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 <br> employment, Attribute of individual person of the Previous one year |
| Survey volume | about 100 questions Survey 2022: 111 questions |
| 2. Period of the Survey |  |

Survey period

## 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) <br> possessed by Intage Inc. |
| Sample design | Based on "Labour force survey" data of Statistics Bureau, Ministry of Internal <br> Affairs and Communications, allocation was implemented by gender, stratified <br> age group, type of employment, district block, education background. The <br> allocation was set to reflect the population. However, as for 10s of non-labour <br> force, and 70 years old and over, the allocation was adjusted less than actual <br> count of persons. |
| Effective collection |  |
| count/effective collection |  |
| rate | Survey 2022: 56,695 samples <br> * From Survey 2017 onwards, each survey consists of 3 sample types, continued <br> (previous year answerers), additional (new answerers of the year) and revived <br> (answerers of Survey before 2020 who didn't answer Survey 2021). <br> - Continued samples (continuous answerers since last year): 44,605 persons <br> Persons requested: 53,981 Effective collection rate: 82.6\% <br> - Additional samples (new answerers, this year): 7,210 persons <br> Persons requested: 14,367 Effective collection rate: 50.2\% |
| - Revived samples (no answer in survey 2021, but answered in 2020): 4,880 |  |
| persons |  |
| Persons requested: 25,055 Effective collection rate: 19.5\% |  |

## 5. Aggregation Method

Weighted<br>sampling aggregation

Survey period is fixed as every January
January 6 ~ January 31, 2022

## Japanese Panel Study of Employment Dynamics 2022

 1. Outline of the SurveyIn Japanese Panel Study of Employment Dynamics, following items were questioned in survey 2022 for the purpose of grasping status of employment, living dynamics, etc. during the previous one year prior to the survey (in case of survey 2022, one year period of 2021).

| Attribute |  | Status of the Previous One Year |  |
| :---: | :---: | :---: | :---: |
| Q1 | Gender | Q54 | Level of happiness |
| Q2 | Age | Q55 | Life satisfaction |
| Q3 | Birth month and year | Q56 | Annual events and living |
| Q4 | Present residential place | Q57 | Annual occupational events |
| Q5 | Final educational background | Q58 | Self-development activities |
| Q6 | Graduated faculty | Q59 | Holiday acquisition condition |
| Q7 | Present school year | Q60 | Rate of taking paid leaves |
| Q7-1 | Faculty to plan to graduate from | Q61 | Stress |
| Q8 | Dropout experience | Q62 | Income source of living expenses |
| Q9 | Marital status | Q63 | How to cover the living expenses |
| Q10 | With or without a child/children | Q64 | Job upskilling |
| Q11 | Number of children | Q65 | On-the-Job-Training opportunity |
| Q12 | Age of the child | Q66 | Off-the-Job-Training opportunity |
| Q13 | Type of residence | Q67 | With or without self-development |
| Q14 | Cohabiter | Q68 | Work place status |
| Q15 | Principal household income earner | Q69 | Nature of work |
| Q16-1 | Labour force status of January $\sim$ April | Q70 | Job satisfaction, career outlook |
| Q16-2 | Labour force status of May $\sim$ August | Q71 | Stress of taking balance of work and family life |
| Q16-3 | Labour force status of September $\sim$ November | Statu | s of Second Job |
| Q17 | Labour force status of December | Q72 | With or without taking second job |
| Status as in Last December |  | Q73 | Desire to take second job |
| Q18 | Type of working | Q74 | Reasons of desire to take second job |
| Q19 | Type of employment | Q75 | Reason for not having a second job or subsidiary business although the person wants to |
| Q20 | With or without store | Q76 | Reasons of taking second job |
| Q21 | Reasons of being engaged in work as in December | Q77-1 | Type of working of the highest income second job |
| Q22 | Reasons of absence from work | Q77-2 | Content of work of the highest income second job |
| Q23 | Could be engaged in work upon availability? | Q77-3 | Job details of the second job that provided the highest income |
| Q24 | Desire to work | Q77-4 | With or without store of second job |
| Q25 | Degree of desire to work | Q77-5 | Number of the second jobs |
| Q26 | With or without job seeking | Q78 | Working hours per week of the second jobs |
| Q27 | Reasons of seeking no job | Q79 | Whether a second job is allowed or not by the workplace |
| Q28 | Reasons of unemployment | Status of Initial Employment |  |
| Q29 | The reason of no desire to work | Q80 | Type of working of initial employment |
| Q30 | Industry | Q81 | Industry of initial employment |
| Q31 | Number of employees | Q82 | Number of employees of initial employment |
| Q32 | Occupation | Q83 | Occupation of initial employment |
| Q33 | Position title | Status of Previous Employment |  |
| Q34 | With or without employment contract term | Q84 | Type of working of previous employment |
| Q35 | Employment contract term | Q85 | Industry of previous employment |
| Q36 | Status of employment (unemployment) insurance coverage | Q86 | Number of employees of previous employment |
| Q37 | Working days and hours per week | Q87 | Occupation of previous employment |
| Q38 | Presence of request to increase/decrease the work hours | Q88 | Number of working days/hours in previous employment |
| Q39 | Degree of increase/decrease in work hours | Q89 | Annual income of previous employment |
| Q40 | Possibility to increase work hours and content of work | Q90 | Channels to find current place of work |
| Q41 | Reason of not possible to increase work hours even when wanting to increase them | Q91 | Order of timing between the last resignation and adoption of current employment |
| Q42 | Salary payment method | Q92 | Reasons of the last resignation |
| Q43 | Hourly rate | Status around the Delivery of the Youngest Child |  |
| Q44 | Work flexibility | Q93 | Working status before and after the birth of your youngest child / child of currently one year old |
| Q45 | Working place | Q94-1 | System used at the birth of the youngest child (female) |
| Q46 | Job style | Q94-2 | System used at the birth of the youngest child (male) |
| Q47 | Job percentage | Q95-1 | Number of consecutive days taken for childcare leave |
| Q48 | Commuting methods | Q95-2 | Number of consecutive holidays taken for childcare |
| Q49-1 | Time for living (Commutation) | Q96 | Working status before and after the birth of your youngest child / child of currently one year old |
| Q49-2 | Time for living (Housework, childcare) | Others |  |
| Q50 | Time for telework | Q97 | Residential place |
| Q51 | Status of telework system introduction and adoption | Q98 | Academic achievement at the last junior high school year |
| Q52 | Subject person to telework system | Q99 | Month and year of school graduation, month and year of entry to and resignation from the initial employment, |
| Q53 | Number of resignation times in the past |  | 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 2022 was actually implemented from January 6 to January 31, 2022.

