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 2019: 120 questions

2. Period of the Survey

Survey period	Survey period is fixed as every January January 11 ~ January 31, 2019

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 70 years old and over, the allocation was adjusted less than actual count of persons.

Effective collection count/effective collection rate	Survey 2019: 62,415 samples
	* From Survey 2018 onwards, each survey consists of 3 sample types, continued (previous year answerers), additional (new answerers of the year) and revived (answerers of Survey before 2017 who didn't answer Survey 2018).
	· Continued samples (continuous answerers since last year): 38,451 persons
	   Persons requested: 48,510 Effective collection rate: 79.3%
	· Additional samples (new answerers, this year): 20,315 persons
	   Persons requested: 30,690 Effective collection rate: 66.2%
	· Revived samples (no answer in survey 2017, but answered in 2016): 3,649 persons
	   Persons requested: 15,617 Effective collection rate: 23.4%
	* 20 samples out of the above are excluded from aggregating subjects due to overseas emigration

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 70 years old and over.

1. Outline of the Survey

In Japanese Panel Study of Employment Dynamics, following items were questioned in survey 2019 for the purpose of grasping status of employment, living dynamics, etc. during the previous one year prior to the survey (in case of survey 2019, one year period of 2018).

Attribute	
Q1	Gender
Q2	Age
Q3	Birth month and year
Q4	Present residential place
Q5	Final educational background
Q6	Graduated faculty
Q7	Present school year
Q7-1	Faculty to plan to graduate from
Q8	Dropout experience
Q9	Marital status
Q10	With or without a child/children
Q11	Number of children
Q12	Age of the eldest child
Q12	Age of the youngest child
Q13	Type of residence
Q14	Cohabiter
Q15	Principal household income earner
Q16-1	Labour force status of January 2018～April 2018
Q16-2	Labour force status of May 2018～August 2018
Q16-3	Labour force status of September 2018～November 2018
Q17	Labour force status of December 2018

Status as in Last December	
Q18	Type of working
Q19	Type of employment
Q20	With or without store
Q21	Reasons of being engaged in work as in December
Q22	Reasons of absence from work
Q23	Could be engaged in work upon availability?
Q24	Desire to work
Q25	Degree of desire to work
Q26	With or without job seeking
Q27	Reasons of seeking no job
Q28	Reasons of unemployment
Q29	The reason of no desire to work
Q30	Industry
Q31	Number of employees
Q32	Occupation
Q33	Position title
Q34	With or without employment contract term
Q35	Employment contract term
Q36	Status of employment (unemployment) insurance coverage
Q37	Working days and hours per week
Q38	Overtime work system
Q39	Existence of overtime work/dynamics
Q40	Existence of desire for increase or decrease of working time
Q41	Degree of increase or decrease of working time
Q42	Possibility of increase of working time and work content
Q43	Reason of not being able to increase working time despite desire
Q44	Salary payment method
Q45	Hourly rate
Q46	Work flexibility
Q47	Working place
Q48	Commuting methods
Q49-1	Time for living (Commutation)
Q49-2	Time for living (Housework, childcare)
Q50	Time for telework
Q51	Status of telework system introduction and adoption
Q52	Subject person to telework system
Q53	Number of resignation times in the past
Q54	Existence of unemployment (absence) period
Q55	Unemployment (absence) period

Status of the Previous One Year	
Q56	Level of happiness
Q57	Life satisfaction
Q58	Annual events and living
Q59	Annual occupational events
Q60	Self-development activities
Q61	Holiday acquisition condition
Q62	Rate of taking paid leaves
Q63	Stress
Q64	Income source of living expenses
Q65	How to cover the living expenses
Q66	Job upskilling
Q67	On-the-Job-Training opportunity
Q68	Off-the-Job-Training opportunity
Q69	With or without self-development
Q70	Work place status
Q71	Nature of work
Q72	Job satisfaction
Q73	Stress of taking balance of work and family life

Status of Second Job	
Q74	With or without taking second job
Q75	Desire to take second job
Q76	Reasons of desire to take second job
Q77	Reasons of taking second job
Q78-1	Type of working of the highest income second job
Q78-2	Content of work of the highest income second job
Q78-3	Specific work content of second job
Q78-4	With or without store of second job
Q78-5	Number of the second jobs
Q79	Working hours per week of the second jobs

