

---

## Differences in Definitions of Non-Regular Employees in Government Statistics

*Ryo Kambayashi*

*Hitotsubashi University*

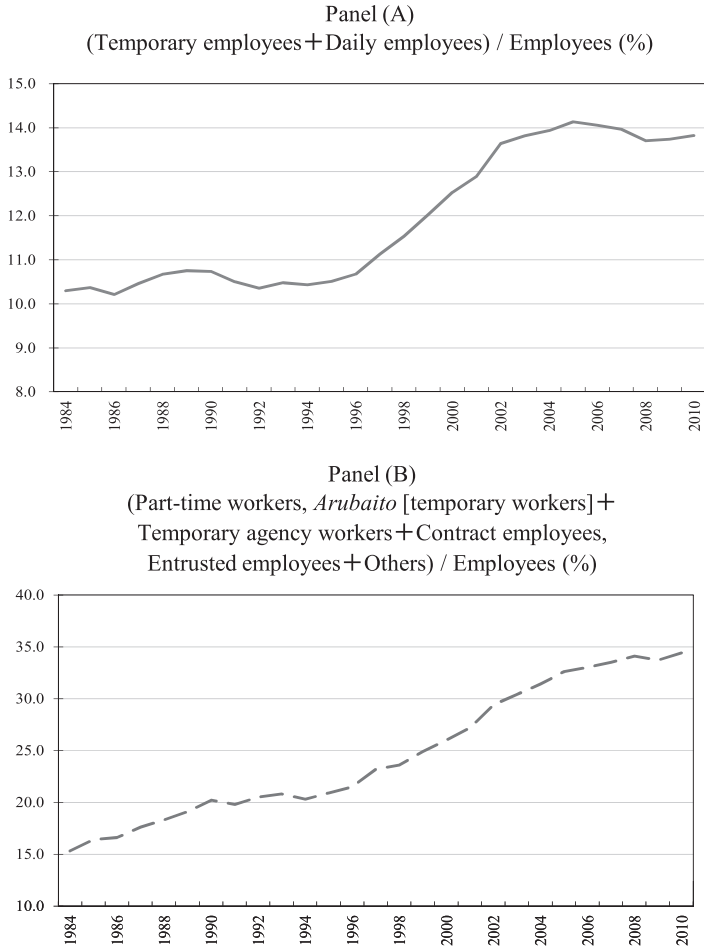
### I. Introduction

For anyone involved in labor issues in Japan, it must already be common knowledge that there are several definitions of non-regular employees. What may be less well-known, however, is that different definitions will produce different trends for historical increases in this category. Figure 1 shows trends in the ratio of non-regular employees to employees in general, based on two typical definitions found in the Labour Force Survey by the Ministry of Internal Affairs and Communications (MIC).

In Panel (A), the definition of non-regular employees is based on “employment status,” determined according to the length of the labor contract. It shows the ratio of “Temporary employees” (with labor contracts of up to 1 year) and “Daily employees” (contracts of less than 1 month) to all employees. As the maximum length of labor contract was one year by 2005, these categories show the whole of fixed-term contracted workers at least by 2005. In Panel (B), the definition is based on the “type of employment,” determined according to descriptions and/or titles used in the workplace. It calculates the ratio of employees not described as “full” or “regular” employees. The resultant figure is normally quoted in expressions like “non-regular employees have passed the 30% mark.”

While both Panels show the same general trend in the share of non-regular employees, one cannot fail to notice a clear difference between the two. For example, while the share of non-regular employees in Panel (A) is between around 10% and 15%, in Panel (B) the share is much larger, between 15% and 35%. Of course, although these two figures are based on the same sample, it should not be surprising that the two show different ratios just because they are based on different definitions. What is more noteworthy is that they also differ in the time-series trend for increases in non-regular employees. Under the definition in Panel (A), the ratio of non-regular employees only increased for a relatively short period from around 1996 to 2002; it did not continue to rise throughout the “Lost Two Decades.” By contrast, the increase in non-regular employees according to Panel (B) had already started in the 1980s, long before the “Lost Two Decades,” and the trend remained relatively constant over a quarter of a century. According to the former definition, the increase in non-regular employees is seen as related to temporary economic change, such as deregulation. Under the latter definition however, it is suggested that the increase in non-regular employees should rather be understood as longer term and more continuous changes in economic structure.