## 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 10 s and 65-69 years old, 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 nonlabour force of 10 s and 65-69 years old, 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 2022, at first we asked all the people who could be requested out of the answerers of survey before 2021 (continued samples and revived samples), to answer the survey. 79,036 persons could be requested for the survey as they remained in the monitor. 49,485 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 14,367 persons, answers were obtained from 7,210 persons. In survey 2022 , total number of effective samples was 56,695 .
(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 10 s and 65-69 years old of non-labour force, and 70 years old and over.
(Refer to "Reference (3) Calculation method of weighted values" and "Reference (5) 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 October to December 2020 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 October to December 2020 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 | $\begin{aligned} & \text { Family } \\ & \text { worker } \end{aligned}$ | Executive of company or corporation | Regular employee | Non-regular employee | Unemployment |  |
| Male | 15-24 years old <br> 25-34 years old <br> 35-44 years old <br> 45-54 years old <br> $55-64$ years old <br> 65 years old and over |  |  |  |  |  |  |  |
| Female | 15-24 years old <br> 25-34 years old <br> 35-44 years old <br> 45-54 years old <br> 55-64 years old <br> 65 years old and over |  |  |  |  |  |  |  |

## Japanese Panel Study of Employment Dynamics 2022

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 October to December 2020 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 <br>  $20-24$ years old <br>  $25-34$ years old <br>  $35-44$ years old <br>  $45-54$ years old <br>  $55-64$ years old <br>  $65-69$ years old <br>  $70-74$ years old <br>  75 years old and over |  |  |  |  |  |  |  |
| Female $15-19$ years old <br>  $20-24$ years old <br>  $25-34$ years old <br>  $35-44$ years old <br>  $45-54$ years old <br>  $55-64$ years old <br>  $65-69$ years old <br>  $70-74$ years old <br>  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 October to December 2020 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 | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { Family } \\ \text { worker } \end{array} \end{array}$ | Executive of company or corporation | Regular employee | Non-regular employee | Unemployme nt | Attending school |  | Attending school |
| Male | 15-19 years old <br> 20-24 years old <br> 25-34 years old <br> 35-44 years old <br> 45-54 years old <br> 55-64 years old <br> 65-69 years old <br> $70-74$ years old <br> 75 years old and over |  |  |  |  |  |  |  |  |  |
| Female | 15-19 years old <br> 20-24 years old <br> 25-34 years old <br> 35-44 years old <br> $45-54$ years old <br> 55-64 years old <br> 65-69 years old <br> 70-74 years old <br> 75 years old and over |  |  |  |  |  |  |  |  |  |