Status of Initial Employment	
Q80	Type of working of initial employment
Q81	Industry of initial employment
Q82	Number of employees of initial employment
Q83	Occupation of initial employment

Status of Previous Employment	
Q84	Type of working of previous employment
Q85	Industry of previous employment
Q86	Number of employees of previous employment
Q87	Occupation of previous employment
Q88	Number of working days/hours in previous employment
Q89	Annual income of previous employment
Q90	Channels to find current place of work
Q91	Order of timing between the last resignation and adoption of current employment
Q92	Reasons of the resignation

Status around the Delivery of the Youngest Child	
Q93・Q95	Working status before and after the birth of your youngest child / child of currently one year old
Q94・Q96	Social system used at the birth of your youngest child / child of currently one year old

Others	
Q97	Residential place
Q98	Academic achievement at the last junior high school year
Q99	Month and year of school graduation, month and year of entry to and resignation from the initial employment, month and year of entry to and resignation from the previous employment, month and year of entry to the current employment
Q100	Annual income of the previous year (main job, second job, non-occupational)
Q101	With whom can you consult?
Q102	Type of working of the spouse
Q103	Event in work (resignation or employment of spouse)
Q104	Annual income of the spouse
Q105	With or without doing nursing care
Q106	Desire for changing or hunting job
Q107	Approach taken related to future career plan in the past one year
Q108	Desired future plan after graduation
Q109	Decision of occupation after graduation
Q110	Job-hunting experience

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 2019 was actually implemented from January 11 to January 31, 2019.

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 70 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 70 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 2019, at first we asked all the people who could be requested out of the answerers of survey before 2018 (continued samples and revived samples), to answer the survey. 64,127 persons could be requested for the survey as they remained in the monitor. 42,100 persons answered out of the above number. In the next stage, new answerers were extracted from the monitor and asked for the survey, imagining deficient cells to be filled up for the allocation. Out of the requested 30,690 persons, answers were obtained from 20,315 persons. In survey 2019, total number of effective samples was 62,415.
(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 70 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 2017 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 2017 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							

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 2017 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 ~ 74 years old/75 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 - 74 years old							
	75 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 - 74 years old							
	75 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 2017 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 - 74 years old									
	75 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 - 74 years old									
	75 years old and over									

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 2017 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 3,168 cells (cells x 11 areas = 3,168) as below;

Hokkaido

		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	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
		14	5	4	1	9	4	85	43	64	19	7	3	6	161	22	25
Male	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	3	1	2	0	0	0	2	0	0	3
	25 - 34 years old	1	0	0	0	0	0	9	8	2	2	1	0	0	1	0	0
	35 - 44 years old	1	1	0	0	1	1	15	9	2	1	1	0	0	1	0	0
	45 - 54 years old	2	1	0	0	1	1	15	9	2	1	1	0	0	2	0	0
	55 - 64 years old	2	2	0	0	2	1	9	6	4	2	1	0	0	4	1	0
	65 - 69 years old	1	0	0	0	2	0	2	0	3	1	0	0	0	8	2	0
	70 - 74 years old	1	0	0	0	0	0	0	0	0	0	0	0	0	9	2	0
	75 years old and over	1	0	0	0	0	0	0	0	1	0	0	0	0	23	5	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	3	1	2	0	0	0	2	0	0	3
	25 - 34 years old	0	0	0	0	0	0	6	4	5	3	1	0	0	5	2	0
	35 - 44 years old	1	0	1	0	0	0	8	2	10	3	1	0	0	7	2	0
	45 - 54 years old	1	0	1	0	1	0	8	2	13	2	1	0	0	8	1	0
	55 - 64 years old	1	0	1	0	1	0	4	1	11	2	1	0	0	14	2	0
	65 - 69 years old	1	0	1	0	1	0	1	0	4	0	0	0	0	16	1	0
	70 - 74 years old	1	0	1	0	0	0	0	0	1	0	0	0	0	15	1	0
	75 years old and over	1	0	1	0	0	0	0	0	0	0	0	0	0	47	2	0

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

II-i. Reduce the actual count of persons 70 years old and over by half
- Reduce actual data of number of persons for each cell of 70 ~ 74 years old and 75 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, 70 ~ 74 years old and 75 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