Thus, the definition of non-regular employees is not merely an issue of statistical



*Note:* Compiled by the author from the Labour Force Survey (Basic Tabulation Historical Data 4 and Detailed Tabulation Historical Data 9). Data from 2011 has been omitted, as results for three prefectures affected by the Great East Japan Earthquake are missing.

Figure 1. Trends in Ratios of Non-Regular Employees According to the Labour Force Survey (1984–2010)

measurement, nor of some futile academic discussion. It needs to be seen as an important economic issue closely related to the role played by non-regular employees in the labor market. This paper sets out to briefly organize the definitions of non-regular employees mainly found in labor statistics administered by the government, and to clarify some economic aspects behind the differences between them.

## II. Definitions Based on Working Hours

The definition of non-regular employees in government statistics could be broadly di-

vided into three types. Two of these have already been discussed, namely (A) a distinction based on length of the labor contract and (B) a distinction based on workplace title/description. The remaining is (C) a distinction based on working hours. Even here, there are several differences; in one statistic for example, the definition is based on an absolute level of less than 35 hours per week, while in another, a comparative standard is set, in that “working hours are shorter than those of ordinary workers.” Nevertheless, these can be summarized as defining non-regular employees as employees who only work short hours.

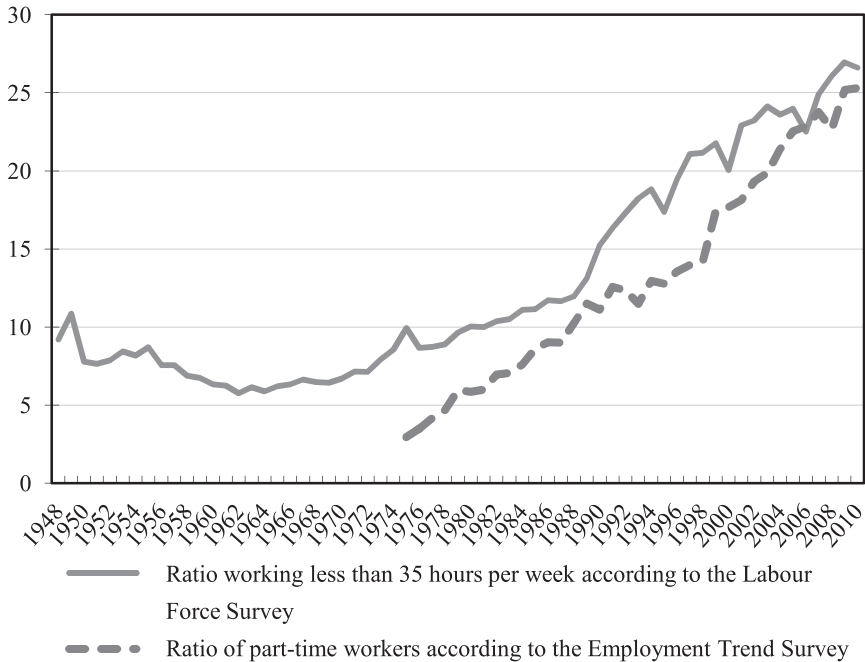
Generally speaking, Japanese Government statistics have hardly shown any great enthusiasm in differentiating between regular and non-regular employees as a way of classifying workers. Nevertheless, the oldest of the three definitions must be (C), the distinction based on working hours. At least in the postwar Population Census, the Labour Force Survey<sup>1</sup> (which started in 1947), and other statistics managed by MIC, actual hours worked per week were ascertained. As a result, it was already known very soon after the war that not all employees worked a 48-hour week. That is to say, Japan’s low unemployment rate was suspected to result from widespread use of intermediate employment status (“partial employment”) by those without full-time work. Therefore, the surveyors in those days intended to measure such phenomena as expressed in phrases like “*shantai shitsugyo*” (unemployment within a company). In recent years, however, these definitions are actually closest to what we would call “part-time workers.”