## Japanese Panel Study of Employment Dynamics 2022

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 October to December 2020 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 |  |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & \text { Attending } \\ & \text { school } \end{aligned}$ | Non-labour force |  |  |
|  |  | Self employed worker |  | Family worker |  | Executive of company or corporation |  | Regular employee |  | Non-regular employee |  | Unemployment |  |  |  |  |  |
|  |  | $\begin{aligned} & \text { Below } \\ & \text { university } \end{aligned}$ | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { University } \\ \text { or higher } \end{array} \\ \hline \end{array}$ | $\begin{array}{\|l\|l} \hline \begin{array}{l} \text { Below } \\ \text { university } \end{array} \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { University } \\ \text { or higher } \end{array} \\ \hline \end{array}$ | Below university | $\begin{array}{\|l} \hline \begin{array}{l} \text { University } \\ \text { or higher } \end{array} \\ \hline \end{array}$ | Below <br> university | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { University } \\ \text { or higher } \end{array} \\ \hline \end{array}$ | $\begin{aligned} & \begin{array}{l} \text { Below } \\ \text { university } \end{array} \end{aligned}$ | $\begin{array}{\|l} \hline \begin{array}{l} \text { University } \\ \text { or higher } \end{array} \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { Below } \\ \text { university } \end{array} \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { University } \\ \text { or higher } \end{array} \\ \hline \end{array}$ |  | Below university | University or higher | Attending school |
|  |  | 14 | 6 | 5 | 2 | 11 | 5 | 83 | 47 | 62 | 22 | 6 | 3 | 8 | 148 | 24 | 24 |
| Male | 15-19 years old | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 9 |
|  | 20-24 years old | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
|  | 25-34 years old | 1 | 0 | 1 | 0 | 0 | 0 | 8 | 7 | 2 | 2 | 1 | 1 | 0 | 1 | 0 | 0 |
|  | $35-44$ years old | 1 | 1 | 0 | 0 | 1 | 0 | 12 | 10 | 2 | 1 | 1 | 0 | 0 | 2 | 0 | 0 |
|  | $45-54$ years old | 2 | 2 | 0 | 0 | 2 | 1 | 13 | 9 | 2 | 1 | 1 | 0 | 0 | 2 | 0 | 0 |
|  | $55-64$ years old | 2 | 1 | 0 | 0 | 2 | 1 | 10 | , | 4 | 3 | 1 | 0 | 0 | 2 | 1 | 0 |
|  | 65 - 69 years old | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 3 | 1 | 1 | 0 | 0 | 5 | 2 | 0 |
|  | 70-74 years old | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 9 | 3 | 0 |
|  | 75 years old and over | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 22 | 7 | 0 |
| Female | 15-19 years old | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 8 |
|  | 20-24 years old | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 3 |
|  | 25-34 years old | 0 | 0 | 1 | 0 | 0 | 0 | 6 | 4 | 4 | 3 | 1 | 0 | 0 | 3 | 1 | 0 |
|  | 35-44 years old | 1 | - | , | 0 | 1 | 0 | 8 | 3 | 8 | 3 | 0 | 0 | 0 | 5 | 2 | 0 |
|  | $45-54$ years old | , | 0 | 0 | 0 | 1 | 0 | 10 | 2 | 13 | 3 | 1 | 0 | 0 | 6 | 1 | 0 |
|  | $55-64$ years old | 1 | 0 | 1 | 0 | 1 | 0 | 5 | 1 | 10 | 2 | 1 | 0 | 0 | 11 | 2 | 0 |
|  | 65 - 69 years old | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 4 | - | 0 | 0 | 0 | 12 | 1 | 0 |
|  | 70-74 years old | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 17 | 1 | 0 |
|  | 75 years old and over | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 50 | 3 | 0 |

* Created population data using data of October to December 2020 since the data of October to December 2021 are not disclosed yet at the time of survey implementation. Weighted tabulation is used to assign back to the composition of the population data created by the data of October to December 2021 at the tabulation phase since the data of October to December 2021 will be disclosed by the end of the survey


## 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 10 s 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 ( $18 \times 16$ cells x 11 areas $=3,168$ ). Actual survey was implemented aiming the number of persons to be collected for the allocation







## 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).


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


## Japanese Panel Study of Employment Dynamics 2022

## Reference (3) Calculation method of weighted values of the survey

## <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
$\mathrm{I}-\mathrm{i}$.

- Using the data of October to December 2021, create the data on the number of people in the population following the same procedure as the reference (1)-I and calculate the entire component ratio for each cell
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 56,679 can be made up according to the population, multiplying 56,679 excluded 16 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
- The calculation was handled in the following 3 patterns; As for unemployment and non-labour force, the weighted value calculated with Pattern A is to be used; As for labour force of ages between 15 and 24 , and 65 or over (excluding completely unemployed persons), the weighted value calculated with Pattern B is to be used; As for labour force of ages between 25 and 64, the weighted value calculated with Pattern C 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 for other age groups by gender, stratified age group, status of employment, education background.
Pattern C : 1,056 cells for 25-64 years old by gender, stratified age group, status of employment, education background and areas.