III. Produce allocation: Make allocation adapting to the population data construction after the correction

- Allocate 43,000 persons adapting to the construction ratio calculated in II-iii
- Now, allocation of 3,168 cells is completed (18 x 16 cells x 11 areas = 3,168). Actual survey was implemented aiming the number of persons to be collected for the allocation

The tables below present allocation figures broken down by area (Hokkaido, Tohoku, Minami Kanto, Kita Kanto Koshinetsu, Hokuriku, Tokai, Kinki, Chugoku), by sex (Male, Female), by age group (15–19, 20–24, 25–34, 35–44, 45–54, 55–64, 65–69, 70–74, 75 years old and over), and by labour-force status. Each area block is divided into:

Labour force — Self employed worker · Family worker · Executive of company or corporation · Regular employee · Non-regular employee · Unemployment (each split into "Below university" and "University or higher"), plus "Attending school"

Non-labour force — Below university · University or higher · Attending school

Shikoku

		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
		70	27	27	3	36	14	332	163	188	57	20	10	19	176	34	32
Male	15 - 19 years old	0	0	0	0	0	0	2	0	2	0	0	0	19	2	0	5
	20 - 24 years old	0	0	0	0	0	0	13	4	4	1	0	0	0	1	0	13
	25 - 34 years old	3	2	0	0	0	0	35	29	8	5	3	2	1	3	1	1
	35 - 44 years old	6	4	0	0	3	2	55	35	3	2	3	2	0	4	1	0
	45 - 54 years old	7	4	0	0	7	4	53	32	3	2	0	0	0	4	1	0
	55 - 64 years old	13	8	0	0	7	4	33	20	13	8	3	2	0	16	6	0
	65 - 69 years old	13	4	0	0	5	2	5	2	10	3	0	0	0	16	5	0
	70 - 74 years old	4	1	0	0	1	0	1	0	2	1	0	0	0	5	0	0
	75 years old and over	4	1	0	0	0	0	0	0	1	0	0	0	0	11	0	0
Female	15 - 19 years old	0	0	0	0	0	0	1	0	2	0	0	0	1	0	0	11
	20 - 24 years old	0	0	0	0	0	0	8	3	4	1	0	0	6	1	0	12
	25 - 34 years old	0	0	0	0	0	0	27	16	17	10	3	2	0	15	5	1
	35 - 44 years old	4	1	4	1	4	1	36	12	32	10	4	2	0	20	6	0
	45 - 54 years old	4	1	4	1	4	1	36	7	40	8	4	1	0	18	3	0
	55 - 64 years old	5	1	9	1	5	1	23	3	33	5	0	0	0	42	6	0
	65 - 69 years old	4	0	6	0	3	0	3	0	13	1	0	0	0	16	5	0
	70 - 74 years old	1	0	2	0	1	0	1	0	2	0	0	0	0	5	0	0
	75 years old and over	2	0	2	0	0	0	0	0	1	0	0	0	0	5	0	0

Kyushu

		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
		202	86	88	18	110	45	1153	587	752	231	78	34	75	587	119	118
Male	15 - 19 years old	0	0	0	0	0	0	6	0	9	0	1	0	6	0	0	11
	20 - 24 years old	1	0	0	0	0	0	37	11	17	5	5	1	29	3	0	47
	25 - 34 years old	6	5	3	2	3	2	131	107	23	19	9	7	3	10	3	3
	35 - 44 years old	19	13	3	2	13	8	191	123	19	13	6	4	0	13	3	2
	45 - 54 years old	27	16	3	2	17	10	173	104	17	10	7	4	0	18	4	0
	55 - 64 years old	40	24	0	0	20	12	119	73	53	32	10	6	0	38	14	0
	65 - 69 years old	34	11	1	0	19	6	19	6	42	13	3	1	0	64	16	0
	70 - 74 years old	10	3	1	0	3	1	3	1	8	3	0	0	0	16	5	0
	75 years old and over	11	4	1	0	2	1	2	1	3	1	0	0	0	11	0	0
Female	15 - 19 years old	0	0	0	0	0	0	6	0	12	0	1	0	6	0	0	11
	20 - 24 years old	1	0	0	0	0	0	35	11	20	7	2	1	30	4	0	44
	25 - 34 years old	3	2	3	2	0	0	97	57	67	39	7	4	1	46	16	2
	35 - 44 years old	8	3	8	3	4	1	117	38	121	39	8	3	0	77	24	2
	45 - 54 years old	9	2	13	3	9	2	121	23	139	26	9	2	0	72	13	0
	55 - 64 years old	14	2	23	3	9	1	79	11	140	20	5	1	0	139	21	0
	65 - 69 years old	12	1	17	1	8	1	14	1	50	3	4	0	0	53	6	0
	70 - 74 years old	4	0	8	0	2	0	3	0	9	1	1	0	0	11	0	0
	75 years old and over	5	0	6	0	1	0	2	0	3	0	0	0	0	11	0	0

