

Japan Labor Review

Volume 6, Number 4, Autumn 2009

Special Edition

Human Resource Management of Atypical Employment

Articles

The Effect of Training Policy for Non-Regular Employees and Human Resource Management Practices

Kenn Ariga, Ryo Kambayashi, Yoshihide Sano

Temporary Agency Workers' Human Resource Management and Willingness to Work

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Career Formation and Utilization of Temporary Agency Workers

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—From Both Viewpoints of Companies and Workers

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Perceptions of Pay and Work by Standard and Non-Standard Workers

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Article Based on Research Reports

Conscientization of a Career Counselling Process—Becoming Aware of One's Career Counselling Process

Jun Kayano

JILPT Research Activities



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NEXT ISSUE (Winter 2010)

The winter 2010 issue of the Review will be a special edition devoted to **Current Status of Fringe Benefits in Japan**

Introduction

Human Resource Management of Atypical Employment

Japanese enterprises have promoted the utilization of atypical employees such as part-time workers, fixed-term contact workers and temporary agency workers. Under this circumstance, the number of workplaces utilizing atypical employees for not only temporary jobs but also jobs which require certain education and training has increased. In enterprises and workplaces which utilize atypical employees, it is getting a bigger issue to improve education and training for atypical employees and human resource management measures for settlement and improvement of their willingness to work.

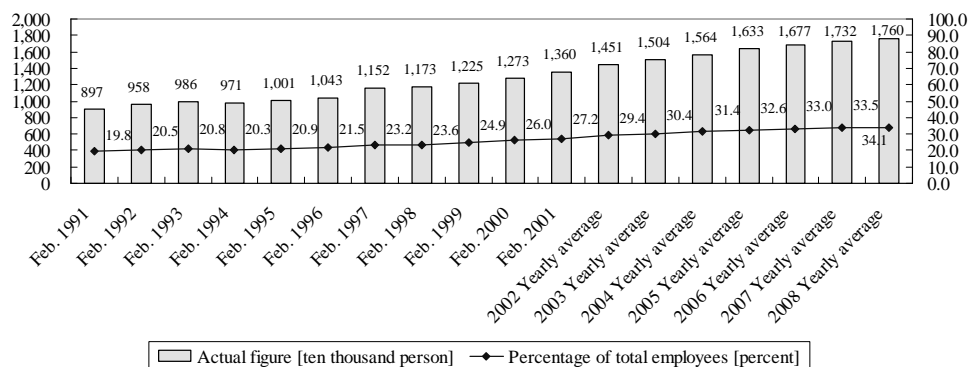
This Special Edition of Japan Labor Review introduces cutting-edge experimental studies on human resource management for atypical employment in this trend. In the following, I would like to briefly explain the recent situation of utilizing atypical employment to understand the significance of such studies in the context of Japanese labor environment followed by brief introduction of each study.

1. Expansion of Utilizing Atypical Employment

One of recent big changes in Japanese employment is that the number of atypical employees has increased. Given that full-time regular employees signing an employment contract without term are defined as typical employees, the number of atypical employees whose relationship with employers and working hours are different from typical employees had been gradually increasing up to 2008, and their percentage of total employees had been getting higher as well. Atypical employees in this paper include part-time workers, fixed-term contact workers and temporary agency workers.

Figure 1 shows the number of atypical employees and changes in the percentage of total employees since the early 1990s based on “Special Survey on Labor Force” (up to 2001) and “Labor Force Survey (Detailed Tabulation)” (since 2002). Since survey methods and surveyed months are different between data up to 2001 and since 2002, an easy comparison cannot be made. However, it is possible to understand the ballpark trend. Looking at the past decade up to 2008, the number of atypical employees has increased from 12.25 million in February 1999 to 17.60 million in 2008 (annual average). During this time, the percentage of atypical employees to total employment has increased from 24.9% to 34.1%. Nonetheless, atypical employment, mainly temporary agency workers in manufacturing industry, has been cut due to the recession since 2008. As a result, according to “Labor Force Survey (Detailed Tabulation),” the percentages of atypical employees in January-March and April-June 2009 are 33.4% and 33.0% respectively.

Comparing the percentages of atypical employees in February 1999 and 2008 (annual average), both female and male percentages have increased from 45.2% to 53.6% and from 11.7% to 19.2% respectively. The percentages of both female and male youth atypical employees (in Japan, youth means mainly people aged up to 34) have also increased. Because of this, the public concern has increased over destabilization of youth employment, possibility of dwindling education and training opportunities during the early years of business



Sources: *The Special Survey of the Labour Force Survey* from 1984 to 2001 and the *Labour Force Survey (Detailed Tabulation)* since 2002. Because there is difference such as survey methods and reference period, attention need to be paid to the time series comparison.

Notes: 1. The data classified “Entrusted, Other” prior to Aug. 2000 and Feb. 2001 (“Other [entrusted, etc]”). The data subdivided “contract employee or entrusted employee” and “Other” since Aug. 2001.

2. Rates are to the totals shown in breakdown of “Employee, excluding executive of company or corporation.”

3. Non-regular staff includes part-time worker, temporary worker, temporary agency worker, contract employee or entrusted employee and other non regular employee.

Figure 1. Actual Figure and Rate of Non-Regular Staff

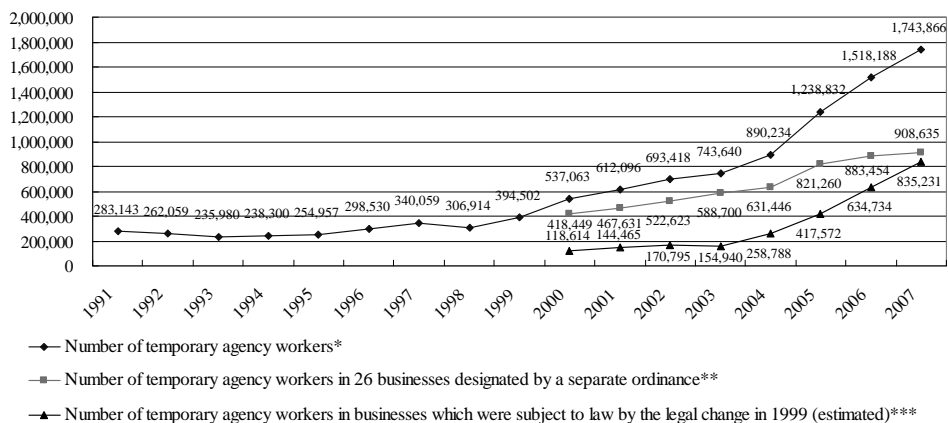
career and measures against such issues.¹

In addition, during this time, the number of temporary agency workers has increased in accordance with Act for Securing the Proper Operation of Worker Dispatching Undertakings and Improved Working Conditions for Dispatched Workers (hereinafter referred to as “Act for Dispatched Workers”) as a change in atypical employment though the percentage of total employees is still low. According to recent data from Statistical Report on Worker Dispatching Undertakings released from the Ministry of Health, Labour and Welfare (hereinafter referred to as “MHLW”), the number of temporary agency workers² has significantly increased from 306,914 in 1998 to 1,743,866 in 2007 (Figure 2).

One of the causes of this situation is relaxation of Act for Dispatched Workers. The Act for Dispatched Workers had permitted the dispatch of workers to listed services, mainly specialized services, and prohibited the dispatch of those to other services. According to a revision of the Act in 1999, however, the temporary agency work has been liberalized in principle except port transport services, construction work, security services and other exempted services designated by a separate ordinance, e.g., medical-related services. For

¹ See, Special Edition: The Transition from School to Working Life (*Japan Labor Review*, vol. 2, no.3, 2005. The Japan Institute for Labour Policy and Training, Tokyo) and Special Edition: Current Situations of Work Hours and Vacations in Japan (*Japan Labor Review*, vol. 3, no.3, 2006. The Japan Institute for Labour Policy and Training, Tokyo).

² The number of temporary agency workers was calculated by dividing total annual working hours of surveyed non-regular workers by total annual working hours per regular worker.



Sources: The Ministry of Health, Labour and Welfare, *Statistical Report on Worker Dispatching Undertakings*.

Notes: *The number of temporary agency workers was calculated based on the number of those workers who were dispatched with fixed term and worked during that period. For the calculation method, see Footnote 2.

** As for the number of temporary agency workers by business type, since the report format changed in FY1999, the number of workers was counted by two standards in FY1999. Therefore, the number of workers by business type in FY1999 was removed from the figure.

***Estimated number of temporary agency workers in businesses which were subject to law by the legal change in 1999 = Number of temporary agency workers - number of temporary agency workers in 26 businesses (as of every 1st of June)

Figure 2. Number of Temporary Agency Workers in Total and by Business Type

newly liberalized services other than 26 services which have been allowed to receive dispatched workers since before the revision, however, the permitted period of temporary agency workers was limited to one year. The period has expanded up to three years by the revision of the Act in 2003. By this revision, the Act has permitted the dispatch of workers to “services of manufacturing products” which was prohibited by the supplementary provision of the Act for Dispatched Workers revised in 1999 with a limitation of the dispatch period; one year within three years after the enforcement of the Act revised in 2004 and up to three years after that.

The reason why the number of temporary agency workers has significantly increased since 2004 may be the impact of the Act revised in 2003. According to “Statistical Report on Worker Dispatching Undertakings” since 2006 which can be used for understanding the number of temporary agency workers dispatched to the services of manufacturing products, the number of temporary agency workers engaged in such services was 239,243 as of 1 June 2006 and increased to 466,493 as of 1 June 2007.

As above, the number of Japanese temporary agency workers has been steadily increased. Since late 2008, however, temporary agency workers mainly in the services of manufacturing products have been cut due to the impact of the recession.

Table 1. Reason for Utilizing Atypical Employment (Up to three multiple answers)
(Unit: Percent)

| | Part-time workers | Agency workers |
|---|-------------------|----------------|
| Need to control wage cost | 41.1 | 18.8 |
| Require additional personnel on daily or weekly basis | 37.2 | 13.1 |
| Require more workers due to extended business hours | 21.7 | 3.4 |
| Need to control labour cost other than wage | 21.3 | 16.6 |
| Need to adjust hiring practices due to changes in business conditions | 18.0 | 25.7 |
| Unable to recruit regular staff | 17.6 | 26.0 |
| Allow regular staff to specialize in important work | 15.3 | 20.4 |
| Need to meet temporary or seasonal demand | 14.5 | 20.3 |
| Require persons capable of doing specialized work | 12.7 | 20.2 |
| Require persons with experience and expertise | 11.8 | 35.2 |
| Wish to re-employ older workers | 7.9 | 2.6 |
| Substitute for staff on childcare or family-care leave | 1.6 | 6.5 |
| others | 10.6 | 7.0 |

Source: The Ministry of Health, Labour and Welfare, *General Survey on Diversified Types of Employment 2007*.

2. Enterprises' Human Resources Utilization Policy and Atypical Employment

As mentioned above, the recent basic trend is that the number of atypical employees including temporary agency workers has increased and the percentage of total employees has also increased. The factors would be the impact of above mentioned relaxation of the Act for Dispatched Workers, workers' choice of employment and enterprises' will to utilize atypical employment.

Table 1 shows the statistics of reasons why enterprises (businesses) utilize part-time workers and temporary agency workers on the basis of "General Survey on Diversified Types of Employment 2007." Many businesses answer that they utilize part-time workers "to save wage costs," followed by "to respond to the fluctuation of daily and/or weekly businesses," "to respond to long sales (operating) hours" and "to save labor costs other than wages." It tells that the main reason why enterprises utilize part-time workers is to save labor costs through lower wage level than regular full-time workers and flexible personnel assignment which rapidly responds to amount of business and sales/operating hours.

On the other hand, many businesses point out the reason for utilizing temporary agency workers "to secure work-ready/talented human resources," "because it is hard to secure regular employees" and "to adjust employment depending on business fluctuation." Enterprises would aim to save fixed labor costs by flexibly adjusting the number of personnel depending on the amount of businesses as well as securing human resources suited to the businesses.

Generally, it can be said that the main reason of utilizing atypical employment such as part-time workers and temporary agency workers is to save labor cost and make it variable cost.³

³ Susan N. Houseman and Machiko Osawa, "The Growth of Nonstandard Employment in Japan and United States: A Comparison of Causes and Consequences," in *Nonstandard Work in Developed Economies*, ed. Susan N. Houseman and Machiko Osawa, 175-214 (Kalamazoo, Mich.: W.E. Upjohn Institute for Employment Research, 2003).

The increased utilization of atypical employment never means that enterprises give up the employment security for regular employees and long-term in-house human resource development which are characteristics of Japanese employment practices. Enterprises hire core employees (*Sei-Shain*) as regular employees and target them for the employment security and long-term human resource development. The disemployment of regular employees is also constrained by the Employment Contracts Act and case laws.⁴

The recently increased number of atypical employees is a result of enterprises' measures to limit the number of regular employees with employment security and long-term human resource development. Based on the experience of the long-term recession since the late 1990s and the uncertainty of business growth outlook, many of Japanese enterprises are trying to limit the number of regular employees who are guaranteed employment, in-house career and continued pay raise and save labor cost and make it variable cost by increasing the utilization of atypical employees.

The Japan Federation of Employers' Associations which had emphasized "Japanese-style" employment practices published a report, "'Japanese-Style Management' for a New Era" with human resources managers of member enterprises as committee and showed a model of using human resources, "employment portfolio" in 1995.⁵ This symbolizes above-mentioned Japanese enterprises' policies.

As for the employment portfolio, enterprises divide human resources into the following three groups: (i) "Long-term accumulated capacity utilization type"; the employer signs an employment contract without term, continues the long-term employment and actively carries out education and training centered on On-the-Job Training (hereinafter referred to as OJT), (ii) "Highly-specialized capacity utilization type"; the employer signs a fixed-term employment contract, not necessarily premise a long-term employment, and carries out education and training centered on Off-the-Job Training (hereinafter referred to as Off-JT) and self-development support and (iii) "Flexible employment type"; the employer signs a fixed-term employment contract and carried out education and training if needed. Typical businesses of "long-term accumulated capacity utilization type" in which a long-term employment practice is applied are assumed as management post, general staff worker and production sector's core worker. Models show an idea to widely utilize fixed-term employees using "highly-specialized capacity utilization type" mainly in planning, sales and R&D sectors and "flexible employment type" for routine work and specialized work in regular service and technical/sales sectors.

Of course, the actual human resources utilization is not necessarily carried out in line with such models. Nonetheless, such models reflect that the policy to save labor cost, make it variable cost and secure personnel by limiting the number of regular employees who are targets of the employment security and long-term human resource management and utiliz-

⁴ Takashi Araki, *Labour and Employment Law in Japan* (Tokyo: The Japan Institute of Labour, 2002).

⁵ New Japanese-Style Management System Research Project, ed. *Shin-Jidai no 'Nipponteki Keiei'* ['Japanese-style management' for a new era] (Tokyo: Japan Federation of Employers' Associations, 1995).

ing atypical employment such as fixed-term employees in a wide range of businesses and services.

3. Core Workforce of Atypical Employment and Human Resource Management

Under this circumstance, Japanese enterprises have promoted the utilization of atypical employment and, as indicated above, the ratio of atypical employees among all employees has been increasing. This would reflect that the number of enterprises utilizing atypical employees has increased and enterprises which have already utilized atypical employment are further utilizing atypical employees more than ever. Especially in the latter enterprises, atypical employees have been in charge of certain high-level jobs in which regular employees were responsible for.

Such trend has already been found since the 1980s in retail and restaurant industries where part-time workers have been utilized. Particularly chain retail shops and restaurants such as supermarkets and chain restaurants are highly utilizing part-timer workers ahead of other businesses/industries in order to manage the shops saving the labor cost. Therefore, part-time workers have been in charge of high-level jobs early in those enterprises. Osaka Women and Minors Bureau's "A Study on the Part-time Worker Problem Concentrating on Skill Questions,"⁶ one of pioneering studies, clarified that part-time workers are not only responsible for routine tasks and complement regular employees ("complementary part-time workers") but also in charge of high-level jobs gaining experience at work ("core part-time workers") in 1989.

Such trend has been conceptualized as "core workforce" of part-time workers in the context of Japanese studies and the corresponding reality has been elucidated. A series of studies shows that the ratio of and the number of utilizing part-timer workers have increased ("quantitative" core workforce) and their jobs have been highly-advanced ("qualitative" core workforce) up to the present date in chain retail shops and restaurants.⁷ In re-

⁶ Osaka Women and Minors Bureau, Ministry of Labour, *Gino to Iu Shiten kara Mita Patotaimu Rodo Mondai ni tsuite no Kenkyu* [A study on the part-time worker problem concentrating on skill questions], report compiled by Study-Group for Improvement of Part-time Labor and Labor Management, Osaka Women and Minors Bureau, Ministry of Labour.

⁷ Akira Wakisaka, "Supa ni okeru Joshi Rodoryoku [Female labor force for supermarkets]," *Okayama Economic Review* 17, no. 3-4 (1986):853-66; Etsuko Aoyama, "Patotaimu Rodosha no Jinji Kanri: Ote Supa wo Chushin ni shite [Human resource management of part-time workers: Centered on major supermarkets]," *Mita Journal of Economics* 83 (1) (1990):155-72; Masako Miyama, "Patotaima Senryokuka to Kigyo-nai Kyoiku [Utilization of part-time workers and training within enterprises]," *The Japanese Journal of Labour Studies* 33, no. 4 (1991):28-36; Kazunari Honda, "Patotaima no Kobetsuteki Chingin Kanri no Henyo [Changes in individual-based pay systems for part-time employees]," *The Monthly Journal of The Japan Institute of Labour* 40, no. 10 (1998): 59-70; Hiroki Sato, Yoshihide Sano and Hiromi Hara, "Koyo Kubun no Tagenka to Jinji Kanri no Kadai: Koyo Kubunkan no Kinko Shogu [Diversifying employment categories and issues of HRM: Balancing wages across employment categories]," *The Japanese Journal of Labour Studies* 45, no. 9 (2003):31-46; Jean Gadrey, Florence Jany-Catrice and Thierry Ribault, "Levels and Systems of Employment in the Japanese Retail Trade : A Comparison with France," *Cambridge Journal of Economics* 25, no. 2 (2001):165-84.

cent studies, it is pointed out that in various industries including department stores and interpersonal services, directly-employed atypical employees including fixed-term full-time contact workers have been core workforce.⁸

These studies show that enterprises promoting the core workforce of atypical employees including part-time workers have evaluated their length of service, skills and work contents and introduced a mechanism to reflect them in their wages, i.e., the wage system of atypical employees has been improved.

As the ratio of atypical employees increases in workplaces and they are responsible for high-level jobs, it should be important to enhance their willingness to work in order to maintain the work quality and efficiency. Furthermore, when atypical employees are in charge of high-level jobs, certain education and training are necessary for them. In order to recoup the investment into education and training, enterprises should increase their job retention rate and let them continue working for a long time. It would also be important to motivate them to improve their skills. In fact, according to the MHLW's General Survey on Diversified Types of Employment 2007 (up to 3 multiple answers were allowed), many of business offices point out that issues on utilizing part-time workers are: "security of good quality human resources" (45.6%), "sense of responsibility for jobs" (45.7%), "job retention" (42.9%) and "improvement of motivation to work" (32.8%).

As above, in order to promote the utilization of atypical employees including part-time workers, issues are how enterprises improve their willingness to work and give them incentive to continue working and improve their skills. Therefore, it would appear that especially enterprises promoting the core workforce of atypical employees have improved the human resource management including the improvement of treatment system for atypical employees.

Regarding the working period of atypical employees, Japanese enterprises utilize atypical employees including part-time workers for a medium to long term by renewing the fixed-term employment contract with them repeatedly. According to the MHLW's Survey on Fixed-Term Contract Labor 2005, for instance, 79.3% of atypical employees with up to three years (legal limit) of fixed-term contract renewed the contract. The average number of their contract renewal was 7.0 and the average number of service years was 5.0. As for temporary agency workers, according to the MHLW's Survey on Temporary Agency workers 2004, the percentage of temporary workers whose length of service in the current client firms is one year or more is 52.5%. The percentage of those working for three years or more is 20.4%.

In this way, many of Japanese enterprises utilize atypical employees including fixed-term contract employees and temporary agency workers as some measure of stationary workforce, not necessarily temporary workforce. That is why many of enterprises utilizing atypical employment need to improve atypical employees' willingness to work and their skills through human resource management. As pointed out above, especially enter-

⁸ Emiko Takeishi, "Hiseiki Rodosha no Kikan Rodoryokuka to Koyo Kanri no Henka [Utilization and changes of non-regular employees's employment management]," *Nissei Kiso Kenkyujo-Ho*, no. 26 (2002):1-36.

prises promoting the core workforce of atypical employees have such need.

4. Introduction of Featured Papers: Frontier Researches on Human Resource Management of Atypical Employment

As mentioned above, Japanese enterprises have promoted the utilization of atypical employment. Because of this, improvement of atypical employees' motivation to work and job retention have been issues for many of Japanese enterprises. This Special Edition of Japan Labor Review collects researches on human resource management of such atypical employees.

Ariga, Kanbayashi and Sano analyzed the effect of human resource management measures for atypical employees such as part-time workers and contract workers who are directly employed by enterprises.

As pointed out above, researches on core workforce of atypical employees centered on part-time workers have clarified that as directly-employed atypical employees have been core workforce, their continued service and skills are likely to be evaluated and reflected in their wage system. However, such researches have not directly verified the impact of such human resource management measures on atypical employees.

On the other hand, Ariga, Kanbayashi and Sano analyzed effects of various human resource management measures focusing on the difference between enterprises' expected job retention ratio and the actual job retention ratio of atypical employees as an index of human resource management effect. They found that for both part-time workers and contract employees, opportunities of providing OJT and the wage system reflecting skills have stimulated their continued service responding to enterprises' expectations. In addition, they argue that it is effective to introduce a flexible working hour system for part-time workers and make a mechanism of posting to managerial positions for contract employees. However, they also show that for contract employees, support for acquisition of external qualification and improvement of skill-training program may stimulate their turnover and discuss the countermeasures.

Shimanuki analyzed the effect of improved human resources on temporary agency workers' willingness to work focusing especially on white-collar temporary agency workers among atypical employees.

Researches on human resource management for temporary agency workers are less accumulated among researches on human resource management for atypical employment. Nonetheless, as pointed out, enterprises have recently promoted the utilization of temporary agency workers and sought adequate human resource management for temporary agency workers on a practical level.

Unlike the case of directly-employed atypical employees, both client firms utilizing human resources and temporary agencies hiring temporary agency workers are involved in the human resource management of them. It can also be said that client firms and temporary agencies share the human resource management for temporary agency workers. Therefore, in order to analyze such human resource management, we need a framework of the analysis which is different from that for the case of directly-employed atypical employees.

Given this factor, Shimanuki summarized the share of human resource management between client firms and temporary agencies in the following four fields: procurement, training, evaluation/treatment and others, and analyzed the effect of their efforts on temporary agency workers' attitude toward work. He shows the analysis results that (1) the quality of client firms' and temporary agencies' human resource managements have an impact on their motivation to work for the client firms, (2) the quality of client firms' human resource management has a larger impact on their willingness to continue working for the client firms, (3) the quality of temporary agencies' human resource management has a larger impact on their willingness to continue working through the temporary agencies, (4) the quality of client firms' human resource management has a larger impact on the satisfaction for the way of working and (5) the quality of temporary agencies' human resource management has a larger impact on the future outlook. Based on this, he discusses the implication of these analysis results.

So what kind of jobs are temporary agency workers engaged in? Researches on this have not been sufficiently accumulated yet. As the utilization of temporary agency workers have been greatly promoted, have temporary agency workers' work contents been highly advanced the same as part-time workers? Shimizu analyzed the situation of advancement (utilization) of temporary agency workers' jobs on the basis of interview survey of temporary agency workers in clerical jobs. As an analysis result, she clarified that temporary agency workers have been core workforce.

She further analyzed the relationship between the frequency of changing client firms and the degree of advancement of jobs for career development of temporary agency workers, and found that "retention type," a temporary agency worker works for one client firm for a long time, is more likely to promote the advancement of job than "transverse type," a temporary agency worker changes client firms on a short-time basis. She also points out that in order to develop "transverse type" workers' ability, the selection of client firms by the temporary agency plays an important role.

To promote the utilization of atypical employment would naturally have an impact on the way of human resource management for employees including regular employees. Yasuda analyzed the impact of utilizing atypical employment on education and training. Empirical researches on the possibility that the promotion of utilizing atypical employment decrease the level of education and training for employees including regular employees have been less accumulated in Japan. He analyzed this using a questionnaire survey on enterprises and workers.

As an analysis result, he clarified that the increase in the number of utilized atypical employees itself has no negative impact on in-house education and training and smooth On-the-Job Training is inhibited by the decrease in the number of regular employees and their long working hours caused by the utilization of atypical employment. Based on such results, he points out that not the size of utilizing non-regular employees but what kind of jobs enterprise utilize atypical employees for and how enterprises properly manage the burden share of regular employees have an impact on education and training.

Then, how do atypical employees view their labor conditions and opportunities for

exercising and development of their abilities? Which human resource group is unsatisfied? These are points on the effectiveness of human resource management. Okunishi analyzed the fairness of wage and the determining factor in job satisfaction by employment format focusing on workers' awareness.

As an analysis result, he found that (i) the awareness of classification between employment patterns and career outlook are more important for the awareness of wage fairness than amount of wages or work contents, (ii) the determining factors in job satisfaction of regular and atypical employees are almost in common regardless of employment patterns and the satisfactions on wages, employment security, training and education and working hours contribute to job satisfaction and (iii) regarding opportunities for exercising and development of abilities through work, there is a bigger problem among atypical employees, especially contract employees and temporary agency workers than among regular employees. He also discusses the implication of these analysis results of human resource management and government policies.

I just briefly introduced the summary of featured papers. All of these papers are important to know the current situation of human resource management for atypical employment in Japan and the attainment level of recent researches on it. I hope this Special Edition of Japan Labor Review contributes to deeply understanding the current situation and issues of human resource management for atypical employment in Japan.

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The Effect of Training Policy for Non-Regular Employees and Human Resource Management Practices

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Using a recent survey of establishments on the practices of non regular employments, we examine the effectiveness of various human resource management (HRM) policies towards non-regular employees. We focus on the gap between the target and the actual average tenures of non-regular employees as the benchmark to measure the effectiveness. We exploit a special characteristics of the survey in which a set of questions are asked on both regular and non-regular employments. With this feature, we conduct difference-in-difference type regressions to control for unobservable heterogeneity of establishments. We find that the emphasis on skill developments alone is not enough to enhance the stability of non-regular employees. Given the heterogeneity of non-regular employments, we find it important that the HRM policy is fine tuned towards the needs and aspirations of respective types of workers. For example, OJT, incentive provisions for skill improvements, and flex-time system are found to be important in the stability of part time (*arubaito*) workers. On the other hand, for contract workers, we find the positive impact of provision of a career track for administrative positions, on top of the OJT and incentive system for skill improvements. If misguided, some of HRM may well be counter-productive. For example, we find that a provision of off-the-job training tends to induce quits of contract employees.

I. Introduction

In recent years there has been an increase in the number of part-time, *arubaito* and contract workers, so-called “non-regular employees,”¹ an increase, too, in the frequency

¹ According to the time-series figures which can be derived from the surveys of the Statistical Office of the Ministry of General Affairs (the Special Survey of the Labor Force Survey for 1984 to 2001 and the Labor Force Survey [Detailed Tabulation] since 2002), non-regular employees made up 15.3% of the labor force in February 1984. By February 1994 this had increase to 19.1%, by February 1999 to 24.9% and rapidly increased further to 31.5% as the average from January to March 2004. (See <http://www.stat.go.jp/data/roudou/longtime/zuhyou/lt51.xls>). The categories used are: part-time workers, *arubaito* workers (a term originally used for student part-time workers, but now used to cover anyone working on a casual basis who does not fit into any of the other categories) workers dispatched from a temporary employment agency and “contract employee or entrusted employee” and “others.” (Contract and entrusted employees have been separated from “others” only since 2001.) The change in the survey frame in 2001, makes direct comparison difficult as the source quoted notes, but there can be no doubt about the big increase in the proportion of non-regular employees. For a comparison of non-regular employees in Japan and the US see Houseman and Osawa (2003) and for the categorization of non-regular employees, see Keizer (2008).

with which such workers are employed alongside regular employees in work which is central to the firm's business. In short there have been big changes, both quantitative and qualitative in the role of non-regular employees in the labor market.

There are, of course, many firms which use non-regular employees only for supplementary and temporary assignments and apply simple personnel system (relative to those governing regular employees), thus economizing on personnel administration resources (Nakamura 1989, 1990). On the other hand, in some other firms, especially those in retail, restaurants and service sectors, non-regular employees are the main core of the labor force and, where efforts are made to introduce systems of evaluation and reward similar to those of regular employees (Honda 1998; Gadray, Jany-Catrice, and Ribault 2001; Takeishi 2006).

How to treat non-regular employees is not only a question that individual firms have to resolve in their employment policies: given the increase in the numbers of such workers, it is also a question of what should be the ideal nature of the Japanese labor market as a whole. The fact is that an increase in the proportions of non-regular employees is a common feature of most other advanced industrial countries, most notably in countries where the difference in employment conditions of regular and non-regular employees is greatest.²

In those countries, too, as in Japan the use of non-regular employees as the core labor force has become an important policy issue. There are already numerous studies looking into the question of whether temporary jobs are a stepping stone to future regular jobs or are simply dead-end jobs.³ If temporary jobs are indeed to become stepping stones to future regular jobs, what is needed is not simply a matter of their treatment within individual firms, but for the external labor market to evaluate their experience as temporary workers to facilitate their upward mobility across jobs.

In the Japanese context, skill formation via job mobility is not a realistic possibility. Instead, we need practical steps to give temporary workers the chance of skill formation and make it easier to treat them as core workers. The minimum necessary steps are to put in place employment policies which foster and evaluate their skills.

As we note later, most of the existing literature is based on the assumption that treating non-regular employees as the core labor force is a good thing and that what is necessary is to employ them under conditions as much as possible close to the treatment given to regular employees. Nevertheless that does not seem to be what is happening and the question arises why that is so and whether it will ever be so without a legislation requiring equal

² An EU study found, for instance, that the probability for temporary workers to be transferred to regular employee status was, in Britain 47%, in Luxemburg 62%, in Portugal 49% but in Italy 28%, in France only 19%. (<http://www.eurofound.europa.eu/ewco/reports/TN0506TR01/TN0506TR01.pdf>)

³ Houseman and Osawa (2003), Heinrich, Mueser and Troske (2005). Esteban-Pretel, Nakajima, and Tanaka (2009) have examined the extent to which experience as a temporary worker influences the chances of getting a regular job and conclude that there is little evidence of such a Stepping Stone function.

treatment.

One reason is because it has not been made clear what effects the policies for employing non-regular employees have in human resource management terms. In particular there have been few studies which investigate the effect on the worker stability. Generally speaking there is no question that if non-regular employees are to be given serious responsible jobs, some accumulation of human capital is needed. But for firms to spend money doing this, there needs to be some likelihood that, even as temporary workers, the people who are trained will stay in their jobs. In fact, it is not clear, however, whether the treatments commonly given to non-regular employees—typically the one originally designed for regular employees—does in fact increase the likelihood of their staying on the job, and thus constitute an effective employment policy. It may well be the case that low motivations and frequent turnover result so that inadequate skill formation hurts the performances of those workers. If so, given the high cost of training, employers may not recoup their investment. In fact, Takeishi (2006) has shown that even where there has been a progressive shift of non-regular employees into core jobs and employment policies have been adjusted accordingly, the measures introduced have not responded to the needs of the workers, and the introduction of such policies have not had much effect on work motivation or on the high turnovers.

It is not always easy to align the interests of workers to those of employers, in the provision of the training. Employers are most concerned to make sure that they are fully acquainted with the ins and outs of their present job and learn by on-the-job training to do it better, while the workers themselves have a much stronger incentive to acquire general skills that could be used in other workplaces. And this clash of interests does not apply only to training. The employer who wants to make his non-regular employees his main work force may want to give them jobs with wider and deeper responsibilities, whereas for workers, this may simply mean being forced into a more difficult and stressful tasks.⁴

Hence the need for empirical studies which show what kind of employment practices do have the effect of raising worker motivation and reducing their quit rates when efforts are made to treat them as core work force. Such studies have practical as well as academic importance.

This paper is based on the results of a questionnaire survey, the Establishment Survey of Employment Policies for Non-Standard Workers (hereafter simply the Survey), carried out by the Study Group on Personnel Administration for Non-Standard Workers of the Ministry of Health, Labor and Welfare. We hope, as well as demonstrating that at the present time, treating non-regular employees as the core work force does not necessarily reduce the turnover of such workers, to suggest what sort of employment policies might contribute to the reduction of the turnover rate. It should be noted that in this analysis we have no direct

⁴ The studies cited in footnote 3 indicate that skill-job mismatch is greater for non-regular than for regular employees, and it is more often the case that job assignments are beyond the skill capabilities of non-regular employees.

data on the effect of various personnel policies on work motivation. But it seems to us reasonable to suppose that the lower the turnover, the higher work morale is likely to be.

Before the main analysis, we offer a brief description on the methodology used and the contribution that it makes. There has been an enormous accumulation of human resource management studies about the employment of non-standard workers, and the current situation is being gradually made clear. It appears from such studies that personnel policies as close to those for standard workers as possible facilitate the use of such workers as the core labor force. But, as will be shown later, most of these studies have as their empirical base a one shot cross-sectional analysis which cannot incorporate the impact of heterogeneous economic environments each sample firm or a worker faces. Typically, such a survey has no data on the profitability of the sample firms. Firms doing brisk business naturally employ large number of temporary workers, and they can afford costly personnel policies for non-regular employees. The underlying reason for the use of temporary workers as the main work force is the brisk business, not the use of high powered human resource management policy.

Given the absence of any panel surveys tracking events in particular firms over time, this is a difficult question to resolve. However, it is possible to make some headway by tweaking the questionnaire survey. The present survey is also a one shot cross-sectional study, but it does have two extra devices. The first is to ask for the expected, or hoped-for, period of service of non-regular employees so that we can look at the gap between expectation and reality. The second is to get the quit rates of regular as well as non-regular employees as a means of getting a measure of the otherwise unknowable variable of the firm's profitability. The assumption is that the profitability of the firm will have a similar effect on the quit rates of both regular and non-regular employees. Hence by comparing the difference in the quit rates of regular and non-regular employees with the difference in the personnel policies directed at each category, we obtain unbiased estimates of the effect of personnel policies on the stability of non-regular employees.

Our estimation results indicate that while improving some of the treatments of non-regular employees indeed reduce quit rates, their effectiveness depend on the nature of the policies adopted. While acknowledging inevitable limitations of the analysis based on any specific survey, we believe that this does constitute a useful addition to our understanding of the issues.

The structure of the paper is as follows. Section II summarizes existing studies of the use of temporary workers as core employees. Section III explains the nature of the data and describes the use of non-regular employee capabilities, the personnel policies adopted and turnover rates. Section IV offers an econometric analysis of the effect of personnel policies including skill development on turnover rates. Finally a brief conclusion is given in Section V.

II. Existing Studies on Human Resource Management Policies for Non-regular Employees

Since the latter half of the 1990s there have been numerous studies of non-regular employees, with particularly valuable contributions being made concerning the use of part-time workers as the core work force. They have shown that there is a tendency for firms, as they increasingly use part-timers in core work areas, to adopt systems of evaluation and remuneration similar to those for regular employees, and provisions for promotion to regular employee status (Honda 1998). More recently the same tendency has been recorded for other types of non-regular employees, including contract workers (Takeishi 2006). Nishimoto and Imano (2003) investigates the use of more equal treatments of non-regular and regular employees in terms of rank system, job allocation, transfers, evaluation and pay systems. Their analysis found positive impacts of equal treatments on the use of non-regular workers as the core employees, as well as on the overall firm performance.⁵ In general, these studies have shown the effectiveness of the adoption of personnel policies similar to that of regular employees on the quality of non-regular employees in core jobs. They also have contributed to the understanding of the mechanisms involved in making non-regular employees the core work force.

We need to apply due cautions, however, in generalizing these findings to the non-regular employees as a whole. To begin with, most of these studies are case studies depending on interviews and the cases have largely been confined to retailers, restaurants and other service firms, which have been known as the most successful cases in the use of non-regular employees for core jobs. They do not tell us much about the effects of personnel policies in other sectors including manufacturing, or, why there are other firms which are apparently reluctant to put non-regular employees into core jobs. Most of these studies concentrate in the relation between putting non-regular employees into core jobs and the overall characteristics of personnel policies towards them. As a result, the lack of the detailed analysis of HRM leaves many practical questions unanswered. For example, the impact of the adoptions on specific problems, such as high turnovers, is unknown.

Moreover, more attentions should be paid to the fact that these are based essentially on one shot, cross-sectional studies. There is always the possibility that with changes in business conditions and the profitability, different personnel policies will be introduced or there will be a change in turnover rates or job satisfaction levels, so that the cross section comparison does not tell us the whole reality. This defect of cross-sectional studies is often pointed out, but it applies also to existing studies on the use of non-regular employees in core jobs.

What are needed to make clear the mechanisms involved in using non-regular em-

⁵ Ishihara and Shinozaki (2005) have also shown that equal treatment in such matters for part-time and regular employees increases the acceptability of pay differentials, and Morishima and Foy (2002) showed that it increased job satisfaction on the part of regular employees.

ployees for core jobs, thus making for a more socially efficient labor market, are studies which avoid this defect and produce more robust results regarding the relation of personnel policies to the use of non-regular employees in core jobs.⁶

III. Human Resource Policies, Employment Stability and Personnel Practices

1. The Data: The Establishment Survey of Employment Policies for Non-Regular Employees

For this purpose, in this paper we use the Survey (sponsored by the Study Group on Personnel Administration for Non-Standard Workers) to look at the relation between personnel policies and employment stability and thereby to improve the robustness of our understanding of the problems in using non-regular employees as core work force.

The sample was drawn from the *Teikoku Databank* and consisted of a random sample of a thousand each from the six categories used in the *Databank* to classify establishments; office and marketing facilities, production facilities, R&D facilities, shops and service establishments, warehousing and transport facilities, and sports and entertainment facilities. The questionnaire was mailed and sent back by mail during August and September 2005. The number of usable replies was 1337, giving a response rate of 22.3%.⁷

The questions in the survey are listed in Appendix Table 1. In most of the questions in the survey, respondents are asked to answer each question separately for three types of non-standard workers; part-time and *arubaito* workers, contract workers, and temporary agency and contract company workers. As this paper concerns the purposes and results and employment policies of directly employed non-regular employees, the analysis below will be confined to the first two categories, workers in the third category being excluded from all the data and tables. One advantage of the survey is its wide coverage of workers in these two categories and over a wide range of establishments, not just in the tertiary sector.

The raw data gathered by this survey are deposited at SSJDA, the Social Science Japan Data Archives attached to the Institute of Social and Economic Research at Tokyo University.

2. Establishment's Human Resource Deployment Policies Differ Widely

As we indicated at the beginning of this paper, there is no uniformity in the policies adopted with regard to non-regular employees; there are large differences depending on the industry sector and the size of the establishments, as well as on the purposes for which

⁶ It is also the case that most of the studies of the 1990s concerned companies and establishments employing married women part-time. There are still very few studies of firms employing the kind of workers whose numbers have increased in recent years—younger workers in part-time or casual work, or full-time workers on time-limited contract basis. For the question of the deployment of a variety of employment forms, including regular employees, see Sato and Sano (2005).

⁷ This overall response rate does not correspond to the response rate for each individual question.

non-regular employees are employed. Let us first demonstrate this with data from our Survey.

In the questionnaire, respondents were asked separately about directly employed non-regular employees and outside workers and on the basis of differences between the two we divided the sample into four categories as follows:

- Establishments seeking to use non-regular employees in general as core workers
- Establishments which are making active efforts to develop skills of non-regular employees in general
- Establishments seeking to use only some non-regular employees as core workers
- Establishments which are making active efforts to develop skills of only some types of non-regular employees

The categorization process is somewhat complex, but since it is a key variable we explain it here in detail. Question 11 asked “What sort of work do you employ non-regular employees (part-timers, *arubaito*, contract workers) for?” and required respondents to choose one among five alternative answers: (i) We give them supplementary work, (ii) We give them work which is core rather than supplementary but which involves fixed routines, (iii) What work we give them varies according to the needs of the moment, (iv) We try deliberately to give them quite demanding work in order to develop their capacities, (v) Other. This same question was asked separately for five categories of workers; non-managerial regular employees, particularly able non-regular employees, ordinary non-regular employees, particularly able workers from outside, and ordinary workers from outside. The results were used to assess differences in policies to develop the skills of non-regular employees.

First, firms which gave the answer “not supplementary but routine jobs”—or something better—for ordinary non-regular employees were put in the first category of “Establishments seeking to use non-regular employees in general as core workers.” (Henceforth, “General non-regular core use.”) Then, comparing the answers about the jobs given to non-regular employees in general, with the answers about regular employees, if they were the same (or better for non-regular employees) we counted the firm as coming in the category of “Establishments which are making active efforts to develop non-regular employees in general,” (henceforth “General non-regular active development efforts”) as a sub-group within the “general non-regular core use” category. The other two categories, selecting particularly able non-regular employees for core work and making active efforts to develop their skills, are self explanatory. Finally, in the analysis that follows, establishments which do not come in one of these four categories are described as “supplementary work only” establishments.

Table 1 shows, for both non-regular employees in general and for particularly able non-regular employees the percentage of establishments with core-use and skill development policies, by industry, and establishment size.

More than 90% of establishments put particularly able non-regular employees on to core jobs, and more than 40% give them jobs either similar to those of regular employees or

Table 1. Deployment Policy for Non-Regular Workers, by Industry and Establishment Size

a1. Use generally as core workers

| | | 10 or less N=185 | 30 or less N=179 | 100 or less N=249 | More than 100 N=183 | All establishments N=796 |
|----------------|-------|---------------------|---------------------|----------------------|------------------------|-----------------------------|
| Services | N=331 | 70.0 | 60.7 | 74.7 | 75.6 | 69.5 |
| Manufacturing | N=284 | 62.9 | 71.4 | 70.8 | 65.3 | 68.0 |
| Other | N=181 | 72.5 | 81.3 | 64.3 | 45.9 | 66.9 |
| All industries | N=796 | 69.2 | 68.7 | 70.7 | 63.9 | 68.3 |

a2. Active training policies for all workers

| | | 10 or less N=156 | 30 or less N=161 | 100 or less N=225 | More than 100 N=171 | All establishments N=713 |
|----------------|-------|---------------------|---------------------|----------------------|------------------------|-----------------------------|
| Services | N=290 | 21.3 | 21.3 | 19.5 | 27.3 | 21.7 |
| Manufacturing | N=262 | 12.1 | 20.0 | 17.5 | 15.2 | 16.4 |
| Other | N=161 | 23.5 | 26.1 | 26.1 | 14.3 | 23.0 |
| All industries | N=713 | 19.9 | 22.4 | 20.0 | 18.1 | 20.1 |

b1. Use particularly able employees as core workers

| | | 10 or less N=136 | 30 or less N=142 | 100 or less N=208 | More than 100 N=165 | All establishments N=651 |
|----------------|-------|---------------------|---------------------|----------------------|------------------------|-----------------------------|
| Services | N=284 | 94.7 | 92.4 | 96.2 | 100.0 | 95.4 |
| Manufacturing | N=222 | 93.3 | 97.3 | 94.0 | 98.8 | 96.4 |
| Other | N=145 | 88.9 | 97.4 | 91.3 | 93.9 | 93.1 |
| All industries | N=651 | 93.4 | 95.1 | 94.2 | 98.2 | 95.2 |

b2. Active training policies for particularly able workers

| | | 10 or less N=136 | 30 or less N=142 | 100 or less N=208 | More than 100 N=165 | All establishments N=651 |
|----------------|-------|---------------------|---------------------|----------------------|------------------------|-----------------------------|
| Services | N=248 | 42.5 | 50.0 | 39.7 | 47.7 | 44.4 |
| Manufacturing | N=208 | 42.9 | 51.4 | 52.0 | 35.4 | 44.7 |
| Other | N=136 | 61.5 | 44.7 | 42.9 | 26.7 | 43.4 |
| All industries | N=592 | 46.9 | 48.9 | 45.3 | 37.2 | 44.3 |

at least of a level which gives them the opportunity to develop their skills—a result which confirms the impression that the much touted “transformation of non-regular employees into the core labor force” is in fact proceeding to a considerable degree. As for non-regular employees in general, somewhat less than 70% put them on to core jobs and about 20% try actively to develop their skills. Moreover, the proportion of establishments which deploy particularly able non-regular employees in core jobs which also seek to develop their skills is nearly one half (44.3 divided by 95.2=0.47) whereas for non-regular employees in general the proportion is less than 30% (20.1 divided by 68.3=0.29). The latter are thus very much a minority. It is apparent that even in establishments which use non-regular employees in core jobs, it is frequently only particularly able workers that are given job assignments similar to those of regular employees.

Across industry variations are small, except that in manufacturing there are few manufacturing establishments which seek to develop the skills of non-regular employees. There is no clear correlation between size and core deployment. We find, however, that, whereas in the service sector, there is little difference between size groups, and if anything, a tendency for the bigger establishments to do more training, in manufacturing and also in

the “other” category, the bigger the establishment the more negative the attitude to developing non-regular employees’ skills.

As this shows, if one is to judge firms’ policies for the deployment of human resources by the job assignments they make, as a general tendency, whereas in the service sector, workers are assigned to core jobs and efforts are made to develop their skills, in manufacturing and particularly in large manufacturing establishments the tendency to do so is weak. It is also apparent that there are differences in the treatment of non-regular employees depending on the industry and the size of the establishment.⁸

3. There is a Connection between Human Resource Deployment Policies and Employment Stability

The question is whether these efforts to develop non-regular employees’ skills have their intended effects. In this paper we use, as a proxy for achieving the desired effect, the difference between the job-tenure pattern expected and that actually found. It is generally understood that the development of human resources requires an accumulation of human capital which is reflected in increased productivity, hence the length of job tenures for the workers who are the object of the investment in human capital would seem to be a good proxy.⁹

Before looking at the difference between expected and actual tenure lengths, let us see how expected tenure lengths are affected by firms’ policies towards the deployment and training of non-regular employees. Table 2 seeks to clarify the issue by showing the expected tenure for different types of workers according to the general policy towards deployment and training that the firm has adopted.

What the table shows is that whichever type of non-regular employee one considers, the more a firm is active about its deployment of human resources (in the sense defined above) the longer the period of expected tenure. The correlation is particularly marked in the proportions in the three categories which hope for more than 10 years tenure. This is also clear from the fact that the expected tenure for regular employees shows no relation to the activeness or otherwise of the deployment of non-regular employees. It also is consonant with the basic logic of this paper that the development of human resources through training investment improves productivity.

⁸ On this question of differences according to the industry, and the assumptions which probably underlie it, see Keizer (2008).

⁹ There are, however, two points to note here. First, if a firm has an active skill development policy and tenures are sufficiently long, should the non-regular employees not be promoted to regular status? Secondly, if the way is open for a non-regular employee in future to use his or her acquired skill to get a regular-status job in another firm then possibly one should not count long tenures as a precondition for skill development. However, even if that is so, the length of tenure is a matter of concern for firms themselves if as a result of their human resource development policies the expected degree of employment stability is not attained.