## Japanese Panel Study of Employment Dynamics 2022

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 \& Pattern C * All over the Country and Hokkaido as an example



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

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

## Japanese Panel Study of Employment Dynamics 2022

## 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 2022
The population produced in Reference (1)-I


* \% values in the table represent percentage of total
* Since the weighted aggregation is implemented, total (n) of Japanese Panel Study of Employment Dynamics 2022 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 2022
Statistics Bureau, Ministry of Internal Affairs and
Communications "Labour Force Survey (Basic
Tabulation)" December, 2021

|  | (\%) |  |  |
| :---: | ---: | ---: | ---: |
|  | n (persons) | Regular <br> employee | Non-regular <br> employee |
| Male |  | 1276 | 48.7 |
|  | $25-34$ years old | 2917 | 83.9 |


|  |  | (\%) |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{gathered} \mathrm{n}(\mathrm{x} 10,000 \\ \text { persons }) \end{gathered}$ | Regular employee | $\begin{gathered} \text { Non-regular } \\ \text { employee } \end{gathered}$ |
| Male | 15-24 years old | 271 | 52.8 | 47.2 |
|  | 25-34 years old | 557 | 86.0 | 14.0 |
|  | 35-44 years old | 631 | 91.0 | 9.0 |
|  | 45-54 years old | 743 | 90.8 | 9.2 |
|  | 55-64 years old | 514 | 75.1 | 24.9 |
|  | 65 years old and over | 286 | 28.3 | 71.7 |
| Female | 15-24 years old | 270 | 45.9 | 54.1 |
|  | 25-34 years old | 474 | 67.7 | 32.3 |
|  | 35-44 years old | 537 | 52.1 | 47.9 |
|  | 45-54 years old | 673 | 42.6 | 57.4 |
|  | 55-64 years old | 452 | 34.1 | 65.9 |
|  | 65 years old and over | 234 | 17.5 | 82.5 |

<Unemployment rate by region>

Japanese Panel Study of Employment Dynamics 2022

Statistics Bureau, Ministry of Internal Affairs and Communications "Labour Force Survey (Basic Tabulation)" October - December 2021 (Seasonally adjusted values)

| Hokkaido | Tohoku | Minami kanto | Kitakanto /koshin | Hokuriku | Tokai | Kinki | Chugoku/ Shikoku | Kyusyu/ Okinawa |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3.0 | 2.5 | 2.6 | 2.4 | 2.0 | 2.1 | 2.7 | 1.6 | 2.4 |


| Hokkaido | Tohoku | Minami <br> kanto | Kitakanto <br> koshin | Hokuriku | Tokai | Kinki | Chugoku/ <br> Shikoku | Kyusyu/ <br> Okinawa |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 3.0 | 2.5 | 3.0 | 2.5 | 2.2 | 2.3 | 2.9 | 2.4 | 2.6 |

Japanese Panel Study of Employment Dynamics 2022

## Additional Survey Design of Japanese Panel Study of Employment Dynamics

## 1. Outline of the Survey

| Purpose of the Survey | Reveal the actual condition of the second job of employed persons and provide <br> suggestions that also improve the quality of work |
| :--- | :--- |
| Items surveyed | Actual condition of second job (employment condition, content of work, contract, <br> working hours, etc.) |
| Survey volume | 15 questions |
| 2. Period of the Survey |  |

Survey period
January 14 ~ February 7, 2022

## 3. Coverage of the Survey

| Survey districts | All over the country |
| :--- | :--- |
| Conditions of persons | Persons who were engaged in a second job or subsidiary business between <br> January and December 2021 <br> *Persons who did not have employment as of December 2021 are not included in <br> the tabulation of the data collection |
| 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) <br> possessed by Intage Inc. |
| Sample design | Extract samples applicable to target people described above among valid <br> respondents of the JPSED2022 main survey |
| Effective collection <br> count/effective collection <br> rate | 5,166 samples <br> Persons requested: 6,008 Effective collection rate: 86.0\% |

## 5. Aggregation Method

## Weighted <br> sampling aggregation

Perform weighted tabulation to tabulate according to the composition of the population

Apply weighted value calculated in this survey