On the other hand, statistics managed by the Ministry of Health, Labour and Welfare (MHLW, formerly the Ministry of Labour [MOL]) have not adopted a simple distinction based on absolute hours worked per week. Their definitions are mainly based on whether or not an individual works shorter hours than ordinary employees, as prescribed in the work rules of the establishment where the individual is employed. In the Basic Survey on Wage Structure, for example, a part-time worker (short-time worker) is defined as “a worker who has fewer scheduled hours worked per day, or who has the same scheduled hours worked per day but fewer scheduled days worked per week than ordinary workers of the establishment.” This definition has existed since 1970. It draws directly on the legal definition of short-time workers, as found in the 1968 amendment to the Employment Insurance Act, for example.<sup>2</sup> This relative definition has also been adopted in statistical surveys by MHLW such as the Employment Trend Survey since 1975 and the Monthly Labour Survey since 1989. By contrast, it has still not been used in household surveys managed by MIC. This

---

<sup>1</sup> The Labour Force Survey itself was first conducted in June 1946, but underwent major changes between November 1947 and March 1948, including sample design. Therefore, it is usual to trace the continuous series back to 1948. For more detail on historical changes in the Labour Force Survey, see MIC (2011).

<sup>2</sup> The plan was originally that the Employment Insurance Act would not apply to workers “employed temporarily on a part-time basis.” However, standards based on a comparison with working hours in work rules were presented, following a clarification of standards for application to short-hour workers in a 1968 notification by the Director of the Unemployment Insurance Division (Hamaguchi 2010, 35–36).



*Note:* Compiled by the author from the Labour Force Survey (employees in non-agricultural industries) and the Employment Trend Survey. For the latter, the number of full-time employees at the start point in Historical Data 1 was used. Between 1975 and 1978, the number of part-time workers was not given in Historical Data 1. The figure was therefore obtained by reverse-calculation from the hiring ratio of part-time workers reported in the Outline. Data from 2011 has been omitted, as results for three prefectures affected by the Great East Japan Earthquake are missing.

Figure 2. Trends in Ratios of Non-Regular Employees Based on Working Hours (%): 1975–2010

shows how much statistical definitions devised by MOL/MHLW have been in line with Japanese labor law.

Figure 2 compares the ratio of non-regular employees based on the absolute definition of 35 hours per week, with that based on the relative definition of working hours in work rules. In reality, therefore, these two definitions may not be so markedly different. However, the actual reason why the figure of 35 hours is often used is thought to be one of convenience, because the Labour Force Survey publishes aggregated data using 35 hours as a dividing line. To be fair, ILO and other international organizations have set 35 hours per week as some kind of defaults (such as the definition of part-time workers) in international arrangements, but not many of these existed back in 1947. One speculation is that the Current Population Survey in the U.S., developed in tandem with Japan’s Labour Force Survey, also sets 35 hours per week as the standard for short working hours. This could have affected the

definitions of other countries and institutions.

The graph shows the ratio of employees in non-agricultural industries who actually worked less than 35 hours per week, according to the Labour Force Survey. Alongside this is the ratio of part-time employees to full-time employees calculated as of January 1st every year, according to the Employment Trend Survey.<sup>3</sup>

Overall, it would appear that the ratio of short-hour workers was not so high immediately after the war, but entered a gradually rising trend from the second half of the 1960s, with the speed of this rise accelerating somewhat in the 1990s. Comparing the time-series trends with those in Figure 1, they resemble Panel (B) (title/description definition) rather than Panel (A) (contract term definition). We should be careful that the population of the Employment Trend Survey is limited to establishments employing five or more full-time employees; its coverage therefore differs from that of the Labour Force Survey (a household survey). As such, it would be natural for there to be a discrepancy between the two standards in the figure.

But it is interesting that the time-series trends resemble each other so closely, even though the role of the absolute level of 35 hours per week changed, in relative terms, from representing around 70% of full-time hours to representing around 90% due to an amendment to the Labor Standards Act. The maximum weekly working hours shifted from 48 hours to 40 hours during this period. In spite of the change in relative importance of the 35 hour system, there is not such a great difference between the two trends in the figure. This implies that, for short-time workers, the very fact of working shorter hours than ordinary workers is in itself the major difference, giving rise to the doubt that how many hours they are behind the working rules may not be so terribly important.