Table 2. The Relation between Human Resource Deployment Policies and Expected Length of Tenure

| | Policy towards deployment of non-standard workers | | | | | | | |
|----------------------------------|--|---|---|-----------------|---|---|--|-----------------|
| | (a) Expected tenure of part-time and <i>arubaito</i> workers (%) | | | | (b) Expected tenure of contract workers (%) | | | |
| | Supple- mentary use | Use as core workers without training | Use as core plus active efforts to train | All patterns | Supple- mentary use | Use as core workers without training | Use as core plus active efforts to train | All patterns |
| Up to 1 month | 0.9 | 0.3 | 0.9 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| Up to 3 months | 0.4 | 1.0 | 0.9 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| Up to 6 months | 2.6 | 0.3 | 1.8 | 1.4 | 1.0 | 2.3 | 0.0 | 1.4 |
| Up to 1 year | 6.0 | 6.3 | 3.5 | 5.7 | 8.7 | 3.4 | 0.0 | 4.3 |
| Up to 3 years | 19.3 | 22.3 | 12.4 | 19.5 | 21.4 | 27.7 | 12.9 | 22.9 |
| Up to 5 years | 25.8 | 25.6 | 21.2 | 24.9 | 27.2 | 26.0 | 15.7 | 24.3 |
| Up to 10 years | 28.3 | 20.6 | 28.3 | 24.7 | 31.1 | 17.5 | 30.0 | 24.0 |
| 10 years or more | 16.7 | 23.6 | 31.0 | 22.4 | 10.7 | 23.2 | 41.4 | 23.1 |
| Total | 100.0 N=233 | 100.0 N=301 | 100.0 N=113 | 100.0 N=647 | 100.0 N=103 | 100.0 N=177 | 100.0 N=70 | 100.0 N=350 |
| Average | 6.17 | 6.26 | 6.58 | 6.25 | 6.12 | 6.24 | 6.99 | 6.34 |
| Average for regular employees | 7.93 | 7.87 | 7.88 | 7.88 | 7.94 | 7.92 | 7.86 | 7.91 |

Note: The average is calculated by counting “Up to one month” as 1 and “10 years or more” as 8. The average for regular employees was calculated in the same way. However, the “All patterns” figure for regular employees differs, because on the left-hand side it is calculated only for firms which had “part-time or *arubaito*” workers and on the other side only for firms which had contract workers.

Let us next look at whether or not the expected tenures are in fact realized, as shown in Table 3.

The table shows the same pattern as for Table 2; the more active the development policy the longer is the actual tenure. And, also, the actual tenures of regular employees is again independent of the type of policy which prevails for non-regular employees.

Then, the next question is what about the gap between expected and actual tenures?

Table 3 shows, in the row “% actual shorter (1)” that around 40 or 50% of establishments report that workers stay in their employment for a shorter period than they had hoped for, which, in turn, suggests that their efforts fully to utilize non-regular employees were not having their expected effect. This is clear in that, as Table 2 shows, as many as 40% of establishments hoped to keep workers for as long as 10 years, the proportion where that actually happened was at most 10%.

More importantly, notice that the more active the efforts to develop both types of workers, the greater is the gap between expectation and reality. The more active the establishment is about the deployment and training of non-regular employees and the more it invests in training costs, the greater is the hope that tenures will be extended, and the more likely the disappointment. And this means that they fail to get positive returns from their investment, and the prospects for treating non-regular employees as core work force become less promising.

Table 3. The Relation between Human Resource Deployment Policies and Actual Length of Tenure

| | Policy towards deployment of non-standard workers | | | | | | | |
|----------------------------------|--|--|--|-----------------|---|--|--|-----------------|
| | (a) Actual tenure of part-time and <i>arubaito</i> workers (%) | | | | (b) Actual tenure of contract workers (%) | | | |
| | Supple- mentary use | Use as core workers without training | Use as core plus active efforts to train | All patterns | Supple- mentary use | Use as core workers without training | Use as core plus active efforts to train | All patterns |
| Up to 1 month | 0.4 | 0.0 | 0.9 | 0.3 | 0.0 | 0.0 | 1.4 | 0.3 |
| Up to 3 months | 1.8 | 2.1 | 1.8 | 1.9 | 1.0 | 0.6 | 0.0 | 0.6 |
| Up to 6 months | 2.6 | 2.1 | 2.7 | 2.4 | 5.9 | 3.6 | 1.4 | 3.8 |
| Up to 1 year | 11.8 | 10.6 | 8.1 | 10.6 | 10.9 | 6.0 | 1.4 | 6.5 |
| Up to 3 years | 29.4 | 30.1 | 18.0 | 27.7 | 29.7 | 38.7 | 29.0 | 34.0 |
| Up to 5 years | 25.9 | 25.0 | 26.1 | 25.5 | 26.7 | 26.8 | 26.1 | 26.6 |
| Up to 10 years | 18.9 | 21.6 | 30.6 | 22.2 | 17.8 | 15.5 | 33.3 | 19.8 |
| 10 years or more | 9.2 | 8.6 | 11.7 | 9.4 | 7.9 | 8.9 | 7.2 | 8.3 |
| Total | 100.0 N=231 | 100.0 N=296 | 100.0 N=113 | 100.0 N=640 | 100.0 N=103 | 100.0 N=172 | 100.0 N=70 | 100.0 N=345 |
| Average | 5.67 | 5.73 | 6.00 | 5.75 | 5.60 | 5.70 | 6.04 | 5.78 |
| Average for regular employees | 7.93 | 7.86 | 7.87 | 7.88 | 7.94 | 7.92 | 7.86 | 7.91 |
| % actual shorter (1) | 44.8 | 44.9 | 48.2 | 45.4 | 41.8 | 36.3 | 50.0 | 40.7 |
| % actual shorter (2) | 35.9 | 37.2 | 42.5 | 37.7 | 39.1 | 29.8 | 48.2 | 36.5 |

Note: Average and average for regular employees as for Table 2. “% actual shorter” the percentage of firms who said that the actual tenure lengths were shorter than those they expected. “% actual shorter (1)” is calculated for the relevant type of non-regular employees for all firms, “% actual shorter (2)” only for firms for which the actual tenures of regular employees coincided with the expected tenure terms, but the actual tenure terms of non-regular employees fell short of those expected.

This is an observation based on the aggregated experience of all industries, without considering the particular economic environments in which establishments find themselves. It is conceivable that the more unfavorable the environment, the more establishments try to substitute non-regular employees for regular employees. In that case, it is the unfavorable environment responsible for increasing quit rates and an increased gap between expected and actual. The true causality is between the worsening of the firm’s economic conditions and the quit rate, and the observed relationship between active deployment and development policies and the tendency of workers to remain in employment is not causal. Hence we cannot necessarily conclude from the figures in “% actual shorter (1)” that the active deployment policies invite a failure of employment stability efforts.

To further probe this issue, we also analyzed only those firms whose actual length of service of their regular employees was the same as their expected length of service, (or longer) and worked out for their non-regular employees the gap between actual and expected. This is the row shown as “% actual shorter (2)” in Table 3. One can assume that where an industry, or a particular firm within an industry is having trouble, this will show up in their level of actual tenure terms for regular employees being lower than what they

Table 4. Personnel Deployment Policies and the Presence or Absence of Formal Personnel Administration Practices: Percentage Having Such Policies

| | Policy towards deployment of non-standard workers | | | | | | | |
|--|---|---|---|--------------------------|--|---|--|--------------------------|
| | (a) Presence or absence of personnel administration practices for part-time and <i>arubaito</i> workers (%) | | | | (b) Presence or absence of personnel administration practices for contract workers (%) | | | |
| | Supple- mentary use N=194 | Use as core workers without training N=263 | Use as core plus active efforts to train N=104 | All patterns N=561 | Supple- mentary use N=81 | Use as core workers without training N=145 | Use as core plus active efforts to train N=58 | All patterns N=284 |
| Personnel evaluation system | 33.0 | 34.6 | 27.9 | 32.8 | 40.7 | 42.1 | 50.0 | 43.3 |
| Pay grade system | 8.8 | 7.6 | 5.8 | 7.7 | 12.4 | 17.2 | 22.4 | 16.9 |
| Pay increase system | 51.0 | 48.7 | 45.2 | 48.8 | 48.2 | 47.6 | 70.7 | 52.5 |
| Bonus system | 46.4 | 52.5 | 47.1 | 49.4 | 55.6 | 61.4 | 70.7 | 61.6 |
| Mentor system | 21.1 | 18.3 | 13.5 | 18.4 | 16.1 | 15.9 | 19.0 | 16.6 |
| Promotion to supervisory functions | 4.6 | 5.3 | 5.8 | 5.2 | 9.9 | 10.3 | 13.8 | 10.9 |
| Promotion to regular employee status | 32.0 | 30.4 | 29.8 | 30.8 | 38.3 | 42.1 | 46.6 | 41.9 |
| Hire with pre conditions on type of jobs | 25.3 | 25.1 | 25.0 | 25.1 | 38.3 | 18.6 | 15.5 | 23.6 |
| Agreement on flex work hours | 47.4 | 45.3 | 52.9 | 47.4 | 22.2 | 15.2 | 10.3 | 16.2 |
| Transfer to contract worker status | 12.9 | 11.4 | 14.4 | 12.5 | | | | |

wanted and that, hence, firms where the expected level and the expected length of tenure of the regular employees coincided would be firms which were not particularly subject to problems. And that would suggest that if some firms among them had difficulty in keeping non-regular employees, it must have been due to some factors which affected only non-regular employees. And in fact it is the case that, (among these firms which keep regular employees for their expected length of tenure) for both types of non-regular employees, the more active the policy for deploying and developing them, the greater the gap between the expected and the actual tenures of such workers. Thus the conclusion from Table 2 that active policies increase the gap between expectation and result seems to be confirmed.

4. The Extent to Which Personnel Management Policies for Non-Regular Employees Are Introduced Depends on the Type of Policy.

(1) The Presence or Absence of Formal Personnel Policies for Non-Regular Employees

What then, explains the fact that enterprises which seek actively to develop the skills of non-regular employees fail to keep them? Previous studies suggests that the problem may lie in the failure of their personnel administration policies, and this may well apply to our own survey results.

Here, in Table 4, we show the proportion of enterprises which have various kinds of formal employment policies (relating to wages, for instance) separately according to the general strategy for deploying non-regular employees. Again, also separating the policies applied to part-time and *arubaito* workers, from those applying specifically to contract workers. As explained previously, “give them a supplementary role” means “not using them as core workers.”

It will be obvious from the table that there are wide variations in the frequency with

which various policies are reported. Thus, while more than 60% of establishments have bonus systems for contract workers, less than a tenth have pay grade systems for part-time and *arubaito* workers. There are also many practices for which the proportions of establishments using it for part-time and *arubaito* workers and those using it for contract workers are very different. For example, nearly a half of the sample allow part-time and *arubaito* workers to choose their preferred work hours and work days, but in the case of contract workers less than a quarter (16.2%) adopt such a policy.

For part-time and *arubaito* workers, there seems to be very little difference in the proportions adopting various practices according to their deployment policies. A possible exception is the fact that there is a smaller proportion promoting to supervisory positions among the establishments which try actively to develop their skills, whereas in the case of contract workers, several practices seem to be more common where there are active development policies. For example, bonus systems for contract workers are found in approximately 50% of establishments which do not try to use them as core workers, whereas the proportion rises to 70% where they do. Much the same can be said of evaluation systems, pay grade systems and promotion systems. By contrast, active skill development policies seem to be negatively correlated with some other practices, such as limiting the job definitions of contract workers, or, flex work days and work hours.

There is less variation according to deployment practices both in appointments to supervisory positions and to regular employee status.

(2) The Presence or Absence of Personnel Policies for Skill Development

Table 5 applies the same analysis to practices concerned with skill development.

There are indeed wide variations in the proportions adopting various practices, but not as much as we find in the wage systems, between part-time and *arubaito* workers on the one hand, and, contract workers, on the other. There is not much difference according to deployment policy, either, in the case of part-time and *arubaito* workers. As in Table 4, however, in the case of contract workers, there is an increase in the proportion of establishments offering training courses, help in self learning or towards the acquisition of qualifications as one goes from those which do not try to use them as core workers to those which do and then to those which have active development policies. These are mostly off-the-job training devices, though. When it comes to on-the-job training, like giving fellow-workers training responsibilities, spelling out required work skills, flexible work allocation and so on, there is no clear correlation with overall deployment policy.

Hence there is a wide variety of rates of adoption of various personnel practices even among establishments which have the same active deployment policy with respect to making non-regular employees core workers or not. It might be expected that the adoption of such practices might have some effect on the stability of non-regular employees.

Table 5. Personnel Deployment Policies and the Presence or Absence of Personnel Administration Practices Related to Skill Development: Percentage Having Such Policies

| | Policy towards deployment of non-standard workers | | | | | | | |
|--|---|---|---|-----------------------|--|---|--|-----------------------|
| | (a) Presence or absence of personnel administration practices for part-time and <i>arubaito</i> workers (%) | | | | (b) Presence or absence of personnel administration practices for contract workers (%) | | | |
| | Supplementary use N=212 | Use as core workers without training N=287 | Use as core plus active efforts to train N=106 | All patterns N=605 | Supplementary use N=96 | Use as core workers without training N=168 | Use as core plus active efforts to train N=66 | All patterns N=330 |
| Giving supervisors or senior workers responsibility for training juniors | 66.0 | 61.7 | 62.3 | 63.3 | 66.7 | 58.3 | 53.0 | 59.7 |
| Preparing operation manuals | 52.8 | 50.2 | 50.9 | 51.2 | 42.7 | 53.6 | 47.0 | 49.1 |
| Explicit spelling out of required work skills | 16.5 | 19.2 | 22.6 | 18.8 | 26.0 | 21.4 | 16.7 | 21.8 |
| Assistance for acquiring in-firm or public skill qualifications | 3.3 | 7.0 | 12.3 | 6.6 | 12.5 | 15.5 | 31.8 | 17.9 |
| Assistance for self learning | 12.7 | 8.0 | 18.9 | 11.6 | 16.7 | 19.6 | 31.8 | 21.2 |
| Allocating work according to aptitude | 45.8 | 43.9 | 44.3 | 44.6 | 38.5 | 48.8 | 43.9 | 44.9 |
| Opportunities for career counseling | 7.1 | 6.6 | 7.6 | 6.9 | 10.4 | 19.1 | 13.6 | 15.5 |
| Training upon hiring | 21.7 | 26.1 | 26.4 | 24.6 | 20.8 | 23.8 | 34.9 | 25.2 |
| Periodic training courses | 13.2 | 14.6 | 16.0 | 14.4 | 17.7 | 18.5 | 22.7 | 19.1 |

IV. Skill Development Policies for Non-Regular Employees and the Effectiveness of Personnel Administration Practices

1. Estimation Model

To summarize the above argument, the adoption of active skill development policies for part-time, *arubaito* and contract workers seems not to have the desired effects. It is also clear that even in those establishments where such policies are adopted, there is a great variety in the actual personnel practices that are introduced. This suggests that the possibility of getting workers to settle down for long tenures varies even among establishments which are equally positive in their skill development policies, depending on the particular type of personnel administration practices that they adopt. In this section we conduct econometric analyses of the relationships between those various practices and tenure lengths.

We assume that the reason why actual tenures do not match up to the expected or desired tenures is primarily because of the ineffectiveness of their personnel deployment policies and their personnel administrative practices. Putting that in the form of an estimation model, we get the following equation (A).

$$\begin{aligned}\Delta Ten_non_j &\equiv Ten_non_j^{expected} - Ten_non_j^{actual} \\ &= \alpha^{non} + policy_j \cdot \beta^{policy} + inst_non_j \cdot \beta_{non}^{inst} + contols + u_j^{est} + u_j^{non} \\ &\dots\dots (A)\end{aligned}$$

Where $Ten_non_j^{expected}$ is the expected length of service of non-regular employees in the establishment j and $Ten_non_j^{actual}$ the corresponding actual length of service. The dependent variable is the difference between the expected and the actual average tenures, namely, ΔTen_non_j . The two explanatory variables are $policy_j$ which is the non-regular employee deployment policy of the establishment j , and $inst_non_j$ which is a variable representing the presence or absence of the whole range of formal personnel administration practices including those related to training. If a practice was adopted the variable was scored 0; if it was not adopted it scored 1.

As for control variables, we use those which are likely to affect the tenure length of non-regular employees, namely the overall skill levels required in the workplace, the skill levels of non-regular employees, the dominant age group, the industry and establishment size. The coefficients which interested us most are the β_{non}^{inst} which allows one to see which of particular personnel practices contribute by its absence to preventing the actual tenure length from being as long as was expected.

The important thing here is that the gap between expected and actual tenures is affected not only by the deployment policy and the adoption or otherwise of certain personnel administration practices, but also by the particular circumstances in which the establishment is placed. We can explore some of these circumstances with the control variables applied to equation (A), but one should not overlook the fact that there remain other elements affecting tenure lengths which are not observable. We represent these unobservable elements as u_j^{est} for those which affect the establishment j in general, and u_j^{non} for those which affect only the tenures of its non-regular employees. We do, indeed, in this study consider these elements to the maximum possible, using trends in sales, an industry dummy and a scale dummy. But given only those control variables one cannot take into account such variables as changes in the overall personnel policies of the firm, or the medium to long term prospects for the firm's business which are likely to have an important effect on the stability of employment tenures.

This means that, if the circumstances of the establishment j are such that it is predisposed towards the use of non-regular employees, or to introduce a particular employment practice, the estimation of the β s through ordinary least squares estimation of equation (A) is biased and may lead to under- or over-estimation.

In order to get around this problem we use the difference between the expected and actual tenures of regular employees as a benchmark. That is to say, equation (A) revamped for regular employees becomes equation (B).

$$\begin{aligned}\Delta Ten_{reg_j} &\equiv Ten_{reg_j}^{expected} - Ten_{reg_j}^{actual} \quad \dots\dots\dots (B) \\ &= \alpha^{reg} + inst_{reg_j} \cdot \beta_{reg}^{inst} + controls + u_j^{est} + u_j^{reg}\end{aligned}$$

And by subtracting the two equations we get equation (C).

$$\begin{aligned}\Delta Ten_j &\equiv \Delta Ten_{non_j} - \Delta Ten_{reg_j} \\ &= (\alpha^{non} - \alpha^{reg}) + policy_j \cdot \beta^{policy} + (inst_{non_j} \cdot \beta_{non}^{inst} - inst_{reg_j} \cdot \beta_{reg}^{inst}) + controls + (u_j^{non} - u_j^{reg}) \\ &\equiv \alpha + policy_j \cdot \beta^{policy} + (inst_{non_j} \cdot \beta_{non}^{inst} - inst_{reg_j} \cdot \beta_{reg}^{inst}) + controls + u_j \\ &\dots\dots\dots (C)\end{aligned}$$

Equation (C) allows us to obtain an unbiased estimate of β_{non}^{inst} by the ordinary least squares method, as the specification allows us to adjust the observed difference between expected and actual tenures for non-regular employees on the basis of that same difference for regular employees and thus exclude the idiosyncratic establishment effect.

2. Estimation Results

The complete results are given in Appendix Table 2, and definitions and summary statistics of the variables in Appendix Table 3. Table 6 shows the principal results. The results of the estimation of equation (A) (separately for the two types of non-regular employees) are shown in models (1) and (6), while those for equation (C) are shown for various combinations of the explanatory variables in columns (2)-(5) and (7)-(10). First let us compare models (1) and (6) which are based only on data relating to non-regular employees, with models (2) and (7) which control for enterprise conditions using the data on regular employees. Personnel administration variables which in the former models show little or no explanatory power, assume a significant power in the latter models, with wide variation in their significance. Clearly the relation between personnel practices and tenure stability is greatly affected by the particular circumstances of the industry to which the establishment belongs and controlling for such variables is something that always has to be remembered when evaluating the worth of those practices.

Let us then look at various practices in turn, using equation (C) which takes account of the regular/non-regular difference, starting with the top-row, “overall adoption or not of active skill development policies.” In both models (3) and (8) which use that alone as the explanatory variable both coefficients are significantly positive, showing that it is the establishments more actively disposed to develop skills which have the greater gap between their expected and actual tenures, thus confirming the finding of the previous section. In models (2) and (7) which show the cumulated results of various practices, however, the estimated coefficient value for active skill development policies is smaller, and, in the case of part-time and *arubaito* workers, it loses even the ten percent significance level. This

Table 6. The Relation between Skill Development Policies and the Effectiveness of Personnel Administration Practices (Extracts)

| Model | | (1) | (2) | (3) | (13) | (7) | (8) | (9) | (17) |
|--|---|---|--|-------|-------|---|--|-------|-------|
| Dependent Variables | | Gap between actual and expected tenures of non-regular employees (Months) | Gap between actual and expected tenures of non-regular employees, less that for regular employees (Months) | | | Gap between actual and expected tenures of non-regular employees (Months) | Gap between actual and expected tenures of non-regular employees, less that for regular employees (Months) | | |
| Type of worker | | Part-time, <i>arubaito</i> | | | | Contract | | | |
| Method of estimation | | OLS | | | | | | | |
| Skill development system for non-regular employees | Active skill development policy | | | + | | ++ | ++ | ++ | ++ |
| | No allocation of responsibility for training | | ++ | NO | ++ | | | NO | |
| | No operation manuals | | | | | | | | |
| | No spelling out of required work skills | | | | | | | | |
| | No help to acquire in-firm or public skill qualifications | | | | | -- | -- | | |
| | No help for self learning | | | | | | | | |
| | No allocation of work according to aptitude | | | | | | | | |
| | No career counseling | | | | | | | | |
| | No training upon hiring | | | | | -- | -- | | |
| | No periodic training courses | | | | | | | | |
| Wage system | No personnel evaluation system | | | NO | | | | NO | |
| | No pay grade system | | | | | | | | |
| | No pay increase system | | ++ | | ++ | | | | |
| | No bonus system | | | | | | | | |
| | No promotion to supervisory functions | | | | | ++ | ++ | | |
| | No promotion to regular employee status | | | | | | | | |
| | No hire with pre conditions on type of jobs | | | | | | | | |
| | No mutual agreement on flex work hours | | ++ | | ++ | | | | |
| | No transfer to contract worker status | | | | | NO | NO | | NO |
| Range of skill levels | | YES | YES | NO | YES | YES | YES | NO | YES |
| Major age-group, gender and education attainment | | YES | YES | NO | YES | YES | YES | NO | YES |
| Trend in sales, scale dummy, industry dummy | | YES | YES | YES | YES | YES | YES | YES | YES |
| Fixed coefficient | | YES | YES | YES | YES | YES | YES | YES | YES |
| Adjusted R ² | | 0.003 | 0.039 | 0.009 | 0.045 | 0.103 | 0.189 | 0.078 | 0.149 |
| Sample size | | 314 | 314 | 314 | 314 | 153 | 153 | 153 | 153 |

Note: Small-print row=standard deviation. Coefficients significantly different from zero are indicated thus: †= 5%, ‡= 10% level, - = 5%, -- =10% level for the negative signs. For details of the estimation procedure see Appendix Table 2. For details of the explanatory variables see Appendix Table 3.

suggests that it is not having a skill development policy in itself which affects the expected/actual tenure gap, but the particular array of practices which counts. So let us look at individual practices—separately for part-time and *arubaito*, and for contract workers.

For the former, model (2) shows it is the absence of any clear responsibility of supervisors or older workers for training, the absence of wage incremental systems and the lack of consultations with the worker over his or her hours of work which shorten tenures. The practices which seem to have no great influence are: opportunities for gaining external qualifications, or for independent personal training, and—this in contrast with contract workers considered below—opportunities for promotion to supervisory rank.

This suggests that supplying all these things—on-the-job training by supervisors or older workers, providing for pay increases in line with improvement in skills, and allowing flexible choice of work hours—would help in getting part-time and *arubaito* workers to stay longer in their jobs.

In the case of contract workers, in model (8) the possibility of promotion to supervisory rank seems to be a variable promoting stability which is unique to contract workers (in the case of part-time and *arubaito* workers the coefficient is not only insignificant; its sign is reversed.) We also find that the introduction of some practices actually increases the likelihood of quitting earlier than expected—notably, giving them the opportunity to acquire external qualifications, and putting on initial training courses. It seems to be the case that offering off-the-job training to contract workers is counter-productive as far as keeping them in employment is concerned. Rather, as in the case of part-time and *arubaito* workers, it is on-the-job training and pay increases as their skills increase which are more likely to keep them—and, also, giving them the chance to rise to supervisory positions.

As for the counter-productive nature of off-the-job training, it may well be that there are many contract workers who are trying to develop specialist skills in order to advance their careers in whatever enterprise suits them, not necessarily the current one. For them, off-the-job training courses which impart general skills probably enhance their ability to get a new job with better pay and conditions and with better opportunities for developing their skills, hence making it more likely that they will quit.

3. Robustness of the Findings

In order to test the robustness of the findings, we performed the following regressions.

Equation (C) is an excellent estimation model for eliminating impacts of the short-term labor market demand-side variables, but it fails to control for possible heterogeneity in worker characteristics across establishments. For example, certain types of establishments with particular skill development policies or wage systems may systematically attract workers who are planning their career developments, thus enhancing worker morale. This conjecture is supported by the differences in regression estimates between the one on part-time and *arubaito*, and the other for contract workers.

The important consideration for our study is whether differences in these respects among part-time and *arubaito* workers, and among contract workers cause them to choose or not to choose establishments with certain types of personnel administration policies and whether this affects the likelihood of their remaining stably in employment (biases due to self selection). It may be that equation (C) succeeds in controlling for variables concerned with the circumstances of the enterprise, but not for these supply-side variables.

Since the present study uses establishment cross-sectional data, it is basically very difficult to deal with such labor supply-side variables. What we do in this section is the best we can, namely to re-estimate equation (C) omitting certain control variables. One can suppose that the “career ambition” which is assumed to be a cause of changing labor-market supply-side behavior and the choice of place of employment, is likely to vary depending on age and sex and qualification-level. If that bias is quantitatively important, there should be a significant difference between equation (C) estimated with and without those control variables. As a matter of fact, a comparison of (4) and (5) with (2) (in the case of contract workers, [8], [10] with [7]. See Appendix Table 2.), reveals that there are no significant differences, either quantitatively or qualitatively. This suggests that, as far as part-time and *arubaito* workers and contract workers are concerned, differences within either of those two groups does not impart any strong bias to the estimation.

In models (11)-(16) in Appendix Table 2, we examine more directly the hypothesis that it is a set of differences in the personnel administrations of regular and non-regular employees that is responsible for the difference in their average tenures. Assuming that the impact of the personnel administration policies on the turnover rate is the same for both regular and non-regular employees, we re-estimated equation (C). That is, we impose the constraint $\beta_{non}^{inst} = \beta_{reg}^{inst} \equiv \beta^{inst}$ as shown in (D) below.

$$\Delta Ten_j = \alpha + policy_j \cdot \beta^{policy} + (inst_non_j - inst_reg_j) \cdot \beta^{inst} + controls + u_j \quad \dots\dots (D)$$

For this it was necessary to find some proxy variable for differences in the personnel administration of regular and non-regular employees. What we did was to assume that the practices listed in Table 4 were universal for regular employees and then score the absence of each particular practice for non-regular employees as 1 (separately for the two types) and its presence as 0, thus creating a dummy explanatory variable. We also did the same for the practices listed in Table 5.

Once again, the results show no significant difference in the coefficients representing the efficacy of personnel policies as between the estimations imposing the constraints ([11] and [14]) and those—(2) and (7)—where the constraint was not imposed.

As a result of these calculations we conclude that our findings are robust.

V. Conclusions

Using a survey result of establishments on the deployment of non-regular employees and the adoption of various personnel administration practices, we analyzed their efficacy chiefly from the point of view of workers' stability in their jobs. We summarize major findings.

First, in order to deploy non-regular employees as core workers, and also to achieve their stability, the effective use of personnel administration policies is important. This finding is broadly in line with the conclusions of the recent studies on the non-regular employees in Japan.

In this paper, we examined the efficacy of personnel policies by focusing on employee stability, rather than by looking at overall correlations between the use of non-regular employees and personnel policies. We have shown that the above propositions hold even when one controls for the unobserved heterogeneity of establishments.

Secondly, considering the efficacy of particular personnel administration practices, we indicate the possibility that, both for part-time and *arubaito*, and for contract workers, giving explicit training responsibility to supervisors and senior workers and giving the opportunity for thorough on-the-job training can enhance the stability of these employees. At the same time, they need be supplemented by material incentives—systematic provision for pay increases as skills improve. We also found, for part time and *arubaito* workers, significant positive impact from the adoption of flex work hours and work days, whereas the provision of tenure track for supervisory positions can enhance the stability of contract workers.

These results serve to emphasize two points of importance for the employment of non-regular employees.

The first is that personnel practices have to be fine tuned to the needs and the preferences of employees. For example, part-time and *arubaito* workers who commit a limited number of hours a week, may have a strong preference for jobs which allow them to choose their work hours and make them compatible with the rest of their daily lives—the time they need for house-work, child or nursing care, study, or socializing. It can help to keep them in their jobs if employers give them this flexibility. In the case of contract workers, however, most of whom are full-time workers and for whom work is more likely to be their central life interest, such flexibility may be less important than the chance to improve their career prospects. Hence, the possibility of promotion to a supervisory position and so advance their careers while remaining with the same employer may be an effective way of keeping them in their jobs.

At the same time—and this is the second point—giving them the possibility for acquiring general skills through off-the-job training can increase the likelihood that they will quit. Non-regular employees, as compared with regular employees, are closer to the external labor market, and in designing personnel administration policies one should remember that

there is a strong possibility that one employer's investment in general training may just give a free ride to other employers. Unless, when providing off-the-job training, they also give them the possibility for wage increases and for promotion within the firm, the likelihood is the training will backfire and make it more likely that a worker quits.

It is easy to imagine that a training deficit as a result of this poaching externality is likely to increase as the external labor market comes to operate more effectively and as the transition from non-regular to regular employee status becomes smoother. It is beyond the scope of this article to consider the choice between seeing non-regular employee status as a stepping stone to regular status via the labor market, and alternatively placing the emphasis on developing the skills of non-regular employees within their individual places of employment, but that remains an important problem for labor policy.

There is a strong tendency in the discussion of personnel policies and work conditions for non-regular employees to advocate uniform equality of treatment, but institutions must be designed to take into account both labor supply incentives and differences in the marketability of individuals' human capital.

Appendix Table 1. Main Items Used in the Establishment Survey of Employment Policies for Non-Regular Employees

| Topic | Items |
|---|--|
| Establishment Characteristics 1 | Company headquarters or not / type of physical plant / industry / year established / number of regular employees / changes in output / changes in number of regular employees / changes in number of non-regular employees / changes in number of externally employed workers / changes in work load of regular employees / whether or not new regular employees have been recruited and deployed |
| Actual deployment of non-regular employees (including not only non-regular employees—part-time, <i>arubaito</i> and contract workers—but also workers from outside—temporary agency workers and workers from sub-contractors) | Whether any non-regular employees and outside workers are employed, length of contract period, work hours, median age, gender and education attainments / purpose for using non-standard labor / actual tenure lengths / job allocation methods / length of time needed to learn the job / proportion who do jobs of comparable responsibility to those of regular employees / measures against sudden changes in orders / the unit, (workplace, establishment, or company HQ) with ultimate responsibility for personnel management of non-regular employees. |
| Personnel administration for non-regular (part-time, <i>arubaito</i> and contract) employees | Training policies in place / evaluation and reward systems / equal treatments / whether employment record as non-regular employee is taken into account when recruiting |
| Opinions and problems regarding deployment of non-regular employees (including not only non-regular employees—part-time, <i>arubaito</i> and contract workers—but also outside workers—temporary agency workers and workers from sub-contractors) | The pluses and the minuses / problems encountered using non-regular employees / the extent of future deployment of non-regular employees |
| Other | Prospects for the business in next 3 years / Evaluation of firm's competitiveness / Sources of the firm's competitiveness / information useful for deciding how and whether to deploy non regular employees / intentions regarding the use of consulting agencies for personnel administration |

Appendix Table 2-1. The Relation between Skill Development Policies

| Model | (1) | (2) | (3) | (4) |
|--|---|---|---------|---------|
| Dependent Variables | Gap between actual and expected tenures of non-regular employees (Months) | Gap between actual and expected tenures less that for regular employees | | |
| Type of worker | Part-time, <i>arubaito</i> | | | |
| Method of Estimation | | | | |
| Active Skill Development Policy | 3.971 | 6.277 | 6.769 ‡ | 6.702 |
| | 3.416 | 4.222 | 4.008 | 4.213 |
| Skill development system for non-regular employees | | | — | |
| No allocation of responsibility for training | 4.223 | 10.074 † | | 9.557 † |
| | 2.814 | 3.719 | | 3.693 |
| No operation manuals | 0.940 | 1.112 | | 1.526 |
| | 2.804 | 3.760 | | 3.753 |
| No spelling out of required work skills | 2.717 | 6.640 | | 6.974 |
| | 3.574 | 4.917 | | 4.901 |
| No help to acquire skill qualifications | 2.119 | -5.045 | | -4.687 |
| | 5.370 | 6.883 | | 6.821 |
| No help for self learning | 3.849 | 5.815 | | 4.957 |
| | 3.893 | 5.231 | | 5.214 |
| No allocation of work according to aptitude | 0.065 | -3.803 | | -4.103 |
| | 2.785 | 3.508 | | 3.506 |
| No career counseling | 4.939 | -1.929 | -1.999 | |
| | 5.228 | 6.743 | 6.718 | |
| No training upon hiring | 1.133 | 0.065 | -0.041 | |
| | 3.067 | 4.001 | 3.994 | |
| No periodic training courses | -5.641 | -3.478 | -3.048 | |
| | 3.702 | 4.670 | 4.668 | |
| Skill development system for regular employees | | | | |
| No allocation of responsibility for training | — | 5.664 | 4.861 | |
| | | 4.673 | 4.656 | |
| -3.856 | | -3.214 | | |
| 4.114 | | 4.098 | | |
| 1.959 | | 1.702 | | |
| 4.654 | | 4.643 | | |
| -2.128 | | -2.266 | | |
| 3.898 | | 3.872 | | |
| 5.291 | | 5.015 | | |
| 4.066 | | 4.065 | | |
| 0.241 | | 0.899 | | |
| 3.483 | | 3.468 | | |
| 6.706 | | 6.144 | | |
| 4.861 | 4.841 | | | |
| -1.738 | -1.688 | | | |
| 3.687 | 3.684 | | | |
| 1.643 | 2.277 | | | |
| 3.818 | 3.805 | | | |

Note: Lower row=standard deviation. Coefficients significantly different from zero are indicated thus:
†= 5%, ‡= 10% level. For details of the explanatory variables see Appendix.

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| (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
|---------------------------------------|----------|--|---|----------|-----------|-----------|-----------|
| of non-regular employees, (Months) | | Gap between actual and expected tenures of non-regular employees (Months) | Gap between actual and expected tenures of non-regular employees, less that for regular employees (Months) | | | | |
| | | Contract | | | | | |
| OLS | | | | | | | |
| 6.905 | 7.049 | 13.754 † | 20.184 † | 24.549 † | 19.414 † | 19.921 † | 24.214 † |
| 4.213 | 4.561 | 5.561 | 6.175 | 5.876 | 6.136 | 5.967 | 6.871 |
| 8.837 † | 8.823 † | 6.560 | 8.936 | — | 8.091 | 7.913 | 7.682 |
| 3.649 | 4.138 | 4.819 | 5.670 | | 5.628 | 5.451 | 7.132 |
| 1.507 | 3.754 | 5.995 | 7.366 | | 8.127 | 8.841 | 9.558 |
| 3.721 | 4.331 | 5.259 | 6.487 | | 6.244 | 5.984 | 8.127 |
| 6.692 | 11.988 † | 6.483 | 8.662 | | 7.218 | 6.495 | 3.914 |
| 4.900 | 5.945 | 6.609 | 7.977 | | 7.894 | 7.639 | 10.842 |
| -3.518 | -4.022 | -9.907 | -26.371 † | | -26.644 † | -24.876 † | -26.679 † |
| 6.801 | 7.588 | 6.381 | 7.640 | | 7.599 | 7.391 | 8.569 |
| 5.432 | 10.397 ‡ | -4.037 | 4.338 | | 5.337 | 3.210 | 6.264 |
| 5.200 | 5.771 | 6.038 | 7.276 | | 7.224 | 6.976 | 8.595 |
| -5.039 | -0.735 | 2.881 | 5.272 | | 6.220 | 5.011 | -3.491 |
| 3.484 | 4.101 | 4.847 | 6.135 | | 6.033 | 5.771 | 7.760 |
| -2.097 | -5.719 | -2.919 | -12.339 | | -13.604 | -11.223 | -1.847 |
| 6.683 | 8.656 | 6.574 | 8.536 | | 8.484 | 8.119 | 10.285 |
| 0.257 | 4.158 | -8.267 | -15.364 † | | -15.324 † | -15.074 † | -14.878 ‡ |
| 3.987 | 4.630 | 5.188 | 6.316 | | 6.300 | 6.072 | 7.657 |
| -3.984 | -4.441 | -6.251 | 2.093 | | 0.943 | 2.004 | 4.637 |
| 4.647 | 5.205 | 5.854 | 7.434 | | 7.339 | 7.228 | 8.920 |
| 3.545 | 4.521 | — | -0.119 | — | -0.915 | 0.001 | 0.400 |
| 4.588 | 5.408 | | 7.698 | | 7.654 | 7.474 | 9.545 |
| -2.238 | 5.217 | | -2.287 | | -3.043 | -2.126 | 2.333 |
| 4.034 | 4.781 | | 6.473 | | 6.326 | 5.976 | 8.172 |
| 2.002 | -0.077 | | 8.477 | | 7.975 | 7.598 | 8.460 |
| 4.623 | 5.372 | | 7.168 | | 7.127 | 6.959 | 9.530 |
| -1.878 | -4.247 | | -14.201 | | -13.652 † | -12.053 ‡ | -25.754 † |
| 3.780 | 4.618 | | 6.413 | | 6.282 | 6.077 | 8.301 |
| 5.139 | 8.033 | | 3.997 | | 4.279 | 4.631 | 7.142 |
| 4.024 | 4.868 | | 6.763 | | 6.735 | 6.495 | 8.129 |
| 1.599 | -0.303 | | -3.719 | | -2.848 | -3.976 | -2.144 |
| 3.445 | 3.985 | | 6.096 | | 5.978 | 5.699 | 8.306 |
| 4.794 | 3.602 | | -10.145 | | -11.625 | -9.108 | -12.823 |
| 4.769 | 5.946 | | 8.364 | | 8.267 | 7.719 | 9.943 |
| -1.898 | -1.682 | | -18.601 † | | -17.972 † | -17.076 † | -22.502 † |
| 3.650 | 4.230 | | 6.635 | | 6.602 | 6.276 | 7.913 |
| 0.935 | 0.322 | | 8.486 | | 8.957 | 8.883 | 19.579 † |
| 3.710 | 4.490 | | 6.629 | | 6.475 | 6.335 | 8.403 |

Appendix Table

| Model | (1) | (2) | (3) | (4) |
|---|---|---|-----------------|-------------------|
| Dependent Variables | Gap between actual and expected tenures of non-regular employees (Months) | Gap between actual and expected tenures less that for regular employees | | |
| Type of worker | Part-time, arubaito | | | |
| Method of Estimation | | | | |
| Wage system | | | | |
| No personnel evaluation system | -0.529 3.055 | -2.362 3.786 | — | -2.407 3.783 |
| No pay grade system | -3.291 5.029 | -7.240 6.140 | | -6.965 6.082 |
| No pay increase system | 3.216 2.950 | 10.128 † 3.624 | | 9.928 † 3.601 |
| No bonus system | 3.023 2.915 | 0.956 3.561 | | 0.544 3.533 |
| No promotion to supervisory functions | -8.464 5.897 | -6.810 7.235 | | -7.030 7.230 |
| No promotion to regular employee status | -3.294 2.948 | -2.579 3.630 | | -1.841 3.503 |
| No hire with pre conditions on type of jobs | 0.151 3.206 | -2.953 3.919 | | -2.203 3.845 |
| No agreement on flex work hours | 2.020 2.686 | 10.235 † 3.299 | | 10.325 † 3.298 |
| No transfer to contract worker status | 5.505 3.776 | 2.429 4.714 | | 1.582 4.686 |
| Skill level required for the ordinary tasks | -0.457 0.314 | -0.146 0.385 | | — |
| Range of skill levels | -0.038 0.113 | 0.011 0.140 | 0.017 0.139 | |
| Major age-group | 1.131 1.285 | 0.109 1.568 | — | — |
| Major gender | 0.656 1.282 | 1.698 1.575 | | |
| Major education attainment | -1.557 1.375 | -2.673 1.697 | | |
| Trend in sales | 0.218 1.604 | 2.798 1.970 | 2.314 1.857 | 2.958 1.942 |
| Scale dummy (BASE=30 and less employees) | | | | |
| Less than 30 employees | 0.419 4.083 | -7.484 5.019 | -5.251 4.741 | -6.519 4.921 |
| Less than 100 employees | -4.497 3.824 | 0.132 4.749 | 0.933 4.450 | 0.387 4.655 |
| More than 100 employees | -5.163 4.037 | -3.680 5.123 | -0.035 4.773 | -3.780 5.113 |
| Industry dummy (BASE=Service) | | | | |
| Manufacturing industry | -4.665 3.421 | 4.056 4.347 | 5.572 3.788 | 6.020 4.086 |
| Other industries | -8.697 † 3.559 | 0.120 4.396 | 0.251 4.125 | 0.416 4.346 |
| Fixed coefficient | 23.933 † 11.217 | 0.375 13.939 | -7.106 5.292 | -0.896 11.264 |
| Adjusted R ² | 0.003 | 0.039 | 0.009 | 0.038 |
| Sample Size | 314 | 314 | 314 | 314 |

2-1. (Continued)

| (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
|------------------------------------|----------|---|--|--------|----------|----------|--------|
| of non-regular employees, (Months) | | Gap between actual and expected tenures of non-regular employees (Months) | Gap between actual and expected tenures of non-regular employees, less that for regular employees (Months) | | | | |
| | | | | | | | |
| | | Contract | | | | | |
| OLS | | | | | | | |
| -2.807 | -4.600 | -6.183 | -2.448 | — | -3.541 | -5.277 | -2.302 |
| 3.761 | 4.354 | 5.291 | 5.809 | | 5.728 | 5.509 | 7.130 |
| -5.792 | -0.183 | 11.647 | 2.326 | | 2.819 | 3.941 | 3.135 |
| 6.042 | 6.822 | 7.019 | 7.802 | | 7.603 | 7.483 | 8.878 |
| 10.250 † | 9.787 † | 1.063 | 5.896 | | 7.612 | 9.240 | 11.871 |
| 3.527 | 4.192 | 5.132 | 5.653 | | 5.436 | 5.221 | 7.446 |
| 0.136 | 1.209 | -3.469 | -1.291 | | -2.081 | -2.251 | 5.781 |
| 3.494 | 4.025 | 4.835 | 5.430 | | 5.396 | 5.285 | 6.452 |
| -5.603 | -1.315 | 13.041 ‡ | 18.155 † | | 17.629 † | 19.975 † | 14.088 |
| 7.176 | 8.140 | 7.067 | 7.846 | | 7.797 | 7.417 | 9.894 |
| -1.560 | -0.876 | -7.709 | 2.431 | | 3.415 | 4.207 | -3.596 |
| 3.491 | 4.326 | 4.923 | 5.580 | | 5.480 | 5.357 | 7.113 |
| -0.570 | -2.501 | -2.999 | -2.472 | | -1.908 | -0.975 | -3.766 |
| 3.779 | 4.424 | 5.759 | 6.432 | | 6.358 | 6.065 | 8.102 |
| 10.526 † | 7.046 ‡ | 5.090 | 9.619 | | 7.610 | 6.090 | 3.397 |
| 3.266 | 3.797 | 6.545 | 7.690 | | 7.552 | 7.388 | 9.423 |
| 3.170 | 1.069 | — | — | — | — | — | |
| 4.627 | 5.795 | | | | | | |
| -0.205 | -0.359 | 0.095 | -0.081 | — | -0.062 | -0.098 | -0.842 |
| 0.383 | 0.439 | 0.425 | 0.472 | | 0.460 | 0.451 | 0.601 |
| -0.015 | -0.195 | -0.411 | -0.316 | | -0.319 | -0.305 | -0.398 |
| 0.137 | 0.157 | 0.188 | 0.206 | | 0.203 | 0.198 | 0.266 |
| — | -2.821 | -0.160 | 1.120 | — | — | — | 1.077 |
| | 2.023 | 1.498 | 1.650 | | | | 1.945 |
| | -1.574 | -1.223 | -2.297 | | | | -3.659 |
| | 1.930 | 1.807 | 2.016 | | | | 2.505 |
| | -2.628 | 1.728 | 2.763 | | | | 2.477 |
| | 1.943 | 1.857 | 2.100 | | | | 2.529 |
| — | 1.398 | -2.000 | 0.494 | -1.304 | 0.508 | — | -0.734 |
| | 2.284 | 2.742 | 3.093 | 2.859 | 2.967 | | 3.737 |
| | -0.126 | -0.104 | -0.700 | -6.485 | -1.785 | | 3.476 |
| | 5.586 | 7.528 | 8.379 | 8.183 | 8.307 | | 10.206 |
| | 2.049 | -2.968 | 4.063 | -1.483 | 3.127 | | 9.126 |
| | 5.296 | 7.258 | 8.147 | 8.027 | 8.011 | | 10.016 |
| | -1.121 | -6.943 | 9.075 | -1.022 | 7.907 | | 11.504 |
| | 5.831 | 7.414 | 8.694 | 8.069 | 8.578 | | 10.933 |
| | | | | | | | |
| | 1.849 | 0.672 | 6.612 | 3.895 | 6.014 | | 1.481 |
| | 4.734 | 5.826 | 6.480 | 5.736 | 6.380 | | 7.596 |
| | -4.293 | -3.825 | 3.600 | -0.694 | 2.347 | | -1.299 |
| 5.133 | 5.770 | 6.696 | 5.982 | 6.565 | 8.323 | | |
| 0.284 | 28.294 ‡ | 14.167 | -6.426 | 4.465 | -3.558 | -2.656 | 9.977 |
| 10.913 | 16.501 | 14.859 | 17.260 | 9.356 | 16.456 | 14.078 | 21.196 |
| 0.032 | 0.164 | 0.103 | 0.189 | 0.078 | 0.191 | 0.206 | 0.189 |
| 314 | 225 | 153 | 153 | 153 | 153 | 153 | 153 |

Appendix Table 2-2. The Relation between Skill Development Policies and the Effectiveness of Personnel Administration Practices

| Model | | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | |
|--|---|---|-------------------|------------------|------------------|--------------------|--------------------|-------------------|--------------------|-----------------|
| Dependent Variables | | Gap between actual and expected tenures of non-regular employees, less than that for regular employees (Months) | | | | | | | | |
| Type of worker | | Part-time, <i>arubaito</i> | | | | Contract | | | | |
| Method of Estimation | | OLS | | | | | | | | |
| Active Skill Development Policy | | 6.126 4.086 | 6.671 4.078 | 6.769 ‡ 4.008 | 4.718 4.435 | 24.345 † 6.248 | 24.096 † 5.904 | 24.549 † 5.876 | 26.212 † 6.809 | |
| Is there a difference between personnel policy provisions for regular and non-regular employees? | ((Skill development system)) | | | | | | | | | |
| | Responsibility for training juniors | 12.315 † 3.840 | 10.449 † 3.770 | | 7.569 ‡ 4.248 | 8.346 6.017 | 9.172 5.664 | | 9.770 7.424 | |
| | Operation manuals | -0.433 4.513 | 0.454 4.470 | | 5.908 5.158 | 2.235 7.250 | 2.098 6.664 | | 6.052 9.280 | |
| | Explicit spelling out of required work skills | 4.022 5.058 | 4.425 5.065 | | -0.486 5.884 | 7.778 6.645 | 7.452 6.360 | | 4.025 8.889 | |
| | Assistance for acquiring skill qualifications | -1.800 3.733 | -1.202 3.607 | | -3.102 4.385 | -19.672 † 6.071 | -17.119 † 5.632 | | -23.565 † 7.537 | |
| | Assistance for self learning | 5.549 3.750 | 5.060 3.706 | | 8.835 † 4.408 | 5.283 6.340 | 4.093 5.915 | | 6.185 7.391 | |
| | Allocating work according to aptitude | -2.116 4.010 | -2.335 4.003 | | -1.646 4.549 | -4.458 7.061 | -5.747 6.783 | | -11.976 8.577 | |
| | Opportunities for career counseling | 1.281 4.911 | -0.189 4.831 | | -0.457 5.763 | -11.441 8.623 | -6.048 7.906 | | -9.859 9.777 | |
| | Training upon hiring | 0.363 3.471 | -0.185 3.444 | | 2.266 4.042 | -15.507 † 5.666 | -14.493 † 5.258 | | -19.047 † 6.727 | |
| | Periodic training courses | -1.194 3.676 | -1.529 3.568 | | -2.736 4.316 | 4.543 6.421 | 4.409 6.116 | | 13.637 8.546 | |
| | ((Wage system)) | | | | | | | | | |
| | Personnel evaluation system | -3.011 3.711 | -3.483 3.693 | | -3.812 4.249 | 1.716 5.702 | 0.279 5.343 | | -1.459 6.521 | |
| | Pay grade system | -6.448 6.008 | -5.049 5.925 | | 2.334 6.587 | -0.623 7.503 | 0.199 7.310 | | 3.628 8.313 | |
| | Pay increase system | 9.708 † 3.538 | 9.917 † 3.460 | | 9.946 † 4.080 | 6.923 5.530 | 8.374 5.214 | | 11.824 ‡ 6.669 | |
| | Bonus system | 0.566 3.508 | -0.517 3.441 | | 1.121 3.961 | -3.445 5.594 | -4.033 5.346 | | 2.791 6.694 | |
| | Promotion to supervisory functions | -8.250 7.013 | -7.493 6.969 | | -1.493 7.807 | 16.931 † 7.956 | 17.859 † 7.328 | | 14.379 9.509 | |
| | Promotion to regular employee status | -1.796 3.577 | -0.305 3.433 | | 0.090 4.197 | -1.612 5.412 | -0.767 4.989 | | -6.239 6.254 | |
| | Hire with pre conditions on type of jobs | -4.178 3.876 | -1.821 3.746 | | -4.195 4.378 | -4.186 6.453 | -2.487 5.887 | | -3.706 7.867 | |
| | Agreement on flex work hours | 8.966 † 3.225 | 9.180 † 3.196 | | 6.696 ‡ 3.699 | 7.049 7.509 | 4.884 7.181 | | 3.727 8.937 | |
| | Transfer to contract worker status | 1.851 4.617 | 2.445 4.552 | | 1.363 5.495 | | | | | |
| | Skill level required for the ordinary tasks | | -0.217 0.381 | -0.276 0.380 | | -0.407 0.433 | -0.054 0.465 | -0.062 0.450 | | -0.525 0.553 |
| | Range of skill levels | | 0.027 0.136 | 0.015 0.133 | | -0.156 0.149 | -0.303 0.198 | -0.280 0.193 | | -0.352 0.241 |
| | Major age-group | | 0.632 1.557 | | | -2.183 1.969 | 0.515 2.739 | | | -1.153 3.589 |
| | Major gender | | 1.774 1.550 | | | -1.309 1.892 | -0.899 1.873 | | | -1.604 2.197 |
| | Major education attainment | | -2.874 † 1.682 | | | -2.906 1.929 | 0.371 2.538 | | | 0.576 2.871 |
| | Trend in sales | | 2.905 1.948 | | 2.314 1.857 | 1.414 2.267 | -0.835 3.059 | | -1.304 2.859 | -1.243 3.618 |
| Scale dummy (BASE = 10 and less employees) | Less than 30 employees | -7.391 4.961 | | -5.251 4.741 | -0.068 5.486 | -0.270 8.365 | | -6.485 8.183 | 4.511 9.831 | |
| | Less than 100 employees | -0.415 4.654 | | 0.933 4.450 | 2.501 5.133 | 6.149 8.338 | | -1.483 8.027 | 9.093 9.761 | |
| | More than 100 employees | -2.588 5.010 | | -0.035 4.773 | -0.687 5.597 | 12.661 8.875 | | -1.022 8.069 | 11.300 10.277 | |
| | Manufacturing industry | 2.649 4.283 | | 5.572 3.788 | 0.650 4.620 | 1.936 6.302 | | 3.895 5.736 | 2.244 7.165 | |
| Industry dummy (BASE = Service) | Other industries | -0.900 4.283 | | 0.251 4.125 | -5.827 5.068 | -0.636 6.686 | | -0.694 5.982 | -1.834 8.324 | |
| | Fixed coefficient | -2.667 12.493 | -0.081 9.037 | -7.106 5.292 | 17.380 14.864 | -8.219 19.889 | -6.485 11.628 | 4.465 9.356 | 5.397 23.631 | |
| Adjusted R ² | | 0.045 | 0.036 | 0.009 | 0.125 | 0.149 | 0.174 | 0.078 | 0.180 | |
| Sample Size | | 314 | 314 | 314 | 225 | 153 | 153 | 153 | 116 | |

Note: Lower row=standard deviation. Coefficients significantly different from zero are indicated thus: †= 5%, ‡= 10% level. For details of the explanatory variables see Appendix.