Okinawa

		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
		23	9	0	0	3	2	118	60	89	32	0	0	8	74	17	14
Male	15 - 19 years old	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	14
	20 - 24 years old	0	0	0	0	0	0	15	12	6	5	0	0	2	3	1	7
	25 - 34 years old	3	2	0	0	0	0	23	15	3	2	0	0	0	4	1	0
	35 - 44 years old	3	2	0	0	0	0	17	10	3	2	0	0	0	4	1	0
	45 - 54 years old	7	4	0	0	3	2	10	6	7	4	0	0	0	8	3	0
	55 - 64 years old	4	1	0	0	0	0	3	1	3	1	0	0	0	5	0	0
	65 - 69 years old	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	70 - 74 years old	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	75 years old and over	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Female	15 - 19 years old	0	0	0	0	0	0	2	0	4	1	0	0	4	1	0	6
	20 - 24 years old	0	0	0	0	0	0	3	1	4	1	0	0	4	1	0	6
	25 - 34 years old	0	0	0	0	0	0	10	6	10	5	0	0	8	3	0	0
	35 - 44 years old	0	0	0	0	0	0	12	4	16	5	0	0	8	3	0	0
	45 - 54 years old	0	0	0	0	0	0	13	3	13	3	0	0	9	2	0	0
	55 - 64 years old	0	0	0	0	0	0	9	1	14	2	0	0	19	3	0	0
	65 - 69 years old	2	0	0	0	0	0	0	0	3	0	0	0	5	0	0	0
	70 - 74 years old	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	75 years old and over	1	0	0	0	0	0	0	0	0	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).

割付 Allocation

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	Below university	University or higher	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				
		1750	722	538	101	1207	508	11764	6003	7824	2386	662	297	832	5921	1239	1171
Male	15 - 19 years old	0	0	0	0	0	0	61	0	122	0	9	0	73	5	0	127
	20 - 24 years old	2	1	0	0	0	0	379	113	244	72	35	10	324	27	2	458
	25 - 34 years old	59	46	15	10	33	24	1445	1184	262	215	74	59	27	110	36	36
	35 - 44 years old	179	116	21	14	132	84	2118	1364	210	135	66	43	0	143	32	0
	45 - 54 years old	247	148	12	8	204	122	2049	1232	196	118	62	38	0	172	37	0
	55 - 64 years old	284	172	0	0	228	138	1134	688	497	301	66	40	0	369	135	0
	65 - 69 years old	281	90	6	0	204	66	189	61	448	141	30	10	0	613	144	0
	70 - 74 years old	84	27	6	0	31	9	28	9	90	27	2	0	0	132	25	0
	75 years old and over	92	28	6	0	18	5	17	5	34	10	1	0	0	101	10	0
Female	15 - 19 years old	0	0	0	0	0	0	37	0	145	0	10	0	75	5	0	116
	20 - 24 years old	0	0	0	0	0	0	330	107	252	83	27	11	322	35	2	407
	25 - 34 years old	32	20	15	10	10	6	973	575	620	367	62	38	11	545	188	23
	35 - 44 years old	84	26	52	16	44	13	1114	362	1230	398	72	23	0	853	269	4
	45 - 54 years old	110	23	77	17	87	19	1126	212	1587	299	73	16	0	825	151	0
	55 - 64 years old	117	17	131	19	109	17	604	84	1280	184	53	9	0	1327	198	0
	65 - 69 years old	102	7	116	7	79	5	116	7	485	30	16	0	0	468	10	0
	70 - 74 years old	36	0	39	0	17	0	26	0	92	5	4	0	0	112	0	0
	75 years old and over	41	1	42	0	11	0	18	0	30	1	0	0	0	79	0	0