### **III. Definition Based on Contract Length or Workplace Title/Description**

A definition as old as that based on working hours is the definition based on the length of the labor contract. This has been in continuous use under the statistical term “employment status” since the Labour Force Survey was launched in 1947. Within this, categories frequently used today are “full-time employee” (open-ended contract, or an excess of 1 year), “temporary employee” (a limit of 1 year or less), and “daily employee” (a limit of less than 1 month). However, it was only in 1959 that these three categories were first used in the Labour Force Survey and its supplements. Until then, there were only two catego-

---

<sup>3</sup> Things would be simpler if the definition based on a comparison with working hours in work rules were incorporated in the Basic Survey on Wage Structure. However, the only figures published in this Survey for part-time workers until 1987 were those aggregated for women; it is not possible to calculate the ratio of part-time workers and ordinary workers including men, except for the years 1970 to 1973. Figures for men were reported between 1988 and 1994 in the totals for business scale in all industries, but figures for male part-time workers have only been published in all aggregate tables since 1995. It should be noted, moreover, that the Contents and Title of reports between 1988 and 1994 use the somewhat misleading expression “Part-time female workers.”

ries—daily employees with a contract period of less than 1 month, and others (i.e. the total of full-time and temporary employees).<sup>4</sup> This is probably because, until the 1950s, the focus of classifying employment status rested on the distinction between self-employed workers or family workers on the one hand, and employees on the other. Relatively little emphasis was placed on finer distinctions within the category of employees. This made it more important to set aside seasonal or temporary workers with extremely short labor contracts. It was therefore more useful to investigate whether the length of the labor contract was extremely short, as with daily employees, rather than a distinction based on whether the length of the labor contract was fixed or not.

Of course, distinctions based on the contract term have also been incorporated in establishment surveys managed by MOL/MHLW. Here again, however, there are not three categories but two (full-time employees and temporary/daily employees). Generally, the distinction between the two could be said to lie in whether the labor contract is fixed-term or open-ended. In the Employment Trend Survey, for example, the two categories of full-time employees and temporary/daily employees were adopted from its launch in 1964. And in the Basic Survey on Wage Structure, microdata included the distinction between fixed-term and open-ended contracts from 1967 onwards. In the first place, a clear distinction is made between fixed-term and open-ended labor contracts in labor law. For example, there is said to be a big difference between the two in the final phase of a labor contract. In the case of a fixed-term labor contract, the contract is automatically terminated in principle at the end of the specified term. With an open-ended labor contract, conversely, the contract remains in force unless either the employer or the employee gives notice of cancellation. Some claim that the very disparity between regular and non-regular employees is the problem when it comes to restrictions on dismissal. This claim could be said to derive from a rationale, grounded in labor law, that emphasizes this difference between fixed-term and open-ended contracts. Although the MOL/MHLW statistics took account of distinctions between employees from an early stage, they could rather be summarized as adopting the administrative perspective of fixed-term or open-ended contracts in direct response to regulation under the Japanese labor law. In this respect, they were unlike the MIC household surveys, which placed emphasis on identifying partial employment in reality.

Of the main definitions of non-regular employment, the statistically most recent is the distinction based on title/description in the workplace. The adoption of this definition in the 1982 Employment Status Survey provided the impetus for its incorporation in the Labour Force Survey (Detailed Tabulation). More recently, it was adopted by the Basic Survey on Wage Structure in 2005.

Table 1 gives a brief summary of these three definitions as they appear in each of the main statistics.

---

<sup>4</sup> The Employment Status Survey, which used three categories from the start of surveys in 1956, was earlier than this.

Table 1. Definitions of Non-Regular Employees According to Statistical Surveys

|   | Population and sample size <sup>a</sup> | Survey frequency | Definition of non-regular employees                        |  |  |
|---|---|------------------|--|--|--|
|   |   |                  | Distinction based on length of labor contract <sup>b</sup> | Distinction based on title/description | Distinction based on working hours<br>Weekly working hours (less than 35 hours)<br>Comparison with working hours in work rules |
| Population Census                             | All households                          | Every 5 years    | 1950–  | 1950–                                  | ×  |
| Labour Force Survey                           | All households                          | Monthly          | 1947–  | 1947–                                  | ×  |
| Detailed Tabulation (formerly Special Survey) | All households                          | Monthly          | 1953–  | 1953–                                  | ×  |
| Employment Status Survey                      | All households                          | Every 5 years    | 1956–  | 1956–                                  | ×  |
| Basic Survey on Wage Structure                | 5 or more employees                     | Yearly           | 1967–  | 2005–                                  | ×  |
| Monthly Labour Survey                         | 5 or more employees                     | Monthly          | ×  | ×                                      | 1989–  |
| Employment Trend Survey                       | 5 or more employees                     | Yearly           | 1964–  | ×                                      | 1975–  |

Notes: <sup>a</sup>Based on the latest version of each survey. Note that some surveys may have changed.