Appendix Table 3. Explanation of the Variables Used in the Regression Analysis and Summary of Statistics

| | | Part-time, <i>arubaito</i> workers | | | | | Contract workers | | | | |
|--|---|------------------------------------|---------|--------------------|------|------|------------------|---------|--------------------|------|------|
| | | Sample size | Average | Standard deviation | Min. | Max. | Sample size | Average | Standard deviation | Min. | Max. |
| The gap between actual and expected tenures of non-regular employees | For each category represented in row headings of Tables 2 and 3, the calculated median of the tenure length expected (Over 10 years counted as 120 months). | 314 | 11.43 | 22.46 | -60 | 84 | 153 | 15.15 | 27.10 | -60 | 89.5 |
| The gap between actual and expected tenures of non-regular employees, less than that for regular employees | For each category represented in row headings of Tables 2 and 3, the calculated median of the tenure length expected (Over 10 years counted as 120 months). | 314 | -0.13 | 27.74 | -87 | 84 | 153 | 5.94 | 30.75 | -102 | 87 |
| Skill level required for the ordinary tasks | Training required for regular workers to reach the skill level required for the ordinary tasks non-regular workers usually do (in months). | 314 | 3.32 | 4.84 | 0.5 | 30 | 153 | 4.40 | 5.78 | 0.5 | 30 |
| Range of skill levels | The gap between the training period required for regular workers to acquire the skill required by the most demanding of the jobs given to non-regular workers, and ditto for the general type of job that non-regular workers do. | 314 | 11.87 | 13.78 | 1 | 84 | 153 | 13.21 | 13.63 | 1 | 72 |
| Major age-group | 1. Teenagers, 2. 20-year-olds, 3. 30-year-olds, 4. 40-year-olds, 5. Over fifties. | 314 | 3.67 | 1.14 | 1 | 5 | 153 | 3.45 | 1.17 | 2 | 5 |
| Major gender | 1. All male, 2. Mostly male, 3. Equal representation, 4. Mostly female, 5. All female. | 314 | 3.80 | 1.09 | 1 | 5 | 153 | 2.88 | 1.53 | 1 | 5 |
| Major education attainment | 1. Junior high school, 2. High school, 3. Junior college and vocational training school, 4. University and above. | 314 | 2.44 | 0.98 | 1 | 5 | 153 | 2.67 | 1.04 | 1 | 5 |
| Trend in sales | Compared with three years ago; 1. Increased, 2. About the same, 3. Decreased. | 314 | 2.05 | 0.85 | 1 | 3 | 153 | 1.93 | 0.84 | 1 | 3 |

| | | | Part-time, <i>arubaito</i> workers | | Contract workers | | |
|---|-----------------|---|---|---------|------------------|---------|------|
| | | | Sample size | Average | Sample size | Average | |
| Personnel policy provisions for non-regular employees | Training system | Responsibility for training juniors | No one given special responsibility for training of non-regular workers: 1, other replies: 0. | 314 | 0.65 | 153 | 0.65 |
| | | Operation manuals | No operation manuals provided for non-regular workers: 1, other replies: 0. | 314 | 0.54 | 153 | 0.56 |
| | | Explicit spelling out of required work skills | No explicit description of job for non-regular workers: 1, other replies: 0. | 314 | 0.21 | 153 | 0.20 |
| | | Assistance for acquiring skill qualifications | No help given to non-regular workers to help them gain external qualifications: 1, other replies: 0. | 314 | 0.08 | 153 | 0.22 |
| | | Assistance for self learning | No help given to non-regular workers for self learning: 1, other replies: 0. | 314 | 0.15 | 153 | 0.27 |
| | | Allocating work according to aptitude | Job allocation does not take account of individual aptitudes for non-regular workers: 1, other: 0. | 314 | 0.46 | 153 | 0.48 |
| | | Opportunities for career counseling | No provision made for career counselling for non-regular workers: 1, other replies: 0. | 314 | 0.08 | 153 | 0.18 |
| | | Training upon hiring | No initial training upon hiring for non-regular workers: 1, other replies: 0. | 314 | 0.28 | 153 | 0.27 |
| | | Periodic training courses | No periodic retraining courses for non-regular workers: 1, other replies: 0. | 314 | 0.19 | 153 | 0.24 |
| | Wage system | Personnel evaluation system | No personnel evaluation system for non-regular workers: 1, other replies: 0. | 314 | 0.66 | 153 | 0.61 |
| | | Pay grade system | No pay grade system for non-regular workers: 1, other replies: 0. | 314 | 0.91 | 153 | 0.84 |
| | | Pay increase system | No system for awarding pay increases for non-regular workers: 1, other replies: 0. | 314 | 0.50 | 153 | 0.49 |
| | | Bonus system | No bonus system for non-regular workers: 1, other replies: 0. | 314 | 0.52 | 153 | 0.37 |
| | | Promotion to supervisory functions | No system for promoting non-regular workers to supervisory jobs: 1, other replies: 0. | 314 | 0.94 | 153 | 0.86 |
| | | Promotion to regular employee status | No system for promoting non-regular workers to regular worker status: 1, other replies: 0. | 314 | 0.65 | 153 | 0.51 |
| | | Hire with pre conditions on type of jobs | No specific limitation of job type when recruiting non-regular workers: 1, other replies: 0. | 314 | 0.75 | 153 | 0.78 |
| | | Agreement on flex work hours | No provisions for allowing non-regular workers to choose their own work hours: 1, other replies: 0. | 314 | 0.53 | 153 | 0.86 |
| | | Transfer to contract worker status | No provision for promoting part-time and arubaito workers to contract worker status: 1, other replies: 0. | 314 | 0.85 | | |

Appendix Table 3. (Continued)

| | | | | | | | |
|---|-----------------|---|--|-----|------|-----|------|
| Personnel policy provisions for regular employees | Training system | Responsibility for training juniors | No one given special responsibility for training of non-regular workers: 1, other replies: 0. | 314 | 0.83 | 153 | 0.86 |
| | | Operation manuals | No operation manuals provided for non-regular workers: 1, other replies: 0. | 314 | 0.62 | 153 | 0.64 |
| | | Explicit spelling out of required work skills | No explicit description of job for non-regular workers: 1, other replies: 0. | 314 | 0.31 | 153 | 0.39 |
| | | Assistance for acquiring skill qualifications | No help given to non-regular workers to help them gain external qualifications: 1, other replies: 0. | 314 | 0.55 | 153 | 0.69 |
| | | Assistance for self learning | No help given to non-regular workers for self learning: 1, other replies: 0. | 314 | 0.50 | 153 | 0.58 |
| | | Allocating work according to aptitude | Job allocation does not take account of individual aptitudes for non-regular workers: 1, other replies: 0. | 314 | 0.49 | 153 | 0.58 |
| | | Opportunities for career counseling | No provision made for career counselling for non-regular workers: 1, other replies: 0. | 314 | 0.22 | 153 | 0.30 |
| | | Training upon hiring | No initial training upon hiring for non-regular workers: 1, other replies: 0. | 314 | 0.61 | 153 | 0.66 |
| | | Periodic training courses | No periodic retraining courses for non-regular workers: 1, other replies: 0. | 314 | 0.50 | 153 | 0.56 |
| | Training system | Responsibility for training juniors | Someone given special responsibility for training regular workers but no one for non-regular workers: 1, other replies: 0. | 314 | 0.23 | 153 | 0.24 |
| | | Operation manuals | Operation manual provided for regular workers but not for non-regular workers: 1, other replies: 0. | 314 | 0.18 | 153 | 0.17 |
| | | Explicit spelling out of required work skills | Explicit description of job for regular workers but not for non-regular workers: 1, other replies: 0. | 314 | 0.15 | 153 | 0.20 |
| | | Assistance for acquiring skill qualifications | Help given to regular workers to help them gain external qualifications but not to non-regular workers: 1, other replies: 0. | 314 | 0.48 | 153 | 0.48 |
| | | Assistance for self learning | Help given to regular workers for self learning but not to non-regular workers: 1, other replies: 0. | 314 | 0.35 | 153 | 0.31 |
| | | Allocating work according to aptitude | Job allocation takes account of individual aptitudes for regular workers but not for non-regular workers: 1, other replies: 0. | 314 | 0.20 | 153 | 0.19 |
| | | Opportunities for career counseling | Provision made for career counseling for regular workers but not for non-regular workers: 1, other replies: 0. | 314 | 0.16 | 153 | 0.14 |
| | | Training upon hiring | Initial training upon hiring for regular workers but not for non-regular workers: 1, other replies: 0. | 314 | 0.36 | 153 | 0.40 |
| | | Periodic training courses | Periodic retraining courses for regular workers but not for non-regular workers: 1, other replies: 0. | 314 | 0.34 | 153 | 0.33 |
| Is there a difference between personnel policy provisions for regular and non-regular employees | Wage system | Personnel evaluation system | No personnel evaluation system for non-regular workers: 1, other replies: 0. | 314 | 0.66 | 153 | 0.61 |
| | | Pay grade system | No pay grade system for non-regular workers: 1, other replies: 0. | 314 | 0.91 | 153 | 0.84 |
| | | Pay increase system | No pay grade for awarding pay increases for non-regular workers: 1, other replies: 0. | 314 | 0.50 | 153 | 0.49 |
| | | Bonus system | No bonus system for non-regular workers: 1, other replies: 0. | 314 | 0.52 | 153 | 0.37 |
| | | Promotion to supervisory functions | No system for promoting non-regular workers to supervisory jobs: 1, other replies: 0. | 314 | 0.94 | 153 | 0.86 |
| | | Promotion to regular employee status | No system for promoting non-regular workers to regular worker status: 1, other replies: 0. | 314 | 0.65 | 153 | 0.51 |
| | | Hire with pre conditions on type of jobs | No specific limitation of job type when recruiting non-regular workers: 1, other replies: 0. | 314 | 0.75 | 153 | 0.78 |
| | | Agreement on flex work hours | No provisions for allowing non-regular workers to choose their own work hours: 1, other replies: 0. | 314 | 0.53 | 153 | 0.86 |
| Is there a difference between personnel policy provisions for regular and non-regular employees | Wage system | Transfer to contract worker status | No provision for promoting part-time and arubaito workers to contract worker status: 1, other replies: 0. | 314 | 0.85 | | |

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Temporary Agency Workers' Human Resource Management and Willingness to Work

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In this paper, I conduct exploratory examinations on the factor of human resource management which has an impact on temporary agency workers' willingness to work. Based on the characteristics of temporary agency work's employment structure, I sort out human resource management functions by client firms and temporary agencies and statistically analyze the impact of these human resource management functions on willingness to work for client firms, willingness to work continuously for client firms and willingness to work continuously through temporary agencies. As a result of the analysis, it becomes apparent that (i) human resource managements of both client firms and temporary agencies have an impact on willingness to work, (ii) the impact of human resource management of client firms is different from that of temporary agencies' one depending on the type of willingness to work and type of human resource functions and (iii) for temporary agency workers, the human resource management of client firms has more impact on their satisfaction with the current way of working and the human resource management of temporary agencies has more impact on their future prospects. It indicates that in order to encourage their willingness to work and use them effectively, it is necessary to establish a mechanism of the human resource management on the basis of a long-term inter-organizational relationship between client firms and temporary agencies.

I. Introduction

The purpose of this paper is to conduct exploratory examinations on the way temporary agency workers' human resource management ought to be focusing on their willingness to work. The impact of human resource managements of firms using temporary agency workers (hereinafter referred to as client firms) and temporary agencies dispatching temporary agency workers (hereinafter referred to as temporary agencies) on their willingness to work is statistically analyzed using individual data.¹

The number of temporary agency workers in Japan in FY2007 was about 3.81 million and the majority of them are registered agency workers engaged in white-collar jobs such as clerical work (or office work). (Takahashi 2006a).² My focus in the following argument is the white-collar registered agency workers who are core of Japan's temporary agency work.

¹ "Temporary agency work" means hereinafter "registered agency work." Temporary agency workers are conceptually positioned as one of contingent workers. For details, see Polivka (1996).

² Time-series data on worker dispatching undertakings are compiled in detail by Takahashi (2006a). According to "Survey on Temporary Agency Workers" (2005) by Ministry of Health, Labour and Welfare, jobs of temporary agency workers (multiple answers) are: general office work (36.4%), office equipment operation (25.6%) and filing (14.3%) in descending order.

According to “Temporary Agency Workers Survey” (2005) conducted by the Ministry of Health, Labour and Welfare, the purpose of using temporary agency workers by client firms is mostly to “promptly secure human resources to fill a vacancy, etc.” (74.0%) and “deal with temporary and seasonal variations of workloads” (50.1%). According to Atkinson’s (1985) flexible firm model, it is the securing of numerical flexibility. However, even if client firms could secure the numerical flexibility by utilizing temporary agency workers, it doesn’t necessarily mean that they are able to enhance temporary agency workers’ productivity. It is because in order for temporary agency workers to be very productive, it is assumed that they work keeping their work motivation high. (Sato 2004; Imano and Sato 2002). Temporary agencies providing workers dispatching services to client firms are also very interested in the productivity of temporary agency workers and their willingness to work. It is an important issue for both client firms and temporary agencies to encourage willingness to work.

However, it is difficult to encourage willingness to work. This is because in the employment system of temporary agency work, client firms and temporary agencies are in charge of human resource management for temporary agency workers separately and their practicable human resource management functions (hereinafter referred to as human resource functions) are limited. Then, how do client firms and temporary agencies motivate workers with limited human resource functions? To consider this question, I will propose an analysis framework based on the structural characteristics of temporary agency work’s employment system.

II. Analysis Framework

The characteristics of temporary agency work’s employment system are in the triadic relations between client firms, temporary agencies and temporary agency workers. Workers such as regular employees and part-time workers have an employment relationship and a directions-and-orders relationship with one firm. In contrast, temporary agency workers have an employment relationship with temporary agencies but have a directions-and-orders relationship with client firms (or an actual relationship involving work assignment with client firms). This means that human resource functions which have assumed to be owned by one firm are separated by more than one management actor such as client firms and temporary agencies (Shimanuki and Morishima 2004).

Regarding human resource functions for temporary agency workers, overall, temporary agencies are responsible for deployment of temporary agency workers and client firms are supposed to use them. Those are categorized by major human resource functions; (i) procurement, (ii) training and (iii) evaluation/treatment as shown in Table 1.

(i) The procurement function: Client firms specify required human resources, design work contents assigned to temporary agency workers and set job requirements such as skills and experience necessary for job performance. Temporary agencies recruit candidates and

Table 1. Separation of Human Resource Functions for Temporary Agency Work

| | Client firms' human resource management | Temporary agencies' human resource management |
|-----------------------------------|---|--|
| Overall human resources functions | Use of temporary agency workers (actual relationship involving work assignment) | Deployment (supply) of temporary agency workers (employment relationship) |
| (i) Procurement | <i>Clarification of work contents and human resource requirements</i> Clarification of work contents that temporary agency workers are assigned to Clarification of required skills and work experience for job performance | <i>Recruit/Selection (job offer)</i> Provision of information on jobs and workplaces of client firms Interview on desire for jobs and work experience |
| (ii) Training | <i>OJT</i> Explanation of expertise and know-how on jobs Explanation of rules at work and in-house regulations | <i>Off-JT</i> Provision of education and training opportunities required for skill development Provision of opportunities to design of and discussion on career plan |
| (iii) Evaluation/Treatment | <i>Evaluation</i> Clarification of criteria Feedback of evaluation results | <i>Treatment</i> Wage management Provision of employment opportunities |
| (iv) Others | <i>Physical environment</i> Improvement of work environment <i>Information sharing</i> Participation in meetings | <i>Complaint handling</i> Provision of opportunities to make complaints for work <i>Welfare</i> Provision of opportunities for use of healthcare support and welfare facilities |

select and register those who meet the requirements to respond to job offers by client firms.³

(ii) The training function: Client firms provide on-the-job training (OJT) to give temporary agency workers required knowledge and skills through actual job performance. Temporary agencies, on the other hand, offer off-the-job training (Off-JT) to get knowledge and skills which can be used in many client firms and also give workers opportunities to plan their long-term career.⁴

(iii) The evaluation/treatment function: Client firms are in charge of evaluation and temporary agencies are responsible for treatment. Client firms show the evaluation criteria to temporary agency workers, evaluate their work attitudes and job performances and give temporary agencies feedback on them. Temporary agencies manage workers' wages including decision of wage levels depending on the jobs in the client firms and a pay-raise in accordance with the development of their capabilities and performances, and also provide employment opportunities to them through other client firms' job offers.

Besides these three functions above, there are functions to be borne by client firms and temporary agencies. Unlike the separated functions such as procurement, training and evaluation/treatment, which should have been unified, those can be provided by either client firms or temporary agencies. For instance, only client firms can improve physical environment and promote information sharing and only temporary agencies can deal with complaint handling and welfare programs.

As above, temporary agency work has a structural characteristic that human resource

³ The job placement process by temporary agencies is normally called "job matching."

⁴ Opportunities for thinking future career are called "career design workshop" and companies have recently provided them as Off-the-Job Training (Off-JT).

functions are separated into client firms and temporary agencies unlike direct employment for regular employees. Based on this characteristic, I will statistically examine the impact of client firms' and temporary agencies' human resource management on the temporary agency workers' willingness to work using individual data of the workers in the following.

III. Data and Samples

Data used in this paper are from the results of "Survey on Temporary Agency Staff's Way of Working and Attitude" conducted by the Department of Research on the Staffing Industry, Institute of Social Science, the University of Tokyo in October 2005. This was a questionnaire survey conducted by Japan Staffing Services Association (JSSA) in cooperation with 11 temporary agencies. Respondents were (i) registered agency workers (except referral planned temporary agency workers), (ii) engaging in white-collar jobs such as general office work (including operation of office equipment and filing), sales office work, accounting work and trade office work and (iii) working for one client firm in the Tokyo metropolitan area for two months or longer.⁵

The questionnaires were distributed to temporary agency workers via temporary agencies in which they are registered and were sent back to the University of Tokyo by mail. 2,253 questionnaires were distributed and 953 were collected (collection rate: 42.3%). Those samples were limited by sex (female) and jobs (general office work, sales office work, accounting work, trade office work and finance office work) and the number of them was reduced by 863. Samples are as follows. Sex: Female only; average age: 32.7 years old; family structure: with spouse 26.0%, with a child (children) 5.9%, with other relatives living together 49.0%; person responsible for household budget: 35.3%; academic background: undergraduate/graduate school graduates 33.5%, technical/junior college graduates 33.5% (totaling a little less than 70%) and business: general office work 67.8%, sales office work 15.2% (totaling 80%), accounting work, trade office work and finance office work are all less than 10%. As for working days a week, five days account for 96.5%. Regarding working hours a day, seven hours or longer account for 95.3%. It can be said that the majority of them are working fulltime, five days a week. Concerning the respondents' career, 88.0% of them have a working experience as regular employees. The average number of client firms they worked for is 2.95. The average working years in the current client firms is 2.14 years. On the other hand, the average number of temporary agencies they worked for is 1.66.

Next, focusing on attributes on the current client firms, the most common industry is manufacturing (29.0%). Combined with finance/insurance (13.8%), wholesale/retail (13.6%) and information-communication (13.0%), they account for a little less than 70%.

⁵ Analysis data contain 1.7% of samples in which the working period in the current client firms is less than two months.

Table 2. Temorary Agency Workers' Willingness to Work

| Willingness to work | Items | Rate of "yes" (%) |
|----------------------------------|--|----------------------|
| Work motivation | • Are you trying to forge ahead with work? | 93.8 |
| | • Are you trying to work effectively? | 83.4 |
| | • Are you trying to live up to supervisor's and coworkers' expectations? | 55.1 |
| | • Are you trying to contribute to the client firm and the workplace? | 48.4 |
| Commitment to client firms | • Would you like to renew the contract with the current client firm? | 47.1 |
| | • Would you like to work for other client firms?(R) | 33.9 |
| Commitment to temporary agencies | • Would you like to continue jobs offered by the current temporary agency? | 42.2 |
| | • Would you like to accept jobs offered by other temporary agencies?(R) | 21.6 |

Note: (R) indicates reverse item.

As for company size, 52.9% of them are working for major companies with more than 1,000 employees. Finally, looking at attributes of the current temporary agencies, capital patterns are: independent companies 72.1% and capital companies 27.9%. Regarding company size, major companies with annual sales of over 50 billion yen in FY2004: 66.4% and small- to medium-sized companies: 33.6%.⁶

IV. Setup of Variables

1. Dependent Variable

The dependent variable is temporary agency workers' willingness to work. This paper set three types of willingness to work which are considered to be important from both viewpoints of client firms and temporary agencies as shown in Table 2.

The first one is willingness to work for client firms (hereinafter referred as to "work motivation"). Client firms expect temporary agency workers to work effectively, contribute to client firms and be very productive with high work motivation.⁷ Since very productive temporary agency workers reflect credit on their temporary agencies, the temporary agencies are also interested in their willingness to work. Therefore, their work motivation is important for both client firms and temporary agencies. To calculate work motivation, I used a sum of four items, "Are you trying to forge ahead with work?" (93.8%), "Are you trying to work effectively?" (83.4%), "Are you trying to live up to supervisor's and coworkers' expectations?" (55.1%) and "Are you trying to contribute to the client firm and the work-

⁶ Temporary agencies are divided into two types, "independent" and "capital" by capital pattern. "Independent" means the temporary agencies without a parent company or with a parent company whose core business is human resource business. On the other hand, "capital" means temporary agencies with a parent company whose core business is not human resource business such as manufacturing or finance. For relationship between capital patterns of temporary agencies and temporary agency workers' way of working/attitude, see Takahashi (2006b).

⁷ This paper looks at work motivation widely, and supposes that not only willingness to efficiently perform jobs but also willingness to live up to employees of client firms and contribute to the workplaces lead to high production. For work motivation, see Pinder (1998).

place?" (48.4%) (Yes = 1 and No = 0. The percentage in parenthesis is the rate of "Yes"). The average of work motivation is 2.807 (standard deviation = 1.022).

The second one is willingness to work continuously for client firms (hereinafter referred as to "commitment to client firms"). Client firms would like to renew the contract repeatedly with very productive temporary agency workers for a long time. For client firms, workers' willingness to work continuously for them without transfer to other companies may have next importance to their willingness to work on a short term basis. Workers' commitment to client firms is more important for client firms. To calculate commitment to client firms, I used a sum of two items, "would you like to renew the contract with the current client firm?" (47.1%) and "would you like to work for other client firms? (R)" (33.9%) (Yes = 1 and No = 0. "R" indicates reverse item.). The average score of commitment to client firms is 1.132 (standard deviation = 0.803).

The third one is willingness to continuously accept jobs offered by the same temporary agencies (hereinafter referred as to "commitment to temporary agencies"). Temporary agencies would try to reduce costs for recruitment and selection of workers and collect Off-JT costs by continuously using their registered workers. Accordingly, the temporary agencies may place the higher priority on that temporary agency workers work continuously and exclusively through them without accepting other temporary agencies' job offers (even if the workers change the companies to work for) over that the workers work continuously for particular client firms. Thus, workers' commitment to temporary agencies is more important for the temporary agencies. To calculate commitment to temporary agencies, I used a sum of two items, "Would you like to continue jobs offered by the current temporary agency?" (42.2%) and "Would you like to accept jobs offered by other temporary agencies? (R)" (21.6%) (Yes = 1 and No = 0. R indicates reverse item.). The average score of commitment to temporary agencies is 1.206 (standard deviation = 0.696).

2. Independent Variables

The independent variables are variables on client firms' and temporary agencies' human resource managements. Based on the separation of human resource functions of temporary agency work shown in Table 1, I set variables on client firms' and temporary agencies' human resource managements as shown in Table 3.

As client firms' human resource management variables, I set four human resource functions, (i) procurement, (ii) training, (iii) evaluation/treatment and (iv) others, with two variables each, i.e., eight variables in total: (i) Procurement function: Taking up "Clarification of work contents and required human resources for temporary agency workers," I use two variables, namely, "clarification of work contents" (the rate of "Yes": 47.7%) and "clarification of required human resources" (18.1%).⁸ (ii) Training function: Focusing on

⁸ It appears that whether or not work contents of client firms would match with temporary agency workers' skills and experience depends on matching effort of temporary agencies as well as clarification of required human resources.

Table 3. Human Resource Managements of Client Firms and Temporary Agencies

| Human resource functions | Variables | Human resources | Rate of "yes" (%) |
|-----------------------------------|--|---|-------------------|
| (i) Procurement | | | |
| <u>Client firms</u> | | | |
| Work contents and human resources | Clarification of work contents | Work contents for temporary agency workers are distinguished from ones for regular employees and temporary agency workers are not assigned the jobs which are not in the contract | 47.7 |
| Clarification of requirements | Clarification of required human resources | Skills and work experience can be used for the job | 18.1 |
| <u>Temporary agencies</u> | | | |
| Recruitment/selection | Provision of information on client firms | Information on jobs and workplaces of client firms are sufficiently provided. | 47.2 |
| | Interview on desire and experience | When offering jobs, temporary agency workers' desire and past work experience are asked. | 75.3 |
| (ii) Training | | | |
| <u>Client firms</u> | | | |
| OJT | Explanation of business knowledge and know-how | Business knowledge and know-how required for the job are explained. | 60.0 |
| | Explanation of workplace rules | Workplace rules and in-house regulations of the client firm are explained. | 58.0 |
| <u>Temporary agencies</u> | | | |
| Off-JT | Opportunities for education/training | Training required for developing skills is provided. | 87.4 |
| | Opportunities for career counseling | Opportunities for discussion on career and counseling are provided. | 39.8 |
| (iii) Evaluation/treatment | | | |
| <u>Client firms</u> | | | |
| Evaluation | Clarification of evaluation criteria | The evaluation criteria are clarified. | 69.6 |
| | Feedback of evaluation results | Evaluation for work behavior and improvement are explained. | 46.7 |
| <u>Temporary agencies</u> | | | |
| Treatment | Wage management | Hourly wage level of the current job is high or hourly wage has increased during the period of working for the current client firm. | 66.3 |
| | Provision of employment opportunities | Opportunities for next job offer have been provided. | 48.2 |
| (iv) Others | | | |
| <u>Client firms</u> | | | |
| Physical environment | Improvement of work environment | There is no work environment difference between regular employees and temporary agency workers such as locker rooms. | 68.5 |
| Information sharing | Information sharing | Participating business meetings in the client firm or having lunch with employees. | 84.5 |
| <u>Temporary agencies</u> | | | |
| Complaint handling | Complaint handling | The temporary agency staff regularly visit workplaces of the client firm. | 43.7 |
| Welfare | Welfare | There are good opportunities for using healthcare support and welfare facilities. | 62.1 |

situation of OJT implementation, I use two variables, “explanation of business knowledge and know-how” (60.0%) and “explanation of workplace rules” (58.0%). (iii) Evaluation/treatment: As for situation of evaluation process implementation, two variables are used “clarification of criteria” (69.6%) and “feedback of evaluation results” (46.7%). (iv) Other functions: “Improvement of working environment” (68.5%) and “information sharing” (84.5%) are set as variable.

These human resource management variables are all dummy variables (Yes = 1 and No = 0), and whether or not human resource management is implemented is based on the recognition of the temporary agency workers who answered the questions. The average of total 8 variables was 4.530 (standard deviation = 1.544).

In the same way as with that of client firms, for temporary agencies' human resource management variables, I set four human resource functions with two variables each, i.e., eight variables in total: (i) Procurement function: As for recruitment/selection of temporary agency workers, two variables used are “provision of client firms' information” (47.2%)⁹ and “interview on desire for jobs and work experience of temporary agency workers” (75.3%). (ii) Training function: Concerning situation of Off-JT implementation, two variables are “education/training” (87.4%) and “career counseling” (39.8%). (iii) Evaluation/treatment function: For situation of treatment implementation, two variables are “wage management” (66.3%)¹⁰ and “provision of employment opportunities” (48.2%).¹¹ (iv) Other functions: “Compliant handling” (43.7%)¹² and “welfare programs” (62.1%). The average of total 8 variables was 4.733 (standard deviation = 1.541).

⁹ For “provision of information on client firms,” seven answers to the question, “Did the current temporary agency provide the following information before working for the current client firm?” are (i) work contents, (ii) working conditions (contract period, hourly wage, working hours, workplace, etc.), (iii) business contents of the client firm, (iv) office environment of the client firm, (v) required skills for working in the client firm, (vi) employees in the client firm (number of employees, sex ratio, etc.) and (vii) temporary agency workers in the client firm (number of temporary agency workers, sex ratio, etc.). Scores were given when the answer is: Yes = 1 and No = 0 and then, all scores were added. The variables were given when the total is average (5.165) or higher = 1, less than average = 0.

¹⁰ For “high hourly wage level,” average hourly wage was calculated by job and variables were given when the wage is average of the job or higher = 1, less than average = 0. Average hourly wages of these data are: general office work: JPY1,581, accounting work: JPY1,584, sales office work: JPY1,617, trading office work: JPY1,718 and finance office work: JPY1,529.

¹¹ For “provision of employment opportunities,” variables were given when the answer to the question, “Have you accept job(s) from the current temporary agency before?” is Yes = 1 and No = 0.

¹² For “complaint handling,” the answers to the question “how often does the person of the current temporary agency who is responsible for your employment visit your workplace?” were (1) once a week or more (0.7%), (2) once a fortnight (4.2%), (3) once a month (38.8%), (4) once per two or three months (46.3%), (5) once per six months (4.9%), (6) less than once per six months (2.2%) and (7) never (2.9%). Variables were given when once a month or more (43.7%) = 1, less than once a month = 0.

3. Control Variables

As control variables, I set them on temporary agency workers' individual characteristics, client firms' company characteristics and temporary agencies' company characteristics.

Variables for temporary agency workers' individual characteristics are: age, academic background dummy (on the basis of junior high school/high school graduates, career college, junior college, technical college, under graduate school and graduate school graduates = 1, others = 0), spouse/children/other relatives living together dummy (with any = 1, none = 0), person responsible for household budget dummy (myself = 1, others = 0), period of working as temporary agency workers (months), the number of client firms and temporary agencies that temporary agency worker worked for or with in the past, period of working for the current client firm (months), year of being registered in the current temporary agency and period of being registered in the current temporary agency. In terms of work contents and labor conditions of temporary agency workers, they are job dummy (on the basis of general office work, sales office work, accounting work, trading office work and finance office work = 1, others = 0), scheduled working days a week, scheduled working hours a day (minutes) and monthly average of overtime hours. I also set autonomous/subsidiary/humdrum job dummy (yes = 1, no = 0)¹³ for job characteristics, and job selection orientation/work-life balance orientation/skill exercising orientation dummy¹⁴ and regular employee orientation dummy¹⁵ (yes = 1, no = 0) for temporary agency workers' labor orientation and career orientation.

As variables for client firms' company characteristics, they are company size dummy (on the basis of less than 100 employees, 100 to 499 employees, 200 to 499 employees, 500 to 999 employees, 1000 or more employees = 1, others = 0) and industry dummy (manufacturing, information-communication, wholesale/retail and finance/insurance industries = 1, others = 0), and for temporary agencies' company characteristics they are company size

¹³ Variables of job characteristics are calculated by using the following items: Autonomous job dummy is "how to work can be decided by myself," subsidiary job dummy is "subsidiary job" and humdrum job dummy is "humdrum and repetitive work" and variables were given when the answer is Yes = 1, No = 0.

¹⁴ For temporary agency workers' working orientation, the following answers to the question "why are you working as a temporary agency worker?" were used as variables: job selection orientation dummy is "work contents and companies can be selected" or "working hours and workplaces can be selected," work-life balance orientation dummy is "easy to balance with housework, child-rearing and nursing" or "easy to balance with hobbies or studies", skill exercising orientation dummy is "skills or certificates can be utilized" or "skills can be improved". Variables were given when either one is correct = 1, neither is correct = 0.

¹⁵ For regular employee orientation dummy, variables were given when the answers to the question "Do you want to work as a regular employee in the future?" were "I want to work as a regular employee" (53.4%) = 1 and "I don't work as a regular employee" (23.2%) and "I don't know" (23.4%) = 0. The breakdown of "I want to work as a regular employee" is "I want to work as a regular employee for the current client firm" (11.2%), "I want to work as a regular employee for a company other than the current client firm" (17.7%) and "I want to work as a regular employee for any company" (24.5%).

dummy (major = 1, medium or smaller = 0) and capital pattern (independent = 1, capital = 0). Basic statistics of variables used for this analysis are shown in Appendix Table.

V. Analysis with All Samples

I conducted a multiple regression analysis using all samples with temporary agency workers' willingness to work as a dependent variable, human resource managements of client firms and temporary agencies as independent variables and individual characteristics and client firms' and temporary agencies' company characteristics as control variables.¹⁶ I applied human resource management variables of (i) entire human resource functions, (ii) procurement function, (iii) training function, (iv) evaluation/treatment function and (v) other functions to three variables: work motivation, commitment to client firms and commitment to temporary agencies.

The analysis result on the workers' work motivation is shown in Table 4. As entire human resource functions, both client firms' and temporary agencies' human resource managements have a significant positive impact on their work motivation. Focusing attention on the result of individual functions such as procurement, training and evaluation/treatment, "clarification of required human resources" and "provision of client firms' information" in the procurement function, "explanation of business knowledge/know-how" and "education/training" in the training function and "clarification of evaluation criteria" and "wage management" in the evaluation/treatment function have a positive impact. As same as entire human resource functions, in the individual functions such as procurement, training and evaluation/treatment, both client firms' and temporary agencies' human resource managements have a significant positive impact on workers' work motivation.

The analysis result on the workers' commitment to client firms is shown in Table 5. As entire human resource functions, both client firms' and temporary agencies' human resource managements have a significant positive impact on their commitment to client firms. However, compared with work motivation, client firms' human resource management has a greater impact on workers' commitment to client firms.¹⁷ Looking at the result of individual functions, in the procurement function, client firms' "clarification of work contents" and "clarification of required human resources" and the temporary agencies' "provision of client firms' information" and "interview on desire and experience" have a positive impact on their commitment to client firms. On the other hand, in the functions other than procurement, only client firms' human resource management has a positive impact on the workers' commitment to client firms. In particular, "explanation of business knowledge/know-how" and

¹⁶ Although the percentage of the missing value of data used for this analysis is only 1.2%, sample size without missing value is only 622 (72.1%). Due to such limited data, the missing value is replaced with the average value in order to secure a certain sample size.

¹⁷ The description of comparing the impacts of client firms' and temporary agencies' human resource managements are based on the comparison by the standardized coefficient.

Table 4. The Impact of Client Firms' and Temporary Agencies'

| | | | Coefficient | Standard error |
|---|---|--|-------------|----------------|
| Constant | | | -29.902 | 35.757 |
| Age | | | 0.016 | 0.009 |
| Career college graduates (on the basis of junior high school/high school graduates) | | | -0.147 | 0.120 |
| Technical and junior college graduates | | | 0.082 | 0.104 |
| Undergraduate and graduate school graduates | | | 0.001 | 0.106 |
| With spouse (Yes = 1) | | | 0.259 * | 0.134 |
| With child(ren) (Yes = 1) | | | 0.016 | 0.158 |
| With relative(s) living together (Yes = 1) | | | 0.256 ** | 0.114 |
| Person responsible for household budget (Myself = 1, Others = 0) | | | 0.114 | 0.107 |
| Sales office work (on the basis of general office work) | | | 0.100 | 0.102 |
| Accounting work | | | -0.052 | 0.137 |
| Trading office work | | | 0.106 | 0.155 |
| Finance office work | | | -0.040 | 0.195 |
| Autonomous job | | | 0.229 *** | 0.073 |
| Subsidiary job | | | 0.146 ** | 0.073 |
| Humdrum job | | | -0.038 | 0.072 |
| Working days a week | | | 0.010 | 0.097 |
| Working minutes a day | | | -0.002 * | 0.001 |
| Monthly overtime hours | | | 0.003 | 0.004 |
| Working period as temporary agency worker (months) | | | 0.000 | 0.002 |
| Number of client firms worked | | | -0.017 | 0.020 |
| Working period in the current temporary agency (months) | | | 0.003 * | 0.002 |
| Number of temporary agencies employed | | | 0.048 | 0.043 |
| Registered year in the current temporary agency | | | 0.016 | 0.018 |
| work experience as a regular employee (Yes = 1) | | | -0.020 | 0.112 |
| Job selection orientation | | | -0.078 | 0.085 |
| work-life balance orientation | | | -0.080 | 0.076 |
| skill exercising orientation | | | 0.026 | 0.084 |
| Regular employee orientation | | | 0.164 ** | 0.072 |
| Client firm | 100 employees or more (on the basis of less than 100 employees) | | 0.132 | 0.126 |
| | 300 employees or more | | 0.084 | 0.146 |
| | 1,000 employees or more | | 0.205 * | 0.117 |
| | Manufacturing | | 0.025 | 0.095 |
| | Information and telecommunication | | -0.049 | 0.117 |
| | Wholesale and retail | | -0.089 | 0.119 |
| Temporary agency | Finance and insurance | | -0.004 | 0.130 |
| | Company size (major = 1, medium or smaller = 0) | | 0.267 * | 0.151 |
| | Capital pattern (independent = 1, capital = 0) | | -0.242 | 0.162 |
| Overall human resource functions | Client firm | | 0.085 *** | 0.023 |
| | Temporary agency | | 0.063 *** | 0.025 |
| Procurement | Client firm | Clarification of work contents | | |
| | | Clarification of required human resources | | |
| Training | Temporary agency | Provision of information on client firms | | |
| | | Interview on desire and experience | | |
| | Client firm | Explanation of business knowledge and know-how | | |
| | | Explanation of workplace rules | | |
| Evaluation/treatment | Temporary agency | Opportunities for education/training | | |
| | | Opportunities for career counseling | | |
| | Client firm | Clarification of evaluation criteria | | |
| | | Feedback of evaluation results | | |
| Others | Temporary agency | Wage management | | |
| | | Provision of employment opportunities | | |
| | Client firm | Improvement of work environment | | |
| Information sharing | | | | |
| Value F | Temporary agency | Complaint handling | | |
| | | Welfare | | |
| R2 | | | 2.499 *** | 0.106 |

Note: N=863. ***: $p < 0.01$, **: $0.01 < p < 0.05$, *: $0.05 < p < 0.1$.

Human Resource Managements on the Work Motivation

| Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error |
|-------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|
| -32.240 | 35.974 | -20.162 | 36.102 | 9.519 | 37.309 | -9.877 | 36.106 |
| 0.016 * | 0.009 | 0.016 * | 0.009 | 0.014 | 0.009 | 0.016 * | 0.009 |
| -0.137 | 0.121 | -0.130 | 0.121 | -0.115 | 0.122 | -0.120 | 0.122 |
| 0.076 | 0.104 | 0.051 | 0.105 | 0.033 | 0.105 | 0.042 | 0.105 |
| -0.001 | 0.107 | -0.007 | 0.107 | -0.023 | 0.108 | 0.008 | 0.108 |
| 0.252 * | 0.136 | 0.262 * | 0.136 | 0.283 ** | 0.137 | 0.260 * | 0.137 |
| 0.024 | 0.158 | 0.067 | 0.160 | 0.033 | 0.160 | 0.050 | 0.160 |
| 0.261 ** | 0.115 | 0.286 ** | 0.115 | 0.289 ** | 0.115 | 0.273 ** | 0.116 |
| 0.117 | 0.108 | 0.093 | 0.108 | 0.087 | 0.108 | 0.080 | 0.109 |
| 0.081 | 0.103 | 0.037 | 0.103 | 0.084 | 0.104 | 0.034 | 0.104 |
| -0.072 | 0.138 | -0.080 | 0.139 | -0.080 | 0.139 | -0.077 | 0.140 |
| 0.033 | 0.158 | 0.115 | 0.157 | 0.129 | 0.158 | 0.088 | 0.158 |
| -0.011 | 0.196 | 0.102 | 0.197 | 0.090 | 0.198 | 0.106 | 0.200 |
| 0.243 *** | 0.073 | 0.290 *** | 0.073 | 0.277 *** | 0.073 | 0.275 *** | 0.074 |
| 0.146 ** | 0.074 | 0.134 * | 0.074 | 0.139 * | 0.074 | 0.130 * | 0.074 |
| -0.053 | 0.072 | -0.080 | 0.073 | -0.068 | 0.073 | -0.073 | 0.073 |
| 0.001 | 0.098 | -0.126 | 0.099 | -0.121 | 0.099 | -0.108 | 0.099 |
| -0.002 * | 0.001 | -0.002 | 0.001 | -0.001 | 0.001 | -0.001 | 0.001 |
| 0.002 | 0.004 | 0.002 | 0.004 | 0.001 | 0.004 | 0.002 | 0.004 |
| -0.001 | 0.002 | 0.000 | 0.002 | -0.001 | 0.002 | -0.001 | 0.002 |
| -0.009 | 0.020 | -0.007 | 0.020 | -0.007 | 0.021 | -0.011 | 0.021 |
| 0.004 ** | 0.002 | 0.003 | 0.002 | 0.002 | 0.002 | 0.003 | 0.002 |
| 0.041 | 0.044 | 0.046 | 0.043 | 0.059 | 0.043 | 0.052 | 0.044 |
| 0.017 | 0.018 | 0.011 | 0.018 | -0.003 | 0.019 | 0.006 | 0.018 |
| -0.013 | 0.113 | -0.144 | 0.113 | -0.180 | 0.114 | -0.151 | 0.114 |
| -0.052 | 0.086 | -0.026 | 0.086 | -0.024 | 0.086 | -0.014 | 0.086 |
| -0.077 | 0.076 | -0.075 | 0.077 | -0.107 | 0.077 | -0.104 | 0.077 |
| 0.037 | 0.085 | 0.054 | 0.085 | 0.064 | 0.085 | 0.051 | 0.085 |
| 0.162 ** | 0.073 | 0.153 ** | 0.073 | 0.159 ** | 0.074 | 0.156 ** | 0.074 |
| 0.122 | 0.127 | 0.230 * | 0.127 | 0.201 | 0.128 | 0.214 * | 0.128 |
| 0.070 | 0.148 | 0.106 | 0.148 | 0.094 | 0.148 | 0.094 | 0.149 |
| 0.182 | 0.118 | 0.292 ** | 0.118 | 0.245 ** | 0.118 | 0.264 ** | 0.118 |
| 0.032 | 0.096 | 0.123 | 0.096 | 0.106 | 0.096 | 0.084 | 0.097 |
| -0.026 | 0.118 | -0.006 | 0.118 | 0.009 | 0.119 | 0.000 | 0.119 |
| -0.117 | 0.120 | -0.032 | 0.121 | -0.053 | 0.121 | -0.054 | 0.121 |
| -0.013 | 0.131 | 0.011 | 0.131 | 0.032 | 0.132 | 0.019 | 0.133 |
| 0.242 | 0.153 | -0.072 | 0.153 | -0.108 | 0.155 | -0.059 | 0.155 |
| -0.177 | 0.163 | 0.032 | 0.164 | 0.147 | 0.164 | 0.074 | 0.165 |
| | | | | | | | |
| -0.050 | 0.072 | | | | | | |
| 0.290 *** | 0.093 | | | | | | |
| 0.183 * | 0.073 | | | | | | |
| 0.008 | 0.085 | | | | | | |
| | | 0.116 * | 0.075 | | | | |
| | | 0.085 | 0.076 | | | | |
| | | 0.341 *** | 0.112 | | | | |
| | | 0.032 | 0.078 | | | | |
| | | | | 0.118 * | 0.078 | | |
| | | | | 0.076 | 0.072 | | |
| | | | | 0.190 ** | 0.082 | | |
| | | | | -0.085 | 0.079 | | |
| | | | | | | 0.106 * | 0.078 |
| | | | | | | 0.056 | 0.100 |
| | | | | | | 0.036 | 0.073 |
| | | | | | | 0.099 * | 0.075 |
| 2.189 *** | | 2.220 *** | | 2.075 *** | | 1.922 *** | |
| 0.099 | | 0.100 | | 0.094 | | 0.088 | |

Table 5. Impact of Client Firms' and Temporary Agencies' Human

| | | Coefficient | Standard error |
|---|---|--|----------------|
| Constant | | 0.051 | 26.811 |
| Age | | 0.004 | 0.007 |
| Career college graduates (on the basis of junior high school/high school graduates) | | -0.043 | 0.090 |
| Technical and junior college graduates | | 0.154 ** | 0.078 |
| Undergraduate and graduate school graduates | | 0.068 | 0.080 |
| With spouse (Yes = 1) | | 0.224 ** | 0.101 |
| With child(ren) (Yes = 1) | | 0.062 | 0.118 |
| With relative(s) living together (Yes = 1) | | 0.184 ** | 0.085 |
| Person responsible for household budget (Myself = 1, Others = 0) | | 0.103 | 0.080 |
| Sales office work (on the basis of general office work) | | -0.009 | 0.076 |
| Accounting work | | 0.062 | 0.103 |
| Trading office work | | 0.095 | 0.117 |
| Finance office work | | -0.137 | 0.146 |
| Autonomous job | | 0.220 *** | 0.054 |
| Subsidiary job | | 0.051 | 0.055 |
| Humdrum job | | -0.130 ** | 0.054 |
| Working days a week | | -0.104 | 0.073 |
| Working minutes a day | | 0.000 | 0.001 |
| Monthly overtime hours | | -0.004 | 0.003 |
| Working period as temporary agency worker (months) | | 0.000 | 0.001 |
| Number of client firms worked | | -0.026 * | 0.015 |
| Working period in the current temporary agency (months) | | 0.001 | 0.001 |
| Number of temporary agencies employed | | -0.028 | 0.032 |
| Registered year in the current temporary agency | | 0.000 | 0.013 |
| work experience as a regular employee (Yes = 1) | | -0.033 | 0.084 |
| Job selection orientation | | -0.052 | 0.064 |
| work-life balance orientation | | 0.002 | 0.057 |
| skill exercising orientation | | 0.002 | 0.063 |
| Regular employee orientation | | -0.190 *** | 0.054 |
| Client firm | 100 employees or more (on the basis of less than 100 employees) | -0.149 | 0.094 |
| | 300 employees or more | -0.138 | 0.110 |
| | 1,000 employees or more | -0.074 | 0.087 |
| | Manufacturing | -0.051 | 0.071 |
| | Information and telecommunication | -0.026 | 0.088 |
| | Wholesale and retail | -0.087 | 0.089 |
| | Finance and insurance | -0.015 | 0.097 |
| Temporary agency | Company size (major = 1, medium or smaller = 0) | 0.080 | 0.114 |
| | Capital pattern (independent = 1, capital = 0) | -0.263 ** | 0.121 |
| Overall human | Client firm | 0.129 *** | 0.018 |
| resource functions | Temporary agency | 0.027 * | 0.019 |
| Procurement | Client firm | Clarification of work contents | |
| | | Clarification of required human resources | |
| | Temporary agency | Provision of information on client firms | |
| | | Interview on desire and experience | |
| Training | Client firm | Explanation of business knowledge and know-how | |
| | | Explanation of workplace rules | |
| | Temporary agency | Opportunities for education/training | |
| | | Opportunities for career counseling | |
| Evaluation/treatment | Client firm | Clarification of evaluation criteria | |
| | | Feedback of evaluation results | |
| | Temporary agency | Wage management | |
| | | Provision of employment opportunities | |
| Others | Client firm | Improvement of work environment | |
| | | Information sharing | |
| | Temporary agency | Complaint handling | |
| | | Welfare | |
| Value F | | 4.710 *** | |
| R2 | | 0.182 | |

Note: N=863. ***, $p < 0.01$, **, $0.01 < p < 0.05$, *, $0.05 < p < 0.1$.