Collection count (final effective samples)

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	Below university	University or higher	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				
		2637	1360	624	160	1144	677	15079	11936	9997	3639	543	297	2279	7801	2662	1560
Male	15 - 19 years old	6	2	2	0	1	0	21	1	27	2	1	0	262	78	2	451
	20 - 24 years old	24	10	9	1	19	6	322	298	176	68	18	6	644	75	38	381
	25 - 34 years old	257	136	61	26	101	87	3186	5123	849	601	102	93	182	315	162	68
	35 - 44 years old	335	174	67	30	154	110	3312	2295	477	221	60	30	65	238	74	6
	45 - 54 years old	276	149	27	13	202	107	2182	1255	270	133	51	30	29	198	58	7
	55 - 64 years old	331	234	17	4	223	151	1205	739	599	375	37	29	31	403	196	5
	65 - 69 years old	381	176	11	7	83	77	129	95	421	378	19	22	6	661	542	13
	70 - 74 years old	132	103	6	3	56	38	32	27	147	82	0	4	4	263	153	4
	75 years old and over	62	68	1	1	16	32	12	14	63	53	2	2	7	158	122	5
Female	15 - 19 years old	4	1	1	0	1	0	10	0	34	5	5	0	304	29	5	282
	20 - 24 years old	48	9	10	2	18	6	341	279	351	84	38	3	608	166	25	260
	25 - 34 years old	149	65	36	14	33	12	1118	918	985	493	37	34	45	729	287	30
	35 - 44 years old	139	68	59	15	33	9	1224	498	1447	466	58	21	34	918	354	13
	45 - 54 years old	158	55	104	14	59	11	1173	258	1777	324	65	14	30	969	183	10
	55 - 64 years old	150	69	142	22	93	22	701	123	1316	267	38	7	22	1424	252	14
	65 - 69 years old	124	23	45	7	35	4	91	10	910	65	10	2	4	867	167	10
	70 - 74 years old	33	13	17	1	10	4	13	3	113	17	2	0	1	178	20	1
	75 years old and over	28	5	9	0	7	1	7	0	35	5	0	0	1	132	22	0

Excess/deficiency count

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	Below university	University or higher	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				
		887	638	86	59	(63)	169	3315	5933	2173	1253	(119)	0	1447	1880	1423	389
Male	15 - 19 years old	6	2	2	0	1	0	(40)	1	(95)	2	(8)	0	189	73	2	324
	20 - 24 years old	22	9	9	1	19	6	(57)	185	(68)	(4)	(17)	(4)	320	48	36	(77)
	25 - 34 years old	198	90	46	16	68	63	1741	3939	587	386	28	34	155	205	126	32
	35 - 44 years old	156	58	46	16	22	26	1194	931	267	86	(6)	(13)	65	95	42	6
	45 - 54 years old	29	1	15	5	(2)	(15)	133	23	74	15	(11)	(8)	29	26	21	7
	55 - 64 years old	47	62	17	4	(5)	13	71	51	102	74	(29)	(11)	31	34	61	5
	65 - 69 years old	100	86	5	7	(121)	11	(60)	34	(27)	237	(11)	12	6	48	398	13
	70 - 74 years old	48	76	0	3	25	29	4	18	57	55	(2)	4	4	131	128	4
	75 years old and over	(30)	40	(5)	1	(2)	27	(5)	9	29	43	1	2	7	57	112	5
Female	15 - 19 years old	4	1	1	0	1	0	(27)	0	(111)	5	(5)	0	229	24	5	166
	20 - 24 years old	48	9	10	2	18	6	11	172	99	1	11	(8)	286	131	23	(147)
	25 - 34 years old	117	45	21	4	23	6	145	343	365	126	(25)	(4)	34	184	99	7
	35 - 44 years old	55	42	7	(1)	(11)	(4)	110	136	217	68	(14)	(2)	34	65	85	9
	45 - 54 years old	48	32	27	(3)	(28)	(8)	47	46	190	25	(8)	(2)	30	144	32	10
	55 - 64 years old	33	52	11	3	(16)	5	97	39	36	83	(15)	(2)	22	97	54	14
	65 - 69 years old	22	16	(71)	0	(44)	(1)	(25)	3	425	35	(6)	2	4	399	157	10
	70 - 74 years old	(3)	13	(22)	1	(7)	4	(13)	3	21	12	(2)	0	1	66	20	1
	75 years old and over	(13)	4	(33)	0	(4)	1	(11)	0	5	4	0	0	1	53	22	0