<sup>b</sup>Note that both household surveys and establishment surveys started with two categories (the former with full-time/temporary employees and daily employees, the latter with full-time employees and temporary/daily employees).

In general, household surveys have commonly adopted definitions based on actual working conditions (e.g. the workplace title/description or weekly working hours). But in establishment surveys, the definition more often revolves along with the legal term in law, such as the length of the labor contract or whether hours worked are shorter than those specified in work rules. Also, several of the government statistics use more than one definition simultaneously, suggesting that we can exploit the relationships between definitions. In the next section, as one attempt, I would like to introduce some research that examines the relationship between definitions.

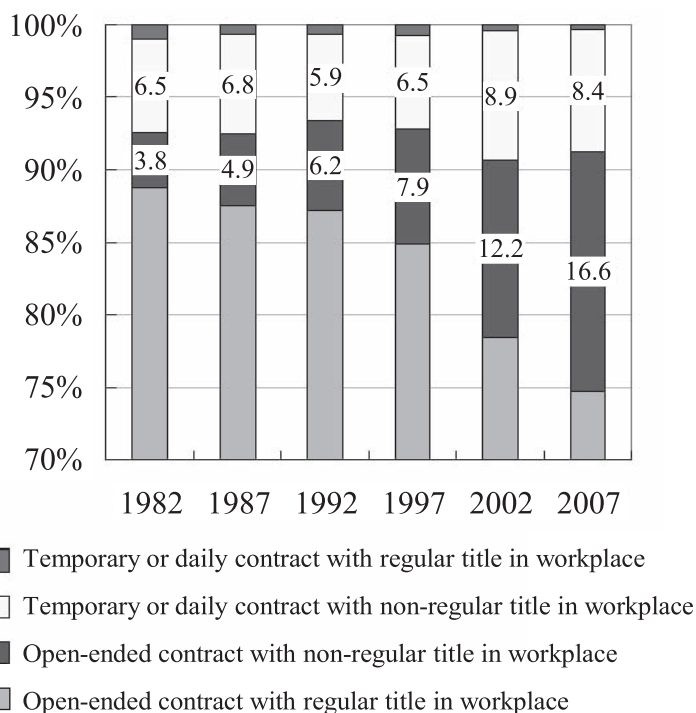
#### **IV. Correlation between Definitions**

As already shown in Figure 1 above, the two definitions explained in the previous section (i.e. distinctions based on the length of the labor contract and on the workplace title/description, respectively) provide different aggregations for non-regular employees in both ratios and increasing trends. In that case, we may predict that not all non-regular employees based on title/description have fixed-term contract, and that, particularly up to the first half of the 1990s and from the 2000s onwards, the increase in non-regular employees mainly involved the former rather than the latter. At present, the Ministry does not provide the cross-tabulation in public; however, Figure 3 from Kambayashi (2010) shows the relation between the two definitions by using the microdata of the Employment Status Survey.

In Figure 3, employees aged 18 to 70 who are mainly working are divided into four categories of contract-based “open-ended contract employees,” versus “temporary or daily contract employees,” and title/description-based “regular employees,” versus “non-regular employees.” The graph shows ratios of each combination between the years 1982 and 2007, clearly showing how the declining ratio of regular employees in the 1990s was offset by an increase in employees classified as “Open-ended contract with non-regular title in workplace.” This highlights an increase in employees who still have open-ended or minimum one-year labor contracts, but are not titled as regular employees in the workplace. Although the ratio of contract-based non-regular employees (i.e. fixed-term contract employees) increased in the second half of the 1990s, the size of this increase was evidently smaller than the increase in description-based non-regular employees. Kambayashi and Kato (2012) point out that the scale of this increase in open-ended contract non-regular employees is more or less offset by a decrease in self-employed or family workers. As such, it should also be noted that the ratio of regular employees as a proportion of the population (not of the employee) barely changed between the 1980s and the 2000s.

