0	8	2	8	2	4	1	111	24	130	32	13	0	0	83	22	0
35-39 years old	3	1	0	1	0	1	30	6	38	0	6	1	0	22	0	0	14	2	14	2	9	1	104	17	136	22	14	0	0	86	15	0
40-44 years old	5	1	0	1	1	1	21	3	31	1	0	0	0	37	0	0	19	2	14	3	14	2	75	9	132	15	0	1	0	181	20	0
45-49 years old	2	0	3	0	1	0	1	0	0	0	0	0	0	5	0	0	3	0	8	0	3	0	4	0	17	1	0	0	0	21	0	0
50 years old and over	3	0	2	0	1	0	1	0	0	0	0	0	0	1	0	0	4	0	1	1	0	0	4	0	4	0	0	0	0	0	0	0

	Males															
	Labour force						Non-labour force									
	Self-employed worker	Family worker	Executive of company or corporation	Regular employee	Non-regular employee	Unemployment	Below university	University or higher	Attending school	Below university	University or higher	Attending school	Below university	University or higher	Attending school	
15-19 years old	20	0	0	0	0	0	100	11	81	26	0	4	7	46	1	14
20-24 years old	0	0	0	0	0	0	3	1	2	1	0	0	12	0	7	
25-29 years old	0	0	0	0	0	0	15	11	6	4	3	2	0	3	1	1
30-34 years old	3	2	0	0	0	0	20	12	7	4	3	2	0	4	1	0
35-39 years old	3	2	0	0	0	0	16	10	3	2	0	0	0	4	1	0
40-44 years old	7	4	0	0	2	0	10	5	7	4	0	0	0	6	2	0
45-49 years old	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50 years old and over	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24 years old	0	0	0	0	0	0	3	1	4	1	0	0	3	1	0	6
25-29 years old	0	0	0	0	0	0	10	5	14	5	0	0	0	6	2	0
30-34 years old	0	0	0	0	0	0	13	3	13	3	0	0	0	12	3	0
35-39 years old	0	0	0	0	0	0	14	2	14	2	0	0	0	9	2	0
40-44 years old	0	0	0	0	0	0	1	1	14	7	0	0	0	19	2	0
45-49 years old	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
50 years old and over	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

Reference (2) Allocation and collection count

The number of persons from whom actual effective answers were obtained is as below after the implementation of survey with the target of the allocation produced in Reference (1).