Resource Managements on the Commitment to Client Firm

| Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error |
|-------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|
| -1.764 | 27.302 | -2.456 | 27.481 | 1.162 | 28.145 | -2.111 | 27.428 |
| 0.003 | 0.007 | 0.003 | 0.007 | 0.002 | 0.007 | 0.004 | 0.007 |
| -0.069 | 0.092 | -0.055 | 0.092 | -0.066 | 0.092 | -0.059 | 0.093 |
| 0.124 | 0.079 | 0.141 * | 0.080 | 0.127 | 0.079 | 0.139 * | 0.080 |
| 0.045 | 0.081 | 0.061 | 0.082 | 0.048 | 0.081 | 0.066 | 0.082 |
| 0.207 ** | 0.103 | 0.209 ** | 0.103 | 0.203 ** | 0.103 | 0.202 * | 0.104 |
| 0.118 | 0.120 | 0.082 | 0.122 | 0.101 | 0.121 | 0.108 | 0.121 |
| 0.170 * | 0.087 | 0.183 ** | 0.088 | 0.183 ** | 0.087 | 0.174 ** | 0.088 |
| 0.105 | 0.082 | 0.097 | 0.082 | 0.078 | 0.082 | 0.092 | 0.083 |
| 0.009 | 0.078 | -0.031 | 0.078 | 0.006 | 0.078 | -0.028 | 0.079 |
| 0.068 | 0.105 | 0.062 | 0.106 | 0.046 | 0.105 | 0.048 | 0.106 |
| 0.074 | 0.120 | 0.111 | 0.120 | 0.119 | 0.119 | 0.105 | 0.120 |
| -0.070 | 0.149 | -0.103 | 0.150 | -0.066 | 0.150 | -0.100 | 0.152 |
| 0.251 *** | 0.055 | 0.269 *** | 0.055 | 0.250 *** | 0.055 | 0.259 *** | 0.056 |
| 0.035 | 0.056 | 0.047 | 0.056 | 0.047 | 0.056 | 0.037 | 0.057 |
| -0.177 *** | 0.055 | -0.156 *** | 0.056 | -0.157 *** | 0.055 | -0.160 *** | 0.056 |
| -0.109 | 0.075 | -0.120 | 0.075 | -0.116 | 0.075 | -0.114 | 0.075 |
| 0.000 | 0.001 | 0.000 | 0.001 | 0.000 | 0.001 | 0.000 | 0.001 |
| -0.004 | 0.003 | -0.005 * | 0.003 | -0.004 | 0.003 | -0.005 * | 0.003 |
| 0.000 | 0.001 | 0.000 | 0.001 | 0.000 | 0.001 | 0.000 | 0.001 |
| -0.024 | 0.016 | -0.020 | 0.016 | -0.027 * | 0.016 | -0.022 | 0.016 |
| 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| -0.021 | 0.033 | -0.025 | 0.033 | -0.016 | 0.033 | -0.021 | 0.033 |
| 0.002 | 0.014 | 0.002 | 0.014 | 0.000 | 0.014 | 0.002 | 0.014 |
| -0.042 | 0.086 | -0.038 | 0.086 | -0.045 | 0.086 | -0.036 | 0.086 |
| -0.058 | 0.066 | -0.025 | 0.065 | -0.018 | 0.065 | -0.029 | 0.066 |
| -0.002 | 0.058 | 0.022 | 0.058 | 0.003 | 0.058 | -0.001 | 0.059 |
| 0.011 | 0.064 | 0.030 | 0.065 | 0.037 | 0.064 | 0.027 | 0.065 |
| -0.185 *** | 0.055 | -0.186 *** | 0.056 | -0.188 *** | 0.055 | -0.187 *** | 0.056 |
| -0.150 | 0.096 | -0.159 | 0.097 | -0.156 | 0.096 | -0.164 * | 0.097 |
| -0.133 | 0.112 | -0.174 | 0.113 | -0.148 | 0.112 | -0.171 | 0.113 |
| -0.088 | 0.089 | -0.097 | 0.090 | -0.097 | 0.089 | -0.101 | 0.090 |
| -0.026 | 0.073 | -0.039 | 0.073 | -0.037 | 0.073 | -0.058 | 0.074 |
| -0.023 | 0.089 | -0.019 | 0.090 | -0.023 | 0.089 | -0.011 | 0.091 |
| -0.086 | 0.091 | -0.128 | 0.092 | -0.106 | 0.092 | -0.127 | 0.092 |
| -0.034 | 0.099 | -0.065 | 0.100 | -0.047 | 0.099 | -0.026 | 0.101 |
| 0.043 | 0.116 | 0.092 | 0.117 | 0.066 | 0.117 | 0.094 | 0.117 |
| -0.218 * | 0.123 | -0.270 ** | 0.125 | -0.241 * | 0.124 | -0.283 ** | 0.126 |
| | | | | | | | |
| 0.172 *** | 0.054 | | | | | | |
| 0.233 *** | 0.071 | | | | | | |
| 0.075 * | 0.055 | | | | | | |
| 0.140 ** | 0.065 | | | | | | |
| | | 0.107 ** | 0.057 | | | | |
| | | 0.162 *** | 0.058 | | | | |
| | | 0.040 | 0.085 | | | | |
| | | -0.073 | 0.059 | | | | |
| | | | | 0.255 *** | 0.059 | | |
| | | | | 0.107 ** | 0.054 | | |
| | | | | 0.050 | 0.062 | | |
| | | | | 0.053 | 0.060 | | |
| | | | | | | 0.101 * | 0.059 |
| | | | | | | 0.155 ** | 0.076 |
| | | | | | | 0.063 | 0.055 |
| | | | | | | 0.037 | 0.057 |
| 3.604 *** | | 3.318 *** | | 3.588 *** | | 3.102 *** | |
| 0.153 | | 0.142 | | 0.152 | | 0.134 | |

Table 6. Impact of Client Firms' and Temporary Agencies' Human

| | | | Coefficient | Standard error |
|---|---|--|-------------|----------------|
| Constant | | | 15.407 | 24.178 |
| Age | | | 0.008 | 0.006 |
| Career college graduates (on the basis of junior high school/high school graduates) | | | -0.090 | 0.081 |
| Technical and junior college graduates | | | -0.006 | 0.070 |
| Undergraduate and graduate school graduates | | | -0.100 | 0.072 |
| With spouse (Yes = 1) | | | -0.086 | 0.091 |
| With child(ren) (Yes = 1) | | | 0.057 | 0.107 |
| With relative(s) living together (Yes = 1) | | | 0.008 | 0.077 |
| Person responsible for household budget (Myself = 1, Others = 0) | | | -0.061 | 0.072 |
| Sales office work (on the basis of general office work) | | | -0.064 | 0.069 |
| Accounting work | | | 0.100 | 0.093 |
| Trading office work | | | 0.037 | 0.105 |
| Finance office work | | | -0.082 | 0.132 |
| Autonomous job | | | -0.005 | 0.049 |
| Subsidiary job | | | -0.063 | 0.050 |
| Humdrum job | | | 0.005 | 0.049 |
| Working days a week | | | -0.070 | 0.066 |
| Working minutes a day | | | 0.000 | 0.001 |
| Monthly overtime hours | | | -0.003 | 0.002 |
| Working period as temporary agency worker (months) | | | 0.001 | 0.001 |
| Number of client firms worked | | | -0.001 | 0.014 |
| Working period in the current temporary agency (months) | | | -0.002 * | 0.001 |
| Number of temporary agencies employed | | | -0.032 | 0.029 |
| Registered year in the current temporary agency | | | -0.007 | 0.012 |
| work experience as a regular employee (Yes = 1) | | | -0.123 | 0.076 |
| Job selection orientation | | | 0.059 | 0.058 |
| work-life balance orientation | | | 0.001 | 0.051 |
| skill exercising orientation | | | -0.020 | 0.057 |
| Regular employee orientation | | | -0.200 *** | 0.049 |
| Client firm | 100 employees or more (on the basis of less than 100 employees) | | -0.015 | 0.085 |
| | 300 employees or more | | -0.109 | 0.099 |
| | 1,000 employees or more | | 0.039 | 0.079 |
| | Manufacturing | | -0.074 | 0.064 |
| | Information and telecommunication | | -0.050 | 0.079 |
| | Wholesale and retail | | -0.053 | 0.081 |
| | Finance and insurance | | -0.024 | 0.088 |
| Temporary agency | Company size (major = 1, medium or smaller = 0) | | 0.155 | 0.102 |
| | Capital pattern (independent = 1, capital = 0) | | -0.175 | 0.110 |
| Overall human resource functions | Client firm | | 0.028 * | 0.016 |
| | Temporary agency | | 0.078 *** | 0.017 |
| Procurement | Client firm | Clarification of work contents | | |
| | | Clarification of required human resources | | |
| Training | Temporary agency | Provision of information on client firms | | |
| | | Interview on desire and experience | | |
| | Client firm | Explanation of business knowledge and know-how | | |
| | | Explanation of workplace rules | | |
| Evaluation/treatment | Temporary agency | Opportunities for education/training | | |
| | | Opportunities for career counseling | | |
| | Client firm | Clarification of evaluation criteria | | |
| | | Feedback of evaluation results | | |
| Others | Temporary agency | Wage management | | |
| | | Provision of employment opportunities | | |
| | Client firm | Improvement of work environment | | |
| | | Information sharing | | |
| | Temporary agency | Complaint handling | | |
| | | Welfare | | |
| Value F | | | 2.522 *** | |
| R2 | | | 0.107 | |

Note: N=863. ***: $p < 0.01$, **: $0.01 < p < 0.05$, *: $0.05 < p < 0.1$.

Resource Managements on the Commitment to Temporary Agencies

| Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error |
|-------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|
| 26.441 | 24.425 | 24.649 | 24.372 | 20.624 | 25.180 | 22.666 | 24.174 |
| 0.008 | 0.006 | 0.009 | 0.006 | 0.007 | 0.006 | 0.008 | 0.006 |
| -0.080 | 0.082 | -0.094 | 0.082 | -0.086 | 0.082 | -0.077 | 0.082 |
| -0.002 | 0.071 | 0.008 | 0.071 | 0.005 | 0.071 | 0.005 | 0.071 |
| -0.088 | 0.073 | -0.093 | 0.072 | -0.075 | 0.073 | -0.065 | 0.072 |
| -0.089 | 0.092 | -0.085 | 0.092 | -0.090 | 0.092 | -0.095 | 0.092 |
| 0.048 | 0.108 | 0.072 | 0.108 | 0.058 | 0.108 | 0.052 | 0.107 |
| 0.016 | 0.078 | 0.023 | 0.078 | 0.028 | 0.078 | 0.005 | 0.078 |
| -0.053 | 0.074 | -0.053 | 0.073 | -0.063 | 0.073 | -0.070 | 0.073 |
| -0.083 | 0.070 | -0.083 | 0.069 | -0.076 | 0.070 | -0.078 | 0.070 |
| 0.086 | 0.094 | 0.094 | 0.094 | 0.086 | 0.094 | 0.110 | 0.094 |
| -0.014 | 0.107 | 0.037 | 0.106 | 0.028 | 0.107 | 0.031 | 0.106 |
| -0.073 | 0.133 | -0.075 | 0.133 | -0.055 | 0.134 | -0.056 | 0.134 |
| 0.002 | 0.050 | 0.016 | 0.049 | 0.009 | 0.049 | 0.008 | 0.050 |
| -0.052 | 0.050 | -0.065 | 0.050 | -0.050 | 0.050 | -0.061 | 0.050 |
| 0.001 | 0.049 | -0.006 | 0.049 | 0.006 | 0.049 | 0.000 | 0.049 |
| -0.071 | 0.067 | -0.080 | 0.067 | -0.073 | 0.067 | -0.085 | 0.066 |
| 0.000 | 0.001 | 0.000 | 0.001 | 0.000 | 0.001 | 0.000 | 0.001 |
| -0.003 | 0.002 | -0.003 | 0.002 | -0.003 | 0.002 | -0.004 | 0.002 |
| 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 0.002 | 0.014 | 0.002 | 0.014 | -0.003 | 0.014 | 0.000 | 0.014 |
| -0.002 | 0.001 | -0.002 | 0.001 | -0.002 | 0.001 | -0.002 | 0.001 |
| -0.032 | 0.030 | -0.024 | 0.029 | -0.023 | 0.029 | -0.028 | 0.029 |
| -0.013 | 0.012 | -0.012 | 0.012 | -0.010 | 0.013 | -0.011 | 0.012 |
| -0.118 | 0.077 | -0.110 | 0.076 | -0.106 | 0.077 | -0.109 | 0.076 |
| 0.070 | 0.059 | 0.080 | 0.058 | 0.096 * | 0.058 | 0.082 | 0.058 |
| 0.016 | 0.052 | 0.021 | 0.052 | 0.019 | 0.052 | 0.001 | 0.052 |
| -0.007 | 0.058 | 0.003 | 0.057 | 0.013 | 0.057 | -0.008 | 0.057 |
| -0.196 *** | 0.050 | -0.196 *** | 0.049 | -0.197 *** | 0.050 | -0.193 *** | 0.049 |
| -0.019 | 0.086 | -0.021 | 0.086 | -0.022 | 0.086 | -0.037 | 0.086 |
| -0.116 | 0.101 | -0.124 | 0.100 | -0.124 | 0.100 | -0.140 | 0.100 |
| 0.027 | 0.080 | 0.033 | 0.080 | 0.024 | 0.080 | 0.021 | 0.079 |
| -0.066 | 0.065 | -0.051 | 0.065 | -0.060 | 0.065 | -0.080 | 0.065 |
| -0.028 | 0.080 | -0.034 | 0.080 | -0.033 | 0.080 | -0.034 | 0.080 |
| -0.068 | 0.082 | -0.061 | 0.082 | -0.062 | 0.082 | -0.075 | 0.081 |
| -0.021 | 0.089 | -0.021 | 0.088 | -0.025 | 0.089 | -0.044 | 0.089 |
| 0.138 | 0.104 | 0.150 | 0.104 | 0.159 | 0.104 | 0.167 | 0.104 |
| -0.107 | 0.110 | -0.178 | 0.111 | -0.129 | 0.111 | -0.172 | 0.111 |
| | | | | | | | |
| -0.011 | 0.049 | | | | | | |
| 0.111 * | 0.063 | | | | | | |
| 0.098 ** | 0.050 | | | | | | |
| 0.076 * | 0.058 | | | | | | |
| | | 0.071 | 0.051 | | | | |
| | | -0.045 | 0.051 | | | | |
| | | 0.141 ** | 0.076 | | | | |
| | | 0.133 *** | 0.052 | | | | |
| | | | | 0.094 * | 0.052 | | |
| | | | | 0.054 | 0.049 | | |
| | | | | -0.003 | 0.055 | | |
| | | | | 0.101 ** | 0.053 | | |
| | | | | | | 0.055 | 0.052 |
| | | | | | | 0.009 | 0.067 |
| | | | | | | 0.127 *** | 0.049 |
| | | | | | | 0.143 *** | 0.050 |
| 1.949 *** | | 2.064 *** | | 1.932 *** | | 2.134 *** | |
| 0.089 | | 0.093 | | 0.088 | | 0.096 | |

“explanation of workplace rules” in the training function, “clarification of evaluation criteria” and “feedback of evaluation results” in the evaluation/treatment function and “improvement of working environment” and “information sharing” in other functions have a positive impact on their commitment to client firms. There was no variable having a significant impact in the temporary agencies’ human resource management.

The analysis result on the temporary agency workers’ commitment to temporary agencies is shown in Table 6. As entire human resource functions, both client firms’ and temporary agencies’ human resource managements have a significant positive impact on their commitment to temporary agencies. However, unlike commitment to client firms, temporary agencies’ human resource management has a greater impact on the workers’ commitment to temporary agencies. Focusing attention on the result of individual functions, in the procurement function, client firms’ “clarification of required human resources” and temporary agencies’ “provision of client firms’ information” and “asking hopes and experience” have a positive impact on their commitment to temporary agencies, while in the functions other than procurement, temporary agencies’ human resource management has a significant positive impact on their commitment to temporary agencies. Particularly, “education/training” and “career counseling” in the training function, “provision of employment opportunities” in the evaluation/treatment function and “complaint handling” and “welfare programs” in other functions have a positive impact on the workers’ commitment to temporary agencies. On the other hand, as client firms’ human resource management, “clarification of evaluation criteria” in the evaluation/treatment function has a significant positive impact.

As above, as entire human resource functions, human resource managements of client firms and temporary agencies have a significant positive impact on all types of willingness to work, and accordingly, both client firms’ and temporary agencies’ human resource managements are important in order to encourage temporary agency workers’ willingness to work.

However, the impact of client firms’ human resource management on willingness to work is different from that of temporary agencies’ one depending on the type of willingness to work. The importance of client firms’ human resource management is the same as that of temporary agencies’ one for willingness to work on a short-term basis such as work motivation, the importance of client firms’ human resource management is different from that of temporary agencies’ one for willingness to work on a long-term basis such as commitment to client firms or temporary agencies.

The impact of client firms’ and temporary agencies’ human resource managements on the willingness to work is also different depending on individual functions such as procurement, training and evaluation/treatment. In the procurement function, both client firms’ and temporary agencies’ human resource managements have a significant positive impact on all types of willingness to work, but in other functions, either one has a significant posi-

tive impact. Especially for willingness to work on a long-term basis, the impact of human resource managements such as training and evaluation/treatment differs.

At this point, I will point out some variables other than client firms' and temporary agencies' human resource managements, which have a significant impact on temporary agency workers' willingness to work. Among job characteristics variables, autonomous job dummy has a significant positive impact on their work motivation and commitment to client firms. Even in the white-collar jobs, to give temporary agency workers leeway to decide the job performance process, i.e., to decide how to work by themselves encourages their work motivation and commitment to client firms. Humdrum job dummy has no significant impact on their work motivation but has a significant negative impact on their commitment to client firms. Humdrum jobs seem to discourage workers' willingness to work continuously for the same client firms. In addition, the regular employee orientation dummy has a significant negative impact on commitment to client firms and temporary agencies. The more the temporary agency worker hopes to work as a regular employee, the lower the willingness to work continuously for the same client firm or through the same temporary agency becomes.

VI. Analysis Results of Divided Samples

Next, focusing attention on the type of temporary agency workers, I examined the impact of client firms' and temporary agencies' human resource managements on the willingness to work.

1. Skill Expertise

As a type of temporary agency workers, I focused on their skill expertise. Although it is indicated in the past studies that temporary agency workers with high degree of skill expertise are highly interested in the work contents and the expertise compared with those with low degree of expertise (Futagami 2002),¹⁸ since the workers' commitment to jobs and skills and long-term career development are different depending on the level of expertise, it is possible that the impact of client firms' human resource management is different from that of temporary agencies' one. In this paper, temporary agency workers' skill expertise is replaced with their jobs. Among white-collar jobs, trade office work, sales office work and accounting work are considered to require relatively higher expertise than general office work. Therefore, I divided samples into the general office work as a job with low degree of expertise and other jobs as with high degree of expertise, and conducted a multiple regression analysis in the same way.

Analysis results are shown in Table 7. Regarding work motivation, as entire human resource functions, both client firms' and temporary agencies' human resource managements

¹⁸ Futagami (2002) analyzed the commitment to jobs and organizations for Japan's registered agency workers. For recent studies on job attitudes and motivation of contingent workers including temporary agency workers and organizational commitment, see Connelly & Gallagher (2004).

Table 7. Impact of Client Firms' and Temporary Agencies' Human Resource Managements on the Willingness to Work—Skill Expertise

| | | | Work motivation | | | | Commitment to client firms | | | | Commitment to temporary agencies | | | |
|----------------------------------|--------------------|--|-----------------|----------------|---------------|----------------|----------------------------|----------------|---------------|----------------|----------------------------------|----------------|---------------|----------------|
| | | | High expertise | | Low expertise | | High expertise | | Low expertise | | High expertise | | Low expertise | |
| | | | Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error |
| Overall human resource functions | Client firms | | 0.102 *** | 0.043 | 0.061 ** | 0.029 | 0.077 *** | 0.035 | 0.156 *** | 0.021 | -0.029 | 0.031 | 0.050 *** | 0.019 |
| | Temporary agencies | | 0.036 * | 0.048 | 0.091 *** | 0.031 | 0.034 * | 0.038 | 0.018 | 0.022 | 0.097 *** | 0.034 | 0.072 *** | 0.020 |
| Value F | | | 1.358 * | | 2.384 *** | | 1.458 ** | | 4.561 *** | | 1.481 ** | | 2.017 *** | |
| R2 | | | 0.155 | | 0.132 | | 0.188 | | 0.225 | | 0.191 | | 0.114 | |
| Sample size | | | 278 | | 585 | | 278 | | 585 | | 278 | | 585 | |
| Procurement | Client firm | Clarification of work contents | 0.101 | 0.137 | -0.121 | 0.088 | 0.053 | 0.108 | 0.246 *** | 0.065 | -0.009 | 0.096 | -0.016 | 0.059 |
| | | Clarification of required human resources | 0.273 * | 0.161 | 0.309 *** | 0.119 | 0.338 *** | 0.128 | 0.212 ** | 0.089 | 0.307 *** | 0.113 | 0.009 | 0.080 |
| | Temporary agency | Provision of information on client firms | -0.009 | 0.132 | 0.152 * | 0.090 | -0.031 | 0.105 | 0.119 * | 0.067 | 0.064 | 0.093 | 0.146 ** | 0.060 |
| | | Interview on desire and experience | -0.010 | 0.164 | -0.017 | 0.104 | 0.118 | 0.130 | 0.125 * | 0.077 | 0.031 | 0.115 | 0.097 * | 0.069 |
| Training | Client firm | Explanation of business knowledge and know-how | 0.176 | 0.135 | 0.020 | 0.092 | 0.098 | 0.109 | 0.104 | 0.069 | 0.028 | 0.096 | 0.068 | 0.061 |
| | | Explanation of workplace rules | 0.214 * | 0.131 | 0.118 | 0.094 | 0.117 | 0.106 | 0.168 ** | 0.071 | -0.212 ** | 0.093 | 0.045 | 0.063 |
| | Temporary agency | Opportunities for education/training | 0.361 ** | 0.187 | 0.326 *** | 0.144 | -0.061 | 0.151 | 0.042 | 0.108 | 0.160 | 0.133 | 0.101 | 0.096 |
| | | Opportunities for career counseling | -0.133 | 0.149 | 0.086 | 0.095 | -0.219 * | 0.120 | -0.043 | 0.072 | 0.090 | 0.106 | 0.143 *** | 0.063 |
| Evaluation/treatment | Client firm | Clarification of evaluation criteria | 0.173 | 0.141 | 0.181 * | 0.096 | 0.007 | 0.112 | 0.391 *** | 0.070 | -0.126 | 0.100 | 0.183 *** | 0.064 |
| | | Feedback of evaluation results | 0.186 * | 0.134 | 0.058 | 0.088 | 0.033 | 0.106 | 0.124 ** | 0.065 | -0.041 | 0.095 | 0.076 | 0.058 |
| | Temporary agency | Wage management | 0.135 | 0.152 | 0.265 *** | 0.103 | 0.005 | 0.120 | 0.118 * | 0.075 | 0.053 | 0.108 | -0.032 | 0.068 |
| | | Provision of employment opportunities | 0.008 | 0.143 | -0.028 | 0.099 | 0.367 *** | 0.113 | -0.090 | 0.073 | 0.150 * | 0.101 | 0.083 | 0.066 |
| Others | Client firm | Improvement of work environment | 0.056 | 0.152 | 0.075 | 0.095 | -0.070 | 0.120 | 0.177 ** | 0.071 | -0.115 | 0.105 | 0.120 * | 0.063 |
| | | Information sharing | 0.089 | 0.213 | 0.063 | 0.116 | 0.346 ** | 0.168 | 0.106 | 0.087 | -0.019 | 0.148 | 0.001 | 0.077 |
| | Temporary agency | Complaint handling | 0.104 | 0.138 | 0.078 | 0.087 | 0.048 | 0.109 | 0.084 | 0.066 | 0.167 * | 0.096 | 0.120 ** | 0.058 |
| | | Welfare | -0.037 | 0.136 | 0.141 | 0.092 | 0.141 | 0.108 | -0.003 | 0.069 | 0.229 ** | 0.095 | 0.112 * | 0.061 |

Notes: 1. ***: $p < 0.01$, **: $0.01 < p < 0.05$, *: $0.05 < p < 0.1$.

2. Other than above, control variables shown in Table 4 are applied.

3. Analysis results of procurement, training, evaluation/treatment and others show results of the multiple regression analysis conducted by human resource functions.

have a significant positive impact on both samples. Both client firms' and temporary agencies' human resource managements are important in order to encourage the workers' work motivation.

Concerning commitment to client firms, as entire human resource functions, both client firms' and temporary agencies' human resource managements have a significant positive impact on samples with high degree of expertise, but only client firms' human resource management has a significant positive impact on samples with low degree of expertise. Although client firms' human resource management is important in order to encourage the temporary agency workers' commitment to client firms, temporary agencies' human resource management is also important for the workers with high degree of expertise.

As for commitment to temporary agencies, as entire human resource functions, both client firms' and temporary agencies' human resource managements have a significant positive impact on samples with low degree of expertise, but only temporary agencies' human resource management has a significant positive impact on samples with high degree of expertise. Temporary agencies' human resource management is important in order to encourage the temporary agency workers' commitment to temporary agencies, but client firms' human resource management is also important for the workers with low degree of expertise.

As above, the impact of client firms' human resource management on the willingness to work is different from that of temporary agencies' one depending on temporary agency workers' skill expertise. Although both client firms' and temporary agencies' human resource managements are important in order to encourage willingness to work on a short-term basis such as work motivation, in order to encourage willingness to work on a long-term basis such as commitment to client firms of temporary agencies, client firms' human resource management is important for temporary agency workers with high degree of expertise while temporary agencies' human resource management is important for those with low degree of expertise.¹⁹

2. Career Orientation

As another type of temporary agency workers, I focused on temporary agency workers' career orientation. The past studies (e.g., Sato [1998], etc.) indicate that temporary agency workers have labor orientation and career orientation such as job selection, balancing work and life and skill exercising which are different from regular employees' labor and career orientations. On the other hand, it is also pointed out that there are many temporary agency workers who wanted to work as regular employees but are forced to choose the way

¹⁹ Skill expertise may reflect temporary agency workers' working orientation and career orientation at the same time. Comparing samples of the general office work with those of work other than general office work, the career orientation used in this paper is job selection orientation (74.3% and 79.6%), work-life balance orientation (35.1% and 35.8%), skill exercising orientation (22.1% and 29.6%) and regular employee orientation (51.9% and 56.7%) respectively.

of working as temporary agency workers.²⁰ In this paper, focusing attention on regular employee orientation, I created divided samples on the basis of whether or not they want to work as regular employees and conducted the multiple regression analysis.

Analysis results are shown in Table 8. Regarding work motivation as entire human resource functions, both client firms' and temporary agencies' human resource managements have a significant positive impact on both samples. Both client firms' and temporary agencies' human resource managements are important in order to encourage the workers' work motivation.

Concerning commitment to client firms, as entire human resource functions, both client firms' and temporary agencies' human resource managements have a significant positive impact on samples with high degree of regular employee orientation, but only client firms' human resource management has a significant positive impact on samples with low degree of regular employee orientation.

In the same way, as for commitment to temporary agencies, as entire human resource functions, both client firms' and temporary agencies' human resource managements have a significant positive impact on samples with high degree of regular employee orientation, but only temporary agencies' human resource management has a significant positive impact on samples with low degree of regular employee orientation. Both client firms' and temporary agencies' human resource managements are important to encourage the willingness to work on a long-term basis of temporary agency workers with high degree of regular employee orientation.

As above, the impact of client firms' human resource management on the willingness to work is different from that of temporary agencies' one depending on temporary agency workers' career orientation. Both client firms' and temporary agencies' human resource managements are important in order to encourage the willingness to work on a short-term basis such as work motivation. Although either client firms' or temporary agencies' human resource management is important for temporary agency workers with low degree of regular employee orientation in order to encourage willingness to work on a long-term basis such as commitment to client firms or temporary agencies, both client firms' and temporary agencies' human resource managements are important for those with high degree of regular employee orientation.

VII. Additional Analysis

Next, as an additional analysis, I examined the impact of client firms' and temporary agencies' human resource managements taking up temporary agency workers' attitudes

²⁰ Many respondents answered "there was no company I could work as a regular employee." as the reason for working as temporary agency workers. As many as 39.6% (multiple answers) of respondents in "Survey on Diversification of Employment Patterns" of Ministry of Health, Labour and Welfare and 29.4% (multiple answers) in this survey have answered the same.

Table 8. Impact of Client Firms' and Temporary Agencies' Human Resource Managements on Willingness to Work—Career Orientation

| | | | Work motivation | | | | Commitment to client firms | | | | Commitment to temporary agencies | | | |
|----------------------------------|--------------------|--|--|----------------|---|----------------|--|----------------|---|----------------|--|----------------|---|----------------|
| | | | Degree of regular employee orientation: High | | Degree of regular employee orientation: Low | | Degree of regular employee orientation: High | | Degree of regular employee orientation: Low | | Degree of regular employee orientation: High | | Degree of regular employee orientation: Low | |
| | | | Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error | Coefficient | Standard error |
| Overall human resource functions | Client firms | | 0.072 ** | 0.032 | 0.089 *** | 0.037 | 0.141 *** | 0.024 | 0.117 *** | 0.027 | 0.036 * | 0.022 | 0.002 | 0.024 |
| | Temporary agencies | | 0.126 *** | 0.034 | 0.025 * | 0.039 | 0.038 * | 0.026 | 0.024 | 0.029 | 0.092 *** | 0.024 | 0.046 * | 0.026 |
| Value F | | | 1.875 *** | | 1.357 * | | 2.948 *** | | 2.524 *** | | 1.423 * | | 1.487 ** | |
| R2 | | | 0.152 | | 0.100 | | 0.211 | | 0.210 | | 0.114 | | 0.135 | |
| Sample size | | | 459 | | 400 | | 459 | | 400 | | 459 | | 400 | |
| Procurement | Client firm | Clarification of work contents | -0.119 | 0.098 | 0.082 | 0.113 | 0.222 *** | 0.075 | 0.096 | 0.084 | 0.023 | 0.068 | -0.069 | 0.073 |
| | | Clarification of required human resources | 0.455 *** | 0.127 | 0.147 | 0.146 | 0.315 *** | 0.097 | 0.149 | 0.108 | 0.077 | 0.089 | 0.134 | 0.095 |
| | Temporary agency | Provision of information on client firms | 0.079 | 0.101 | 0.080 | 0.113 | 0.166 ** | 0.077 | 0.037 | 0.084 | 0.203 *** | 0.071 | -0.026 | 0.073 |
| | | Interview on desire and experience | 0.229 ** | 0.116 | -0.245 * | 0.133 | 0.204 ** | 0.088 | 0.056 | 0.098 | 0.036 | 0.081 | 0.101 | 0.086 |
| Training | Client firm | Explanation of business knowledge and know-how | 0.122 | 0.104 | 0.016 | 0.116 | 0.103 | 0.081 | 0.112 | 0.086 | 0.018 | 0.073 | 0.114 | 0.075 |
| | | Explanation of workplace rules | 0.183 * | 0.106 | 0.095 | 0.115 | 0.229 *** | 0.083 | 0.069 | 0.084 | 0.008 | 0.075 | -0.123 * | 0.074 |
| | Temporary agency | Opportunities for education/training | 0.433 *** | 0.150 | 0.120 | 0.179 | -0.001 | 0.117 | 0.077 | 0.132 | 0.238 ** | 0.105 | -0.035 | 0.115 |
| | | Opportunities for career counseling | 0.136 | 0.107 | -0.032 | 0.121 | -0.105 | 0.084 | -0.066 | 0.089 | 0.085 | 0.075 | 0.153 ** | 0.077 |
| Evaluation/treatment | Client firm | Clarification of evaluation criteria | 0.176 * | 0.105 | 0.212 * | 0.122 | 0.223 *** | 0.081 | 0.301 *** | 0.090 | 0.046 | 0.072 | 0.124 * | 0.080 |
| | | Feedback of evaluation results | -0.021 | 0.100 | 0.254 ** | 0.110 | 0.140 ** | 0.077 | 0.079 | 0.081 | 0.167 ** | 0.069 | -0.082 | 0.072 |
| | Temporary agency | Wage management | 0.217 ** | 0.114 | 0.287 ** | 0.125 | -0.010 | 0.088 | 0.106 | 0.092 | 0.064 | 0.079 | -0.053 | 0.082 |
| | | Provision of employment opportunities | 0.055 | 0.112 | -0.088 | 0.122 | 0.036 | 0.086 | 0.135 | 0.090 | 0.103 * | 0.077 | 0.135 * | 0.080 |
| Others | Client firm | Improvement of work environment | 0.117 | 0.105 | 0.059 | 0.126 | 0.089 | 0.082 | 0.116 | 0.092 | 0.107 * | 0.073 | -0.082 | 0.081 |
| | | Information sharing | 0.036 | 0.138 | 0.104 | 0.154 | 0.109 | 0.107 | 0.249 ** | 0.113 | -0.045 | 0.095 | 0.104 | 0.099 |
| | Temporary agency | Complaint handling | 0.118 | 0.100 | 0.055 | 0.113 | 0.149 ** | 0.078 | -0.050 | 0.082 | 0.177 *** | 0.069 | 0.032 | 0.072 |
| | | Welfare | 0.281 *** | 0.103 | -0.131 | 0.115 | 0.048 | 0.080 | 0.024 | 0.084 | 0.107 * | 0.071 | 0.149 ** | 0.074 |

Notes: 1. ***: $p < 0.01$, **: $0.01 < p < 0.05$, *: $0.05 < p < 0.1$.

2. Other than above, control variables shown in Table 4 are applied.

3. Analysis results of procurement, training, evaluation/treatment and others show results of the multiple regression analysis conducted by human resource functions.

Table 9. Impact of Client Firms' and Temporary Agencies' Human Resource Managements on Temporary Agency Workers' Satisfaction

| | | | Satisfaction with the current way of working | | Future career outlook | |
|----------------------------------|--------------------|--|--|----------------|-----------------------|----------------|
| | | | Coefficient | Standard error | Coefficient | Standard error |
| Overall human resource functions | Client firms | | 0.151 *** | 0.067 | 0.048 * | 0.075 |
| | Temporary agencies | | 0.107 * | 0.068 | 0.171 *** | 0.078 |
| -2 log likelihood | | | 672.833 | | 548.907 | |
| Chi square | | | 99.636 *** | | 115.517 *** | |
| Pseudo R2 (Cox and Snell) | | | 0.136 | | 0.156 | |
| Procurement | Client firm | Clarification of work contents | 0.013 | 0.177 | 0.068 | 0.206 |
| | | Clarification of required human resources | 0.474 ** | 0.220 | 0.029 | 0.252 |
| | Temporary agency | Provision of information on client firms | 0.353 ** | 0.179 | 0.164 | 0.210 |
| Training | Client firm | Interview on desire and experience | 0.233 | 0.219 | -0.298 | 0.249 |
| | | Explanation of business knowledge and know-how | 0.098 | 0.187 | -0.006 | 0.217 |
| | Temporary agency | Explanation of workplace rules | 0.250 * | 0.187 | 0.140 | 0.220 |
| Evaluation/treatment | Client firm | Opportunities for education/training | 0.831 *** | 0.313 | 0.172 | 0.343 |
| | | Opportunities for career counseling | 0.081 | 0.188 | 0.635 *** | 0.219 |
| | Temporary agency | Clarification of evaluation criteria | 0.392 ** | 0.196 | -0.173 | 0.225 |
| Others | Client firm | Feedback of evaluation results | 0.203 | 0.175 | 0.637 *** | 0.209 |
| | | Wage management | -0.142 | 0.198 | 0.065 | 0.237 |
| | Temporary agency | Provision of employment opportunities | -0.223 | 0.194 | -0.455 ** | 0.232 |
| | Client firm | Improvement of work environment | 0.240 | 0.196 | 0.045 | 0.227 |
| | | Information sharing | -0.001 | 0.243 | -0.138 | 0.284 |
| | Temporary agency | Complaint handling | 0.218 | 0.175 | 0.550 *** | 0.208 |
| | Temporary agency | Welfare | 0.012 | 0.182 | 0.606 *** | 0.226 |

Notes: 1. N = 859.

2. ***: $p < 0.01$, **: $0.01 < p < 0.05$, *: $0.05 < p < 0.1$.

3. Other than above, control variables shown in Table 4 are applied.

4. Analysis results of procurement, training, evaluation/treatment and others show the results of logistic regression analysis conducted by human resource functions.

toward temporary agency work such as satisfaction with the current way of working and future career outlook. These attitudes toward work may not have a direct impact on temporary agency workers' productivity but are important indicators for workers. In order to develop a long-term career through temporary agency work, it would be necessary for workers to be satisfied with the current way of working and realize that the experience of temporary agency work is helpful for their future career.

As variables of attitudes toward temporary agency work, I used "satisfied with working as a temporary agency worker" (27.2%) for the satisfaction with the current way of working and "working as a temporary agency worker is helpful for career" (17.7%) for the future career outlook (percentage in parenthesis is the rate of "Yes"). These two variables are dummy variables (Yes = 1, No = 0). As an analysis method, I used the logistic regression analysis with these temporary agency workers' attitude variables as dependent variables, client firms' and temporary agencies' human resource managements as independent variables and individual characteristics and client firms' and temporary agencies' company characteristics as control variables.

Analysis results are shown in Table 9. Both client firms' and temporary agencies' human resource managements have a significant positive impact on the satisfaction with the current way of working and client firms' human resource management has a greater impact

than that of temporary agencies' one. Client firms' human resource management is more important in order to enhance the satisfaction with the current way of working.

On the other hand, both client firms' and temporary agencies' human resource managements have a significant positive impact on the future career outlook, but the temporary agencies' human resource management has a greater impact than that of client firms' one contrary to the current satisfaction. Temporary agencies' human resource management is more important in order to realize that temporary agency work is helpful for future career.

As above, both client firms' and temporary agencies' human resource managements have a significant positive impact on the satisfaction with the current way of working and future career outlook and client firms' human resource management has a greater impact on the current satisfaction and temporary agencies' human resource management has a greater impact on the future career outlook. It would appear that client firms' human resource management is more important for temporary agency workers to be satisfied with the current jobs and way of working, and temporary agencies' human resource management is more important to realize that temporary agency work is helpful for future career. It is indicated that temporary agencies' human resource management has a crucial role when temporary agency workers develop their long-term career.²¹

VIII. Conclusions

In this paper, I focused on the temporary agency workers' willingness to work and examined temporary agency workers' human resource management in an exploratory manner. Paying attention to employment structure characteristics of temporary agency work, i.e., separation of human resource functions, I sorted out client firms' and temporary agencies' human resource managements and statistically examined the impact of those human resource managements on willingness to work using data from questionnaire survey conducted by the Institute of Social Science, the University of Tokyo.

As the analysis results of this paper, the following six points can be pointed out:

1) Both client firms' and temporary agencies' human resource managements have a significant positive impact on the temporary agency workers' willingness to work. Client firms' and temporary agencies' human resource managements have a significant positive impact on not only willingness to work on a short-term basis, i.e., work motivation but also willingness to work on a long-term basis, i.e., commitment to client firms or temporary agencies. Both client firms' and temporary agencies' human resource managements are important in order to encourage willingness to work.

2) The impact of client firms' human resource management is different from that of

²¹ Sato (2006) cites creation of employment opportunities and career development support as social functions of temporary help service industry. Tsuchida (2004) picks up the conversion from temporary agency workers to regular employees from the viewpoint of legal policy and discusses on "employment placement dispatching."

temporary agencies' one depending on the type of willingness to work. The impact of client firms' human resource management is the same level of that of temporary agencies' one for the workers' work motivation, but client firms' human resource management has a greater impact on their commitment to client firms, and temporary agencies' human resource management has a greater impact on their commitment to temporary agencies. The importance of client firms' human resource management is the same as that of temporary agencies' one in order to encourage temporary agency workers' willingness to work on a short-term basis but is different from that of temporary agencies' one in order to encourage their willingness to work on a long-term basis.

3) The impact of client firms' human resource management is different from that of temporary agencies' one depending on individual functions such as procurement, training and evaluation/treatment. In the procurement function, both client firms' and temporary agencies' human resource managements have a significant positive impact on all types of willingness to work. As functions other than procurement, both client firms' and temporary agencies' human resource managements have a significant positive impact on the temporary agency workers' work motivation, but client firms' human resource management has a positive impact on their commitment to client firms and temporary agencies' human resource management has a positive impact on their commitment to temporary agencies. In the procurement function, the importance of client firms' human resource management is the same as that of temporary agencies' one, but in training and evaluation/treatment functions, it is different from the importance of temporary agencies' human resource management depending on the type of willingness to work.

4) The impact of client firms' human resource management is different from that of temporary agencies' one depending on temporary agency workers' skill expertise. Both client firms' and temporary agencies' human resource managements have a positive impact on their work motivation regardless of the expertise level. However, in case of temporary agency workers with high degree of expertise, temporary agencies' human resource management has a positive impact on their commitment to client firms or temporary agencies, and conversely, in case of those with low degree of expertise, client firms' human resource management has a positive impact on them. From a long-term standpoint, temporary agencies' human resource management is more important for temporary agency workers with high degree of expertise and client firms' human resource management is more important for those with low degree of expertise.

5) The impact of client firms' human resource management is different from that of temporary agencies' one depending on temporary agency workers' career orientation. Both client firms' and temporary agencies' human resource managements have a positive impact on their work motivation regardless of whether or not they are regular employee-oriented. However, in case of temporary agency workers with low degree of regular employee orientation, client firms' human resource management has a positive impact on their commitment to client firms and temporary agencies' human resource management has a positive impact

on their commitment to temporary agencies, while in case of those with high degree of regular employee orientation, both client firms' and temporary agencies' human resource managements have a positive impact on any type of willingness to work. From a long-term standpoint, both client firms' and temporary agencies' human resource managements are important for temporary agency workers who want to work as regular employees.

6) Both client firms' and temporary agencies' human resource managements have a significant positive impact on satisfaction with the current way of working and future career outlook. Client firms' human resource management has a greater impact on the current satisfaction with working as temporary agency workers, and temporary agencies' human resource management has a greater impact on the long-term outlook that temporary agency work is helpful for future career. Client firms' human resource management is more important for temporary agency workers to be satisfied with the way of working on temporary agency work and temporary agencies' human resource management is more important for a long-term career outlook.

IX. Implication and Future Issues

These analysis results indicate that although the human resource management of temporary agency work is separated into client firms and temporary agencies, temporary agency workers' willingness to work could be encouraged if client firms and temporary agencies would implement their limited human resource functions together. This tells that both client firms' and temporary agencies' human resource managements are necessary to encourage their willingness to work and raise the possibility of human resource management based on the inter-organizational relationship between them.

The human resource management on the basis of inter-organizational relationship is not the human resource management in which the internal labor market is used on the premise of a long-term employment relationship like regular employees (Morishima 2004) nor the use of human resources which leans on the external labor market based on a short-term spot contract like contract company workers or freelancers (Murata 2004; Shu 2006). It is a human resource management with procurement, training and evaluation/treatment functions on the basis of a long-term inter-organizational partnership between client firms and temporary agencies. In other words, it is an intermediate labor market built by client firms and temporary agencies. In the intermediate labor market under inter-organizational relationship, temporary agency workers can secure a long-term employment opportunities working on a short term basis repeatedly and client firms and temporary agencies can develop temporary agency workers' skills on a long term basis using them for short-term jobs. Client firms and temporary agencies can efficiently conduct human resource management through the process of procurement, training and evaluation/treatment by accumulating and organizing not only information on client firms' jobs and workplaces but also information on temporary agency workers' abilities, skills, performances and will-

ingness to work between the companies. Although this concept of human resource management based on inter-organizational relationship remains a matter of speculation, analysis results of this paper indicate that both client firms' and temporary agencies' human resource managements are necessary in order to encourage temporary agency workers' willingness to work and suggest the need to build a framework of human resource management on the basis of inter-organizational relationship between client firms and temporary agencies.²²

These suggestions seem to be natural when considering the structural characteristics of temporary agency work where the human resource management which should have been unified is now separated into client firms and temporary agencies. In fact, the bottom line is that the impact of client firms' human resource management is different from that of temporary agencies' one depending on the types of willingness to work and human resource functions. It is highly possible that many of past studies were very interested in particular systems and design of measures for human resource functions in considering human resource management which encourages temporary agency workers' willingness to work. The analysis results in this paper, however, tell that role-sharing viewpoint, i.e., which human resource management actor is in charge of human resource practices, is important as well as designing these practices. The framework which combines the human resource practices with the human resource management actors can be applied when considering role-sharing between the personnel department and the line manager for human resource management for employees such as regular employees and part-time workers. In addition, the viewpoint of role-sharing of human resource functions raises the possibility of cooperation between client firms and temporary agencies for human resource management of temporary agency work. These study subjects would become clear through a comparative analysis with engineering temporary agency work and temporary agency work in production sites which could not be used in this paper due to limited data and surveys of companies, i.e., client firms and temporary agencies.