On this point, “Open-ended contract employees” have been truly divided between those with fixed-term contracts and those with open-ended contracts in Labour Force Surveys since January 2013, because the adamancy of the Labor Standard Law in 2005 extends the maximum of contracting terms from one year to three years. Although the Ministry does not publish the cross-tabulation, the difference between numbers of employees with





*Note:* Kambayashi (2010), Figure 4. For more details on the graph, see Kambayashi (2010).

Figure 3. Ratios of Non-Regular Employment in Employment Status Surveys (1982–2007)

open-ended contracts and those not described as regular employees in their workplace averaged 4.04 million between January and April, or around 7.4% of all employees in non-agricultural industries. This is about half of the 16.6% shown under “Open-ended contract with non-regular title in workplace,” according to the Employment Status Survey in Figure 3. This is probably the result of blurred measurement due to changes in survey items, as well as differences in the original measurement concepts of the Labour Force Survey and the Employment Status Survey (the former being based on “actual standards” and the latter on “usual standards”).<sup>5</sup>

Next, Kambayashi (2010), Kawaguchi, Kambayashi, and Hara (2011), and Kambayashi and Kato (2012) carried out a simple regression analysis to ascertain whether the distinction based on labor contracts is more strongly correlated to the working

<sup>5</sup> The average ratio of regular employees to employees in 2007 Labour Force Surveys was around 86%, lower than in the Employment Status Survey where it exceeded 90%. Even within Labour Force Surveys between December 2012 and January 2013, the ratio of employees to persons in employment was little changed at around 87%, but that of regular employees to employees jumped from 86% to 91%. This proves that changes in survey items do have an impact.

Table 2. Impact of Contract Term and Title/Description on Hourly Wage

| Sample  | (1)                | (2)               | (3)               | (4)                | (5)               | (6)               |
|---|--------------------|-------------------|-------------------|--------------------|-------------------|-------------------|
|   | 1987               |                   | 1997              |                    | 2007              |                   |
|   | Males              | Females           | Males             | Females            | Males             | Females           |
| Dependent variable                                    | Log of hourly wage |                   |                   |                    |                   |                   |
| Estimation method                                     | OLS                |                   |                   |                    |                   |                   |
| Contract/Non-regular<br>(BASE=Contract/Regular)       | -0.011<br>(0.005)  | -0.008<br>(0.006) | -0.019<br>(0.006) | -0.009<br>(0.005)  | -0.032<br>(0.005) | -0.012<br>(0.005) |
| Description/Non-regular<br>(BASE=Description/Regular) | -0.187<br>(0.004)  | -0.151<br>(0.005) | -0.122<br>(0.005) | -0.243<br>(-0.004) | -0.221<br>(0.004) | -0.185<br>(0.004) |
| Observations  | 253691             | 105560            | 207336            | 139923             | 214729            | 131832            |
| Adj. R-squared  | 0.53               | 0.42              | 0.54              | 0.43               | 0.46              | 0.35              |

*Note:* Quoted directly from Kawaguchi, Kambayashi, and Hara (2011), Table 4. Figures in parentheses are the standard error. Besides the constants, age, age squared, tenure, tenure squared, educational attainment dummy, industrial classification dummy (1 digit), occupational classification dummy (1 digit), and firm size dummy and prefecture dummy were introduced as control variables. The sample for analysis was limited to persons in employment mainly engaged in work. Hourly wages were calculated as follows. First, the median value of annual incomes in each category was taken. Next, the median value of the annual working days category was divided by seven to calculate the number of annual working weeks, and this was multiplied by the median of the working hours per week category to obtain working hours per year. Finally, annual income was divided by working hours per year to obtain the wage rate.

conditions of non-regular employees than that based on title/description. As a result, they report that the distinction based on title/description shows a more important role in actual working conditions (such as hourly wages) than that based on labor contract. As an example of this analysis, Table 2 directly quotes the results of Kawaguchi, Kambayashi, and Hara (2011) on the relationship between definitions and hourly wage.