Allocation																		
All over the country																		
Labour force																		
		Self employed worker		Family worker		Executive of company or corporation		Regular employee		Non-regular employee		Unemployment				Non-labour force		
		Below university	University or higher	Below university	University or higher	Below university	University or higher	Below university	University or higher	Below university	University or higher	Below university	University or higher	Attending school	Below university	University or higher	Attending school	
		1706	666	575	104	1097	450	11324	5360	7296	2075	834	345	722	6037	1160	1237	
Male	15 - 19 years old	0	0	0	0	0	0	64	0	104	0	13	0	62	0	0	119	
	20 - 24 years old	6	2	0	0	0	0	350	112	228	74	55	19	284	25	2	495	
	25 - 34 years old	63	45	21	14	33	23	1535	1115	304	221	99	71	22	118	39	47	
	35 - 44 years old	205	123	21	14	152	91	2247	1338	244	147	95	58	0	139	22	5	
	45 - 54 years old	237	143	12	8	198	119	1839	1101	191	115	73	44	0	154	37	0	
	55 - 64 years old	365	187	0	0	260	133	1145	581	568	288	88	48	0	507	143	0	
	65 - 69 years old	124	34	6	0	95	27	75	21	178	50	20	2	0	266	51	0	
70 years old and over	180	49	12	0	45	13	36	11	93	26	9	0	0	192	35	0		
Female	15 - 19 years old	0	0	0	0	0	0	35	0	144	0	11	0	67	5	0	114	
	20 - 24 years old	3	1	0	0	0	0	306	98	260	83	41	13	282	38	2	437	
	25 - 34 years old	29	17	18	12	3	2	969	488	695	350	74	41	5	672	210	20	
	35 - 44 years old	100	24	66	16	45	11	1101	274	1371	342	103	25	0	1035	274	0	
	45 - 54 years old	129	19	98	15	89	14	969	154	1436	229	90	15	0	845	157	0	
	55 - 64 years old	146	19	178	20	117	16	571	65	1223	138	57	9	0	1708	188	0	
	65 - 69 years old	47	1	56	0	35	1	47	4	178	9	4	0	0	187	0	0	
70 years old and over	72	2	87	5	25	0	35	1	79	3	2	0	0	146	0	0		
Collection count (final effective samples)																		
All over the country																		
Labour force																		
		Self employed worker		Family worker		Executive of company or corporation		Regular employee		Non-regular employee		Unemployment				Non-labour force		
		Below university	University or higher	Below university	University or higher	Below university	University or higher	Below university	University or higher	Below university	University or higher	Below university	University or higher	Attending school	Below university	University or higher	Attending school	
		1985	1267	420	141	828	476	11853	7339	7866	3007	806	341	2433	7120	1919	1330	
Male	15 - 19 years old	1	0	1	1	2	0	23	0	15	2	4	0	84	25	1	124	
	20 - 24 years old	18	9	11	1	25	5	290	235	197	79	35	14	491	79	32	404	
	25 - 34 years old	85	45	28	14	36	30	1579	1501	327	262	72	67	135	206	83	20	
	35 - 44 years old	231	129	37	21	101	35	2313	1594	315	161	91	37	181	249	40	13	
	45 - 54 years old	287	177	17	4	125	47	1985	1193	257	137	99	48	154	211	51	18	
	55 - 64 years old	378	320	10	12	149	120	1273	805	650	501	57	37	150	611	231	34	
	65 - 69 years old	106	111	3	2	68	48	100	49	183	124	6	3	54	309	182	29	
70 years old and over	151	163	11	4	43	100	32	39	209	178	2	3	60	251	192	19		
Female	15 - 19 years old	8	0	1	0	10	0	36	0	63	0	6	0	109	38	1	124	
	20 - 24 years old	60	6	19	3	44	9	491	475	585	151	65	31	501	399	61	348	
	25 - 34 years old	91	52	32	16	26	9	1011	723	776	346	77	46	130	680	217	42	
	35 - 44 years old	149	72	53	13	35	11	1101	377	1370	423	143	32	151	1062	273	55	
	45 - 54 years old	161	60	73	18	71	17	994	200	1462	301	101	13	102	906	149	34	
	55 - 64 years old	185	94	86	24	68	36	583	134	1208	294	46	10	102	1750	344	48	
	65 - 69 years old	35	17	27	7	21	2	31	11	173	34	1	0	16	183	31	11	
70 years old and over	39	12	11	1	4	7	11	3	76	14	1	0	13	161	31	7		
Excess/deficiency count																		
All over the country																		
Labour force																		
		Self employed worker		Family worker		Executive of company or corporation		Regular employee		Non-regular employee		Unemployment				Non-labour force		
		Below university	University or higher	Below university	University or higher	Below university	University or higher	Below university	University or higher	Below university	University or higher	Below university	University or higher	Attending school	Below university	University or higher	Attending school	
		279	601	(155)	37	(269)	26	529	1979	570	932	(28)	(4)	1711	1083	759	93	
Male	15 - 19 years old	1	0	1	1	2	0	(41)	0	(89)	2	(9)	0	22	25	1	5	
	20 - 24 years old	12	7	11	1	25	5	(60)	123	(31)	5	(20)	(5)	207	54	30	(91)	
	25 - 34 years old	22	0	7	0	3	7	44	386	23	41	(27)	(4)	113	88	44	(27)	
	35 - 44 years old	26	6	16	7	(51)	(56)	66	256	71	14	(4)	(21)	181	110	18	8	
	45 - 54 years old	50	34	5	(4)	(73)	(72)	146	92	66	22	26	4	154	57	14	18	
	55 - 64 years old	13	133	10	12	(111)	(13)	128	224	82	213	(31)	(11)	150	104	88	34	
	65 - 69 years old	(18)	77	(3)	2	(27)	21	25	28	5	74	(14)	1	54	43	131	29	
70 years old and over	(29)	114	(1)	4	(2)	87	(4)	28	116	152	(7)	3	60	59	157	19		
Female	15 - 19 years old	8	0	1	0	10	0	1	0	(81)	0	(5)	0	42	33	1	10	
	20 - 24 years old	57	5	19	3	44	9	185	377	325	68	24	18	219	361	59	(89)	
	25 - 34 years old	62	35	14	4	23	7	42	235	81	(4)	3	5	125	8	7	22	
	35 - 44 years old	49	48	(13)	(3)	(10)	0	0	103	(1)	81	40	7	151	27	(1)	55	
	45 - 54 years old	32	41	(25)	3	(18)	3	25	46	26	72	11	(2)	102	61	(8)	34	
	55 - 64 years old	39	75	(92)	4	(49)	20	12	69	(15)	156	(11)	1	102	42	156	48	
	65 - 69 years old	(12)	16	(29)	7	(14)	1	(16)	10	(5)	25	(3)	0	16	(4)	31	11	
70 years old and over	(33)	10	(76)	(4)	(21)	7	(24)	2	(3)	11	(1)	0	13	15	31	7		