²² The conventional discussions on intermediate labor market are, as it is called as "quasi-internal labor market", centered on staff deployment problems such as temporary transfer and employment transfer within the company group (e.g., Nagano (1995)). The human resource management and intermediate labor market on the basis of inter-organizational relationship suggested in this paper are based on the premise that the framework of human resource management including not only staff deployment but also human resource development and evaluation/treatment is built not exclusively within the company group.

Appendix Table: Basic Statistics of Variables Used for the Analysis

| | | N | Average | Standard deviation | Maximum | Minimum |
|---------------------------|--|-----|----------|--------------------|---------|---------|
| Willingness to work | Work motivation | 860 | 2.807 | 1.022 | 4 | 0 |
| | Commitment to client firms | 858 | 1.132 | 0.803 | 2 | 0 |
| | Commitment to temporary agencies | 849 | 1.206 | 0.696 | 2 | 0 |
| | Satisfaction with the current way of working | 859 | 0.272 | 0.445 | 1 | 0 |
| | Future career outlook | 859 | 0.177 | 0.382 | 1 | 0 |
| Individual attributes | Age | 857 | 32.650 | 5.431 | 55 | 21 |
| | Career college graduates | 862 | 0.155 | 0.363 | 1 | 0 |
| | Technical and junior college graduates | 862 | 0.335 | 0.472 | 1 | 0 |
| | Undergraduate and graduate school graduates | 862 | 0.335 | 0.472 | 1 | 0 |
| | With spouse (Yes = 1) | 858 | 0.260 | 0.439 | 1 | 0 |
| | With child(ren) (Yes = 1) | 858 | 0.059 | 0.237 | 1 | 0 |
| | With relative(s) living together (Yes = 1) | 858 | 0.490 | 0.500 | 1 | 0 |
| | Person responsible for household budget (Myself = 1, Others = 0) | 859 | 0.353 | 0.478 | 1 | 0 |
| | Sales office work | 863 | 0.152 | 0.359 | 1 | 0 |
| | Accounting work | 863 | 0.072 | 0.258 | 1 | 0 |
| | Trading office work | 863 | 0.058 | 0.234 | 1 | 0 |
| | Finance office work | 863 | 0.041 | 0.197 | 1 | 0 |
| | Autonomous job | 863 | 0.504 | 0.500 | 1 | 0 |
| | Subsidiary job | 863 | 0.503 | 0.500 | 1 | 0 |
| | Humdrum job | 863 | 0.402 | 0.491 | 1 | 0 |
| | Working days a week | 861 | 4.934 | 0.375 | 5 | 1 |
| | Working minutes a day | 850 | 444.678 | 39.507 | 480 | 60 |
| | Monthly overtime hours | 858 | 9.098 | 10.199 | 70 | 0 |
| | Working period as temporary agency worker (months) | 849 | 53.041 | 44.459 | 300 | 1 |
| | Number of client firms worked | 850 | 2.951 | 2.538 | 30 | 1 |
| | Working period in the current temporary agency (months) | 859 | 25.685 | 26.918 | 216 | 1 |
| | Number of temporary agencies employed | 844 | 1.664 | 0.966 | 7 | 1 |
| | Registered year in the current temporary agency | 850 | 2001.524 | 3.596 | 2005 | 1978 |
| | Work experience as a regular employee (Yes = 1) | 841 | 0.880 | 0.325 | 1 | 0 |
| | Job selection orientation | 858 | 0.760 | 0.427 | 1 | 0 |
| | Work-life balance orientation | 858 | 0.353 | 0.478 | 1 | 0 |
| | Skill exercising orientation | 858 | 0.245 | 0.430 | 1 | 0 |
| | Regular employee orientation | 859 | 0.534 | 0.499 | 1 | 0 |
| Client firms | 100 employees or more | 842 | 0.227 | 0.419 | 1 | 0 |
| | 300 employees or more | 842 | 0.122 | 0.328 | 1 | 0 |
| | 1,000 employees or more | 842 | 0.529 | 0.499 | 1 | 0 |
| | Manufacturing | 841 | 0.290 | 0.454 | 1 | 0 |
| | Information and telecommunication | 841 | 0.130 | 0.336 | 1 | 0 |
| | Wholesale and retail | 841 | 0.136 | 0.343 | 1 | 0 |
| Temporary agencies | Finance and insurance | 841 | 0.138 | 0.345 | 1 | 0 |
| | Company size (major = 1, medium or smaller = 0) | 863 | 0.664 | 0.473 | 1 | 0 |
| Human resource management | Capital pattern (independent = 1, capital = 0) | 863 | 0.721 | 0.449 | 1 | 0 |
| | Overall Client firm | 825 | 4.530 | 1.544 | 8 | 0 |
| Procurement | Temporary agency | 799 | 4.733 | 1.541 | 8 | 1 |
| | Client firm | 863 | 0.477 | 0.500 | 1 | 0 |
| | Clarification of work contents | 853 | 0.181 | 0.385 | 1 | 0 |
| | Temporary agency | 839 | 0.472 | 0.500 | 1 | 0 |
| | Provision of information on client firms | 854 | 0.753 | 0.432 | 1 | 0 |
| | Interview on desire and experience | 854 | 0.753 | 0.432 | 1 | 0 |
| | Client firm | 859 | 0.600 | 0.490 | 1 | 0 |
| | Explanation of business knowledge and know-how | 861 | 0.580 | 0.494 | 1 | 0 |
| | Temporary agency | 847 | 0.874 | 0.332 | 1 | 0 |
| | Explanation of workplace rules | 847 | 0.398 | 0.490 | 1 | 0 |
| | Opportunities for career counseling | 847 | 0.398 | 0.490 | 1 | 0 |
| | Client firm | 843 | 0.696 | 0.460 | 1 | 0 |
| | Clarification of evaluation criteria | 851 | 0.467 | 0.499 | 1 | 0 |
| | Feedback of evaluation results | 851 | 0.467 | 0.499 | 1 | 0 |
| | Temporary agency | 836 | 0.663 | 0.473 | 1 | 0 |
| | Wage management | 863 | 0.482 | 0.500 | 1 | 0 |
| | Provision of employment opportunities | 863 | 0.482 | 0.500 | 1 | 0 |
| Others | Client firm | 863 | 0.685 | 0.465 | 1 | 0 |
| | Improvement of work environment | 863 | 0.845 | 0.362 | 1 | 0 |
| | Information sharing | 863 | 0.845 | 0.362 | 1 | 0 |
| Evaluation/treatment | Client firm | 859 | 0.437 | 0.496 | 1 | 0 |
| | Complaint handling | 847 | 0.621 | 0.485 | 1 | 0 |
| Welfare | Temporary agency | 847 | 0.621 | 0.485 | 1 | 0 |
| | Welfare | 847 | 0.621 | 0.485 | 1 | 0 |

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Career Formation and Utilization of Temporary Agency Workers

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There is a possibility that white-collar temporary agency workers have been core workforce recently due to relaxation of the Worker Dispatching Act, lowering of dispatching fees, increase in the number of highly-educated temporary agency workers, etc. Therefore, this paper analyzed (i) the extent to which utilization of temporary agency workers has progressed and (ii) whether or not skills are developed and utilization progresses by developing career as temporary agency work. Regarding (i), it became clear that temporary agency workers have been core workforce to a large extent at white-collar workplaces. Regarding (ii), the longer the experience as temporary agency workers becomes, the more their skills are developed regardless of “fixed-type” workers who work for one company only or “transverse-type” workers who work from company to company in the short term. However, fixed-type workers show a higher degree of this tendency than transverse-type ones due to the difference of business formation between them. Therefore, it is necessary for developing skills of transverse-type temporary agency workers to select user firms so that a wide range of skills can be developed.

I. Introduction—Why We Are Concerned with Utilization of Temporary Agency Workers

1. Debate about Temporary Agency Work

Temporary agency work has been legally recognized for 24 years in Japan and the number of temporary agency workers has increased significantly during this time. Especially this tendency has been remarkable since the late 1990s. According to “Worker Dispatch Business Report” of the Ministry of Health, Labour and Welfare, the number of temporary agency workers was about 860 thousand in 1996 and reached about 3.81 million in 2007; it has increased more than fourfold during the past decade.

What is temporary agency work which is of increasing importance in the labor market? There are two opposing points of view. One point of view positively evaluates that it increases options of job opportunities and provides “flexible way of working” while sense of labor has changed. Another point of view, however, negatively evaluates it as “involuntary way of working,” saying that temporary agency work provides unstable employment, poor working conditions such as low wage and many low-skilled occupations, and therefore, it is not good employment format.¹

In addition, regarding temporary agency workers’ way of working, there is debate about how to utilize temporary agency workers by user firms. In particular, the issue be-

¹ For “flexible way of working,” see Furugohri (2002) and Hiroki Sato (1998). Wakita (2001a, 2001b) is one of the leading figures who ask for protection of temporary agency workers defining temporary agency work as “involuntary way of working.”

comes whether temporary agency workers or standard general-staff workers (hereinafter referred to as general-staff workers) who are utilized by user firms. Based on the fact that before temporary agency work emerged, female general-staff workers were in charge of many jobs such as filing and handling of office automation equipment in which the current temporary agency workers are in charge of, temporary agency workers as substitutes for general-staff workers as well as expansion of temporary agency work have been discussed.²

According to past findings, there are two opposing points of view. One is that since general-staff worker is just a subsidiary workforce and in charge of jobs which do not require any high knowledge or skills, skills would not be developed even if he or she gains experience.

On the other hand, another point of view has been actively studied in recent years and it has been pointed out that general-staff workers' jobs are not only routine tasks but are highly advanced (Asami 2001; Senda 2000). If general-staff workers' jobs are highly advanced, who will be in charge of conventional general-staff workers' jobs? Senda clarified that 30 % of conventional general-staff workers' jobs have been shifted to temporary agency workers giving an example of a major trading firm. That is, the reason why general-staff workers' jobs are highly advanced is because about 30 % of career-track workers' jobs and general-staff workers' jobs have been shifted to general-staff workers and temporary agency workers respectively, and Senda says that this situation has also increased the level of temporary agency workers' jobs at the same time.

On the other hand, Wakisaka (1996) argues that strong workforce as substitutes for general-staff workers is not temporary agency workers but part-time workers. The basis for his argument is that under current dispatching system,³ temporary agency workers are replaced with other ones shortly and users have to tell those new comers how to work there each single time, but costs of temporary agency workers are high and are inadequate for substitutes for general-staff workers. Regarding substitute relations between general-staff workers and temporary agency workers, Abe (2001) argues that many of general-staff workers' jobs are non-routine tasks and highly advanced and some user firms are successful in utilization of temporary agency workers but some have failed in it. He also points out the problem that many of companies have promoted outsourcing of jobs by utilization of temporary agency workers, etc. ignoring that there is no training system in the external labor market.⁴

² For companies and flexible organization strategy, see Atsushi Sato (2003).

³ Wakisaka discusses in his paper based on the system of the Worker Dispatching Act in 1996 that whether temporary agency workers can be substituted for general-staff workers or not depends on "future revision of the Worker Dispatching Act."

⁴ Atsushi Sato (2001) and Hara (2003) discuss substitute for regular employees. Although they analyzed whether non-standard work is a substitute or supplement, they did not focus on temporary agency work and even Hara excluded temporary agency work from her analysis.

2. Desired Revaluation of Temporary Agency Workers—Possibility of the Utilization of Temporary Agency Workers

As above, temporary agency workers' way of working has been discussed from the perspective of substitute relations between general-staff workers and temporary agency workers, but a concrete conclusion on this point has not been made yet. Therefore, experimental studies are required to clarify detailed job descriptions of temporary agency workers, but studies from this viewpoint have not been conducted.⁵ Behind this background, it may be widely-recognized that "temporary agency workers' jobs are routine tasks which can be compiled in a manual." In fact, most of temporary agency workers' jobs in the past studies are routine tasks.⁶

However, the view that temporary agency work is routine task should be reconsidered because it is possible that temporary agency work is highly advanced based on the recent changes in the situation. There are three major changes as follows:

⁵ The past research studies on work contents of temporary agency work are roughly divided into the following three. One is a survey on work contents from the viewpoint of substitute for general-staff worker, and this was discussed in this paper. Second is a survey on user firms from the viewpoint of businesses. "Worker Dispatch Report" (Ministry of Health, Labour and Welfare) is a typical one. However, obtained information is just compositions of temporary agency work such as "filing," "operation of business equipment" and "preparation of trade documents" and particular work contents that temporary agency workers are in charge of in user firms are unknown. Third is a survey on work contents clarified by questionnaire survey for individual temporary agency workers. "Actual Conditions Result on Temporary Agency Workers" (Japanese Electrical Electronic and Information Union) is a typical one. Since work contents were surveyed from the viewpoint that "the extent to which temporary agency workers are in charge of jobs equal to regular employees," the survey just clarified that "many of registered agency workers are assigned to main jobs equal to regular employees." Regarding contract and temporary agency works for manufacturing, surveys such as "Actual Condition Survey on Contract Work for Manufacturing" (Ministry of Health, Labour and Welfare 2002), Institute of Social Science (the University of Tokyo 2005) and Hiroki Saito (2001) have been accumulated recently. Especially the survey conducted by Institute of Social Science of the University of Tokyo is valuable: it clarified that the longer the young contract and temporary agency workers work, the more the number of experienced manufacturing-related jobs increases. However, these survey results were limited to manufacturing jobs and there is no research analyzing detailed work contents of white-collar temporary agency work which makes up the largest number of current temporary agency works. Regarding foreign papers, EIRO (1999) is a typical foreign research on temporary agency work. It surveyed actual conditions of temporary agency work in Europe. It has surveyed existence or nonexistence of collective bargaining in countries and made international comparisons such as situations of social security and regulatory frameworks. Those will also be important issues for temporary agency work in Japan, but are not quoted in this paper since points of argument are individual career and utilization. Attention is focused on Houseman (2001) and (Houseman, Kalleberg, and Erickgek 2003), paper on temporary agency work. Particularly as paper focusing on assignment of temporary agency work, Houseman (2003) clarified the reason why employers used temporary agency workers in tight labor market in the United States in the 1990s with case studies of hospitals and auto parts manufacturing. Although it analyzed work contents dividing into "high-skill" and "low-skill," their assignment and career were little described.

⁶ Although Abe (2001), Senda (2000), etc. argued that partial jobs of general-staff workers have been shifted to temporary agency work, the work contents were regarded as miscellaneous duties or routine tasks which cannot be automated.

Firstly, the Worker Dispatching Act (Act for Securing the Proper Operation of Worker Dispatching Undertakings and Improved Working Conditions for Dispatched Workers) was relaxed. As Wakisaka (1996) argued, under the conventional Worker Dispatching Act, utilization of temporary agency workers was difficult. However, taking advantage of the occasion that the restriction of jobs which are allowed to use temporary agency workers was abolished by the relaxation of the Worker Dispatching Act in 1999, the market of temporary agency workers has been greatly expanded. In addition, three-year-limitation of dispatching period was abolished by the relaxation of regulations in 2005. This enables user firms to utilize temporary agency workers for a long time establishing a foundation to utilize them as core workforce. Therefore, they may be utilized for more advanced and important jobs.

Secondly, dispatching fees lowered. Although temporary agency work was considered to be relatively expensive before, the fees are lowering due to recent expansion of human resources business markets and increase in the number of temporary agency workers. It is expected that temporary agency workers are utilized for more jobs than before based on the movement that companies are making labor cost as variable one.⁷

Thirdly, conditions of the supply side which promotes the utilization of temporary agency workers are being improved. One of the reasons may be increased number of professional temporary agency workers who have experienced temporary agency work for a long time, over 20 years have passed after the enforcement of the Worker Dispatching Act.⁸ Another reason may be increased number of highly-educated temporary agency workers. Although there are no accurate data about this, many of highly-educated women have selected temporary agency work as an alternative way of working due to hiring slump caused by recession or changing attitude toward work.

Given such changing situations, it is highly possible that temporary agency work has been highly advanced. That is, it is possible that “utilization” in which temporary agency workers are in charge of “highly advanced core jobs” has progressed beyond “substitutes for general-staff workers,” which means that they are in charge of “routine tasks in which general-staff workers were engaged” discussed in the past studies. The definition of utilization will be described in detail later. This paper considers the extent to which temporary agency workers are in charge of highly advanced jobs from the perspective of “utilization of temporary agency work” and clarifies the following two points based on the interview survey conducted by the author:

⁷ Other than Worker Dispatch Report, Yokoyama (2005) made an analysis on wages of temporary agency workers.

⁸ At this time, “Actual Condition Survey on Career Development of Youth” (Mitsubishi-UFJ Research & Consulting 2003) is data to understand total period of individual temporary agency work. According to this, average total period of temporary agency work is 34 months. By period of temporary agency work, the most common period is 25 to 36 months (24.0%), the second most one is 13 to 24 months (22.7%) and the third most one is 61 months or longer (16.0%). That is, while the number of workers entering into the market of temporary agency work has increased recently, the number of workers working for a long time has also increased.

The first point is “to what extent utilization of temporary agency workers has progressed.” Regarding this point, the extent to which temporary agency workers have been core workforce at white-collar workplaces in companies will be clarified using an index to measure the utilization level made by the author.

Secondly, based on the above, “whether or not skills are developed and utilization progresses by developing career as temporary agency worker” will be clarified. In the past studies, it was tacitly considered that developing skills while working as a temporary agency worker is almost impossible based on the recognition that temporary agency workers are replaced shortly and in charge of routine tasks only. Based on above recent changes in objective circumstances, however, it is significant to consider whether there may be a possibility to develop skills while working as temporary agency worker, and if it is possible, how it affects the utilization of temporary agency work. Furthermore, if this is the case, it would be a significant finding to enable us to take measures to complement “weakness of training function” which has been pointed out as a disadvantage of temporary agency work.

3. Outline of Survey Method and Respondents

To clarify above points, an interview survey of temporary agency workers was conducted. This survey was conducted from May to August 2002 mainly for temporary agency workers in the Tokyo metropolitan area. It took about 90 minutes for the interview per capita. The number of surveyed temporary agency workers was 51.⁹ Since this survey was mainly conducted for general white-collar registered temporary agency workers, “part-time temporary workers”¹⁰ who were often utilized for banks, etc. were not included in the analysis. Interviews were conducted on: (i) individual attribute (academic background, marriage status, etc.), (ii) work experience as a temporary agency worker (job contents at workplace, how his/her skills were developed, period of temporary agency work experience, the number of user firms, etc.), (iii) property of the temporary agency in which he/she is currently registered (in the case where the user firm and the temporary agency are in a same business group [hereinafter referred to as “in-group dispatching”], and the case where he/she is registered in an independent temporary agency [hereinafter referred to as “inde-

⁹ 51 samples were collected by asking persons in charge of personnel transfer and purchasing in manufacturing, trade and service industries to introduce temporary agency workers of preferably different departments and persons of temporary agencies to introduce their own temporary agency workers. To clarify “career and utilization of temporary agency work,” the first priority was to obtain cooperation of temporary agency workers as many as possible this time. Therefore, interview survey for user firms was difficult and passed. The next issue is to survey user firms’ information and actual conditions on utilization.

¹⁰ Bank branches recruit part-time workers and register them with a temporary agency of their own group after hiring. Only their employment status is of temporary agency workers. Since they are in the older age group and work shorter hours per day compared to general registered agency workers being differentiated themselves from their counterparts in many ways, they were excluded from this survey. In this survey, three persons are employed agency workers and rest of the 48 persons are registered agency workers.

pendent dispatching”], etc.) and (iv) property of user firms (industry, department, etc.).

Characteristics of analyzed temporary agency workers are: sex (female 98.0% and male 2.0%), average age (29.0 years old), and marriage status (married 19.6% and unmarried 80.4%). Property of temporary agencies in which interviewed persons are registered is: in-group dispatching 19.6% and independent dispatching 80.4%. Academic backgrounds of analyzed temporary workers are: college graduates 56.9%, junior college/career college graduates 23.5% and high-school graduates 19.6%. Industries of user firms are: both “wholesale, retail and restaurant businesses” and “information service, service and education businesses” account for 31.4% respectively, “manufacturing” 23.5% and “finance, insurance and real estate” 13.7%. Current departments of user firms are: administrative offices 43.1%, sales offices 31.4% and other office duties (office center, SE, sales and reception) 23.5%.

II. Utilization and Current Status of Temporary Agency Workers

1. Individual Utilization

In order to analyze utilization of temporary agency workers, it is important how to define and how to measure the utilization. Much of the debate about utilization of non-standard workers has been revolved around that of part-time workers. However, the concepts and standards are varied. There are two major concepts, “qualitative utilization” and “quantitative utilization.” Especially it is difficult to establish criteria for qualitative utilization, some of which are: “degree of confidence and degree to which temporary agency workers are allowed to influence key decisions” (Kobayashi 2000), “method to make closeness to or substitute for jobs of regular employees as a proxy indicator” (Honda 1993, 2001), “the case where a temporary agency worker works for a job which is virtually identical to that of a regular employee with little career, or he/she was originally introduced as a substitute for a female regular employee but only part-time workers are working now” (Nakamura 1990) and “either case of engaging in (i) administrative work, (ii) coaching work or (iii) work with judgment” (Takeishi 2006).

This paper considers utilization from two aspects, “individual utilization” which shows utilization at individual level and “collective utilization” which shows utilization at workplace level. Firstly, individual utilization is explained.¹¹

Definition of individual “utilization” is that individual temporary agency worker is “in charge of core tasks at workplace” and “utilization level” means the degree of utilization. Therefore, in order to measure the utilization level, it is necessary to analyze jobs of temporary agency workers and clarify how much core tasks are included in them. As a measure of the degree, difficulty levels of office work are set up as shown in Table 1. Work with a high

¹¹ In this survey, levels of individual and collective utilizations were determined by the temporary agency workers themselves during the interview after explaining the definitions and gaining understanding.

Table 1. Utilization Indicators for Temporary Agency Work

| Utilization indicators | Standard | Level |
|-------------------------------|---|--|
| Individual utilization | Work contents | Level 1 Accessory service Level 2 Arrangement/procedure operations Level 3 Non-routine task associated with judgment such as negotiation, adjustment and response |
| Collective utilization | Situation of work sharing between regular employees and temporary agency workers at workplace | Level 1 Temporary agency workers engage in assistant work which is completely different from regular employees' work. Level 2 Temporary agency workers engage in work which is similar to, but is basically separated from regular employees' work. Level 3 Temporary agency workers engage in work which is completely same as regular employees' work. |

difficulty level is regarded as core task, i.e., the utilization level is high when a temporary agency worker is in charge of work with a high difficulty level.¹² In particular, the levels of difficulty are: Level 1 for “accessory service,” Level 2 for “arrangement/procedure operations” and Level 3 for “non-routine tasks with judgment such as negotiation, adjustment and response.” The levels of job contents above are based on Asami’s findings (Asami 2001).

To explain those difficulty levels with an example of sales office work for placing an order, the difficulty level is: Level 1 for data entry operations for products, Level 2 for answering calls from customers and taking necessary procedures for orders and Level 3 for responding to inquiries about delivery date and products from customers as well as tasks of Level 2. The utilization level obtained by this method shall be “individual utilization.”¹³

The current status of individual utilization for temporary agency workers using above indicators (see Table 2), consists of Level 1 “accessory service” 25.5%, Level 2 “arrangement/procedure operations” 45.1% and Level 3 “non-routine tasks” 27.5%. Overall average point of individual utilization is 2.0, i.e., Level 2 on an average. Therefore, the current status of individual utilization is “arrangement/procedure” level. In addition, Level 3 in which temporary agency workers can be completely substituted for regular employees reaches 27.5%, i.e., nearly 30% of temporary agency workers engage in work equivalent to that of regular employees.

Looking at the individual utilization in the context of properties of temporary agencies

¹² Utilization levels were also measured by measuring job difficulty levels with rate of participation in meetings and time for business transfer. However, since white-collar regular employees may not participate in meetings depending on workplace and time for business transfer can be shortened if the temporary agency work is excellent, they were judged as unstable indicators and excluded from this analysis.

¹³ Asami’s difficulty levels of white-collar workplace are classified into six stages including office work, expert office work and sales. Average white-collar worker is mainly in charge of Level 1 “accessory miscellaneous duties” and Level 2 “arrangement/procedures” in both office work and expert office work. Above-average personnel has achieved Level 3 even among white-collar regular employees. Level 1 to 3 were used as utilization indicators this time.

Table 2. Indicators for Individual Utilization and Properties of Temporary Agencies and User Firms

| | | | Level 1 (%) | Level 2 (%) | Level 3 (%) | Unknown (%) | Score of individual utilization (points) | Total (persons) |
|--------------------------------|-------------------------|--|-------------|-------------|-------------|-------------|--|-----------------|
| Total | | | 25.5 (26.0) | 45.1 (46.0) | 27.5 (28.0) | 2.0 | 2.0 | 51 |
| Property of temporary agencies | Management properties | In-group dispatching | 30.0 | 50.0 | 20.0 | 0.0 | 1.9 | 10 |
| | | Independent dispatching | 24.4 | 43.9 | 29.3 | 2.4 | 2.1 | 41 |
| Properties of user firms | Industry of user firms | Manufacturing | 0.0 | 41.7 | 50.0 | 8.3 | 2.5 | 12 |
| | | Finance, insurance and real estate | 28.6 | 57.1 | 14.3 | 0.0 | 1.9 | 7 |
| | | Wholesale, retail and restaurant services | 37.5 | 37.5 | 25.0 | 0.0 | 1.9 | 16 |
| | | Information service, service and education | 31.3 | 50.0 | 18.8 | 0.0 | 1.9 | 16 |
| | Department in user firm | Sales office work | 43.8 | 50.0 | 6.3 | 0.0 | 1.6 | 16 |
| | | Administrative office work | 9.1 | 50.0 | 40.9 | 0.0 | 2.3 | 22 |
| | | Other office work (work center, SE, sales/reception) | 33.3 | 33.3 | 33.3 | 0.0 | 2.0 | 12 |

- Notes: 1. Degree of individual utilization shall be: Level 1 for accessory service, Level 2 for arrangement/procedure operation and Level 3 for non-routine task with judgment such as negotiation, adjustment and response.
2. Scores of individual utilization are calculated by the formula: $([Level\ 1] \times 1 + [Level\ 2] \times 2 + [Level\ 3] \times 3) / (100 - \text{Unknown})$.
3. Figure in parenthesis in Total column is a ratio calculated by excluding Unknown.
4. One case in which user department is unknown is excluded from the table.

and user firms, the flowing characteristics are discovered (see Table 2).¹⁴

- (i) Looking at temporary agencies' properties, the utilization of independent dispatching has progressed more than that of in-group dispatching.
- (ii) Among user firms, the utilization has progressed more in manufacturing industry.
- (iii) From the viewpoint of relationship with user departments, the utilization has progressed more in administrative work.

2. Collective Utilization

Collective utilization indicates "to what extent temporary agency workers are in charge of core tasks collectively at workplace," and in this section it is reviewed from the viewpoint of work sharing between regular employees and temporary agency workers at workplace. Indicators prepared are: Level 1 when "temporary agency workers engage in assistant work which is completely different from regular employees' work," Level 2 when "temporary agency workers engage in work which is similar to, but is basically separated from regular employees' work" and Level 3 when "temporary agency workers engage in work which is completely same as regular employees' work" (see Table 1). The indicators regarding the way of work sharing with regular employees shall be called as "collective

¹⁴ The relationship between management properties, industries, departments and utilization is not a representative result but introduces survey conditions only. Since the sample size is too small to clarify the relationship between them, they were not analyzed more than necessary.

Table 3. Degree of Collective Utilization and Properties of Temporary Agencies and User Firms

| | | | Level 1 (%) | Level 2 (%) | Level 3 (%) | Unknown (%) | Score of collective utilization (points) | Total (persons) |
|--------------------------------|--------------------------------|--|-------------|-------------|-------------|-------------|--|-----------------|
| Total | | | 17.6 (24.3) | 21.6 (29.8) | 33.3 (45.9) | 27.5 — | 2.2 | 51 |
| Property of temporary agencies | Management properties | In-group dispatching | 20.0 | 10.0 | 20.0 | 50.0 | 2.0 | 10 |
| | | Independent dispatching | 17.1 | 24.4 | 36.6 | 22.0 | 2.3 | 41 |
| Properties of user firms | Industry of current user firms | Manufacturing | 16.7 | 33.3 | 50.0 | 0.0 | 2.3 | 12 |
| | | Finance, insurance and real estate | 14.3 | 14.3 | 42.9 | 28.6 | 2.4 | 7 |
| | | Wholesale, retail and restaurant services | 25.0 | 25.0 | 37.5 | 12.5 | 2.1 | 16 |
| | | Information service, service and education | 12.5 | 12.5 | 12.5 | 62.5 | 2.0 | 16 |
| | Current department | Sales office work | 18.8 | 25 | 43.8 | 12.5 | 2.3 | 16 |
| | | Administrative office work | 4.5 | 22.7 | 36.4 | 36.4 | 2.5 | 22 |
| | | Other office work (work center, SE, sales/reception) | 41.7 | 8.3 | 16.7 | 33.3 | 1.6 | 12 |

Notes: 1. “Share” shall be Level 1 when temporary agency workers engage in assistant work which is completely different from regular employees’ work, Level 2 when temporary agency workers engage in work which is similar to, but is basically separated from regular employees’ work and Level 3 when temporary agency workers engage in work which is completely same as regular employees’ work.

2. Scores of collective utilization are calculated by the formula: $([\text{Level 1}] \times 1 + [\text{Level 2}] \times 2 + [\text{Level 3}] \times 3) / (100 - \text{Unknown})$

3. Figure in parenthesis in Total column is a ratio calculated by excluding Unknown.

4. One case in which the department is unknown is excluded from the table.

utilization level” hereinafter. The higher the figure is, the more advanced work they are sharing with regular employees.

As shown in Table 3, the current collective utilization level excluding 14 unknown cases is that Level 1 (completely different work from regular employees) accounts for 24.3%, Level 2 (similar to work of regular employees) accounts for 29.8% and Level 3 (completely same as work of regular employees) accounts for 45.9%, and the average of collective utilization is 2.2 points. It is found that work of temporary agency workers is completely same as that of regular employees at nearly half of the workplaces and therefore, temporary agency workers have been important core taskforce at white-collar workplaces.

There can be found following characteristics in terms of properties of temporary agencies and user firms (see Table 3).

- (i) Looking at temporary agencies’ properties, the utilization of independent dispatching has progressed more than that of in-group dispatching.
- (ii) Among user firms, utilization has progressed more in finance, insurance and real estate industries.
- (iii) In relation to departments in user firms, the utilization has progressed more in administrative work of departments such as secretary, general affairs and purchasing.

The results of above individual and collective utilizations show characteristics in

common that both indicators reveal that the utilization of independent dispatching has progressed more than that of in-group dispatching among registered temporary agencies and the utilization has progressed more in administrative work in the dispatched department.

III. Career and Utilization of Temporary Agency Workers

1. Classification of Temporary Agency Workers by Career Development

Up to now, current utilization of temporary agency workers has been analyzed. Then what is the factor to facilitate utilization? The focus will be placed on individual utilization in this section. As described above, the major concern of this paper is whether or not it is possible to get experience as a temporary agency worker and develop his/her career resulting in boosting individual utilization, and the relationship between individual utilization and career development will be closely examined here.

Initially, assuming that “career development” is to develop skills through job experience as temporary agency workers, three facets of career development are clarified as follows: Firstly, it is the way of getting job experience. Temporary agency workers’ career development can be classified into two types, “fixed-type career development achieved in a specific company” and “transverse-type career development achieved in several companies.” That is, they are classified by how to develop career, working for a specific company for a long time or going from one company to another. In particular, they are classified by the number of experienced user firms, one or more than one; the former shall be called “fixed-type” and the latter “transverse-type.”¹⁵ In this case, since some of those who have just become temporary agency workers are included in fixed-type and it is not yet clear whether they will take fixed-type career or transverse-type career with experience as temporary agency workers, those workers with six months or shorter period of experience are excluded from fixed-type.¹⁶ In addition, fixed-type and transverse-type are classified by the period of temporary agency work experience into “mid-level (seven to 18 months)” and “expert level (19 months or longer).”

Secondly, it is classified by the way of developing skills; “improved-type” in which their skills are improved by accumulating experience as temporary agency workers or

¹⁵ The breakdown of the number of user firms where 29 transverse-type workers experienced is: 16 workers for two companies, six workers for three companies, five workers for four companies, a worker for five companies and a worker for six companies. Since the sample size was small, they were divided into fixed-type workers working for one company or transverse-type workers working for two or more companies in this paper.

¹⁶ When classifying into fixed-type and transverse-type, if the workers are classified into these two categories by the number of experienced user firms, one or more, those who have just become temporary agency workers are also included in fixed-type. Therefore, temporary agency workers whose experience period is six months or shorter were deleted from fixed-type and excluded from this analysis. Since many of temporary agency work contracts are renewed every three months, fixed-type may require at least two times of renewing. Therefore, eight cases (fixed-type: 8, transverse-type: 0) were excluded.

“fixed-type” in which their skills are not improved but fixed. Moreover, “improved-type” is classified into “vertical-type” and “horizontal-type” depending on the spread of jobs. “Vertical-type” means that the workers’ experience expands from easy (low level) tasks to advanced (high level) tasks in a specific job, while in “horizontal-type” the sphere of their experience expands to related peripheral jobs.

Classifications are organized and shown in Table 4.¹⁷ The composition of respondents by classification is: transverse-type is 69.0% (29 persons) and fixed-type is 31.0% (13 persons) in the classification by “how to develop career.” Regarding the classification by way of “skill development,” improved-type is 72.5% (37 persons) and fixed-type is 27.5% (14 persons). Among improved-type, vertical-type is 43.2% (16 persons) and horizontal-type is 56.8% (21 persons) in the classification by “spread of jobs.”

In particular, examining career development in reality in terms of properties of temporary agencies and user firms focusing on fixed-type workers and transverse-type of workers, some characteristics can be seen as below (see Table 5):

- (i) As for the fixed-type workers, in the temporary agencies they are more likely to be seen in the in-group dispatching, while in the user firms the manufacturing and information service/service/education industries tend to have more fixed-type workers. They also more often engaged in the office work in the administrative department.
- (ii) As for the transverse-type workers, in the temporary agencies they are more likely to be seen in the independent dispatching. In the user firms more transverse-type workers work in the wholesale/retail/restaurant and finance/insurance/real estate industries and they are mainly doing the office work in office centers, the SE department, the sales department and the receptionist's office.

2. Career Development Type and Individual Utilization

(1) Career Development Type and Current Situation of Utilization

The relationship between the classification of career development and the utilization level is shown in Table 6. Comparing fixed-type and transverse-type of career development, the individual utilization level of fixed-type is higher than that of transverse-type. Regarding fixed-type and improved-type in skill development, needless to say, the individual utilization level of improved-type is higher than that of fixed-type. As for spread of jobs, the level of horizontal-type is higher than that of vertical-type in individual utilization.

Figure 1 shows the comparison of individual utilization levels for “mid-level” and “expert level” in terms of fixed-type and transverse-type. It reveals that the scores of fixed-type rapidly increase from 1.8 to 2.8 in accordance with length of service as temporary agency worker. On the other hand, the scores of transverse-type decrease from 2.1 to

¹⁷ The temporary agency workers themselves determined into which categories of improved-type, fixed-type, vertical-type or horizontal-type they fell during the interview after explaining definitions of all types. This is because nobody but they themselves can tell how they acquired their individual skills for jobs.

Table 4. Classification of Career Development

| Classification of career | Type | Definition of classification | Classification | Class | Definition of classification |
|--------------------------------------|--|---|--|--|--|
| Classification of career development | Transverse-type (29 persons, 69.0%) | Worked for more than one company | Classification by period of temporary agency work experience | Mid-level (8 persons, 19.0%) | Experience period of temporary agency work is seven to 18 months. |
| | | | | Expert level (21 persons, 50.0%) | Experience period of temporary agency work is 19 months or longer. |
| | Fixed-type (13 persons, 31.0%) | Worked for a company | | Mid-level (8 persons, 19.0%) | Experience period of temporary agency work is seven to 18 months. |
| | | | | Expert level (5 persons, 11.9%) | Experience period of temporary agency work is 19 months or longer. |
| Classification of skill development | Improved-type (37 persons, 72.5%) | Skills are improved while working as a temporary agency worker. | Classification by spread of jobs | Vertical type (16 persons, 43.2%) | Assigned tasks are mainly limited to specific work and they expand from easy (low level) tasks to advanced (high level) tasks. |
| | | | | Horizontal type (21 persons, 56.8%) | Tasks spread from core jobs to peripheral jobs. |
| | Fixed-type (14 persons, 27.5%) | Skills are more or less fixed while working as a temporary agency worker or skills are not improved beyond a certain level. | | | |

Table 5. Classification of Career Development and Properties of Temporary Agencies and User Firms

| | | Classification of career development | | | | |
|--------------------------------|------------------------|---|------|-----------------|------|-----------|
| | | Fixed-type | | Transverse-type | | Total |
| | | % (persons) | | % (persons) | | (persons) |
| | | 31.0 | (13) | 5.0 | (29) | 42 |
| Property of temporary agencies | | In-group dispatching | | 80.0 | (8) | 10 |
| | | Independent dispatching | | 15.6 | (5) | 32 |
| Properties of user firms | Industry of user firms | Manufacturing | | 50.0 | (4) | 8 |
| | | Finance, insurance and real estate | | 16.7 | (1) | 6 |
| | | Wholesale, retail and restaurant services | | 15.4 | (2) | 13 |
| | | Information service, service and education | | 40.0 | (6) | 15 |
| | | Sales office work | | 21.4 | (3) | 14 |
| | Current department | Administrative office work (secretary, general affairs and purchase department) | | 55.6 | (10) | 18 |
| | | Other office work (work center, SE, sales/reception) | | 0.0 | (0) | 10 |
| | | | | | | |

Table 6. Career Development Type and Degree of Individual Utilization

| | | | Score of individual utilization (points) | Total (persons) |
|-------------|---------------------------------|-----------------|--|-----------------|
| Career Type | Career development type | Fixed-type | 2.2 | 13 |
| | | Transverse-type | 1.9 | 29 |
| | Skill development type | Improved-type | 2.1 | 37 |
| | | Fixed-type | 1.9 | 14 |
| | Work composition expansion type | Vertical type | 2.0 | 16 |
| | | Horizontal type | 2.2 | 21 |

Note: As for calculation method of scores of individual utilization, see note in Table 2.

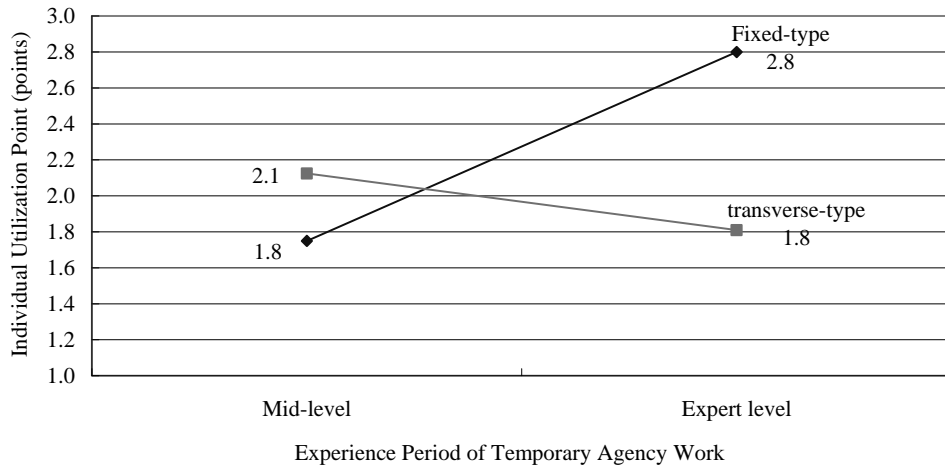


Figure 1. Individual Utilization Level by Type and Period of Temporary Agency Work Experience

1.8 point, that is, when working as temporary agency worker, there is little difference in the individual utilization level up to mid-level period regardless of fixed-type or transverse-type. However, the difference in the utilization level between fixed-type and transverse-type is getting wider as mid-level workers become experts.¹⁸

(2) What Is behind Difference of the Utilization Level between Fixed-Type and Transverse-Type

Then why individual utilization level in transverse-type becomes lower than in fixed-type as the period of temporary agency work experience becomes longer? One possible reason for the difference may lie on how to develop career. Table 7 shows the relationship with career development type. Although the percentage of improved-type in

¹⁸ Regarding the relationship between career in the past and utilization levels, impacts of academic background and career developed before going into temporary agency work could be taken into account other than career argued in this paper. However, there was no significant relationship between academic background and utilization levels in this survey results (see table below). It may be also important whether or not the respondents have work experience as a regular employee before starting temporary agency work. However, since all respondents once worked as a regular employee soon after graduating from school, the impact cannot be confirmed. Moreover, the work experience before temporary agency work is also important, but obtained data do not contain enough information to confirm the impact. These remain challenges for the future.

Academic Background and Individual Utilization Level

| | Individual Utilization | | | | Points | Total |
|--|------------------------|---------|---------|---------|--------|-------|
| | Level 1 | Level 2 | Level 3 | Unknown | | |
| High school graduate | 40.0 | 30.0 | 30.0 | 0.0 | 1.9 | 10 |
| Junior college/Career college graduate | 33.3 | 58.3 | 8.3 | 0.0 | 0.7 | 12 |
| College graduate | 24.1 | 27.6 | 44.8 | 3.4 | 2.2 | 29 |

Table 7. Composition of Classification of Skill Development by Type and Period of Temporary Agency Work Experience

| | | Classification of career development (%) | | | | Total (persons) |
|-----------------|--------------|--|------|--|-----------------|--------------------|
| | | Fixed-type | | Improved-type | | |
| | | | | Classification of job expansion (%) | | |
| | | | | Vertical type | Horizontal type | |
| Total | | 28.0 | 72.0 | 44.4 | 55.6 | 51 |
| Fixed-type | Mid-level | 50.0 | 50.0 | 50.0 | 50.0 | 8 |
| | Expert level | 20.0 | 80.0 | 25.0 | 75.0 | 5 |
| Transverse-type | Mid-level | 37.5 | 62.5 | 60.0 | 40.0 | 8 |
| | Expert level | 14.3 | 85.7 | 38.9 | 61.1 | 21 |

Notes: 1. An unknown case and eight trainee cases are excluded from Total.

2. 20 Others/unknown cases (fixed-type: 11 and unknown: 1) are excluded from Classification of job expansion.

3. Ratios of vertical and horizontal types are based on the ratio of improved-type as 100.

transverse-type is slightly higher than that in fixed-type in spite of the period of mid-level or expert level experience, the percentages of improved-type both in transverse-type and fixed-type become higher as the period of experience becomes longer from mid-level to expert level. That is, when working as a temporary agency worker, one can have opportunities for capacity building regardless of transverse-type and fixed-type.

If the opportunities for capacity building are not responsible for low utilization level of transverse-type, another reason is possibly the way in which assigning jobs expand. According to Table 7, horizontal-type accounts for 40.0% and 61.1% of mid-level and expert level respectively in transverse-type and 50.0% and 75.0% of mid-level and expert level respectively in fixed-type. It reveals that the percentage of horizontal-type increases as mid-level workers become experts regardless of fixed-type or transverse-type, but the disparity between them is widening and the scope of work for fixed-type further expands horizontally.

What is revealed as a result of these is that when working as a temporary agency worker for a long time, regardless of working for one company or more, improved-type increases and one can grow in capability. However, as service of length is getting longer reaching to expert level, fixed-type's utilization level becomes higher than that of transverse-type. What is behind of this may be the difference in the composition of jobs which user firms assign to temporary agency workers. When a temporary worker moves from one company to another, user firms delegate limited specific jobs to the worker, who eventually ends up with having vertical job composition and narrowly built capacity. On the other hand, when working for one company for a long time, the temporary worker wins a trust at workplace resulting in increase of his/her experience and being delegated various tasks. The worker's job composition expands horizontally and a wide range of skills are developed. These differences in vertical and horizontal job compositions and capacity composition may

be a reflection of the difference of the utilization level between fixed-type and transverse-type.

(3) Verifying Actual Utilization by Examples

To confirm above points, this section gives examples of most and least progressed utilization of temporary agency workers and particularly clarifies what kind of jobs they have experienced and how to build their capacity. As an example of most progressed utilization, the cases of temporary agency workers where both individual and collective utilizations are high (i.e., both indicators are Level 3) were extracted and as an example of least progressed utilization, the case of a temporary agency worker where both indicators are Level 1 were extracted.

Example of most progressed utilization of fixed-type

There is an example of most progressed utilization, 26-year-old Ms. A. After graduation from college, she worked for a major foreign-affiliated foreign language school as a regular employee for two years. After that she registered herself with a temporary agency and was dispatched to a major auditing firm as a secretary. In the first week, she received off-the-job training for entire organization, company outline, manners in the industry, documentation formats, etc. The department where she was assigned was a general affair department responsible for secretary service and 9 secretaries other than Ms. A were all regular employees. Her initial task was to manage her manager's schedule, and she started to write and translate greetings to clients for her manager. Although she had no specific knowledge on accounting initially, since it was necessary for preparing accountant reports, she voluntarily studied and asked other secretaries in each case and gradually acquired knowledge on flow of settlement, bookkeeping, etc. She also gradually became able to respond to unforeseen situations such as replacement of accountant reports, and she came to be in charge of eight managers after six months of her dispatching. The department provides secretary services for 70 managers in total and 10 secretaries including Ms. A are in charge of the services. So her duties are completely same as regular employees.

Example of transverse-type as a non-core worker

There is an example of a transverse-type worker without utilization, 30-year-old Ms. B. After graduation from high school, she engaged in the reception service at the bank counter as a regular employee for two years and three months. After that she registered herself with a temporary agency and was dispatched to a drug company for the first time. She was in charge of data entry for preparing documents to be submitted to the then Ministry of Welfare. After the 3-year expiry, she was dispatched to a sales company. She began with sales office work such as part number registration and data input of orders, and came to answer phone calls from customers afterward. After the 3-year expiry, she moved to a casualty insurance company. She engaged in input of accounting receipts and filing of contract

documents in the general affair department. After the 3-year expiry, she was dispatched to the current workplace, a merchandise department of a wholesale company. After one-week training session for data entry, she was assigned data input operation to register product numbers. As above, Ms. B's temporary agency work experience is mostly of data entry. Although her work seems simple, she has to acquire vast knowledge on products specific to each company. For instance, the sales company which is her second user firm supplies music media, storage media for computers and digital cameras to general merchandising stores dealing with more than 200 products. As she gets used to her new job, she has to learn product information from latest to discontinued products in order to properly respond to inquiries and orders from customers. However, knowledge which is specific to such a company as this is rarely used in the next user firm and she has to learn from the beginning every time when she moves to a new company.

Example of transverse-type as a core worker

Are there any temporary agency workers who move from one company to another, develop skills and become core workforce? According to this survey, more than 20% of transverse-type temporary agency workers reached Level 3 of individual utilization. Here is an example of transverse-type with utilization:

After graduation from college, 28-year-old Ms. C worked for a supermarket and was in charge of transaction at the cash register, inventory and placement of order as a regular employee for a year. Then, she worked for an editorial service company as a contract writer for computer magazines for six months. The job was to actually use and compare various computer softwares, and write articles about the comparison. She learned a lot about how to use the computer there. She registered herself with a temporary agency and worked for a university for 11 months to engage in office work for a department. Next, she worked for a major auto manufacturer's factory to do an administrative office work such as preparing data for reports, materials and drawings created with software like Microsoft PowerPoint, Word and CAD. Her computer skills obtained at the previous workplace were fully used there. In addition, since only two worked in the office, she had to do anything due to a shortage of workers. Here, she learned how to draw with CAD from seniors. After four months of working there, she move to a laboratory of a major communications company by her request. She was in charge of preparing materials for meetings and discussions with PowerPoint and Visio for three months. Next, she worked for a foundation for space development by her request. She engaged in preparing materials with Microsoft Access and Excel, schedule management for professor's lecture, preparing request papers, managing websites and sometimes went on a business trip. Her job there was equivalent to or even more than that of regular employees. The job made her physically exhausted, and six months later, she moved to a school by her request. She worked there for four months creating posters and preparing lists made using Ichitaro and Page Maker. After coming back to work for her first workplace, the university, by its request and working there for three months, she was dis-

patched to a career college, the current workplace. She is in charge of revision and updating of educational materials there.