In the Table, “Contract/Non-regular,” is a dummy variable with value 1 if the employment status is “temporary employee” or “daily employee,” and 0 for “open-ended contract employee.” “Description/Non-regular” is a dummy variable with value 1 if the workplace title/description is not “regular employee,” and 0 if it is “regular employee.” Taking column (1), for example, for male employees in 1987, the hourly wage was about 1.1% lower if the labor contract had a fixed term compared to an open-ended one. If the workplace description was “non-regular,” there was an hourly wage difference of 18.7% compared to regular titled employees, which clearly shows the importance of title/description in workplace rather than contract term. This relationship is consistently observed, regardless of the survey year or gender. Kambayashi (2010), Kawaguchi, Kambayashi, and Hara (2011), and Kambayashi and Kato (2012) point out that the same relationship is generally observed

not only for hourly wage, but also for working hours, employee turnover propensity, and participation in training. This estimation result means that workplace title/description is more closely related to the determinants of working conditions. On the contrary, the slackness of the contract term suggests the weak effectiveness of labor law regulations, because it can be predicted that if labor law regulations strongly regulate working conditions, the length of the labor contract will show a stronger correlation than workplace title/description would.<sup>6</sup>

## V. In Lieu of a Conclusion

This paper has given an overview of how several definitions of non-regular employees have been handled by government statistics in Japan. It has also suggested that an employee's title/description in the workplace is more closely connected to working conditions than the length of the labor contract, based on Kambayashi (2010), Kawaguchi, Kambayashi, and Hara (2011), and Kambayashi and Kato (2012). Particularly, the negligent role of contract term compared to the title/description will indicate the effectiveness of legal assignment in the Japanese labor markets.

Of course, the subject of how to define non-regular labor has been discussed *ad infinitum*, and cannot be reduced to the three definitions in government statistics introduced in this paper. In recent years, jobs with good qualities have come to be distinguished from those with bad ones by studying the various aspects of jobs, or in other words, the actual facts of working conditions. And some researchers have come to emphasize that so-called non-regular labor is concentrated in the latter.<sup>7</sup> On the other hand, it is not necessarily easy to convert the actual facts of working conditions into data; authorities in various countries could be seen as being at the trial and error stage in this respect.

## References

- Hamaguchi, Keiichiro. 2010. Rodo shijo no sefuti netto [The safety net of the labor market]. JILPT Labour Policy Report vol.7, the Japan Institute for Labour Policy and Trainin, Tokyo.
- Kalleberg, Arne L. 2011. *Good jobs, bad jobs: The rise of polarized and precarious employment systems in the United States, 1970s–2000s*. New York: Russell Sage Founda-

---

<sup>6</sup> Kambayashi (2010) confirms the same trend using the Basic Survey on Wage Structure, as an addendum.

<sup>7</sup> Kalleberge (2011), among others. In recent years, OECD has put its weight behind the creation of a compound indicator called the Better Life Index. The purpose of this is to take a pluralistic view of social welfare from multiple angles, one of which is a compound indicator related to jobs. While this kind of index does not tackle the dichotomy of regular versus non-regular, it could be seen as one attempt to measure the quality of jobs.

- tion, American Sociological Association Rose Series in Sociology.
- Kambayashi, Ryo. 2010. *Joyo, hiseiki rodosha no shoso* [Aspects of full-time, non-regular employees]. Global COE Hi-Stat Discussion Paper Series no. 120, Hiotsubashi University, Tokyo.
- Kambayashi, Ryo, and Tako Kato. 2012. *Good jobs, bad jobs, and the Great Recession: Lessons from Japan's lost decade*. IZA Discussion Paper Series no. 6666, IZA, Bonn.
- Kawaguchi, Daiji, Ryo Kambayashi, and Hiromi Hara. 2011. *Seishain to hiseishain wo wakatsu bunsuirei: Hiseishain wo do tokei de toraeruka?* [The dividing line between regular and non-regular employees: How to perceive non-regular employees in statistics?]. Mimeograph.
- MIC (Ministry of Internal Affairs and Communications). 2011. *Rodoryoku chosa no kaisetsu (dai 3 pan)* [Commentary on the Labour Force Survey (3rd Edition)]. <http://www.stat.go.jp/data/roudou/pdf/hndbk.pdf>.