* Above data show total of whole Japan. In detail, total throughout the country by 11 areas. Figures in the brackets represent number in deficiency
* 20 samples are excluded from the above collection count for this year survey due to their overseas emigration

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

    However, 70 ~ 74 /75 years old and over cells will be included in one cell with 70 years old and over.

I-ii.

•   Calculate number of persons for each cell in case of collection of 62,395 can be made up according to the population, multiplying 62,395 excluded 20 samples of overseas emigrants out of the effective answer 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 (3,168 cells)

    Pattern B: 1,056 cells for 25 ~ 64 years old by gender, stratified age group, status of employment, education background and areas.

    96 cells for other age groups by gender, stratified age group, status of employment, education background.

Pattern A * Hokkaido only as an example

Calculate the coefficient to make the left table figures as the same ones in right table
= weighted value Pattern A

As for unemployment and non-labour force in blue frames, the weighted value calculated in this way is to be used

* For attending school cells of labour force, Pattern A is to be used only for the persons of unemployment

Pattern B

Calculate the coefficient to make the left table figures as the same ones in right table
= weighted value Pattern B

For labor force of 25 ~ 64 years old (excluding unemployment) in red frames, the weighted value calculated in each area is used.

For labor force of 15 ~ 24 years old and 65 years old and over (excluding unemployment) in blue frames, the weighted value calculated in all areas of the country is used.

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 statics shows as below; The results of this survey appear not strongly biased, even compared with official statics.

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

Japanese Panel Study of Employment Dynamics 2019

All over the country

		n (persons)	Self employed worker (previously graduated)	Family worker (previously graduated)	Executive of company or corporation (previously graduated)	Regular employee (previously graduated)	Non-regular employee (previously graduated)	Unemployment (previously graduated)	Unemployment (Attending school)	Non-labour force (previously graduated)	Non-labour force (Attending school)
		62611	5.7	1.1	2.6	29.5	18.8	1.5	1.4	33.7	5.7
Male	15-19 years old	1731	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.1	2.2
	20-24 years old	1766	0.1	0.0	0.0	0.9	0.4	0.0	0.5	0.1	0.8
	25-34 years old	3923	0.2	0.1	0.1	4.4	0.9	0.0	0.3	0.3	0.1
	35-44 years old	4990	0.5	0.1	0.3	5.8	0.7	0.2	0.0	0.3	0.0
	45-54 years old	4936	0.7	0.1	0.5	5.5	0.6	0.2	0.0	0.3	0.0
	55-64 years old	4340	0.9	0.0	0.6	3.0	1.5	0.2	0.0	0.9	0.0
	65-69 years old	2802	0.9	0.0	0.2	0.3	1.1	0.1	0.0	1.9	0.0
	70 years old and over	5744	0.7	0.0	0.3	0.2	0.7	0.0	0.0	7.4	0.0
Female	15-19 years old	1626	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.2	2.0
	20-24 years old	1679	0.1	0.0	0.0	0.7	0.5	0.1	0.5	0.1	0.7
	25-34 years old	3756	0.3	0.1	0.1	2.4	1.8	0.2	0.0	1.2	0.0
	35-44 years old	4865	0.3	0.1	0.1	2.5	2.8	0.2	0.0	1.9	0.0
	45-54 years old	4919	0.3	0.2	0.1	2.2	3.2	0.1	0.0	1.7	0.0
	55-64 years old	4399	0.3	0.2	0.2	1.2	2.4	0.1	0.0	2.6	0.0
	65-69 years old	2927	0.2	0.1	0.0	0.1	1.2	0.0	0.0	3.0	0.0
	70 years old and over	8207	0.3	0.1	0.1	0.1	0.7	0.0	0.0	11.8	0.0