As above, Ms. C has been dispatched to seven different companies in four years. Once she learned the business and skills at some level, she changed the company by her request in order to obtain wide range of skills through various job experiences. As a result, she experienced data management with Excel and Access, drawing with CAD and preparation of technical documents, preparation of business materials with PowerPoint, Visio, etc., and management of websites, and obtained a wide range of computer skills through such experiences. She was also willing to attend a computer school to systematically understand skills obtained from work in user firms and obtained a related vocational qualification. In this way, she obtained a wide range of skills with which she can respond to various uncertain cases by experiencing many workplaces. Now, she quickly and accurately prepares educational materials and does the page layout perfectly in the current workplace. She was highly regarded as an excellent and reliable person and even helps other departments by doing the work and solving the computer problems for them.

To summarize above three examples, in the case of Ms. A as a core worker, she settled to a company and won the trust there because of her high proficiency in her work. She gradually expands her contributions to peripheral jobs such as accounting. On the other hand, in the case of Ms. B as a non-core worker, even though her knowledge on products and skills are improved in a company, these are often specialized for the company and are little used in the next user firm. Also, when she moves to the next company, her job tends to be limited to data entry work, presumably, because of convenience for the user firm such as reducing mistakes on the job. This might be an obstacle for the transverse-type worker to develop career being prevented from improvement of skills and boost of utilization. Meanwhile in the case of Ms. C, though she is a transverse-type worker, too, she is willing to select companies to work for so that she can gain much wider and deeper job experiences and raise the level of utilization. That is to say, the transverse-type worker can develop his/her skills and capability by consciously selecting the companies or jobs to work for.

IV. Conclusions and Issues

1. What Is Clarified in This Paper

Based on above results, two points raised in this paper will be discussed focusing on individual utilization.

Firstly, as mentioned above, regarding “the extent to which utilization of temporary agency workers has progressed,” there was a common belief that temporary agency work is routine task only. According to utilization indicators, however, average individual utilization level is “arrangement/procedure operations” level, and the percentage of temporary workers doing non-routine tasks (Level 3) is 27.5%, i.e., nearly 30% of temporary agency workers can be substituted for regular employees. The same is true of collective utilization and it is

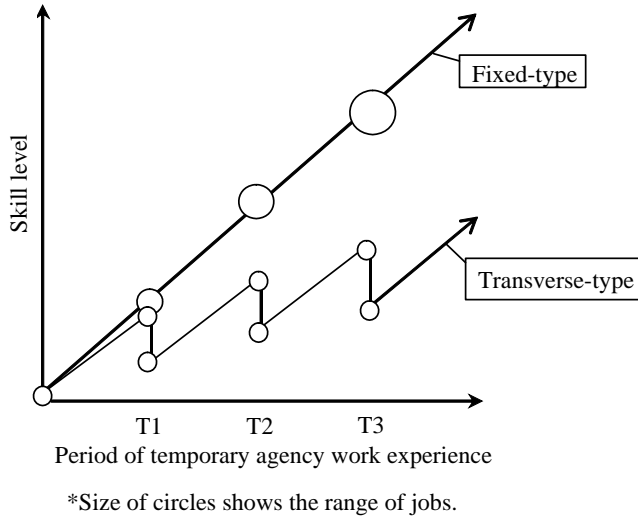


Figure 2. Models of Career Development and Skill Development

found that temporary agency workers have been core workforce at white-collar workplaces to a large extent.

Secondly, regarding “whether or not skills are developed and utilization progresses by developing career as temporary agency work,” the following three points were found.

- (i) The longer the experience as temporary agency workers becomes, the more their skills are developed regardless of “fixed-type” workers who settle in and work for a company or “transverse-type” workers who work for several companies in the short term. However,
- (ii) Utilization level of fixed-type is higher than that of transverse-type.
- (iii) The reason for this may be because of the differences of job and skill compositions between them. That is, when temporary agency workers work for several companies in the short term, the user firms assign them jobs which are limited to a certain range, and their skills are build narrowly and vertically. On the other hand, when working for one company for a long time, the user firms delegate them various jobs depending on their experience and dedication and, as a result, a wide range of skills are developed. It would appear that the differences of jobs and skills composition expressed in the notions “transverse-type tends to expand jobs and skills vertically” and “fixed-type tends to expand jobs and skills horizontally” are reflected to the difference of utilization level.

Considering to above points, the differences of skill development between transverse-type and fixed type are shown as models in Figure 2. Regarding utilization level as the total indicator of skill level, there is no much difference between them at the time of T1 but the job range of fixed-type is slightly larger. However, once the transverse-type worker

moves to the next company, some of his/her skills accumulated in the previous company often become useless for the other company. Furthermore, since the length of service for each company of the transverse-type worker is relatively short, the assigned job to them tends to be limited to a certain area, i.e., the work experience is accumulated vertically. On the other hand, the fixed-type worker develops skills consistently and also experiences a wide range of jobs. As a result, both skill level and the range of jobs of fixed-type exceed that of transverse-type at the time of T3.

2. Issues of Human Resource Development through Temporary Agency Work

Taking above conclusion into account, the following points would be important for human resources development through temporary agency work. One of the reasons why companies utilize temporary agency workers is need for “just-in-time human resource system” i.e., “necessary human resources at the time of need.” This can be interpreted that companies shift the risk of employment as well as the risk of internally developing necessary human resources to outside (temporary agencies and temporary agency workers). For that reason, temporary agency work has been pointed out its weakness in education and training, which, as this paper clarified, may be shown in the fact that utilization level of temporary agency workers with transverse-type career is lower than that of their counterparts with fixed-type career.

In order to improve this point, the temporary agencies should enhance education and training system for upgrading the skills of temporary workers paying attention, at the same time, to OJT functions of temporary agency work. As explained earlier, skills of temporary agency workers are improved through OJT and accordingly, jobs assigned to them come to be of highly-skilled when the length of service as a temporary agency worker becomes longer. To what extent their skills are improved depends on the way of working. Even though the length of service as a temporary agency worker is the same, utilization level of workers who work from company to company in the short term is lower than that of workers who work for a company for a long time. That is, a part of improved skills is useless in the next user firm and accumulated skills are not fully utilized. If user firms are selected for temporary agency workers in consideration of their career development just like personnel transfer done within a company, their skills would be more utilized and improved.

To that end, it is crucial that the matching function of temporary agencies should be enhanced in order to utilize improved skills as well as that temporary agency workers themselves should be willing to develop their skills and career. If such conditions are right, even the temporary agency worker like Ms. C will be able to develop skills moving from one company to another.

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Impact of the Using Non-Regular Employees on On-the-Job Training* —From Both Viewpoints of Companies and Workers

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Based on previous studies which clarified that employment of non-regular employees has a negative impact on firm-level training, this paper verified whether it is caused by quantitative change in non-regular employees or functional problems such as employment policy of non-regular employees. As a result of the analysis, it was confirmed that quantitative increase in non-regular employees is not a major impediment to implementation of On-the-Job Training (OJT). On the other hand, it was confirmed that OJT does not function smoothly in companies where the number of regular employees' employment is reduced by the employment of non-regular employees. This indicates that OJT is not functioning smoothly in companies in which regular employees have been replaced with non-regular ones. It indicated a possibility that the impact of employment of non-regular employees on OJT is caused by a functional problem of human resources management, i.e., using non-regular employees as substitutes for regular employees, not quantitative change in non-regular employees.

I. Introduction

The purpose of this paper, based on previous studies which clarified that employment of non-regular employees has a negative impact on firm-level training, is to verify whether it is caused by quantitative change in non-regular employees or functional problems such as employment policy of non-regular employees.

The recent main characteristic of Japanese companies' human resources management is that non-regular employees have been actively used.¹ Japanese companies have promoted the use of non-regular employees aimed mainly at decrease in labor cost and change labor cost into variable cost due to long-term recession following the burst of the bubble economy.² Non-regular employees have been in charge of core tasks similar to regular employees.

Such business behavior may have a positive impact on the companies such as boost-

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¹ According to OECD (2008), Japan's ratio of part-time workers (working time is less than 30 hours per week) in 2007 was 18.9% (male: 9.2%, female: 32.6%), above the OECD average for both male and female, and is at high level internationally.

² Toyoda (2005) verified that the employment of non-regular employees has progressed in whole-sale, retail and restaurant industries in which there is a substantial wage gap between regular and non-regular employees and non-regular employees function as a buffer of employment.

ing company profits in the short term. However, in the middle and long term, there is fear that it causes an impediment to handing down of skills and a decrease in human capital level and has a negative impact on business management in the future. Especially this problem is important when considering vocational training for youth who can obtain technologies and skills most effectively (Ohta 2006).

In fact, studies on a negative impact of the use of non-regular employees on firm-level training mainly at production sites of the manufacturing industry have been accumulated.

Kimura (2002) pointed out that problems such as “difficulty of training new regular employees” and “impediment to original work” have been caused by growing share of non-regular employees and outside personnel at production and engineering sites and it has a negative impact on human resources development.

Sato, Sano and Kimura (2003) pointed out big issues posed by the use of contract company workers at production sites such as “increase in burden on regular employees who provide education and training to contract company workers,” “difficulty of accumulation and handing down of know-how” and “increase in burden on regular employees who assume operational control over contract company workers.”

Muramatsu (2004) conducted a hearing survey for production sites of Toyota Motors group companies and pointed out that it has been difficult to accumulate technologies and skills due to too many displaced non-regular employees and the ability to improve work environment has decreased. However, even at a workplace with high ratio of non-regular employees, smooth production can be done if the company provides vocational training to non-regular employees on a rotating basis the same as regular employees and opens the door for non-regular employees to become regular employees.

This paper verifies whether such negative impact of using non-regular employees on firm-level training is caused by quantitative increase in non-regular employees or functional problems such as use policy and work contents of non-regular employees. Especially the impact of using non-regular employees on firm-level training is analyzed by using both data of companies and workers.

There are following three major characteristics of this analysis:

Firstly, the analysis focuses on On-the-Job Training (“practical training on the job,” hereinafter referred to as OJT) in firm-level training. The vocational training is classified broadly into OJT, Off-the-Job Training (“training off the job,” hereinafter referred to as Off-JT) and self-development and a special emphasis has been placed on OJT for skill development and promotion in rank and grade (Koike 2005).

In considering the impact of using non-regular employees on firm-level training, it is necessary to examine if OJT functions smoothly at workplace in which employees with different employment patterns such as responsibility for job and evaluation/treatment system are mixed. However, many of previous studies on non-regular employees focused on transfer from non-regular employees to regular ones (Blank 1998; Faber 1999; Chalmers

and Kalb 2001; Booth, Francesconi and Frank 2002; O'Reilly and Bothfeld 2002; Gash 2008; Picchio 2008; Aizawa and Yamada 2008; Genda 2008, 2009) and training disparity between non-regular and regular employees (Arulampalam and Booth 1998; Kawaguchi 2006; Sano 2007; Kurosawa and Hara 2009), and there are not many studies focusing on the impact of using non-regular employees in workplaces and companies.³

Therefore, this paper analyzes the relationship between use of non-regular employees and OJT focusing on OJT among firm-level training. Unless otherwise noted, "firm-level training," "vocational training" and "training" shall mean OJT hereafter.

Secondly, this paper analyzes various industries while previous studies mainly analyzed manufacturing industry. Given current human resources management of companies, the use of non-regular employees has progressed as a pillar of human resources management in not only manufacturing industry centered on production sites but also offices. Therefore, this paper also analyzes the impact of using non-regular employees on firm-level training in non-manufacturing industries.

Thirdly, this paper analyzes the impact of using non-regular employees on firm-level training from many directions by using both data of companies and workers. That is, the relationship between the use of non-regular employees and firm-level training from the viewpoint of subjects providing vocational training can be analyzed by using companies' data and those from the viewpoint of objects receiving vocational training can be analyzed by using workers' data. It would be highly meaningful to analyze using both data of companies and workers.

In considering current human resources management of Japanese companies, although it should be essential to consider the impact of using non-regular employees on firm-level training, it has been ill-argued. Therefore, detailed analysis on the impact of using non-regular employees on firm-level training would provide significant information for the consideration of the progress of using non-regular employees as a human resources management in the future.

This paper consists of the following. Issues to be considered will be discussed in Section II, data used for the analysis will be introduced in Section III, the impact of using non-regular employees on workplaces and companies will be outlined in Section IV, Regression analyzes will be conducted in Section V and VI and finally findings obtained by this analysis will be confirmed in Section VII.

II. Issues to Be Considered

This paper mainly discusses the following three issues to be considered:

Firstly, the impact of quantitative increase in non-regular employees at workplaces on

³ Ariga, Kambayashi and Sano (2008) analyzed the impact of policy regarding the use of non-regular employees and human resources management on the job retention rate of non-regular employees.

firm-level training is discussed. According to analysis results of Kimura (2002) and Sato, Sano and Kimura (2003), the quantitative increase in non-regular employees may disturb firm-level training through increase in the amount of time regular employees spend on education and guidance for non-regular employees. Therefore, the impact of quantitative increase in non-regular employees on firm-level training is discussed.

Secondly, the impact of quantitative decrease in regular employees at workplaces on firm-level training is discussed. The decrease in regular employees at workplaces may have the impact on firm-level training as well as the increase in non-regular employees. Regular employees centered on youth are forced to work long hours due to curbing new hires and restructuring promotion caused by the *Heisei Recession* (Genda 2005 and Ogura 2007). Therefore, the decrease in regular employees may disturb firm-level training through increase in working hours of regular employees.⁴ That is why the impact of quantitative decrease in regular employees at workplaces on firm-level training is discussed.

Thirdly, the impact of policy regarding the use of non-regular employees on firm-level training is discussed. It would appear that what jobs and tasks non-regular employees are used for have a significant impact on firm-level training. Non-regular employees have been core workforce recently, but it has not been considered whether non-regular employees being in charge of core tasks similar to regular employees have a positive or negative impact on firm-level training. Therefore, the impact of non-regular employees who become core taskforce on firm-level training is discussed.

III. Data

Data used in this paper are micro data from “Survey on Companies’ Personnel Strategies and Workers’ Attitude toward Work 2003” conducted in January 2003 by the Japan Institute of Labour (currently, the Japan Institute for Labour Policy and Training [JILPT]. Hereinafter referred to as JIL Survey).⁵

Although JIL Survey consists of company survey and worker survey, this paper uses both data and considers the impact of using non-regular employees on firm-level training from both viewpoints of employers and employees.

In the company survey, 10,000 companies with 100 or more employees were extracted from the database of enterprises with 30 or more employees owned by the Nikkei Research Inc. and survey slips were distributed to those companies. The number of effective

⁴ Cappelli (1999) analyzed the impact of restructuring in U.S. companies and indicated that although the productivity has been improved, the workload has increased and organizational climate/morals and employees’ commitment have been corrupted.

⁵ In preparing this paper, micro data of “Survey on Companies’ Personnel Strategies and Workers’ Attitude toward Work 2003” (JILPT) was provided by the Social Science Japan Data Archive, Information Center for Social Science Research on Japan, Institute of Social Science, the University of Tokyo. I would like to express my gratitude to them.

answers collected from the companies was 1,602 (collection rate: 16.02%).⁶

In the worker survey, 10 each of survey slips were sent to 5,000 establishments with 10 or more employees extracted from an enterprise summary database “COSMOS2” owned by the Teikoku Databank Ltd. to ask distribute those slips to their employees (50,000 persons in total). The number of effective answers collected was 7,566 (collection rate: about 15.13%).

A striking advantage of using this JIL Survey data is that both company and worker surveys were made on “the impact caused by using non-regular employees” with 10 question items. Since there are few data with explicit questions on the impact of using non-regular employees, these data are invaluable. The detailed analysis on how the use of non-regular employees impacts on workplaces and companies can be done by using these questions and answers.

Furthermore, since the company survey is different from the worker survey, if consistent analysis results are obtained from data of companies and workers, more persuasive conclusions on the impact of using non-regular employees on firm-level training can be achieved. That is another advantage of using JIL Survey results.

However, due to different sampling, data of companies cannot be analyzed with data of workers, and both companies’ and workers’ awareness of using non-regular employees cannot be perceived completely. This is the limit of using JIL Survey results.

IV. Impact Caused by Using Non-Regular Employees

In this section, the impact caused by using non-regular employees is reviewed by using both company and worker surveys of JIL Survey.

Firstly, the impact of using non-regular employees on companies is considered using the company survey. The company survey slip says, “Please answer the following questions A to J about the impact caused by the use of non-regular employees. Please check the appropriate number.” and demands answers for 10 question items.

Table 1 summarizes the answers for these 10 questions.

Focusing attention on positive variables of D.I., “Regular employees can apply themselves to advanced business” (37.11), “Labor productivity is improved” (30.07) and “Working together smoothly” (14.66) show great positive values and these are the positive impact caused by the use of non-regular employees from the view point of employers. On the surface, regular employees can apply themselves to advanced business, labor productivity is improved and they are working together smoothly, so it seems to be free of problems.

However, focusing attention on negative variables of D.I., “Know-how is accumulated/handed

⁶ At the stage of sampling, companies with 100 or more employees should have been extracted, but companies with less than 100 employees were included in the sample (66 companies, about 4.12% of the total). It is thought that this happened due to the slight difference between data owned by the Nikkei Research Inc. and actual number of employees in companies at the time of the survey.

Table 1. Impact Caused by the Use of Non-Regular Employees (%) (Company Survey, N=1460)

| [A] | I | II | III | IV | V | N.A | D.I | [B] |
|--|------|-------|-------|-------|------|------|-------|---|
| Know-how is accumulated/handed down | 2.12 | 14.66 | 50.62 | 20.82 | 4.18 | 7.60 | -8.22 | Hard to accumulate/hand down know-how |
| Easy to conduct vocational training | 0.62 | 8.77 | 64.73 | 15.41 | 1.92 | 8.56 | -7.94 | Hard to conduct vocational training |
| No risk of leaking secrets to outside | 5.68 | 14.93 | 46.85 | 22.12 | 3.08 | 7.33 | -4.59 | At risk of leaking secrets to outside |
| New know-how is introduced from outside | 2.33 | 12.88 | 62.74 | 10.00 | 3.63 | 8.42 | 1.58 | Hard to introduce know-how from outside |
| Quality of products/service is improved | 2.12 | 16.37 | 61.64 | 10.75 | 0.62 | 8.49 | 7.12 | Quality of products/service is reduced |
| Regular employees' morale is raised | 1.51 | 16.78 | 67.67 | 6.71 | 0.48 | 6.85 | 11.10 | Regular employees' morale is degraded |
| Regular employees' working hours become shorter | 2.53 | 19.18 | 62.05 | 8.01 | 1.78 | 6.44 | 11.92 | Regular employees' working hours become longer |
| Working together smoothly | 2.95 | 23.84 | 54.45 | 11.58 | 0.55 | 6.64 | 14.66 | Not working together smoothly |
| Labor productivity is improved | 3.49 | 33.63 | 49.38 | 6.71 | 0.34 | 6.44 | 30.07 | Labor productivity is declined |
| Regular employees can apply themselves to advanced tasks | 5.75 | 38.01 | 43.15 | 5.62 | 1.03 | 6.44 | 37.11 | Regular employees cannot apply themselves to their original tasks |

Note: I: Close to A, II: Closer to A than B, III: Neither, IV: Closer to B than A, V: Close to B. D.I is an abbreviation for Diffusion Index. It is obtained by the formula: $(I+II)-(IV+V)$. Items are arranged in ascending order of D.I.

down” (-8.22), “Easy to conduct vocational training” (-7.94) and “No risk of leaking secrets to outside” (-4.59) show negative values. That is, “Hard to accumulate/hand down know-how,” “Hard to conduct vocational training” and “At risk of leaking secrets to outside” are the negative impact caused by the use of non-regular employees from the viewpoint of employers.

Based on both positive and negative impacts caused by the use of non-regular employees, the impact caused by the use of non-regular employees can be considered as follows:

In the short term, regular employees can apply themselves to advanced business, labor productivity is improved, they are working together smoothly and benefits are more than costs so the use of non-regular employees have a great positive impact on companies even though there are problems with accumulation/handling down of know-how and vocational training.

However, the problems with accumulation/handling down of know-how and vocational training as the negative impact are highly unlikely to become obvious in the short term. Therefore, in the middle and long term, such problems become obvious and costs may be more than benefits.

In other words, if companies put the use of non-regular employees into short-term perspective only, it brings about a decrease in human capital level of employees due to problems with accumulation/handling down of know-how and impediment to vocational training in the middle and long term and may have a negative impact on business management in the future. As Kimura (2002) and Muramatsu (2004) pointed out in their previous studies, the true nature of the problems with the use of non-regular employees is a question that has bearings on the fundamental character of human resources development such as accumulation/handling down of know-how and vocational training.

Next, the impact of using non-regular employees on workplaces and companies is considered using the worker survey.

The worker survey slip says, the expression is slightly different from the company survey slip, “Please answer the following questions A to J about the situations seen when regular and non-regular employees are working together. Please check the appropriate number.” and demands answers for 10 question items as same as the company survey slip.

Table 2 summarizes the answers for these 10 questions.

Focusing attention on positive variables of D.I., “Regular employees can apply themselves to advanced business” (30.77), “Working together smoothly” (13.34) and “Labor productivity is improved” (12.66) show great positive values. These top three items agree with the result of the company survey. It turns out that employers and employees share common perceptions on the positive impact caused by the use of non-regular employees.

On the other hand, focusing attention on negative variables of D.I., “Regular employees’ working hours become shorter” (-14.25), “Easy to conduct vocational training” (-7.89) and “Know-how is accumulated/handed down” (-7.32) show negative values. These

Table 2. Situations Seen When Regular and Non-Regular Employees Are Working Together (Worker Survey, N=3906)

| [A] | I | II | III | IV | V | N.A | D.I | [B] |
|--|-------|-------|-------|-------|-------|------|--------|---|
| Regular employees' working hours become shorter | 3.48 | 20.25 | 58.19 | 11.55 | 3.71 | 2.82 | 8.47 | Regular employees' working hours become longer |
| Easy to conduct vocational training | 2.10 | 10.52 | 63.95 | 15.31 | 5.20 | 2.92 | -7.89 | Hard to conduct vocational training |
| Know-how is accumulated/handed down | 2.87 | 11.78 | 54.61 | 16.41 | 12.49 | 1.84 | -14.25 | Hard to accumulate/hand down know-how |
| New know-how is introduced from outside | 2.59 | 13.80 | 59.47 | 14.21 | 7.30 | 2.64 | -5.12 | Hard to introduce know-how from outside |
| Regular employees' morale is raised | 8.58 | 17.18 | 45.44 | 19.74 | 6.61 | 2.46 | -0.59 | Regular employees' morale is degraded |
| No risk of leaking secrets to outside | 2.82 | 17.31 | 49.54 | 19.87 | 7.58 | 2.89 | -7.32 | At risk of leaking secrets to outside |
| Quality of products/service is improved | 2.53 | 15.72 | 58.99 | 14.64 | 5.53 | 2.59 | -1.92 | Quality of products/service is reduced |
| Labor productivity is improved | 5.56 | 27.93 | 43.93 | 15.59 | 4.56 | 2.43 | 13.34 | Labor productivity is declined |
| Working together smoothly | 3.41 | 24.30 | 54.48 | 11.47 | 3.58 | 2.76 | 12.66 | Not working together smoothly |
| Regular employees can apply themselves to advanced tasks | 10.62 | 31.82 | 43.73 | 8.78 | 2.89 | 2.15 | 30.77 | Regular employees cannot apply themselves to their original tasks |

Note: I: Close to A, II: Closer to A than B, III: Neither, IV: Closer to B than A, V: Close to B. D.I is an abbreviation for Diffusion Index. It is obtained by the formula: $(I+II) - (IV+V)$. Items are arranged in ascending order of D.I. Samples are male and female regular employees under 60 years old.

two items, “Hard to conduct vocational training” and “Hard to accumulate/hand down know-how” are also confirmed as the result of the company survey as negative impact caused by the use of non-regular employees. Thus it may be said that the problems caused by the use of non-regular employees are summarized in the problems of vocational training and accumulation/handing down of know-how.

Based on both the company survey and worker survey conducted by JIL Survey, it turned out that the biggest problem caused by the use of non-regular employees is a question that has bearings on the fundamental character of human resources development.

The next section conducts a regression analysis focusing on the impact of using non-regular employees on vocational training which may be the central question among problems with the use of non-regular employees.

V. Regression Analysis 1: Company Survey Estimates

This section conducts a regression analysis to statistically verify the impact of functional changes such as quantitative changes in regular and non-regular employees and policy for the use of non-regular employees on firm-level training.

The regression analysis uses “Easy to conduct vocational training” as an explained variable to interpret the coefficient sign of explanatory variable. This paper interprets this as an indicator for “smoothness of OJT implementation.”

As mentioned above, a special emphasis has been placed on OJT among vocational training and the purpose of this paper is to verify how OJT has been affected by the use of non-regular employees. As will be noted from the question of the worker survey, the variable “Easy to conduct vocational training” indicates “vocational training when regular and non-regular employees are working together,” and it is natural to interpret that it is an indicator for OJT, not Off-JT.⁷

Therefore, the variable “Easy to conduct vocational training” is considered to indicate the smoothness of OJT implementation and is a suitable variable to verify the impact of using non-regular employees on OJT at workplaces. Particularly, explained variables are used as: 5 = “Easy to conduct vocational training,” 4 = “Tend to be easy to conduct vocational training,” 3 = “Neither,” 2 = “Tend to be hard to conduct vocational training” and 1 = “Hard to conduct vocational training.”

Since the explained variables are sequence indicators from 1 to 5, Ordered Probit Regression is adopted as an estimate method.

Variables to be introduced to explanatory variables are shown in Table 3.

In order to consider the impact of quantitative change in regular and non-regular employees on OJT, we include “Change ratio of the number of regular employees compared

⁷ However, it is impossible to identify whether questions indicate planned OJT or normal OJT such as guidance and advice. Therefore, this paper interprets it as “broad OJT” including both planned and normal OJT.

Table 3. Definition of Variables

| |
|---|
| Explained variables |
| 【Smoothness of OJT implementation】 |
| 5=Easy to conduct vocational training, 4=Tend to be easy to conduct vocational training |
| 3=Neither, 2=Tend to be hard to conduct vocational training, 1=Hard to conduct vocational training |
| Explaining variables |
| <i>Quantitative change in regular and non-regular employees</i> |
| 【Change ratio of the number of regular employees compared with three years ago】 |
| 1=150% or higher, 2=140 to less than 150%, 3=130 to less than 140%, 4=120 to less than 130%, |
| 5=110 to less than 120%, 6=100 to less than 110%, 7=90 to less than 100%, 8=80 to less than 90%, |
| 9=70 to less than 80%, 10=60 to less than 70%, 11=50 to less than 60%, 12=40 to less than 50%, |
| 13=Lower than 40% |
| 【Change ratio of the number of non-regular employees compared with three years ago】 |
| Prepared as same as change ratio of the number of regular employees |
| 【Employment change in regular employees due to the use of non-regular employees】 |
| Each dummy of “Increased,” “No change” [†] and “Decreased” |
| <i>Company’s policy for using non-regular employees</i> |
| 【What tasks are non-regular employees currently used for?】 |
| “Routine tasks in which regular employees had conducted” dummy |
| “Nonroutine tasks including judgment in which regular employees conduct” dummy |
| “Tasks that require advanced professional skills in which regular employees conduct” dummy |
| “Tasks that require advanced professional skills in which regular employees do not conduct” dummy |
| “Office management/supervision” dummy |
| <i>Ability development policy which represents company’s property, Company’s personnel strategy</i> |
| 【Dummy of maintenance of lifetime employment】 |
| 1=Lifetime employment continues to be maintained in principle |
| 0=Unavoidable to revise partially, Fundamental review is needed, Not lifetime employment |
| 【Emphasis on seniority payment system】 |
| 4=Emphasize, 3=Tend to emphasize, 2=Tend not to emphasize, 1=Do not emphasize |
| 【Objects of ability development】 |
| 4=All regular and non-regular employees, 3=All regular employees and partial non-regular employees, |
| 2=All regular employees (except non-regular employees), 1=Executive candidates among regular employees |
| <i>Sales, Number of employees, Industry</i> |
| 【Sales (compared with three years ago)】 |
| -0.3=Decline by 20% or more, -0.15=Decline by 10 to less than 20%, -0.075=Decline by 5 to less than 10%, |
| -0.03=Decline by less than 5%, 0=No change, 0.03=Increase by less than 5%, |
| 0.075=Increase by 5 to less than 10%, 0.15=Increase by 10 to less than 20%, 0.3=Increase by 20% or more |
| 【Number of employees】 |
| Each dummy of “Less than 100,” “100 to 299,” “300 to 499,” [†] “500 to 999,” “1000 to 4999” and “5000 or more” |
| 【Industry】 |
| Each dummy of “Manufacturing,” “Mining/Construction/Utilities,” “Communications/Transport,” [†] |
| “Wholesale/Retail/Restaurant,” “Finance/Insurance/Real estate,” “Service” and “Others” |

Note: † indicates reference groups. There are 29 industries to be selected in the company survey slip, but they are classified into seven industries in this paper.

with three years ago,” “Change ratio of the number of non-regular employees compared with three years ago” and “Employment change in regular employees due to the use of non-regular employees” in the regression.

Next, in order to consider the impact of non-regular employees who become core taskforce on OJT, “Company’s policy for using non-regular employees” (What tasks are non-regular employees currently used for?) is included into the explanatory variables.

“Ability development policy which represents company’s property” and “Company’s

personnel strategy” are also introduced into the explanatory variables to control the company property. Particularly, “Dummy of maintenance of lifetime employment,” “Emphasis on seniority payment system” and “Objects of ability development” are included.

Finally, “Sales (compared with three years ago),” “Number of employees” and “Industry” are included as control variables.

The descriptive statistics are shown in Table 4.

Above variables were included into the explanatory variables and the regression analysis was conducted with “Smoothness of OJT implementation” as an explained variable (estimated results are shown in Table 5).

Focusing on variables related to the change ratio of the number of regular/non-regular employees, while “Change ratio of the number of non-regular employees compared with three years ago” has no significant impact on OJT, “Change ratio of the number of regular employees compared with three years ago” has a significant negative impact on it at 10% level. That is, the impediment to OJT due to the use of non-regular employees is not caused by the increase in the number of non-regular employees but by the decrease in the number of regular employees.

Hara (2007) also indicated that companies which are constantly understaffed have less opportunities of receiving business guidance and advice. It would appear that since the burden of original tasks has increased due to the decrease in the number of regular employees at workplaces and they have no “leeway” in terms of personnel and time state which is essential for OJT, OJT has not functioned smoothly⁸.

Next, “Employment change in regular employees due to the use of non-regular employees: Decrease” has a significant negative impact on OJT at 1% level. It tells that it is difficult to implement OJT for companies in which the employment of regular employees decreases due to the use of non-regular employees. This result indicates that OJT implementation has a problem within the company in which non-regular employees may be used as replacement for regular employees.

Toyoda (2004) also pointed out that the increase in part-time workers causes long working hours of regular employees. The replacement of regular employees by non-regular ones would mean that one non-regular employee is in charge of the job that one regular employee should be in charge of. In fact, however, given working hours and responsibility for jobs, it is difficult that one non-regular employee is in charge of jobs of one regular employee. As a result, remaining regular employees are facing the increase in the burden of jobs and responsibilities and it may have an impediment to smooth OJT implementation.

Taking into account the fact that “change ratio of the number of non-regular employees compared with three years ago” has no significant impact, OJT problems due to the use of non-regular employees is not caused by the quantitative increase in the number of

⁸ Koike (2001) also emphasized the importance of “leeway” in terms of personnel and time state for one-on-one in implementing OJT and pointed out that such “leeway” has been strictly reduced.

Table 4. Descriptive Statistics (Company Survey), N=911

| Variables | Mean | S.D | Min | Max |
|---|--------|-------|------|-----|
| Smoothness of OJT implementation (Easy to conduct vocational training) | 2.888 | 0.608 | 1 | 5 |
| Change ratio of the number of regular employees compared with three years ago | 5.880 | 1.958 | 1 | 13 |
| Change ratio of the number of non-regular employees compared with three years ago | 7.479 | 3.177 | 1 | 13 |
| Employment change in regular employees due to the use of non-regular employees: Decrease | 0.539 | 0.499 | 0 | 1 |
| Employment change in regular employees due to the use of non-regular employees: No change | 0.402 | 0.491 | 0 | 1 |
| Employment change in regular employees due to the use of non-regular employees: Increase | 0.059 | 0.236 | 0 | 1 |
| Routine tasks in which regular employees had conducted | 0.911 | 0.285 | 0 | 1 |
| Nonroutine tasks including judgment in which regular employees conduct | 0.244 | 0.430 | 0 | 1 |
| Tasks that require advanced professional skills in which regular employees conduct | 0.205 | 0.404 | 0 | 1 |
| Tasks that require advanced professional skills in which regular employees do not conduct | 0.109 | 0.311 | 0 | 1 |
| Office management/supervision | 0.103 | 0.304 | 0 | 1 |
| Objects of ability development | 2.603 | 1.053 | 1 | 4 |
| Dummy of maintenance of lifetime employment | 0.347 | 0.476 | 0 | 1 |
| Emphasis on seniority payment system | 2.853 | 0.860 | 1 | 4 |
| Sales (operating revenue): Comparison with three years ago | -0.021 | 0.161 | -0.3 | 0.3 |
| Number of employees: less than 100 | 0.032 | 0.176 | 0 | 1 |
| Number of employees: 100 to 299 | 0.476 | 0.500 | 0 | 1 |
| Number of employees: 300 to 499 | 0.169 | 0.375 | 0 | 1 |
| Number of employees: 500 to 999 | 0.151 | 0.359 | 0 | 1 |
| Number of employees: 1000 to 4999 | 0.156 | 0.363 | 0 | 1 |
| Number of employees: 5000 or more | 0.015 | 0.123 | 0 | 1 |
| Manufacturing | 0.245 | 0.430 | 0 | 1 |
| Mining/Construction/Utilities | 0.162 | 0.369 | 0 | 1 |
| Communications/Transport | 0.116 | 0.321 | 0 | 1 |
| Wholesale/Retail/Restaurant | 0.189 | 0.392 | 0 | 1 |
| Finance/Insurance/Real estate | 0.087 | 0.282 | 0 | 1 |
| Service | 0.179 | 0.383 | 0 | 1 |
| Other Industry | 0.022 | 0.147 | 0 | 1 |

non-regular employees but by the functional problem of human resources management replacing regular employees by non-regular ones.

Focusing attention on the policy for the use of non-regular employees, “Used for office management/supervision” has only significant impact on OJT (coefficient = 0.434, significant at 1% level). Since when non-regular employees are in charge of highly advanced

Table 5. “Company Survey” Entire Estimate
(Explained Variable: “Smoothness of OJT Implementation”)

| Explanatory variables | Coef. | Z-value |
|---|----------|-----------|
| Change ratio of the number of regular employees compared with three years ago | -0.042 | -1.82 * |
| Change ratio of the number of non-regular employees compared with three years ago | -0.021 | -1.63 |
| Employment change in regular employees due to the use of non-regular employees: Decrease 【No change】 | -0.279 | -3.16 *** |
| Employment change in regular employees due to the use of non-regular employees: Increase | 0.007 | 0.04 |
| Routine tasks in which regular employees had conducted | 0.199 | 1.40 |
| Nonroutine tasks including judgment in which regular employees conduct | -0.101 | -1.06 |
| Tasks that require advanced professional skills in which regular employees conduct | -0.065 | -0.63 |
| Tasks that require advanced professional skills in which regular employees do not conduct | 0.182 | 1.39 |
| Office management/supervision | 0.434 | 3.16 *** |
| Objects of ability development | 0.032 | 0.85 |
| Dummy of maintenance of lifetime employment | 0.017 | 0.20 |
| Emphasis on seniority payment system | 0.037 | 0.81 |
| Sales (operating revenue): Comparison with three years ago | 0.635 | 2.31 ** |
| /cut1 | -2.228 | |
| /cut2 | -1.024 | |
| /cut3 | 1.186 | |
| /cut4 | 2.621 | |
| Log likelihood | -784.859 | |
| N | 911 | |

Note: Ordered Probit Regression is estimated. 【】= Reference group. ***, ** and * indicate significant levels at 1%, 5% and 10%, respectively. Number of employees, and industry dummy variables are included in the regression. But the coefficient are suppressed.

jobs such as office management/supervision, jobs of non-regular and regular employees may be clearly separated, OJT would function smoothly. For this reason, the functional problem of human resources management, i.e., what tasks non-regular employees are used for, has a large impact on firm-level training.

However, there are few variables related to the policy for the use of non-regular employees which has a significant impact, and the impact of the company’s policy for the use of non-regular employees on firm-level training could not been considered sufficiently from the entire estimate of the company survey. This may be because different impacts of industries were countered by themselves due to the integrated estimate.

Therefore, in order to verify the impact of each industry’s policy for the use of non-regular employees, it is estimated by industry. In the estimate by industry, “Wholesale/Retail/Restaurant” in which the use of non-regular employees has progressed most and “Manufacturing” which has been researched in the previous studies were picked up to

Table 6. “Company Survey” Estimate by Industry
(Explained Variable: “Smoothness of OJT Implementation”)

| Explanatory variables | Wholesale/Retail/Restaurant | | Manufacturing | |
|--|-----------------------------|----------|---------------|-----------|
| | Coef. | Z-value | Coef. | Z-value |
| Change ratio of the number of regular employees compared with three years ago | 0.031 | 0.53 | 0.007 | 0.14 |
| Change ratio of the number of non-regular employees compared with three years ago | 0.002 | 0.05 | -0.057 | -2.13 ** |
| Employment change in regular employees due to the use of non-regular employees: Decrease 【No change】 | -0.431 | -1.98 ** | -0.532 | -2.88 *** |
| Employment change in regular employees due to the use of non-regular employees: Increase | -0.169 | -0.45 | -0.869 | -1.53 |
| Routine tasks in which regular employees had conducted | 0.462 | 1.08 | -0.375 | -1.03 |
| Nonroutine tasks including judgment in which regular employees conduct | -0.514 | -2.41 ** | 0.652 | 2.81 *** |
| Tasks that require advanced professional skills in which regular employees conduct | 0.025 | 0.10 | -0.003 | -0.01 |
| Tasks that require advanced professional skills in which regular employees do not conduct | 0.417 | 1.27 | -0.696 | -2.14 ** |
| Office management/supervision | 0.872 | 2.39 ** | 0.571 | 1.55 |
| Objects of ability development | -0.007 | -0.08 | 0.042 | 0.52 |
| Dummy of maintenance of lifetime employment | -0.279 | -1.29 | 0.065 | 0.36 |
| Emphasis on seniority payment system | -0.017 | -0.15 | 0.236 | 2.01 ** |
| Sales (operating revenue): Comparison with three years ago | 0.042 | 0.06 | 1.001 | 1.75 * |
| /cut1 | -1.768 | | -2.964 | |
| /cut2 | -0.588 | | -1.192 | |
| /cut3 | 1.719 | | 1.157 | |
| /cut4 | 3.130 | | | |
| Log likelihood | -148.417 | | -172.517 | |
| N | 172 | | 223 | |

Note: Ordered Probit Regression is estimated. 【】= Reference group. ***, ** and * indicate significant levels at 1%, 5% and 10%, respectively. Number of employees dummy variables are included in the regression. But the coefficient are suppressed.

estimate.⁹ The estimate results are shown in Table 6.

Focusing attention on variables related to the change ratio of the number of regular and non-regular employees, manufacturing industry’s “Change ratio of the number of non-regular employees compared with three years ago” is the only significant variable (coefficient = -0.057, significant at 5% level). In other words, in the manufacturing industry, the quantitative decrease in non-regular employees may disturb OJT, but in the whole-

⁹ According to the Ministry of Internal Affairs and Communications “Employment Status Survey” (2007), industries with high ratio of part-time workers are “Restaurants and lodging” (32.3%) and “Wholesale/retail” (27.1%). Industries with high ratio of *arubaito* (fringe workers) are also “Restaurants and lodging” (31.6%) and “Wholesale/retail” (12.6%). Therefore, the use of non-regular employees has progressed most in those industries.

sale/retail/restaurant industry, regardless of regular or non-regular employees, the quantitative employment change has no significant impact on OJT. Even in those industries in which the use of non-regular employees has progressed, the quantitative increase in non-regular employees has no negative impact on OJT.

However, in both wholesale/retail/restaurant and manufacturing industries, “Employment change in regular employees due to the use of non-regular employees: Decrease” has a negative impact on OJT at 5% level and 1% level respectively. It turns out that OJT implementation is disturbed in companies in which the employment of regular employees is reduced by the use of non-regular employees. That is, it is highly possible that OJT is not implemented smoothly in companies which may have replaced regular employees by non-regular employees. This impact is especially greater in manufacturing industry.

This result was also confirmed by the entire estimate (see Table 5) so it can be said strongly that OJT is hard to function in companies which have replaced regular employees by non-regular employees. In manufacturing industry, since OJT on site is core training, it may be especially susceptible to the impact of the use of non-regular employees as substitutes for regular employees.

Next, focusing attention on the impact of the policy for the use of non-regular employees on vocational training, clear differences between industries are highlighted. In the wholesale/retail/restaurant industry, OJT does not function smoothly in companies which use non-regular employees for “Nonroutine tasks including judgment in which regular employees conduct.” In contrast, in the manufacturing industry, OJT functions in companies which use non-regular employees for “Nonroutine tasks including judgment in which regular employees conduct.”

If this is interpreted as the difference of the impact between industries caused by non-regular employees who have become core workforce, since it is not that special to use non-regular employees for advanced tasks in which regular employees conduct and the emphasis is on skill levels regardless of the employment pattern in the manufacturing industry, making non-regular employees to be core workforce may make smooth OJT implementation.¹⁰

On the other hand, in the wholesale/retail/restaurant industry, the job separation between regular and non-regular employees may be generally ambiguous. Therefore, making non-regular employees to be core workforce, i.e., using non-regular employees for non-routine tasks in which regular employees conduct may increase the burden of regular employees who provide vocational training to non-regular employees and as a result, OJT may not function smoothly.

Regarding variables related to the policy for the use of non-regular employees, there was no significant result found in the entire estimate in Table 5, but there were different

¹⁰ Muramatsu (2007) indicated that the smooth production is done in auto companies which “take” non-regular employees into their workplaces. It is consistent with the estimated result of this paper.

findings depending on the industry in the estimate by industry in Table 6. In the manufacturing industry, although non-regular employees' core workforce contributes to the smooth implementation of firm-level training, in the wholesale/retail/restaurant industry, their core workforce may disturb firm-level training.¹¹

According to the estimate by industry, it was also confirmed that whether OJT smoothly functions or not is not caused by the quantitative increase in non-regular employees but by the functional problem of human resources management using non-regular employees as substitutes for regular employees.

VI. Regression Analysis 2: Worker Survey Estimates

Next, the impact of using non-regular employees on firm-level training is analyzed from the viewpoint of workers (regular employees) using the worker survey results. While the worker survey surveyed regular employees and loaned workers about "Situations seen when regular and non-regular employees are working together," the worker survey estimates only use answers from regular employees who directly experienced changes in firm-level personnel system and management strategies.

Since the preference of workers aged 60 or over is expected to differ greatly from that of workers under 60 years old due to the existence of retirement age system and reemployment system, samples shall be regular employees under 60 years old.

As same as the company survey estimates, "Smoothness of OJT implementation (Easy to conduct vocational training)" is used as an explained variable. Ordered Probit Regression is also adopted as an estimate method as same as the company survey estimates.

We included increased/decreased number of non-regular employees dummy,¹² increased/decreased number of regular employees dummy, monthly average working hours, number of employees, company's business condition (results), industry dummy,¹³ age, female dummy, education dummy, annual wage and occupation dummy as explanatory variables.

Regarding monthly average working hours and annual wage, since the answers were received as class values, log-transformed real median values in each category were used as variables (descriptive statistics are shown in Table 7).

Above variables were introduced into explanatory variables and the regression analysis was conducted using "smoothness of OJT implementation" as an explained variable (see

¹¹ Cappelli and Neumark (2004) also found that the relationship between "functional flexibility" and "quantitative flexibility" in the manufacturing industry is different from that in the non-manufacturing industry.

¹² Changes in the number of both non-regular and regular employees compared with the previous year.

¹³ Although 21 industries are to be selected in the worker survey, variables which classify them into seven industries are introduced as same as the company survey estimates. The reference group is also "Communications/Transport" as same as the company survey.

Table 7. Descriptive Statistics (Worker Survey), N=3175

| Variables | Mean | S.D | Min | Max |
|--|--------|-------|--------|--------|
| Smoothness of OJT implementation (Easy to conduct vocational training) | 2.885 | 0.740 | 1 | 5 |
| Number of regular employees: Increase [†] | 0.140 | 0.347 | 0 | 1 |
| Number of regular employees: No change | 0.243 | 0.429 | 0 | 1 |
| Number of regular employees: Decrease | 0.573 | 0.495 | 0 | 1 |
| Number of regular employees: Do not know | 0.044 | 0.206 | 0 | 1 |
| Number of non-regular employees: Increase [†] | 0.501 | 0.500 | 0 | 1 |
| Number of non-regular employees: No change | 0.231 | 0.421 | 0 | 1 |
| Number of non-regular employees: Decrease | 0.179 | 0.383 | 0 | 1 |
| Number of non-regular employees: Do not know | 0.089 | 0.285 | 0 | 1 |
| Log (Monthly average working hours) | 5.054 | 0.543 | 2.708 | 5.635 |
| Company's business condition (results): Good (very good+good) | 0.203 | 0.402 | 0 | 1 |
| Company's business condition (results): Not bad | 0.253 | 0.435 | 0 | 1 |
| Company's business condition (results): Bad (bad+very bad) | 0.520 | 0.500 | 0 | 1 |
| Company's business condition (results): Do not know | 0.024 | 0.154 | 0 | 1 |
| Number of employees: less than 100 | 0.009 | 0.097 | 0 | 1 |
| Number of employees: 100 to 299 | 0.310 | 0.463 | 0 | 1 |
| Number of employees: 300 to 499 | 0.199 | 0.399 | 0 | 1 |
| Number of employees: 500 to 999 | 0.210 | 0.407 | 0 | 1 |
| Number of employees: 1000 to 4999 | 0.177 | 0.382 | 0 | 1 |
| Number of employees: 5000 or more | 0.095 | 0.293 | 0 | 1 |
| Age: 18 to 29 years old | 0.267 | 0.443 | 0 | 1 |
| Age: 30 to 39 years old | 0.341 | 0.474 | 0 | 1 |
| Age: 40 to 49 years old | 0.230 | 0.421 | 0 | 1 |
| Age: 50 to 59 years old | 0.162 | 0.368 | 0 | 1 |
| Manufacturing | 0.274 | 0.446 | 0 | 1 |
| Mining/Construction/Utilities | 0.163 | 0.369 | 0 | 1 |
| Communications/Transport | 0.083 | 0.276 | 0 | 1 |
| Wholesale/Retail/Restaurant | 0.107 | 0.309 | 0 | 1 |
| Finance/Insurance/Real estate | 0.149 | 0.356 | 0 | 1 |
| Service | 0.190 | 0.393 | 0 | 1 |
| Other Industry | 0.034 | 0.180 | 0 | 1 |
| Female | 0.305 | 0.461 | 0 | 1 |
| Junior high school graduate | 0.015 | 0.123 | 0 | 1 |
| High school graduate | 0.286 | 0.452 | 0 | 1 |
| Special training/Technical/Junior college graduate | 0.186 | 0.389 | 0 | 1 |
| Undergraduate/Graduate school graduate | 0.513 | 0.500 | 0 | 1 |
| Log (Annual Wage) | 15.332 | 0.459 | 13.592 | 16.706 |
| Professional job | 0.100 | 0.301 | 0 | 1 |
| Technical job | 0.073 | 0.260 | 0 | 1 |
| Office job | 0.208 | 0.406 | 0 | 1 |
| Administrative job | 0.468 | 0.499 | 0 | 1 |
| Sales job | 0.048 | 0.214 | 0 | 1 |
| Service job | 0.030 | 0.170 | 0 | 1 |
| Security job | 0.006 | 0.075 | 0 | 1 |
| Transport/Communications job | 0.019 | 0.137 | 0 | 1 |
| Skilled workman/Production process | 0.036 | 0.186 | 0 | 1 |
| Labor | 0.011 | 0.106 | 0 | 1 |

Note: Number of regular employees and number of non-regular employees are compared with the previous year.