* Above data show total of whole Japan. In detail, total throughout the country by 11 areas. Figures in the brackets represent number in deficiency

Reference (3) Calculation method of weighted values

<Calculation procedures>

- I. Calculate number of persons for each cell in case collection can be made up according to the population construction
- II. Calculation of weighted values

<Calculation procedures in detail>

- I. Calculate number of persons for each cell in case collection can be made up according to the population construction
 - I-i.
 - Calculate overall construction ratio of each cell using the data of population person count produced in Reference (1)-I
 - I-ii.
 - Calculate number of persons for each cell in case of collection of 49,131 can be made up according to the population, multiplying 49,131 answers count of the survey by overall construction ratio of the population

II. Calculation of weighted values

- Calculate the coefficient (weighted value) to make the actual collection count for each cell as the same number of persons calculated in I-ii
- Calculation was done in following 2 patterns; As for unemployment and non-labour force, the weighted value calculated with Pattern A is to be used, and for the rest of persons, the weighted value calculated with Pattern B is to be used

Pattern A: Number of all cells of the population produced in Reference (1)-I (2,816 cells)

Pattern B: 96 cells only by gender, stratified age group, status of employment, education background

Reference (4) Comparison of the survey results and official statistics

Comparison between aggregated results in the survey (after weighted aggregation) and construction ratio in official statistics shows as below; The results of this survey appear not strongly biased, even compared with official statistics.

<Construction ratio by gender, stratified age group and type of employment>

Japanese Panel Study of Employment Dynamics 2016

The population produced in Reference (1)-I

		All over the country (%)									
		Labour force					Non-labour force				
		Self employed worker	Family worker	Executive of company or corporation	Regular employee	Non-regular employee	Unemployment	Attending school	Previously graduated	Attending school	Previously graduated
		n (persons)	previously graduated	previously graduated	previously graduated	previously graduated	previously graduated	previously graduated	previously graduated	previously graduated	previously graduated
All over the country		49130	5.5	1.0	2.2	20.6	18.0	1.9	1.2	34.6	6.0
Male	15 - 19 years old	1345	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1	2.2
	20 - 24 years old	1407	0.0	0.0	0.1	0.8	0.2	0.1	0.5	0.0	0.0
	25 - 34 years old	3236	0.2	0.1	0.1	4.7	0.9	0.3	0.0	0.3	0.1
	35 - 44 years old	4175	0.6	0.1	0.2	6.3	0.8	0.3	0.0	0.3	0.0
	45 - 54 years old	3600	0.7	0.0	0.3	5.1	0.6	0.2	0.0	0.3	0.0
	55 - 64 years old	3700	1.0	0.0	0.4	3.1	1.7	0.2	0.0	1.1	0.0
	65 - 69 years old	1999	0.5	0.0	0.3	0.4	0.8	0.0	0.0	1.9	0.0
70 years old and over	1282	0.5	0.0	0.2	0.1	0.7	0.0	0.0	7.1	0.0	
Female	15 - 19 years old	1300	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.2	2.0
	20 - 24 years old	1332	0.1	0.0	0.0	0.6	0.6	0.1	0.5	0.1	0.8
	25 - 34 years old	3072	0.2	0.1	0.1	2.5	1.7	0.2	0.0	1.5	0.0
	35 - 44 years old	4036	0.3	0.1	0.1	2.3	2.9	0.2	0.0	2.3	0.0
	45 - 54 years old	3594	0.3	0.1	0.1	1.9	2.8	0.2	0.0	1.7	0.0
	55 - 64 years old	3779	0.4	0.2	0.2	1.2	2.1	0.1	0.0	3.5	0.0
	65 - 69 years old	2080	0.2	0.1	0.1	0.8	0.0	0.0	0.0	2.9	0.0
70 years old and over	6191	0.3	0.1	0.0	0.1	0.6	0.0	0.0	11.5	0.0	