The population produced in Reference (1)-I

All over the country

		n (persons)	Self employed worker (previously graduated)	Family worker (previously graduated)	Executive of company or corporation (previously graduated)	Regular employee (previously graduated)	Non-regular employee (previously graduated)	Unemployment (previously graduated)	Unemployment (Attending school)	Non-labour force (previously graduated)	Non-labour force (Attending school)
		11061	4.7	1.3	3.1	30.4	17.8	1.6	1.4	33.9	5.8
Male	15-19 years old	308	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.1	2.2
	20-24 years old	313	0.0	0.0	0.0	0.8	0.5	0.1	0.6	0.1	0.8
	25-34 years old	683	0.2	0.0	0.0	4.5	0.8	0.2	0.0	0.3	0.1
	35-44 years old	877	0.5	0.1	0.4	5.9	0.6	0.2	0.0	0.3	0.0
	45-54 years old	872	0.7	0.0	0.6	5.6	0.5	0.2	0.0	0.4	0.0
	55-64 years old	762	0.8	0.0	0.3	3.1	1.4	0.2	0.0	0.9	0.0
	65-69 years old	497	0.6	0.0	0.5	0.4	1.0	0.1	0.0	1.9	0.0
	70 years old and over	1018	0.8	0.0	0.2	0.2	0.5	0.0	0.0	7.4	0.0
Female	15-19 years old	293	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.2	2.0
	20-24 years old	297	0.0	0.0	0.0	0.7	0.6	0.1	0.5	0.1	0.7
	25-34 years old	657	0.1	0.0	0.0	2.6	1.7	0.2	0.0	1.2	0.0
	35-44 years old	858	0.2	0.1	0.1	2.5	2.8	0.2	0.0	1.9	0.0
	45-54 years old	869	0.2	0.2	0.2	2.3	3.2	0.2	0.0	1.7	0.0
	55-64 years old	777	0.2	0.3	0.2	1.2	2.5	0.1	0.0	2.6	0.0
	65-69 years old	518	0.2	0.2	0.1	0.2	0.9	0.0	0.0	3.0	0.0
	70 years old and over	1462	0.3	0.3	0.1	0.2	0.4	0.0	0.0	11.9	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 2019 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 2019

(%)

		n (persons)	Regular employee	Non-regular employee
Male	15-24 years old	1348	46.7	53.3
	25-34 years old	3332	83.4	16.6
	35-44 years old	4128	88.7	11.3
	45-54 years old	3846	89.6	10.4
	55-64 years old	2784	66.6	33.4
	65 years old and over	1420	21.1	78.9
Female	15-24 years old	1293	36.3	63.7
	25-34 years old	2619	57.7	42.3
	35-44 years old	3282	47.3	52.7
	45-54 years old	3402	40.5	59.5
	55-64 years old	2268	34.4	65.6
	65 years old and over	1326	10.3	89.7

Statistics Bureau, Ministry of Internal Affairs and Communications "Labour Force Survey (Basic Tabulation)" December, 2018

(%)

		n (x 10,000 persons)	Regular employee	Non-regular employee
Male	15-24 years old	283	49.5	50.5
	25-34 years old	572	86.5	13.5
	35-44 years old	693	91.2	8.8
	45-54 years old	711	91.1	8.9
	55-64 years old	505	71.7	28.3
	65 years old and over	270	28.5	71.5
Female	15-24 years old	267	43.4	56.6
	25-34 years old	471	61.4	38.6
	35-44 years old	582	46.9	53.1
	45-54 years old	641	42.9	57.1
	55-64 years old	423	31.4	68.6
	65 years old and over	216	17.6	82.4

<Unemployment rate by region>

Japanese Panel Study of Employment Dynamics 2019

Hokkaido	Tohoku	Minami kanto	Kitakanto /koshin	Hokuriku	Tokai	Kinki	Chugoku/ Shikoku	Kyusyu/ Okinawa	
2.5	2.3	2.7	1.9	1.8	2.1	2.9	2.4	2.6	(%)

Statistics Bureau, Ministry of Internal Affairs and Communications "Labour Force Survey (Basic Tabulation)" October ~ December 2018 (Seasonally adjusted values)

Hokkaido	Tohoku	Minami kanto	Kitakanto /koshin	Hokuriku	Tokai	Kinki	Chugoku/ Shikoku	Kyusyu/ Okinawa	
3.0	2.5	2.3	2.4	2.2	1.7	3.1	2.4	2.7	(%)