Table 8. “Worker Survey” Estimate
(Explained Variable: “Smoothness of OJT Implementation”)

| Explanatory variables | Coef. | Z-value |
|--|-----------|-----------|
| Number of regular employees: Increase 【No change】 | 0.035 | 0.51 |
| Number of regular employees: Decrease | -0.151 | -2.84 *** |
| Number of regular employees: Do not know | -0.139 | -1.06 |
| Number of non-regular employees: Increase 【No change】 | -0.021 | -0.40 |
| Number of non-regular employees: Decrease | 0.057 | 0.85 |
| Number of non-regular employees: Do not know | 0.146 | 1.48 |
| Log (Monthly average working hours) | -0.106 | -2.81 *** |
| Company’s business condition (results): Good 【Not Bad】 | 0.183 | 3.00 *** |
| Company’s business condition (results): Bad | -0.231 | -4.57 *** |
| Company’s business condition (results): Do not know | 0.004 | 0.03 |
| Number of employees: less than 100 【Number of employees: 300-499】 | 0.156 | 0.73 |
| Number of employees: 100 to 299 | 0.148 | 2.50 ** |
| Number of employees: 500 to 999 | 0.179 | 2.84 *** |
| Number of employees: 1000 to 4999 | 0.163 | 2.43 ** |
| Number of employees: 5000 or more | 0.240 | 2.83 *** |
| Age: 18 to 29 years old 【Age: 50 to 59 years old】 | -0.040 | -0.48 |
| Age: 30 to 39 years old | -0.177 | -2.57 *** |
| Age: 40 to 49 years old | -0.104 | -1.55 |
| Manufacturing 【Communications/Transport】 | -0.145 | -1.63 |
| Mining/Construction/Utilities | 0.032 | 0.34 |
| Wholesale/Retail/Restaurant | -0.303 | -3.00 *** |
| Finance/Insurance/Real estate | 0.010 | 0.10 |
| Service | -0.136 | -1.49 |
| Other Industry | 0.097 | 0.72 |
| /cut1 | -2.690 | |
| /cut2 | -1.847 | |
| /cut3 | 0.149 | |
| /cut4 | 1.133 | |
| Log likelihood | -3223.564 | |
| N | 3175 | |

Note: Ordered Probit Regression is estimated. Samples are regular employees under 60 years old. **【】**= Reference group. “Female,” “Log (Annual Wage),” “Education” and “Occupation” are included in the regression. But the coefficient are suppressed. ***, ** and * indicate significant levels at 1%, 5% and 10%, respectively.

the estimated results in Table 8).

Firstly, focusing on variables related to the change in the number of regular and non-regular employees, the change in the number of non-regular employees has no significant impact. On the other hand, regarding the change in the number of regular employees, “Number of regular employees: Decrease” has a significant negative impact on vocational training at 1% level. This result is consistent with the estimated result of the company survey (see Table 5). It also turns out from the worker survey that the impact of firm-level training due to the use of non-regular employees is not caused by the quantitative increase in non-regular employees but by the quantitative decrease in regular employees.

Next, “Monthly average working hours” has a significant negative impact on the vocational training at 1% level. It turns out that OJT implementation is disturbed at workplaces in which regular employees’ working hours are long. In companies in which regular employees are working long hours, OJT may be disturbed due to too many tasks of regular employees. Adding that “Number of regular employees: Decrease” has a negative impact on the vocational training, OJT may not function smoothly in workplaces or companies in which the burden of regular employees has increased. Focusing on age dummy, “Age: 30 to 39 years old” has a significant negative impact at 1% level. It is estimated that regular employees in their thirties are most sensitive to the problem of firm-level training caused by the use of non-regular employees.

In addition, “Business condition (results)” has a significant positive impact on the vocational training at 1% level (both “Good” and “Bad”). Also in the estimated result of the company survey (see Table 5), “Sales (operating revenue)” has a significant positive impact on the vocational training at 5% level. It is confirmed that companies’ business conditions have a great impact on firm-level training.

Finally, focusing on industry dummy, “Wholesale/retail/restaurant” has a significant negative impact on the vocational training. It turns out from the worker survey that regular employees working in wholesale companies, retail companies and restaurants feel an impediment to the vocational training due to the use of non-regular employees. As confirmed from the estimated result in Table 6, it is suggested that the burden of regular employees working in wholesale companies, retail companies and restaurants has increased due to use of non-regular employees as substitutes for regular employees and progress of non-regular employees’ core workforce, and as a result, it may be impediment to the opportunities of training for regular employees.

VII. Conclusion

Based on the previous studies which found that the use of non-regular employees has a negative impact on firm-level training, this paper analyzed whether it is caused by the quantitative increase in non-regular employees or the functional problems such as the policy for the use of non-regular employees using both data of companies and workers. The major

conclusions obtained by this paper are the following three points:

Firstly, it was confirmed from both estimated results of the company survey and worker survey that the quantitative increase in non-regular employees has no significant impact as a cause of disturbing OJT implementation. It turned out that the impediment to OJT due to the use of non-regular employees is not caused by the quantitative increase in non-regular employees.

Secondly, according to the estimated result of the company survey, it was confirmed that OJT does not function smoothly in companies in which the employment of regular employees has been reduced due to the use of non-regular employees. This means OJT has not been conducted smoothly in companies which have replaced regular employees by non-regular employees. It indicated the possibility that the impact of using non-regular employees on the vocational training is not caused by the quantitative change in non-regular employees but by the functional problem using non-regular employees as substitutes for regular employees.

Thirdly, from the estimated results of both company and worker surveys, it was confirmed that firm-level training has not been implemented smoothly in companies in which the number of regular employees has decreased. According to the estimated result of the worker survey, OJT implementation has also been disturbed in companies in which regular employees are working long hours. It was confirmed that firm-level training has not been implemented smoothly in companies in which the burden of regular employees has increased.

From the analysis result of this paper, it was highlighted that the increase in the number of non-regular employees itself is not the cause of disturbing firm-level training, and the impact of using non-regular employees on the vocational training may be caused by the functional problem of human resources management; what tasks non-regular employees are used for and how to manage the burden of regular employees.

Finally, this paper refers to issues remained. “Smoothness of OJT implementation” which was used as a major analysis indicator in this paper is defined as just a “broad OJT” due to limited data and is still ambiguous. A more particular and objective indicator should be analyzed in the future.

The response to the endogenous problem is also an issue remained. It can be considered that the use of non-regular employees is not generated exogenously but based on the decision making of companies taking costs of long-term human resources development for regular employees into account. This paper remains an issue on the response to such endogenous problem.

In order to overcome these issues, further accumulation of data on the use of non-regular employees and the impact are required. The accumulation of data is expected for further progress of the studies in the future.

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Perceptions of Pay and Work by Standard and Non-Standard Workers

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Using a unique internet survey of standard and non-standard workers in Japan, the author studied the determinants of their perceived wage equity and job satisfaction by employment category. The primary finding was that distinctions of employment category and workers' career concerns are more influential in determining perceived wage equity than wages and job contents per se. Secondly, the determinants of job satisfaction are rather common in each employment category, although a notable difference exists in the components of wage satisfaction. Satisfaction with wages, job security, training and working hours are all important in determining overall job satisfaction, which in turn contributes to organizational performance. Thirdly, measurements of capability show somewhat disadvantageous positions for non-standard workers, particularly those of contractual/temp-agency workers.

I. Introduction

Equitable treatment between standard and non-standard workers has been a matter of concern in Japan for more than a decade, and in 2007 the Act on Part-Time Workers was amended to mandate equitable treatment of part-time and full-time workers. But questions remain on what constitutes "equitable treatment" and how to implement it. Some argue that wage determination based on comparable worth is the way to go, but it is not obvious if the value of a job, calculated by job analysis, is the most equitable factor. To better understand wage equity between standard and non-standard workers, we need empirical research on how workers really think about this issue.

One of the earliest and most detailed empirical studies is Shinozaki et al. (2003). Using the *Survey on the Utilization of Diversified Workers* conducted by the JIL (Japan Institute of Labour) in January 1999, the authors proposed a model to explain the factors affecting the perceived inequity of wage differentials between standard workers and part-timers. The sample used female part-timers under age 60 who believe their wages are lower than those of standard workers in the same workplace. According to their estimation, the perceived inequity increases when the job requires more responsibility and higher qualifications, the job is not felt to be worthwhile, and standard workers do almost the same jobs. On the other hand, the perceived inequity decreases when overtime and regular working hours are short, working hours or days are flexible, job responsibility is low, and the workers opted for part-time positions. Interestingly, the magnitude of wage differentials does not have a significant effect. In sum, job content and working hours are the significant factors.

Although the findings in that study are very instructive, some aspects deserve further investigation. The first point is whether there are no other important factors which affect

perceptions of inequity by part-timers. For example, Okunishi (2007) contrasts two polar-case HR strategies concerning the treatment of standard and non-standard workers, i.e., integration and separation strategies. It will be interesting to see if and how firms' HR strategies or policies affect workers' equity perceptions. The second point concerns a comparison group. Shinozaki et al. focus their attention on the comparison between standard and part-time workers. But it is not entirely obvious whether part-timers compare their wages primarily with standard workers. The social-comparison theory suggests that workers tend to compare their wages with those belonging to the same employment categories (Baron and Kreps [1999, chap. 5]). The third point is how important wage equity is in affecting, say, overall job satisfaction and organizational performance. The organizational justice theory suggests that perceived inequity may cause workers' dissatisfaction and worsen organizational performance (Folger and Cropanzano 1998). But this theme has not been fully explored in the context of equitable treatment between standard and non-standard workers in Japan.

Shimanuki (2007) takes up the first two of the above three points. He notes that the role of HR policies and the consideration of comparison groups are lacking in the previous studies. He proposed a model to explain wage satisfaction by using additional explanatory variables such as those signifying the extent to which part-timers are incorporated into the main workforce (*kikan-ka* in Japanese), and those signifying firms' policies toward equitable treatment. The former group of variables is assumed to determine the choice of comparison groups. He finds that the wage satisfaction of part-timers declines as their jobs become more similar to those of standard workers, which he interprets to mean that part-timers are more aware of standard workers as their comparison group. Furthermore, HR policies toward equity (e.g., individual performance evaluation, a grievance system and the practice of conversion from part-timers to standard workers) enhance wage satisfaction.

His study clearly advanced our understanding on this issue. But the following points merit further research. First, it would be better to take a comparison group into account more explicitly. Second, not only firms' HR policies but also workers' attitudes or career concerns may matter, too. Third, although most of the previous studies have concentrated on part-timers, a comparison within non-standard workers would be of interest. Fourth, the relationship between equity or satisfaction and organizational performance will be a further research agenda. Lastly, as Shimanuki himself mentioned, aspects other than wages should be taken into account explicitly. These considerations, except for the last two, take us to the first research question of this study.

Research question 1

What factors affect the perceived equity of wages by non-standard workers, after controlling for the primary wage comparison group? As explanatory variables, the relationship between standard and non-standard workers at the workplace, and career concerns, should be included as well as wage levels, job attributes, and working hours. Furthermore, are the factors affecting wage eq-

uity perception different between part-timers and other non-standard workers?

Concerning the relationship among perceived wage equity, job satisfaction and organizational performance, one should note that overall job satisfaction of non-standard workers is not necessarily lower than that of standard workers.¹ For example, the survey results in Japan Institute for Labour Policy and Training (2006a) show that only 33% of standard workers are satisfied with their jobs, while the corresponding figure for non-standard workers is 41%.² Another survey in Japan Institute for Labour Policy and Training (2006b) also shows that 32% of standard workers are satisfied with their jobs as a whole, while the corresponding figure for non-standard workers is 35%.³ Non-standard workers show higher satisfaction than standard workers regarding working hours, training, and wages.

This issue is also linked to the following debate. There is a widely-held view that non-standard workers generally have poorer working conditions than standard workers (see for example, Nakano [2006] for Japan and Kalleberg, Reskin, and Hudson [2000] for the U.S.A.). But Sato and Koizumi (2007) challenge this view by claiming that one should not judge the working conditions of non-standard workers based on the criteria for standard workers. In their view, non-standard workers have their own way of judging their working conditions, and they may be sufficiently well-off. Given the above-mentioned satisfaction data, this may be true. Probably the criteria for judging working conditions will not be the same between standard and non-standard workers. But how different are they? If they are indeed different, in what aspects and to what extent are they different? Again, we need further empirical research. This background leads us to the second research question of this study.

Research question 2

What aspects or factors affect the overall job satisfaction of workers? More specifically, what is the significance of not only wages but also job security, training and working hours, and are the effects of those aspects different among employment categories? Finally, does job satisfaction affect organizational performance?

¹ This may not be unique to Japan. Booth and Van Ours (2008), for example, find that British women have higher job satisfaction when they are part-timers.

² This survey consists of an establishment survey and a worker survey, both conducted in December 2005. The establishments surveyed had 30 or more employees, and 870 responses were collected. The worker survey respondents were chosen by the establishments, and 5,704 responses were collected.

³ This survey was conducted in November 2005. The sample frame is unionized standard workers and non-standard workers (regardless of union status) mainly in retail and service industries. The observations of 1,970 standard workers and 1,963 non-standard workers were tabulated.

II. Data

For the purpose of this study, I conducted an internet survey through Macromill, which is an internet-survey company with more than 560,000 registered monitors. The sample frame is employees (excluding executives) aged 25 to 59 in Japan. Those under age 25 were not included because there are many student part-timers (called *arubaito* in Japanese, coined from the German *Arbeit*) in this age group and their characteristics may be very different from those of other part-timers. Those aged 60 or over were not included either for two reasons. First, this group includes many contractual workers (called *shokutaku* in Japanese) who used to be standard workers and had reached the mandatory retirement age. Their characteristics may be very different from those of other contractual workers. Second, the number of Macromill monitors aged 60 or over is rather small compared to other age groups. Therefore, obtaining a representative sample was a concern.

From the registered Macromill monitors, 1,615 standard workers and 1,678 non-standard workers were chosen at random and an e-mail questionnaire was sent to them on the evening of November 9, 2007. The survey was targeted to collect 1,000 observations from standard and non-standard workers respectively. When this target was reached in the early afternoon of November 10, the survey was closed.

In the end, we obtained a sample of 1,030 standard workers and 1,030 non-standard workers. The composition of standard workers is: 381 career-track workers (called *sogo-shoku* in Japanese), 378 general-staff workers (called *ippan-shoku* in Japanese), 43 workers belonging to other categories, and 228 workers whose workplaces have no career-track vs. general-staff worker distinction. The composition of non-standard workers is: 604 part-timers (whose working hours or days are shorter than those of standard workers in the same workplace), 214 contractual workers (who engage in specific jobs under specified contract periods), 210 temp-agency workers (who are employed by temporary-help companies and are sent to work at client workplaces), and 2 other workers. After examining the cross tabulation results by employment category, I found that the tendencies of the three standard worker categories other than career-track workers were rather similar. This was also the case for the two non-standard worker categories of contractual workers and temp-agency workers. Thus I grouped those categories together in the subsequent analyses.

The major characteristics of the survey respondents are shown in Table 1. Among demographic characteristics, one can easily see the sheer contrast in male ratios between standard and non-standard workers, i.e., males are dominant among standard workers, while females are dominant among non-standard workers. Regarding age distribution, contractual/temp-agency workers are notable for heavy distribution in the younger age groups. When compared to the national representative sample of the *Labor Force Survey*, those of a younger age have a much heavier distribution, in particular for females. It is also the case

Table 1. Characteristics of Survey Respondents by Employment Category

| Characteristics | Standard workers | Career-track | Others | Non-standard workers ¹ | Part-timers | Contractual/temp-agency workers |
|---|------------------|---------------|---------------|-----------------------------------|---------------|---------------------------------|
| Sample size (Composition, %) | 1,030 (50.0) | 381 (18.5) | 649 (31.5) | 1,030 (50.0) | 604 (29.3) | 424 (20.6) |
| Ratio of males (%) | 78.0 | 89.5 | 71.2 | 19.3 | 8.1 | 35.4 |
| Age distribution (%) | | | | | | |
| 25-34 | 37.3 | 33.9 | 39.4 | 40.8 | 34.5 | 50.2 |
| 35-44 | 37.4 | 38.1 | 37.0 | 40.0 | 43.5 | 34.9 |
| 45-59 | 25.2 | 28.1 | 23.6 | 19.2 | 22.1 | 14.9 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Ratio of those with spouses (%) | 65.3 | 69.8 | 62.7 | 58.7 | 73.8 | 37.3 |
| Ratio of college graduates (%) | 59.7 | 82.4 | 46.4 | 27.7 | 19.9 | 38.9 |
| Ratio of those working in metropolitan areas (%) ² | 52.6 | 62.2 | 47.0 | 52.3 | 47.5 | 59.2 |
| Distribution of establishment size (%) | | | | | | |
| <30 employees | 21.1 | 10.8 | 27.1 | 36.8 | 52.2 | 15.1 |
| 30-99 | 20.3 | 16.3 | 22.7 | 20.2 | 21.4 | 18.6 |
| 100-299 | 16.4 | 16.8 | 16.2 | 15.5 | 11.9 | 20.5 |
| 300-999 | 15.4 | 17.8 | 14.0 | 11.7 | 7.0 | 18.4 |
| 1,000+ employees | 26.8 | 38.3 | 20.0 | 15.7 | 7.6 | 27.4 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Hourly wage (yen) ³ | 2,996 | 3,319 | 2,807 | 1,491 | 1,227 | 1,872 |
| Monthly working hours (hours) ⁴ | 181.5 | 184.4 | 179.7 | 115.9 | 89.4 | 153.6 |
| Monthly overtime hours (hours) ⁴ | 19.0 | 21.0 | 17.8 | 5.9 | 2.4 | 10.9 |
| Distribution of annual income (%) ⁵ | | | | | | |
| <1 million yen | 0.5 | 0.3 | 0.7 | 37.9 | 57.3 | 6.2 |
| 1-2 million yen | 2.6 | 1.1 | 3.5 | 28.1 | 34.2 | 17.5 |
| 2-3 million yen | 7.0 | 2.2 | 9.9 | 18.3 | 7.3 | 36.6 |
| 3-4 million yen | 17.5 | 8.3 | 23.0 | 9.7 | 0.4 | 25.0 |
| 4-5 million yen | 20.4 | 16.3 | 22.8 | 2.4 | 0.2 | 6.2 |
| 5-6 million yen | 16.4 | 20.8 | 13.7 | 1.4 | 0.0 | 3.8 |
| 6-7 million yen | 11.9 | 14.1 | 10.6 | 1.0 | 0.0 | 2.7 |
| 7-8 million yen | 8.6 | 10.5 | 7.5 | 0.8 | 0.4 | 1.4 |
| 8-9 million yen | 6.5 | 10.0 | 4.5 | 0.0 | 0.0 | 0.0 |
| 9-10 million yen | 4.2 | 7.8 | 2.2 | 0.0 | 0.0 | 0.0 |
| 10+ million yen | 4.2 | 8.6 | 1.7 | 0.4 | 0.2 | 0.7 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Notes: ¹ “Non-standard workers” include 2 respondents who are included neither in “part-timers” nor “contractual/temp-agency workers.”

² “Metropolitan areas” are the following prefectures: Saitama, Chiba, Tokyo, Kanagawa, Aichi and Osaka.

³ “Hourly wage” was calculated by: monthly income/monthly working hours, both in October 2007. The respondents whose hourly wage was less than 500 yen or more than 100,000 yen were treated as missing.

⁴ “Working hours” and “overtime hours” are in October 2007. Working hours less than 10 hours or more than 500 hours were treated as missing. Observations in which overtime exceeds total working hours were deleted.

⁵ “Annual income” is for the previous year. In this calculation, observations where job tenures are less than 1 year were deleted.

that there are more temp-agency workers in the present survey.⁴ Although it is not necessarily obvious how these factors will affect the results, one should keep in mind that this survey probably over-samples younger workers. In part due to this age structure, the ratio of those with spouses is low, standing at 37% among contractual/temp-agency workers. In the other categories, it exceeds 60%.

There is a correlation between education and employment categories as well. The ratio of college graduates is highest among career-track workers, followed by other standard workers. The ratio is lower among non-standard workers, especially among part-timers. One can also find differences in geographic distribution. Career-track workers and contractual/temp-agency workers are more heavily distributed in metropolitan areas. This is probably due to the locations of the large firms that employ them.

As for wages and working hours, one can find sheer differences again by employment category. The hourly wage is highest for career-track workers, followed by other standard workers, contractual/temp-agency workers, and part-timers. The order of working hours corresponds to that of hourly wages, i.e., they are longest for career-track workers and shortest for part-timers. Annual income distribution reflects these tendencies of wages and working hours. Among career-track workers the majority earns more than 5 million yen, while most part-timers earn less than 2 million yen.

Before embarking on statistical analyses, it will be beneficial to look at the basic results for the two research questions, i.e., perception of wage equity and job satisfaction.

There are two measures of perceived wage equity in this survey. The first is the question on the primary wage comparison group when one judges if one's wage is high or low.⁵ The survey further asks about perception when one compares one's own wage with this primary comparison group. The results are shown in Table 2. A major finding is that standard workers tend to compare their wages with those of other standard workers (either in the same firm or other firms), and non-standard workers tend to compare their wages with those of other non-standard workers (either in the same firm or other firms). In other words, employment categories are more important than organizational boundaries. A slight deviation is observed for contractual/temp-agency workers in that they compare their wages not only with non-standard workers but also with standard workers in the same firm and with the same job. When one's wage is compared to one's primary comparison group, the degree of perceived equity is rather similar between standard and non-standard workers. But contractual/temp-agency workers show slightly higher dissatisfaction, perhaps due to their

⁴ Among non-standard workers, the proportion of temp-agency workers is 7.6% in the 2006 Labor Force Survey, while the corresponding proportion is 20.8% in this survey. Furthermore, among female non-standard workers aged 25-64, the proportion of those aged 25-34 is 23.3% in the 2006 Labor Force Survey, while the corresponding proportion is 40.4% in this survey (however, the denominator in my internet survey is those aged 25-59 rather than those aged 25-64).

⁵ The survey asks about a secondary comparison group as well. But the tendencies are very similar to the primary comparison group and I will thus focus on the primary comparison group.

Table 2. The Primary Wage Comparison Group and Perception of Wage Equity by Employment Category

| Item | (%) | | | |
|--|-------------------------------------|------------------------------|-------------|--|
| | Career-track standard workers | Other standard workers | Part-timers | Contractual/ temp-agency workers |
| <i>The primary wage comparison group</i> | | | | |
| 1. Standard workers in the same firm and with the same job | 45.7 | 43.6 | 12.1 | 25.0 |
| 2. Non-standard workers in the same firm and with the same job | 0.5 | 1.7 | 26.5 | 21.9 |
| 3. Standard workers in the same firm but with different jobs | 1.8 | 3.1 | 1.2 | 1.2 |
| 4. Non-standard workers in the same firm but with different jobs | 0.5 | 0.6 | 4.0 | 3.1 |
| 5. Standard workers in other firms in the same industry | 37.3 | 29.9 | 2.3 | 8.3 |
| 6. Non-standard workers in other firms in the same industry | 1.3 | 1.2 | 33.9 | 18.9 |
| 7. Amount necessary to earn a living | 10.5 | 15.9 | 17.9 | 17.2 |
| 8. Other | 2.4 | 4.0 | 2.2 | 4.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| <i>Perception of wage equity toward the above comparison group</i> | | | | |
| 1. Fully satisfied | 4.5 | 3.7 | 7.0 | 5.0 |
| 2. Tolerable | 31.2 | 24.0 | 36.9 | 20.0 |
| 3. Average | 27.6 | 31.4 | 28.8 | 30.4 |
| 4. Intolerable | 23.6 | 25.9 | 19.9 | 24.8 |
| 5. Totally intolerable | 13.1 | 14.9 | 7.5 | 19.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

choice of a comparison group.

The second measure of perceived wage equity is the wage differential between standard and non-standard workers performing similar jobs. The upper portion of Table 3 shows the results concerning perception of wage differentials. Most workers perceive that standard workers get higher wages than non-standard workers, and this view is most prominent among career-track workers and contractual/temp-agency workers. The lower portion of Table 3 shows the results concerning perception of wage equity. It is found that standard workers tend to think the differentials are reasonable or should be still larger, while part-timers tend to think they are reasonable or barely tolerable, and contractual/temp-agency workers tend to think they are barely tolerable. Overall, the majority of

Table 3. Perceptions of Wage Differentials and Wage Equity between Standard and Non-Standard Workers by Employment Category

| Item | (%) | | | |
|--|-------------------------------------|------------------------------|-------------|--|
| | Career-track standard workers | Other standard workers | Part-timers | Contractual/ temp-agency workers |
| <i>Perception of wage differentials between standard and non-standard workers performing similar jobs</i> | | | | |
| 1. Standard workers get much higher wages | 50.4 | 33.1 | 37.1 | 48.8 |
| 2. Standard workers get higher wages | 25.7 | 28.7 | 21.9 | 20.8 |
| 3. No substantial differences | 7.3 | 10.9 | 6.8 | 5.7 |
| 4. Non-standard workers get higher wages | 2.4 | 2.8 | 1.5 | 3.1 |
| 5. No cases of both types of workers doing similar jobs | 8.1 | 11.2 | 14.2 | 7.1 |
| 6. Other | 0.0 | 0.3 | 0.0 | 0.0 |
| 7. Don't know | 6.0 | 12.9 | 18.5 | 14.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| <i>Perception of wage equity between standard and non-standard workers, when 1, 2, 3 or 4 was chosen in the above question</i> | | | | |
| 1. The differentials should be still larger | 26.3 | 21.8 | 7.9 | 6.0 |
| 2. Reasonable | 46.8 | 46.9 | 44.1 | 22.1 |
| 3. Barely tolerable | 17.1 | 19.2 | 28.8 | 32.0 |
| 4. Intolerable | 8.0 | 6.9 | 12.6 | 19.9 |
| 5. Totally intolerable | 1.8 | 4.7 | 6.4 | 19.9 |
| 6. Other | 0.0 | 0.4 | 0.2 | 0.0 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

workers seem to tolerate wage differentials, but contractual/temp-agency workers show some discontent.

The other major research interest is job satisfaction. One may tend to think that non-standard workers are less satisfied than standard workers. But the results are to the contrary, as Figure 1 shows. Overall job satisfaction is not very different between standard and non-standard workers. Indeed, part-timers show the highest job satisfaction as a whole, and for wages, training, and working hours. It would be understandable that non-standard workers show higher satisfaction with working hours, and that contractual/temp-agency workers show lower satisfaction with job security. But why do part-timers whose hourly wage and annual income are the lowest among the employment categories show the highest satisfaction overall and for wages? As was noted in the Introduction, these results are not unique to this particular survey. How should one interpret this "reversal" phenomenon?

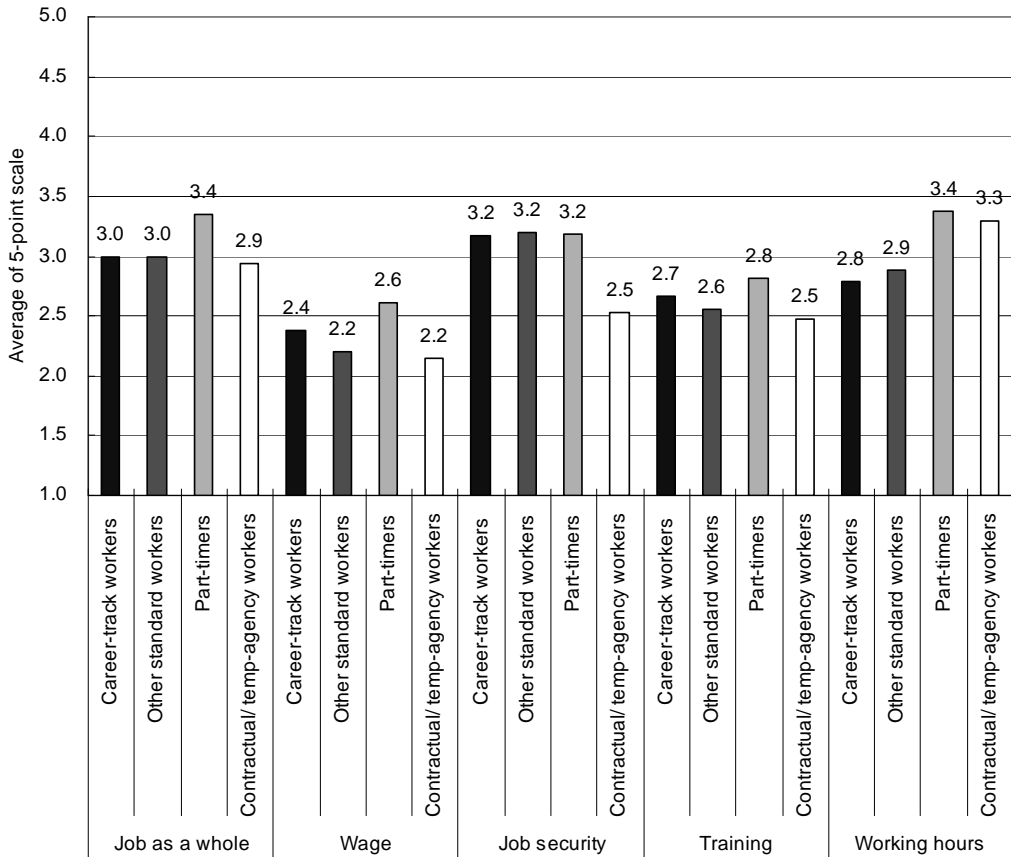


Figure 1. Job Satisfaction by Employment Category

III. Determinants of Perceived Wage Equity by Non-Standard Workers

To answer the first research question, I proposed a model to explain the perception of wage equity between standard and non-standard workers from the perspective of non-standard workers. The explanatory variables are classified broadly into the following seven groups: (1) variables concerning wages, (2) variables signifying the strength of distinction by employment category, (3) job attributes, (4) working hours, (5) career concerns of workers, (6) attributes of the workplace, and (7) individual and household attributes.

Since the dependent variable uses a 5-point scale on wage equity, the ordered-probit model is appropriate (Table 4). Although the results are somewhat different for part-timers and contractual/temp-agency workers, there are some features in common. First, broadly speaking, (2) variables signifying the strength of distinction by employment category and (5) career concerns of workers are more important than (3) job attributes and (4) working hours, which previous studies emphasized. In particular, the strength of distinction by employment category diminishes wage equity, while the distinction of job contents enhances

Table 4. Estimation Results of the Models Explaining the Perception of Wage Equity between Standard and Non-Standard Workers from the Perspective of Non-Standard Workers (Ordered Probit)

| Explanatory variables | Non-standard workers | Part-timers | Contractual/ temp-agency workers |
|--|-----------------------|-------------------------|----------------------------------|
| (1) Variables concerning wage | | | |
| Dummy indicating if one's primary wage comparison group is standard workers | -0.254 ** (0.113) | -0.218 (0.177) | -0.398 ** (0.160) |
| Importance of the wage income in the household | -0.151 * (0.080) | -0.205 * (0.115) | -0.131 (0.123) |
| Hourly wage | -0.00002 (0.00003) | 0.0002 *** (0.00009) | -0.00003 (0.00004) |
| (2) Variables signifying the strength of distinction by employment category | | | |
| Distinction by employment category | -0.219 *** (0.045) | -0.161 *** (0.060) | -0.355 *** (0.076) |
| Distinction by job content | 0.159 *** (0.039) | 0.154 *** (0.058) | 0.229 *** (0.059) |
| Ratio of non-standard workers | -0.024 (0.046) | -0.010 (0.065) | -0.025 (0.072) |
| Practice of conversion from non-standard to standard worker status | 0.228 *** (0.067) | 0.283 *** (0.093) | 0.161 (0.107) |
| (3) Job attributes | | | |
| Degree of non-routine tasks | 0.038 (0.043) | 0.014 (0.060) | 0.037 (0.067) |
| Required skill levels of the job | -0.030 (0.064) | -0.262 *** (0.090) | 0.184 * (0.108) |
| Having subordinates | 0.109 (0.082) | 0.181 (0.114) | 0.072 (0.127) |
| (4) Working hours | | | |
| Monthly regular working hours | -0.002 (0.001) | -0.0002 (0.002) | -0.001 (0.002) |
| Monthly overtime hours | -0.003 (0.003) | -0.015 ** (0.008) | -0.0001 (0.004) |
| Flexibility of working hours/days | -0.023 (0.040) | -0.081 (0.058) | -0.004 (0.061) |
| (5) Career concerns of workers | | | |
| Willingness in choosing the present employment category | 0.179 *** (0.045) | 0.202 *** (0.069) | 0.183 *** (0.065) |
| Dummy indicating if one desires to become a standard worker | -0.252 ** (0.110) | -0.538 *** (0.162) | 0.077 (0.169) |
| (6) Attributes of the workplace | | | |
| Manufacturing industry dummy | 0.0002 (0.139) | 0.236 (0.242) | -0.100 (0.181) |
| Establishment size | -0.052 (0.035) | 0.018 (0.052) | -0.115 ** (0.055) |
| (7) Individual and household attributes | | | |
| Dummy indicating if one has a spouse | 0.097 (0.127) | 0.258 (0.200) | -0.159 (0.191) |
| Dummy indicating if one has a preschool child | 0.063 (0.126) | -0.022 (0.163) | 0.477 * (0.246) |
| Male dummy | 0.221 (0.136) | 0.450 (0.284) | 0.021 (0.175) |
| Dummy indicating those aged 35-44 | -0.280 ** (0.110) | -0.198 (0.160) | -0.391 ** (0.164) |
| Dummy indicating those aged 45-59 | -0.057 (0.149) | -0.376 * (0.210) | 0.397 (0.244) |
| Job tenure | -0.013 (0.014) | 0.010 (0.020) | -0.038 (0.025) |
| College graduate dummy | 0.169 (0.109) | 0.063 (0.170) | 0.278 * (0.149) |
| Sample size | 521 | 282 | 237 |
| Pseudo R ² | 0.123 | 0.135 | 0.136 |

Note: Standard errors are shown in parentheses.

*** signifies $p\text{-value} \leq 0.01$; ** signifies $0.01 < p\text{-value} \leq 0.05$; * signifies $0.05 < p\text{-value} \leq 0.10$ respectively.

wage equity. The latter result is common with Shinozaki et al. (2003) and Shimanuki (2007). Furthermore, willingness in choosing the present employment category enhances wage equity, which was also found in Shinozaki et al. (2003).

Second, if one's primary wage comparison group is standard workers, wage equity decreases for contractual/temp-agency workers (by approximately -0.4 grade points). The corresponding figure for part-timers is not significant. This seems to reflect the fact that contractual/temp-agency workers are more conscious of the comparison with standard workers than part-timers (Table 2).

Third, the effect of hourly wages itself is rather limited as was the case in Shinozaki et al. (2003). It is barely significant for part-timers, at a level that is almost negligible (i.e., a 1,000 yen increase in hourly wage increases the grade point by only 0.2).

Fourth, among part-timers, the higher the required skill levels and the longer the overtime hours, the lower the wage equity, as Shinozaki et al. (2003) found. Furthermore, the practice of conversion from non-standard to standard worker status affects wage equity positively for part-timers, as Shimanuki (2007) found in the case of short-tenured part-timers. But these effects are not found for contractual/temp-agency workers.

In sum, wages and job contents per se are not very influential for wage equity. Rather, the feeling of "distinction" by employment category (i.e., *they* and *we* are different), and the distinction by job content are more influential. Non-standard workers want their jobs to be differentiated from those of standard workers, but they do not like the feeling that they are discriminated against. Given the above findings, the following implications emerge. Raising the wages of non-standard workers and considering comparable worth based on job analyses may not be very effective for improving wage equity. More effective measures will be appropriate job design, prospective career courses, and comprehensive measures of symbolic egalitarianism.

IV. Determinants of Job Satisfaction by Standard and Non-Standard Workers

To compare the determinants of job satisfaction and their effect on organizational performance, I set up the model in Figure 2. Job satisfaction is associated with four other aspects of satisfaction: wage, job security, training, and working hours. Each aspect is, in turn, associated with two to four relevant measures. Job satisfaction is also associated with overall performance of the workplace (a subjective measure of the respondents). All variables are observed in our survey questionnaire.

The estimation used SEM (structural equation modeling), and was done for all samples and for four different employment categories separately. The results are shown in Table 5. First, the parameters on the relationship between job satisfaction and other variables are broadly similar to each other by employment category, although the goodness-of-fit indices (RMSEA and CFI) suggest that it is inappropriate to assume that all parameters are the same. The effect on performance ranges from 0.38 (contractual/temp-agency workers) to 0.46

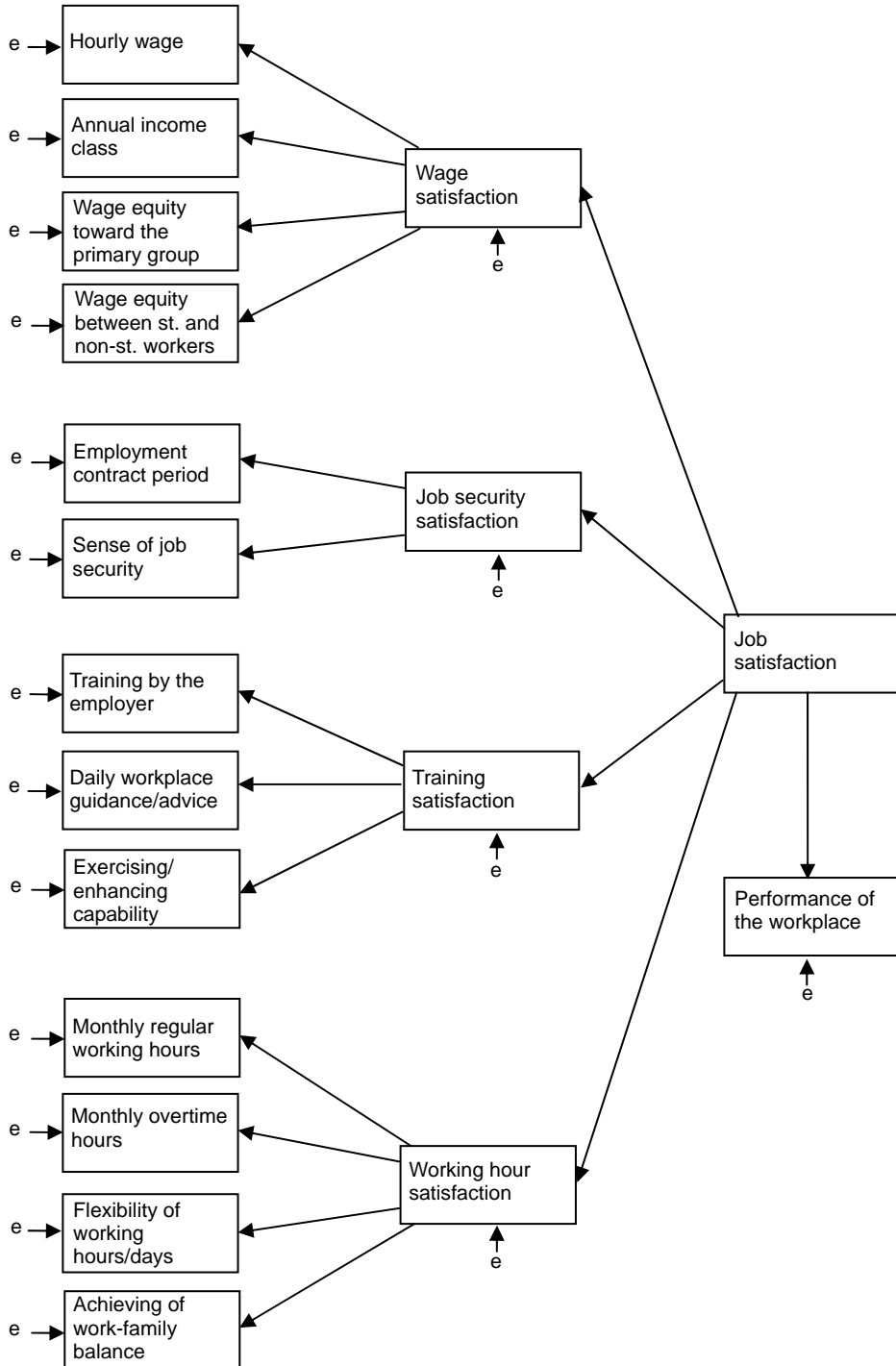


Figure 2. Structural Equation Model to Explain Job Satisfaction of Standard and Non-Standard Workers

Table 5. Estimation Results of the Models Explaining Job Satisfaction of Standard and Non-Standard Workers (Structural Equation Modeling, Standardized Coefficient Estimates)

| Relationship | All (n=1,827) | Career-track standard workers (n=345) | Other standard workers (n=584) | Part-timers (n=527) | Contractual/ temp-agency workers (n=369) |
|--|------------------|--|---|------------------------|---|
| Job satisfaction | | | | | |
| → Performance of the workplace | 0.435 | 0.453 | 0.420 | 0.458 | 0.379 |
| → Wage satisfaction | 0.337 | 0.356 | 0.332 | 0.302 | 0.307 |
| → Job security satisfaction | 0.439 | 0.537 | 0.449 | 0.450 | 0.340 |
| → Training satisfaction | 0.432 | 0.464 | 0.438 | 0.410 | 0.379 |
| → Working hour satisfaction | 0.340 | 0.373 | 0.360 | 0.303 | 0.279 |
| Wage satisfaction | | | | | |
| → Hourly wage | 0.030 † | 0.020 † | 0.080 | 0.102 | 0.034 † |
| → Annual income class | 0.027 † | 0.192 | 0.246 | -0.037 † | 0.072 † |
| → Wage equity toward the primary comparison group | 0.652 | 0.641 | 0.648 | 0.609 | 0.685 |
| → Wage equity between standard and non-standard workers | 0.303 | 0.202 | 0.158 | 0.332 | 0.483 |
| Job security satisfaction | | | | | |
| → Employment contract period | 0.150 | 0.128 | 0.064 | -0.028 † | 0.067 † |
| → Sense of job security | 0.596 | 0.593 | 0.637 | 0.556 | 0.555 |
| Training satisfaction | | | | | |
| → Training by the employer | 0.683 | 0.717 | 0.687 | 0.649 | 0.669 |
| → Daily workplace guidance/ advice | 0.495 | 0.515 | 0.515 | 0.490 | 0.426 |
| → Exercising/enhancing capabil- ity | 0.250 | 0.296 | 0.258 | 0.234 | 0.223 |
| Working hour satisfaction | | | | | |
| → Monthly regular working hours | -0.168 | -0.095 | -0.068 | -0.142 | -0.048 † |
| → Monthly overtime hours | -0.280 | -0.131 | -0.351 | -0.091 | -0.310 |
| → Flexibility of working hours/ days | 0.365 | 0.314 | 0.343 | 0.269 | 0.402 |
| → Achievement of work-family balance | 0.431 | 0.457 | 0.481 | 0.296 | 0.428 |
| RMSEA | 0.108 | 0.094 | 0.098 | 0.100 | 0.095 |
| CFI | 0.655 | 0.723 | 0.705 | 0.645 | 0.692 |

Note: † signifies that the coefficients are *insignificant* at the 10% level. RMSEA (Root Mean Square Error of Approximation) and CFI (Comparative Fit Index) are measures of the goodness-of-fit of the model.

(part-timers). Satisfaction with job security and training tend to be larger than satisfaction with wages and working hours in all employment categories.

Second, among the wage satisfaction components, wage equity toward the primary comparison group has the largest parameter in all employment categories. It is followed by wage equity between standard and non-standard workers in the case of non-standard workers. Although annual income class matters for standard workers, it does not matter for non-standard workers. Hourly wages are almost negligible except for part-timers. Part-timers' small or negligible parameters of hourly wages and annual income are probably in part due to the lesser importance of their wage income in the household. In fact, there is a negative correlation between importance of wage income in the household and wage satisfaction, and the former variable is conspicuously low in part-timers.

Third, regarding satisfaction with job security, the sense of job security is much more important than the contract period. Fourth, among the training satisfaction components, training by the employer has the largest parameters through all employment categories, followed by daily workplace guidance/advice, and exercising/enhancing capability. Fifth, for satisfaction with working hours, achievement of work-family balance has the largest parameter in all employment categories, followed by flexibility of working hours/days. Although length of working hours has a negative parameter, it is not as large except for overtime hours of other standard workers and contractual/temp-agency workers.

In sum, the parameter structures for standard and non-standard workers are rather common. Wage satisfaction is as important for non-standard workers as for standard workers. By the same token, satisfaction with working hours is as important for standard workers as for non-standard workers. Among the components of wage satisfaction, in all employment categories equity concerns are more important than actual wage amounts. Likewise, among the components of satisfaction with working hours, flexibility and work-family balance are more important than length of working hours in all employment categories. Satisfaction with job security and training are more appreciated than satisfaction with wage and working hours, both by standard and non-standard workers. Furthermore, job satisfaction has a positive impact on organizational performance.

Of course, there are differences as well. Perhaps the most important are the components of satisfaction with wage. For standard workers, annual income does matter, while this is negligible for non-standard workers. In addition, wage equity between standard and non-standard workers is modestly important for non-standard workers, while it is less important for standard workers.

Putting together the parameter estimates in Table 5 and the means of the variables, one could understand why job satisfaction among non-standard workers is not necessarily low despite their lower wages. For one thing, it is not really the wage level itself which matters in wage satisfaction but wage equity toward the primary comparison group. For another, non-standard workers enjoy more flexibility of working hours/days and achievement of work-family balance, which contribute to job satisfaction. Thus, to further enhance

job satisfaction of both standard and non-standard workers, improving wage equity within the same employment category, sense of job security, training by the employer, flexibility of working hours/days and work-family balance will be particularly effective.

V. Further Thoughts on “Capability”

So far, we have seen that the wages and annual income of non-standard workers are lower than those of standard workers (Table 1). Despite that, job satisfaction of non-standard workers is not necessarily lower than that of standard workers (Figure 1). In particular, satisfaction with wages among part-timers is highest among all employment categories, despite their wage level being the lowest. We analyzed the mechanism behind that. For one thing, job satisfaction consists of not only satisfaction with wages but also other satisfying aspects such as job security, training, and working hours (Figure 2 and Table 5). Of these, satisfaction with working hours among non-standard workers is higher than among standard workers. For another, in determining wage satisfaction, equity consideration is more important than actual wage amounts (Table 5). Furthermore, regarding equity concerns, comparison with workers in the same employment category is more important than that between standard and non-standard workers (Tables 2 and 5). Thus, the potentially negative effects of perceived wage inequity between standard and non-standard workers dwindle substantially. Does this mean that “All’s right with the world”?

In pursuing the measures of individual well-being, Sen (1999) compares three concepts: (1) *opulence* (e.g., real income), (2) *utility* (e.g., satisfaction, happiness and desire-fulfillment), and (3) the *capability* to function (i.e., what a person can do or be). He criticizes the first measure, opulence, by saying that “a person’s well-being is not really a matter of how rich he or she is” and that opulence “is a means to the end of well-being, but can scarcely be the end itself” (p. 19). He goes on to say that the second measure, utility, has two drawbacks, what he calls “physical-condition neglect” and “valuation neglect.” The former means that utility is fully grounded in the mental attitude of the person, while the latter means that avoiding any direct reference to the person’s own valuation exercise (p. 14). Indeed it seems plausible that “our mental reactions to what we actually get and what we can sensibly expect to get may frequently involve compromises with a harsh reality” (p. 15).