		All over the country (%)									
		Labour force					Non-labour force				
		Self employed worker	Family worker	Executive of company or corporation	Regular employee	Non-regular employee	Unemployment	Attending school	Previously graduated	Attending school	Previously graduated
		n (x 10,000 persons)	previously graduated	previously graduated	previously graduated	previously graduated	previously graduated	previously graduated	previously graduated	previously graduated	previously graduated
All over the country		11032	5.0	1.5	3.1	20.2	17.2	2.1	1.2	34.7	6.0
Male	15 - 19 years old	305	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.1	2.2
	20 - 24 years old	314	0.0	0.0	0.0	0.8	0.2	0.1	0.5	0.1	0.0
	25 - 34 years old	720	0.2	0.1	0.1	4.6	0.9	0.3	0.0	0.3	0.1
	35 - 44 years old	933	0.6	0.1	0.4	6.2	0.7	0.3	0.0	0.3	0.0
	45 - 54 years old	813	0.7	0.0	0.5	5.1	0.5	0.2	0.0	0.3	0.0
	55 - 64 years old	822	1.0	0.0	0.7	3.0	1.5	0.2	0.0	1.1	0.0
	65 - 69 years old	449	0.6	0.0	0.4	0.3	0.8	0.1	0.0	1.9	0.0
70 years old and over	961	0.8	0.0	0.2	0.2	0.4	0.0	0.0	7.1	0.0	
Female	15 - 19 years old	294	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.2	2.0
	20 - 24 years old	298	0.0	0.0	0.0	0.7	0.6	0.1	0.5	0.1	0.8
	25 - 34 years old	688	0.1	0.1	0.0	2.5	1.8	0.2	0.0	1.5	0.0
	35 - 44 years old	913	0.2	0.1	0.1	2.4	3.0	0.2	0.0	2.3	0.0
	45 - 54 years old	809	0.3	0.2	0.2	1.9	2.9	0.2	0.0	1.7	0.0
	55 - 64 years old	847	0.3	0.2	0.2	1.1	2.1	0.1	0.0	3.5	0.0
	65 - 69 years old	471	0.2	0.2	0.1	0.2	0.6	0.0	0.0	2.9	0.0
70 years old and over	1395	0.3	0.3	0.1	0.1	0.3	0.0	0.0	11.6	0.0	

* % values in the table represent percentage of total

* Since the weighted aggregation is implemented, total (n) of Japanese Panel Study of Employment Dynamics 2016 is not identical with the actual collection count

<Construction ratio of regular and non-regular by gender and stratified age group, for employees>

Japanese Panel Study of Employment Dynamics 2016

Statistics Bureau, Ministry of Internal Affairs and Communications "Labour Force Survey (Basic Tabulation)" December, 2015

		All over the country (%)		
		n (persons)	Regular employee	Non-regular employee
Male	15 - 24 years old	991	48.9	51.1
	25 - 34 years old	2746	83.8	16.2
	35 - 44 years old	3470	89.1	10.9
	45 - 54 years old	2821	89.0	11.0
	55 - 64 years old	2337	64.7	35.3
	65 years old and over	1045	26.1	73.9
Female	15 - 24 years old	978	41.8	58.2
	25 - 34 years old	2047	60.3	39.7
	35 - 44 years old	2560	45.1	54.9
	45 - 54 years old	2348	40.4	59.6
	55 - 64 years old	1760	32.4	67.6
	65 years old and over	788	14.4	85.6

		All over the country (%)		
		n (x 10,000 persons)	Regular employee	Non-regular employee
Male	15 - 24 years old	245	52.7	47.3
	25 - 34 years old	594	82.7	17.3
	35 - 44 years old	747	90.2	9.8
	45 - 54 years old	648	91.0	9.0
	55 - 64 years old	486	68.7	31.3
	65 years old and over	280	27.1	72.9
Female	15 - 24 years old	246	41.9	58.1
	25 - 34 years old	472	58.3	41.7
	35 - 44 years old	587	46.0	54.0
	45 - 54 years old	564	40.2	59.8
	55 - 64 years old	390	33.3	66.7
	65 years old and over	218	23.4	76.6