The third measure, capability, seems to overcome the difficulties of the first two measures. One of the attractive features of this measure is that it emphasizes what choice set one faces (“capability set” in Sen’s terminology), rather than the choice itself actually made. Thus there may well be a difference in the well-being of a person who chose to be a non-standard worker when he could have chosen to be a standard worker and that of a person who chose to become a non-standard worker because that was all he could do. As Table 6 shows, the majority of standard workers were willing to choose the current employment category, while about 30% of contractual/temp-agency workers were unwilling to choose

Table 6. Willingness in Choosing the Present Employment Category by Employment Category

| | (%) | | | |
|-----------------------------------|-------------------------------------|------------------------------|-------------|--|
| Item | Career-track standard workers | Other standard workers | Part-timers | Contractual/ temp-agency workers |
| 1. Strongly willing | 67.2 | 51.5 | 46.5 | 13.2 |
| 2. Somewhat willing | 15.2 | 19.7 | 31.5 | 27.6 |
| 3. Hard to say which was the case | 11.8 | 20.3 | 13.4 | 29.5 |
| 4. Somewhat unwilling | 2.4 | 5.4 | 5.1 | 15.1 |
| 5. Almost unwilling | 3.4 | 3.1 | 3.5 | 14.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

Table 7. The Degree to Which One's Capability is Exercised or Enhanced, and Obstacles to Realizing That Capability, by Employment Category

| | (%) | | | |
|--|-------------------------------------|------------------------------|-------------|--|
| Item | Career-track standard workers | Other standard workers | Part-timers | Contractual/ temp-agency workers |
| <i>The degree of which one's capability is exercised or enhanced</i> | | | | |
| 1. Highly realized | 6.0 | 6.2 | 4.5 | 5.4 |
| 2. Realized to some extent | 50.1 | 41.1 | 37.6 | 30.4 |
| 3. Average | 25.5 | 29.9 | 34.4 | 26.7 |
| 4. Not realized very much | 15.2 | 18.3 | 16.9 | 25.0 |
| 5. Not realized at all | 3.1 | 4.5 | 6.6 | 12.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| <i>The obstacles to realizing that capability, when 3, 4 or 5 was chosen in the above question</i> | | | | |
| 1. Limit of employment period | 4.2 | 0.9 | 4.9 | 14.7 |
| 2. Income adjustment to cope with taxation | 1.8 | 1.5 | 17.4 | 2.6 |
| 3. Due to employment category | 6.0 | 12.0 | 18.0 | 36.0 |
| 4. Due to job assignment by supervisors | 29.9 | 30.1 | 8.0 | 9.6 |
| 5. Problems with the workplace itself | 22.2 | 21.3 | 9.1 | 11.0 |
| 6. Problems of self-learning | 15.6 | 13.7 | 6.6 | 8.5 |
| 7. Due to compatibility with family or person's own lives | 16.2 | 17.8 | 34.9 | 15.8 |
| 8. Other | 4.2 | 2.6 | 1.1 | 1.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

the current employment category.

The present study does not try to elaborate Sen's capability concept further. But its essence in regards to potential achievement seems quite relevant to our interests. In the survey, there is a variable which can be seen as a rough proxy of Sen's capability concept, i.e., the degree to which one's capability is exercised or enhanced. According to Table 7, the capability of non-standard workers, in particular that of contractual/temp-agency workers, tends to be less exercised or enhanced than that of standard workers. The obstacles to achieving capability differ from one employment category to another. Among part-timers, compatibility with family or their own lives is most important, followed by employment category and income adjustment to cope with taxation.⁶ Contractual/temp-agency workers cite their employment category as the most critical factor, followed by compatibility with family or their own lives and limit of the employment period. Standard workers do have some obstacles, too, due to supervisors and workplaces.

Although the degree to which one's capability is exercised or enhanced is not strongly linked to job satisfaction (Table 5), it can be an important measure of individual and social well-being. Thus, the approximately 30% underutilization of the capability of non-standard workers should not be dismissed, with the same applying to the approximately 20% underutilization of standard workers (Table 7).

VI. Conclusion

The empirical findings of this study can be summarized as follows. First, in the quest for the determinants of wage equity between standard and non-standard workers from the perspective of non-standard workers, we found that wages and job contents per se are not very influential. Rather, the feeling of "distinction" by employment category, and job demarcation, are more influential. Non-standard workers want their jobs demarcated from standard workers, but they do not like the feeling that they are differentiated from standard workers in the workplace. Therefore, rather than raising non-standard workers' wages and introducing comparable worth, measures such as appropriate job design, prospective career courses, and symbolic egalitarianism may be more effective.

Second, in the quest for the determinants of job satisfaction among standard and non-standard workers, we found that the parameter structures determining job satisfaction are not entirely different among employment categories. Satisfaction with wages, job security, training and working hours are all important in determining job satisfaction, which in turn contributes to organizational performance across employment categories. There remain some differences, however, by employment category, most notably in the components of

⁶ If a person's annual income is 1,030,000 yen or less, he or she is exempt from income tax. Furthermore, an earner with a spouse can receive an income tax deduction if the annual income of the spouse is less than 1,410,000 yen.

wage satisfaction. For standard workers, annual income does matter, while this component is considered negligible by non-standard workers. In addition, wage equity between standard and non-standard workers is modestly important for non-standard workers, while it is less important for standard workers. In conclusion, to further enhance job satisfaction of both standard and non-standard workers, it will be particularly effective to improve wage equity within the same employment category, the sense of job security, training by the employer, flexibility of working hours/days and work-family balance.

Finally, we tried to apply Sen's capability concept in the context of the standard vs. non-standard workers controversy. Although job satisfaction is similar among the job categories, the measure of capability shows the somewhat disadvantageous positions of non-standard workers, particularly in the case of contractual/temp-agency workers. To alleviate this problem, firms should consider utilizing their workforce to a fuller extent regardless of employment category, and the government should try to remove institutional obstacles by which the capability of non-standard workers is underutilized (e.g., the taxation system by which part-timers refrain from supplying their labor, and the lack of career prospects of some casual workers).

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Conscientization of a Career Counselling Process —Becoming Aware of One's Career Counselling Process

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The objective of this report is to explain how to conscientize a career counselling session. The conscientization process involves creating a formatted transcript of a session, which is then separated into utterances. An utterance is one or more words that express a certain meaning. Each utterance is then classified based on Expressional Structure of Career Story. This Expressional Structure has three types of Expressional Technique: Tense, Viewpoint, and Subject. Each type of Expressional Technique consists of the following categories of Expressional Method: Now, Past, Present for Tense; Outer, General, Inner for Viewpoint; and Matter, Sentiment, Reasoning for Subject. An utterance is thus classified by selecting a category for each type of Expressional Technique. To assist the above process, we have created a software program called CareeTalk. This software takes the formatted transcript, separates the transcript into utterances, and provides statistical analysis based on the frequency of the category of Expressional Method as explained above. We will demonstrate how CareeTalk works, and describe how the analysis can be used to help the counsellor.

I. Introduction

Career development is the process of constructing Career Concept, a future activity plan based on one's past and present, by socializing a career as a story (Japan Institute for Labour Policy and Training [JILPT] 2009). As the present exists because there is a past, and the future exists because there is a present, Career Story is the making of meaning from a chain of events through interpretation. Career Concept is developed from a continuous cycle of construction, deconstruction and reconstruction of Career Story as one goes through social activities, such as working and looking for employment.

By this process, Career Story can be shared easier with others by personally eliminating impractical and rigid beliefs, and transformed into Career Concept which has a consistent script, a balanced perspective, and a cohesive plot (JILPT 2007).

Career counselling¹ is an implementation of a career development process using verbal communication as its main form of media. From a Career Concept development point of view, the conscientization of the career counselling process is important to effectively perform a career counselling session by becoming aware of a continuous cycle of construction, deconstruction, and reconstruction of Career Story (JILPT 2009).

¹ Career counselling that this research intends for is counselling for the unemployed who needs job placement at the public employment agency.

A training program called “Case Study Program” was developed (see Kayano 2008; JILPT 2009) at Labour College² targeted for counsellors who engage in career counselling and job placement at public employment agencies. In this program, the counsellors analyze transcripts from their own career counselling and become aware of the process.

The conscientization process involves creating a formatted transcript³ of a session, which is then separated into utterances. An utterance is defined as a string of words that express a certain organized meaning. Each utterance is then classified based on Expressional Structure of Career Story (Kayano 2006). This Expressional Structure has three types of Expressional Technique; Tense, Viewpoint, and Subject. Each Type consists of the following categories of Expressional Method; Now, Past, Present for Tense, Outer, General, Inner for Viewpoint, and Matter, Sentiment, Reasoning for Subject. An utterance is thus classified by selecting a category of Expressional Method for each Expressional Technique.

To assist the above process, we have created a software called CareeTalk (Kayano 2006; JILPT 2007). This software takes the formatted transcript, separates the transcript into utterances, and provides statistical analysis based on the frequency of the category of Expressional Method as explained above. We will demonstrate how CareeTalk works, and describe how the transcript analysis can be used to help the counsellor.

II. Theory of Career Counselling

1. Career Counselling Types and Theoretical Background

In public job placement, career counselling precedes job placement and the significance of career counselling is that it enhances the chance of concluding an employment relationship through job placement (Ministry of Health, Labour and Welfare 2004).

An employment relationship is a human relationship based on an employment agreement. Employment is the state of being hired by another person to contribute labour, and an employee works for rewards such as wages and allowances (Suwa 1999). The rewards are important sources of income for the job seeker while they are a cost for the employer (Shirai 1992). It is not easy for people with such different positions to conclude an employment agreement and form a human relationship. This is where career counsellors can play a role by bridging differences between the job seeker and the employer.

Career counselling can be categorized into three types depending from which perspective they bridge such differences: (i) Job Placement Type, (ii) Active Listening Type, and (iii) Catalytic Agent Type (Table 1).

² Labour College is a training institution of the Japan Institute of Labour Policy and Training (<http://www.jil.go.jp/english/index.html>).

³ The transcript is made based on an actual dialogue during career counselling which was recorded and, following “The 10 Rules for Formatting Transcripts Using CareeTalk (see Table 2),” every single word was transcribed from the recorded dictation. Not only verbal communication but also non-verbal communication (including facial expressions, gestures, and posture) was transcribed (see Appendix).

Table 1. Career Counselling Types and Theoretical Background

| | Career counselling types | Theoretical background |
|-----------------------|---|---|
| Job placement type | The career counsellor takes a neutral position between the job seeker and the employer and introduces an appropriate job offer to the job seeker from an objective perspective. | Trait and factor theory (Parsons 1909; Williamson 1964) |
| Active listening type | The career counsellor takes the job seeker's position and tries to understand the job seeker empathetically. The career counsellor supports the job seeker so that the job seeker can take the initiative in finding a job. | Vocational development theory (Super 1953) |
| Catalytic agent type | The career counsellor acts as an intermediary between the job seeker and the employer and provides support so that the two parties can constructively talk with each other. | Constructivist approach (Savickas 1993; Peavy 1996; Cochran 1997) |

The three types of career counselling differ in their choice of which reality to look at. Job Placement Type considers objective fact to be reality. Thus, the role of the career counsellor is to introduce an appropriate job to the job seeker from an objective perspective as a specialist.

Active Listening Type sees that reality is in the job seeker's subjective sentiments and ideas. The career counsellor provides support to the job seeker by respecting his/her sentiments and ideas and tries to understand the job seeker empathetically so that he/she can take the initiative in finding a job.

Catalytic Agent Type thinks that the job seeker and the employer can share an image of reality (though not actual reality) through verbal communication. Thus, the career counsellor talks with the job seeker and cooperates in recreating the job seeker's image of reality and helps him/her have constructive talks with the employer.

The different perspective taken in each type of career counselling arises from its theoretical foundation. Job Placement Type is based on the trait and factor theory founded by Parsons (1909) and developed by Williamson (1964). Active Listening Type is based on the vocational development theory proposed by Super (1953). Catalytic Agent Type is based on the constructivist approach by Savickas (1993), Peavy (1996), and Cochran (1997).

2. Catalytic Agent Type for Career Counselling

According to Madsen (1986), vocational guidance targeting young people is affected by changes to the structure of society. This refers to the change from the selection of the labor force to occupational choice during the transitional period from school to work, the change from social ascriptions (such as gender, education, and race) to individual achievement when evaluating one's ability, and the change from being a passive object of selection

to an active subject making a choice.

We believe that vocational guidance from a public employment agency is also affected by similar changes. Thus, the support given to the job seeker will shift from being centered on job introductions to creating purpose and value in working, allowing the job seekers to autonomously choose their own work.

This also means that there will be a shift in doctrine within public employment agencies, which is currently centered on career counselling. We hypothesize that there will be a shift from a trait and factor theory—which places importance on the compatibility of a job seeker to a job—to a constructivist approach. This approach, by way of vocational development theory that places importance on the job seeker to understand oneself and the job that one is pursuing, states that the concept of a career will become a reality through the sharing of this understanding with others.

The constructivist approach places emphasis on the narrative; that is to say, the client telling the story of their own career, specifically, Career Story outlining what that person has done up to the current point, what they are doing now, and what they will do in the future. McAdams (1995) states that the present direction can be plotted from the past and the future can be observed from the present direction through the client's narrative, and the client creates their own direction and consistency; that is, their own identity.

The narrative also serves as a means for sharing one's reality with others. According to Collin (2000), many people are losing the concept of sharing time and space in modern society. Thus, relating one's career to another person is an effective means of sharing the concept of time and space with another person.

When these ideas are applied to vocational counselling at public employment agencies, the following three benefits apply when a job seeker relates the story of their own career: (i) The job seeker can share his/her image of reality with the counsellor. (ii) Through an integrated story, the job seeker can find meaning from a chain of events and can be conscious of his/her consolidated being. (iii) Through (ii), the job seeker can talk about (express) his/her career to recruiters, thereby sharing their image of reality.

For Catalytic Agent Type, it is the counsellor's job to position him/herself between the job seeker and the employer and to support the job seeker in order to enable a constructive dialogue with the employer. Specifically, the job seeker constructs Career Concept through discussion with the counsellor during the career counselling.

In other words, the benefit of career counselling is that dialogue with the employer is more constructive when the job seeker constructs Career Concept with the support of the counsellor than when he or she constructs it alone.

3. Career Concept and Expressional Technique

In Psychology, the image of reality is equivalent to one's "Life-space" suggested by Lewin, which is the subjective environment of the job seeker. By giving meaning to a chain of events in one's Life-space, a story is constructed. And this, in turn, has the effect of

transforming the Life-space into an orderly one.

In constructivist career counselling, how is the relationship between Life-space and Career Story viewed? Peavy (1998, 77) states that “enter into the world of the other” is “the first task of the constructivist counsellor.” That means at first the client and the counsellor should share the client’s Life-Space.

According to Collin (2000, 84), “Constructs of past, present, and future, of nearness and distance, shape experiences which would otherwise be chaotic, and anchor memory, hope, anticipation, and planning.” In other words, by organizing one’s Life-space, one can bring order to oneself, and thereby create hope and a future roadmap.

When these ideas are applied to Catalytic Agent Type, the process involves at first the counsellor entering a job seeker’s Life-space, secondly the counsellor helping the job seeker organize his/her Life-space, and then finally the job seeker and the counsellor collaborating to construct, deconstruct, and reconstruct Career Story.

Script, Version, and Plot are required to create Career Story (JILPT 2007). “Script” is an expression of events over time (that is, the past, the present, and the future). “Version” is an expression of viewpoint of the story being told. “Plot” is an expression of the subject or the central theme of the story.

In order to arrange and connect events to construct Career Story, we came up with a technique called “Expressional Technique.” We define it as “techniques constructed from multiple linguistic Expressional Methods used to express one’s Career Story that enables one to select and carry out an appropriate method of expression in response to the status and flow of the career counselling between the job seeker and the counsellor.” Expressional Technique is divided into Subject, Direction, and Tense. The correlations between both components of Expressional Technique and Career Story are “Subject” to “Plot,” “Viewpoint” to “Version,” and “Tense” to “Script.” Each Expressional Technique is categorized into three categories of Expressional Method. Now, Past, Present for Tense; Outer, General, Inner for Viewpoint; and Matter, Sentiment, Reasoning for Subject. The definition of Expressional Method is explained in “III-4 Utterance Classification.” Figure 1 is the image of the relationship of Life-space, Expressional Technique and Expressional Method.

By a counsellor using these Expressional Methods adequately, Career Story can be developed into Career Concept which has a consistent script, a balanced perspective, and a cohesive plot through a continuous cycle of construction, deconstruction, and reconstruction of Career Story.

III. Basics of Utterance Classification

1. Protocol of Transcript Analysis

Transcript analysis follows the steps shown in Figure 2. If the transcript is created according to the set rules (Table 2), it can be loaded into CareeTalk. Once CareeTalk is used to

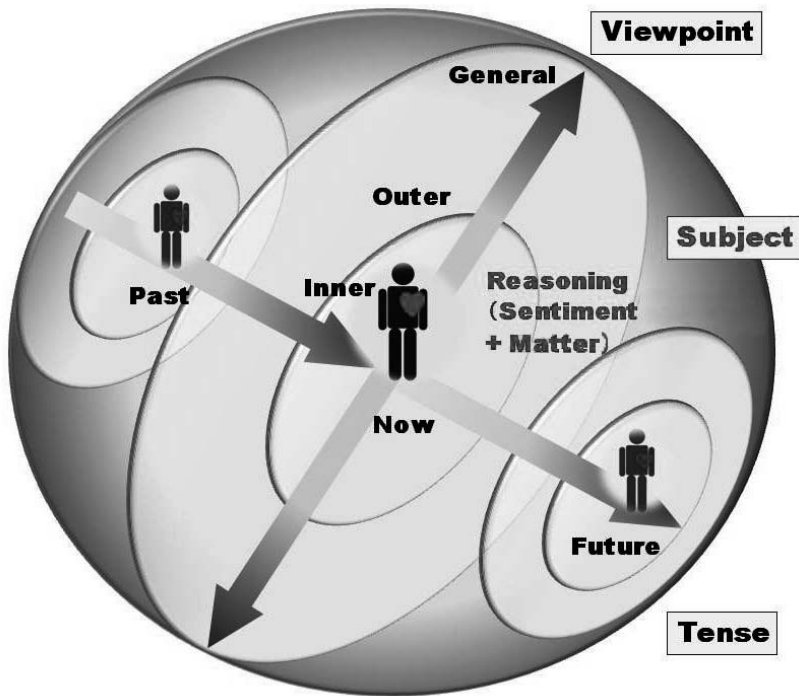


Figure 1. The Image of the Relationship of Life-Space, Expressional Technique, and Expressional Method

perform Utterance Classification in accordance to Coding Manual, compiled for the Utterance Classification criteria, it is possible to analyze a transcript and select utterances using specific Expressional Method. The protocol is as follows (Figure 2):

- (1) Prepare a transcript from the audio recording of career counselling
- (2) Learn the criteria of Utterance Classification
- (3) Enter the transcript into CareeTalk and code each utterance
- (4) Analyze a transcript by quantity
- (5) Analyze a transcript by quality, for example, searching a specific code of utterances and interpreting their tendencies.

2. Unit of Utterance Classification

(1) Utterance

An utterance is the basic unit of Utterance Classification. An utterance is defined as a string of words that express a certain organized meaning. An utterance corresponds to a sentence grammatically in a transcript. Hence utterances are separated by “.” which is located at the end of a sentence. Sometimes “!” and “?” have the same function. In addition, the following are considered “utterances”:

- (i) An interrupted utterance: when a speaker is interrupted during the middle of an utterance.
- (ii) A pause in conversation: when there is a pause of 5 or more seconds.
- (iii) A quasi-utterance: when there is a non-verbal behaviour which has a certain organized meaning.

The above 3 situations don't fit the definition of an utterance. But they are important functions in the conversation between the job seeker and the counsellor. For that reason, the above three situations are handled in the same way as utterances.

(2) Turn and Adjacency Pair

A turn is defined as a set of one or more utterances during which a single speaker speaks. An adjacency pair of turns is defined as an exchange of one turn each by two speakers.

(3) Examples of Utterance and Turns

Figure 3 is an example of utterances and turns. A career counselling session progresses with repeated exchanges of one turn each by two speakers such as (Counsellor's Turn 1) → (Job Seeker's Turn 1) → (Counsellor's Turn 2) → ...

Adjacency pairs are a pair consisting of (Counsellor's Turn 1-Job Seeker's Turn 1) and (Counsellor's Turn 2-Job Seeker's Turn 2). Each adjacency pair is identified by turn numbers. In the example, there are 8 turns and 4 adjacency pairs.

A turn contains one or more utterances. Each utterance is sequentially numbered. In the example, there are 13 utterances.

Utterance 7 is an example of "an interrupted utterance." The symbol "*" means a speaker was interrupted during the middle of an utterance.

Utterance 11 is an example of "a pause in conversation." Scenes, situations and length of pause are described within angle brackets "< >."

3. The Rules for Formatting Transcripts Using CareeTalk

Transcripts must be formatted in a certain manner so that utterances can be classified, and we use CareeTalk to generate statistical data. There are 10 rules to formatting.

They are as follows (Table 3). In the explanation of the 10 rules, there are three notations. (i) Enter means the enter key. Enter is used to separate the transcript into utterances and turns, and numbered accordingly by CareeTalk. (ii) JS is an abbreviation for "Job Seeker." (iii) CC is an abbreviation for "Career Counsellor."

4. Utterance Classification

Expressional Technique is divided into three categories of Expressional Method (Table 4). The correlations between each category are exclusive in nature, and, in principle,

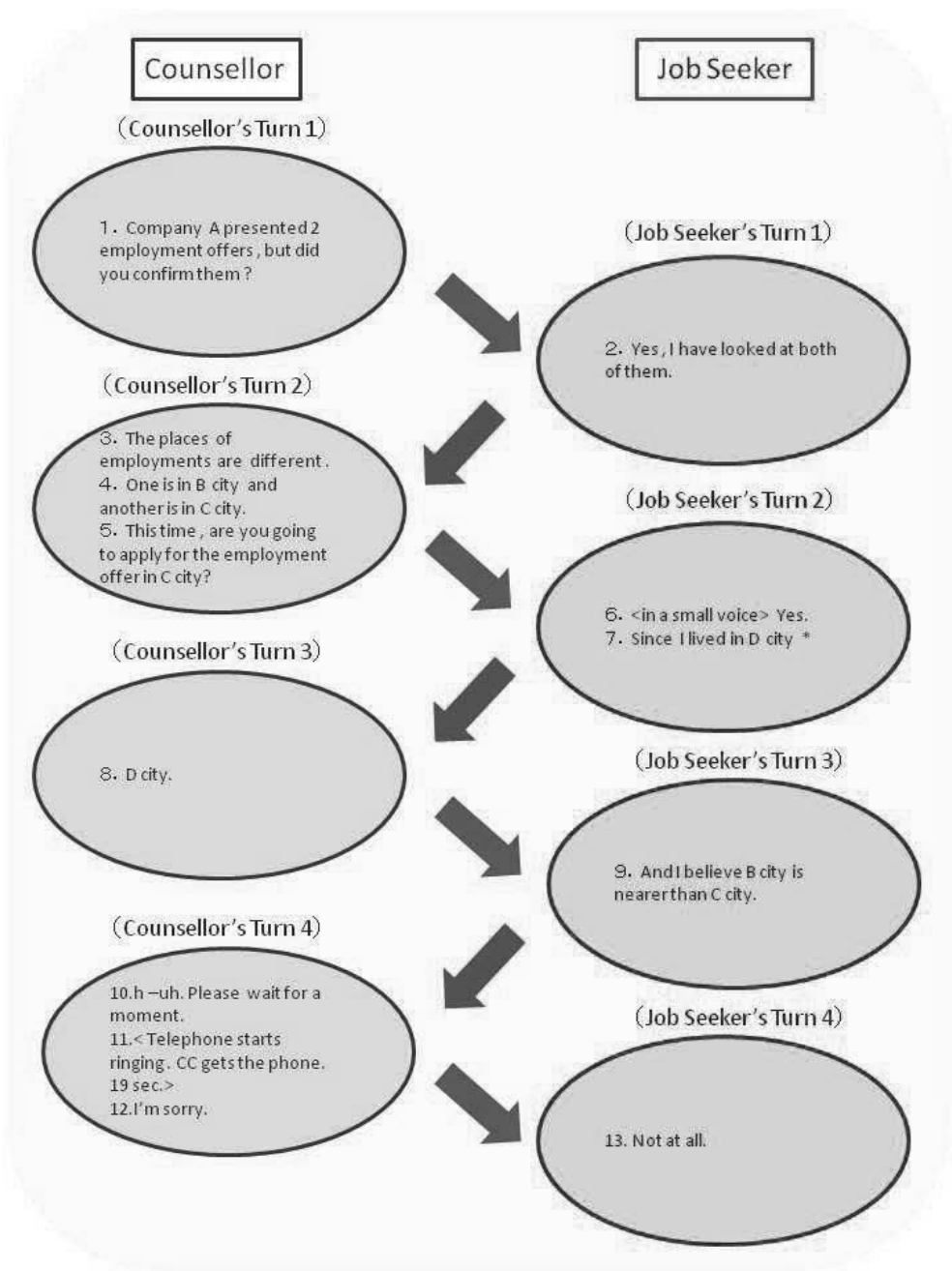


Figure 3. An Example of Utterances and Turns

Table 3. An Example of the Application of 10 Rules

CC (1)
Company A presented 2 employment offers [yah], but did you confirm them? (2)
JS
Yes, I have looked at both of them. (2)
CC
The places of employment are different [Yah].
One is in B city (9) [yah] and the other is in C city (9) [Yah].
At this time, are you going to apply for the employment offer in B city?
JS
<In a small voice> (6) Yes.
Since I lived in D city * (3)
CC
D city. (9)
JS
And I believe B city is nearer than C city. [Yah] (5)
CC
Uh-uh. (4) Please wait for a moment.
<Telephone starts ringing. CC gets the phone. 19sec.> (7)
I'm sorry.
JS
Not at all.
CC
Uh ... (4) You live in D city.
This company seeking workers is nearer [Yah]. (5)
Let's see the status of the applications [Yah].
Uh...There are #vocal impairment# (10) applicants for the employment offer [Yah].
JS
<JS becomes silent. 5 sec>
CC
May I ask the company seeking a worker whether it is still seeking a worker now? (2)
JS
<JS nods his head.> (8)
CC
I understand.
I will call the company and find out. (1)

Note: The above example shows a typical application of the 10 formatting rules.

Table 4. Expressional Structure of Career Story

| Expressional method | Expressional technique | | |
|------------------------|------------------------|-------------------|-------------------|
| | Low ← | Priority | → High |
| Tense | <u>P</u> ast | <u>G</u> eneral | <u>I</u> nnner |
| Viewpoint | <u>M</u> atter | <u>S</u> entiment | <u>R</u> easoning |
| Subject | <u>N</u> ow | <u>P</u> ast | <u>F</u> uture |

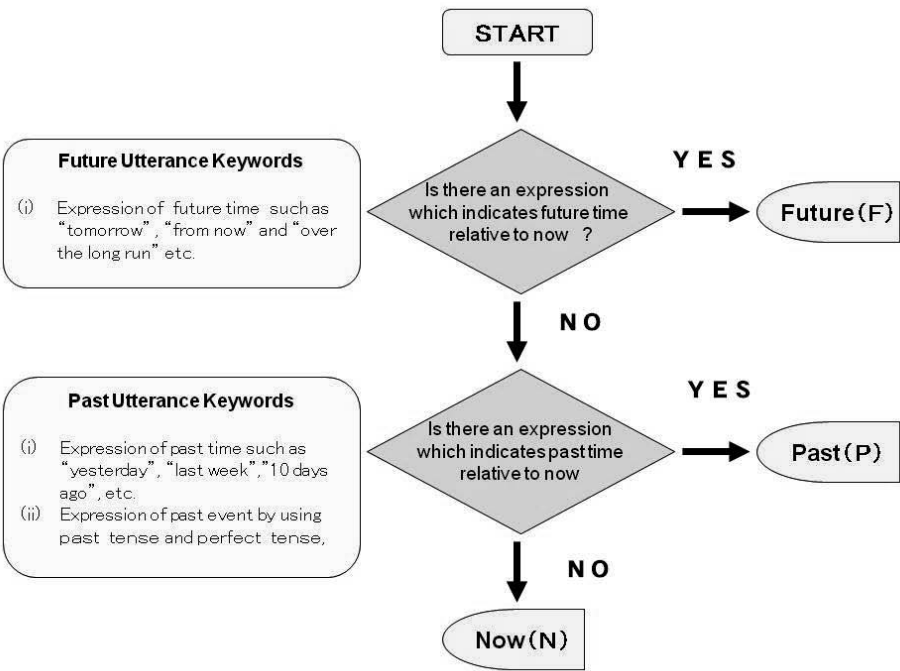


Figure 4. Protocol of Utterance Classification for Tense

each utterance falls under one of these three categories.

Utterance Classification follows the steps shown in Figure 4, 5, and 6. For example, Subject of Utterance has three categories of Expressional Method: Reasoning, Sentiment and Matter. Check to see if the utterance expresses emotion or desire. If it does not, then categorize it as “Matter.” If it does, then check if there is an element of cause of emotion or desire. If it does, then categorize it as “Reasoning.” If it does not, then categorize it as “Sentiment.”

Here is an example. Take the utterance “I am happy.” Because this utterance has “happy” which expresses emotion, it is classified as “Sentiment.” Another utterance “I am happy because my father came home.” This utterance is classified as “Reasoning,” because the “Sentiment” includes an element of cause. Take another utterance “Today it is cloudy.” This is “Matter,” because it has no element of emotion or desire.

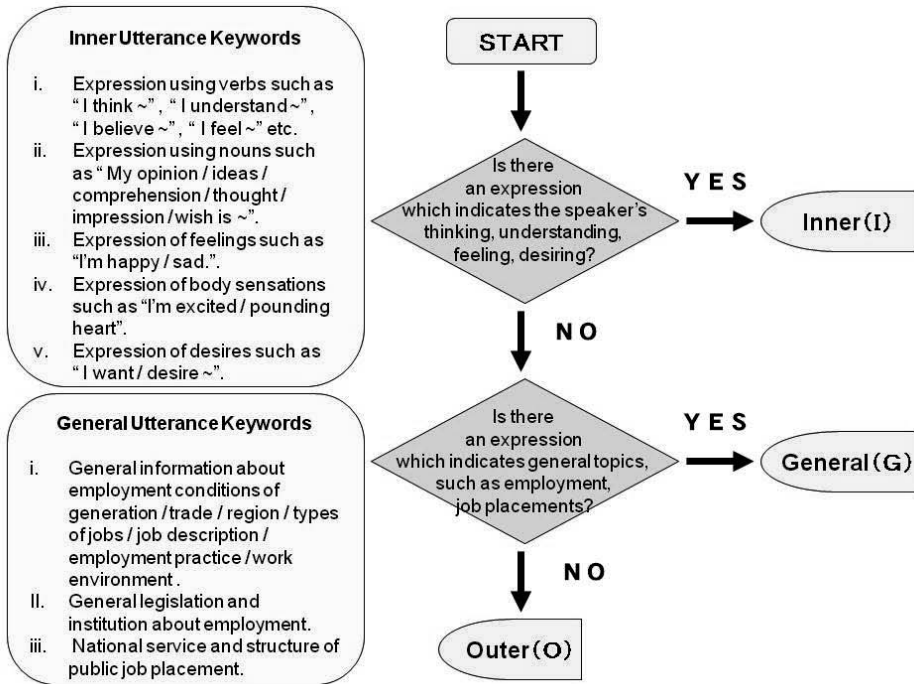


Figure 5. Protocol of Utterance Classification for Viewpoint

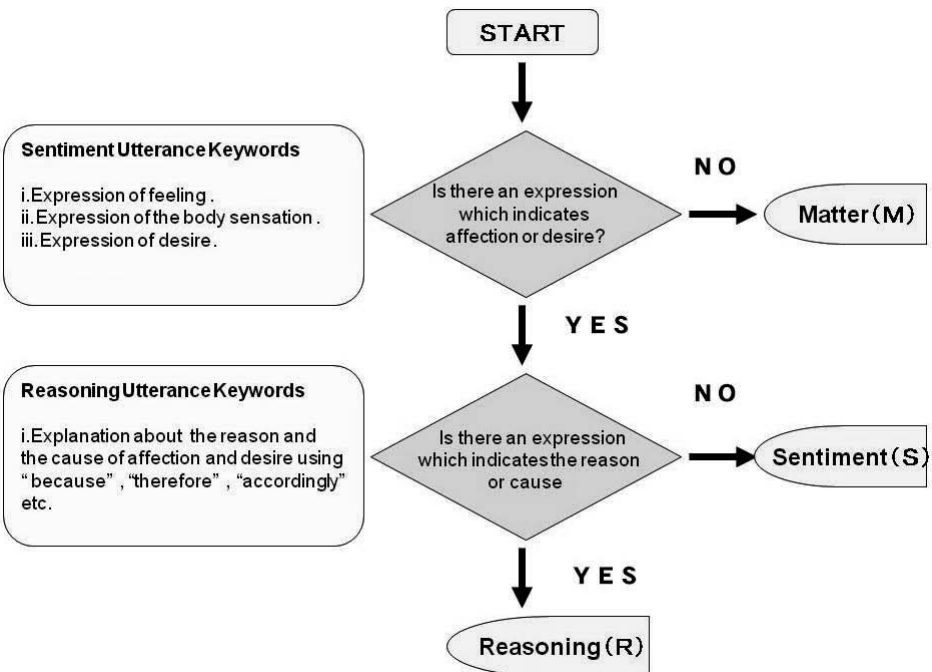


Figure 6. Protocol of Utterance Classification for Subject

IV. Analysis of Career Counselling Using CareeTalk

The Japan Institute for Labour Policy and Training (hereafter called “JILPT”) developed a training program called “Case Study Program” to improve career counselling at Hello Work⁴ (Kayano 2008; JILPT 2009).

This is one of the programs in “the Professional Training Course for Career Consultant Development” for employees who engage in career counselling and job placement at public employment agencies.

This program began from the fiscal year 2005. It has been implemented seven times and 307 counsellors have participated in it as of March 2009.

By counsellors conscientizing their own career counselling process in this program, they can control their own action and improve their own career counselling in the field.

Counsellors perform the following 3 tasks for conscientization of career counselling (Kayano 2008; JILPT 2009) as previously arranged for this program.

- (i) Counsellors make transcripts based on voice recording of their own career counselling as previously arranged for this program.
- (ii) Counsellors classify each utterance in the transcript based on Expressional Structure of Career Story (Table 4) and analyze the transcripts using CareeTalk.
- (iii) Counsellors conduct Utterance Analysis by using Careetalk. In Utterance Analysis, utterances are analyzed quantitatively from the standpoint of what type of utterances has been made and in what frequency.

We will analyze transcripts from a fictional career counselling session and demonstrate the conscientization of career counselling process by using CareeTalk.

1. Setting of the Career Counselling Session

The setting of the career counselling session is as follows.

- (i) This is the first counselling session at Hello Work. In the first session, usually a counsellor receives a job application form, and checks whether there is a yet-to-be-filled-out column or insufficient content in it.
- (ii) The name of a job seeker is “Ms. Lake (assumed name).” Her age is 22 years old. She got a clerk general job right after graduating from college and left the job on her own 9 months later. One year later, she got a part-time job at an interior goods shop. 5 months later, she left the job on her own. 3 months later from then, she came to Hello Work because her parents told her that she should start looking for a job.

The state of Ms. Lake is below.

- (i) This is her first time at Hello Work. She doesn’t know what services she can receive at Hello Work.
- (ii) She doesn’t know what to talk about to a counsellor because her choice of work isn’t

⁴ Hello Work is the name of the public job placement agency in Japan.

clear.

Two kinds of transcripts “Case A and Case B (Appendix)” are made based on the situations of career counselling stated above.

The difference between them is to help Ms. Lake to verbalize what she wants in her next job by hearing the reason why she left the former job in Case A, in comparison with Case B in which a counsellor makes confirmation of the job application format throughout.

We will demonstrate the difference between them objectively by using CareeTalk.

2. Analysis of Transcript by CareeTalk

(1) The Features of the Career Counselling

There are 37 utterances in Case A. There are 61 utterances in Case B. Case B is almost equivalent to double the number of utterances of case A. That shows that there were more dialogue exchanges between the counsellor and Ms. Lake in Case B than case A.

The ratio of Ms. Lake’s utterances as a whole is 35.1% in case A. It is 47.5% in Case B. The counsellor talked more in Case A than Case B. Ms. Lake talked approximately as much as the counsellor in Case B.

Regarding the number of interruptions, there were none in Case B but two in Case A.

In the latter case, counsellor interrupted twice during the middle of Ms. Lake’s utterance.

Regarding the number of pause, there were seven pauses in both Case A and Case B. But in Case A, the counsellor paused four times as opposed to twice in Case B.

From this analysis, we reach the following interpretation of Case B compared to Case A.

- (i) By the counsellor refraining from talking much, it gave Ms. Lake more opportunity to do the talking.
- (ii) By the counsellor not interrupting and pausing, Ms. Lake was able to talk at her own pace.

(2) The Features of Ms. Lake’s Utterances

From the outcome of Utterance Analysis on Ms. Lake, we will interpret how her Career Story was constructed.

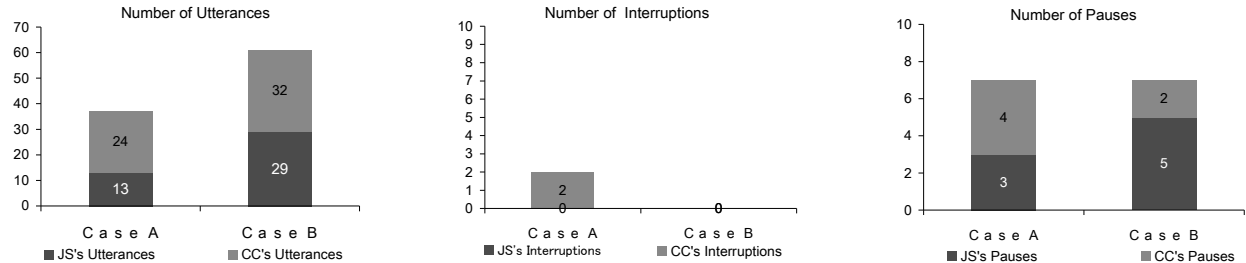
In Utterance Tense, Past scored 37.9% in Case B whereas it was very low in Case A at 7.6%.

In Utterance Viewpoint, Inner scored 27.5% in Case A whereas it was 0.0% in Case B.

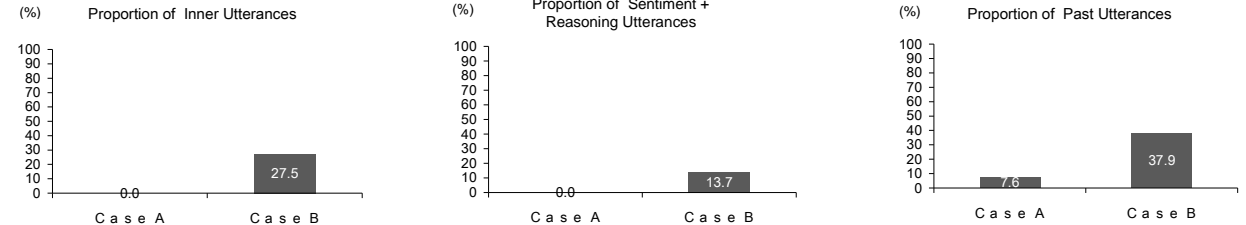
In Utterance Subject, Sentiment and Reasoning together scored 13.7% in Case B whereas they were 0.0% in Case A.

From this analysis, in Case B, we can surmise that while looking back at past events and expressing her thinking and feelings, Ms. Lake constructed her Career Story by connecting the past to the present. In contrast, in Case A, we could not surmise such development.

(i) Features of Career Counselling



(ii) Features of JS's Utterances



(iii) Features of CC's Utterances

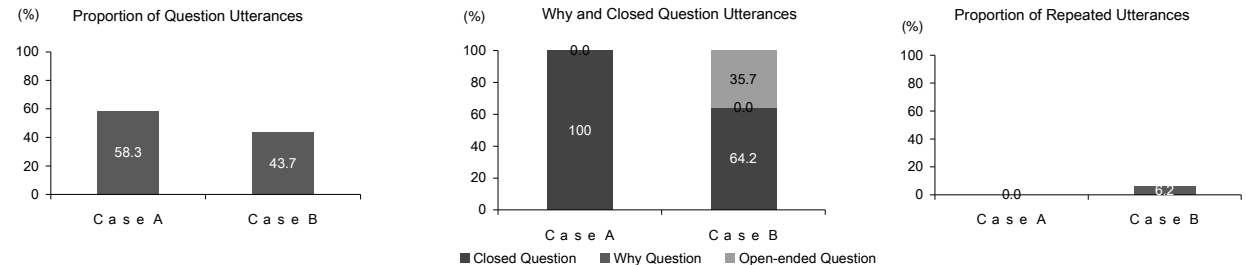


Figure 7 Analysis of Transcript by CareeTalk

(3) The Features of Counsellor Utterances

From the outcome of Utterance Analysis of the counsellor, we will interpret how the counsellor helped Ms. Lake construct her Career Story.

In Utterance Process,⁵ the proportion of Question was 43.7% in Case B whereas it was very high in Case A at 58.3%. In addition, while in Case B there was one turn where there was Answer from Ms. Lake's Question there were none in Case A.

Generally speaking, the proportion of the counsellor's Questions is higher than the job seeker's, and there is a tendency for the counsellor to ask questions one-sidedly. This tendency appears much stronger in Case A than Case B.

In Utterance Process, Question is composed of "Closed Question" where the answer is restrictive and predictable, "Open-ended Question" where the answer is broad and relatively longer, and "Why Question" that asks for a cause and a reason

In Case A, all questions were of the type "Closed Question" while in Case B, "Closed Question" scored 64.2% and "Open-ended Question" 35.7%.

In addition, "Repetition" that expresses summarizing or rephrasing of the keywords that comes immediately preceding the other's turn was not present in Case A, whereas it scored 6.2% in Case B.

From this analysis, the counsellor in Case B tended to ask questions that Ms. Lake can answer freely to some extent and listened to her carefully using "Repetition."

Observing more in detail the types of Question that were used, we see that in Case A, a counsellor would reiterate confirmation of facts and no more whereas in Case B, the counsellor asked Ms. Lake why she left her former job.

In addition, in Case A, regarding the work of Ms. Lake's choice, the counsellor reiterated the confirmation of fact, whereas in Case B, the counsellor asked regarding Ms. Lake's choices, such as with "What image do you have of a secure job" and "What is a regular salaried employee's job?"

As a consequence, in Case A, the career counselling finished without finding a connection between the reason of Ms. Lake's leaving of her job and the work of her choice. In Case B, a connection was made between the reason for leaving and the choice of job type. For example, the counsellor's utterances such as "You want a regular salaried employee's job from now on" and "You like interior goods, and managing stock was interesting" explain the reason for changing jobs and her job preference. Ms. Lake's utterance "If I can, I want to get such a job in the future" clarifies the work of her choice.

⁵ Process is another type of Expressional Technique. Process is the technique that influences the interaction between a speaker and a listener. Process is categorized into three categories of Expressional Method, Question, Answer and Explanation. These categories have sub-categories Closed, Why and Open-ended for Question; Positive, Negative and Neutral for Answer; and Directive, Repeated and Non-directive for Explanation.

V. Discussion

There are three issues that arise regarding the development of CareeTalk (JILPT 2007).

The first issue concerns the usability of the system. Currently, the interface needs to be simplified so that a first-time counsellor may run the software without any assistance. In the future, it will be necessary to improve its usability.

The second issue involves further clarification of trends in career counselling sessions after increasing the number of example cases of counselling sessions and examining the trends associated with the frequency of sessions, the gender and age of the job seekers and counsellors, and the combination of all of these factors. The counselling sessions are diverse, but by understanding overall trends, counsellors will understand the uniqueness of their own counselling as compared to general counselling.

The third issue involves automating classification of utterances by matching appropriate words, if any.

There were three issues that arise regarding the usage of CareeTalk that weren't included in this Case Study Program (JILPT 2009). The first wasn't to include work promoting awareness of job seeker's Career Concept in Case Study Program. The second wasn't to include work to interpret the meaning of the use of Expressional Technique from the relationships between Career Concept construction, deconstruction and reconstruction. The third wasn't to emphasize criteria related to Career Concept construction and omit other standards as much as possible for the learning of Utterance Classification. They should be included in Case Study Program.

Appendix: Case A and Case B of Career Counselling with Ms. Lake

Notation of Transcript

| | |
|-------|---|
| *: | The symbol “*” signifying “Interruption” means a speaker was interrupted during the middle of an utterance. |
| < >: | Angle brackets “< >” called “Narration” enclose explanations of situations and scenes. |
| CCXX: | The number of Career Counsellor's turn. In this case, Career Counsellor means the employee who engages in job placement at public employment agencies. XX designates the number of XX's turn in sequential order. |
| JSXX: | The number of Job Seeker's turn. In this case, JS's name is Ms. Lake. XX means the number of JS's turn in sequential order. |

Background of Career Counselling

Ms. Lake was given a job application form and advised to go to the job placement counter after filling it out. The job placement counters were crowded with job seekers who were waiting to be serviced. Ms. Lake was finally called after waiting for 30 minutes. (This

transcript is fiction.)

Case A

| Turn Number | Utterance Number | Utterances |
|-------------|------------------|--|
| CC01 | 1 | Sorry to keep you waiting. |
| JS01 | 2 | <Comes walking in, facing down, and quietly takes a seat. 5s.> |
| CC02 | 3 | Can I see your job application form? |
| JS02 | 4 | <She offers it to CC without a word nor any eye contact. 5s.> |
| CC03 | 5 | <Scanning through her job application form while looking down.> Is this your first time to come to <i>Hello Work</i> [†] ? [†] <i>Hello Work</i> is the name of the public job placement agency in Japan. |
| JS03 | 6 | <While looking down and with a small voice.>...yes. |
| CC04 | 7 | <Speaking with a loud voice.> Let me check the job application form. |
| | 8 | <While looking down at the job application form.> Did you leave your job last month? |
| JS04 | 9 | ...yes. |
| CC05 | 10 | You had worked in A plaza. |
| | 11 | Well, that was a part-time employment, wasn't it? |
| JS05 | 12 | ...yes. |
| CC06 | 13 | You gave your reason for leaving your job as "I left the job because I couldn't return home at the scheduled time," ...so did you offer to leave the job first? |
| JS06 | 14 | <Silence. 5s> |
| CC07 | 15 | <With a troubled look.> Um...was this a voluntary termination? |
| JS07 | 16 | ...yes. |
| CC08 | 17 | Your work is given as "receiving and inspecting interior goods". |
| | 18 | The monthly income is given as 80,000 yen, how about your hourly pay? |
| JS08 | 19 | ...800 yen [I see]. |
| CC09 | 20 | <CC writes it in the job application form. 5s.> |
| | 21 | <Looking at the column "employment history".> Well, you worked as a general office worker at an insurance company, was this your first job after graduating from junior college? |
| JS09 | 22 | ...yes. |
| CC10 | 23 | What was your major in junior college? |
| JS10 | 24 | ...business [okay]. |
| CC11 | 25 | <CC writes it in the job application form. 5s.> |
| | 26 | Yeah. Um...nothing is written in the column "the work of your choice". |
| | 27 | Since I can't register the job application form without filling |

| | | |
|------|----|---|
| | | in this column, is there any preference about the work of your choice? |
| JS11 | 28 | ...<While looking up.>The same work as before * |
| CC12 | 29 | <While looking at the job application form and without looking at JS's face.>That is receiving and inspecting interior goods, isn't it? |
| JS12 | 30 | ...yes. |
| CC13 | 31 | Um...tentatively I will write "light duty work" in this column, you can change it later, is that all right? |
| JS13 | 32 | ...yes. |
| CC14 | 33 | <CC writes "light duty work". 5s.> |
| | 34 | You checked "regular employee" in the type of employment, so you want a job as a regular worker, don't you? |
| JS14 | 35 | ...if possible* |
| CC15 | 36 | If possible, you want to be hired as a regular worker. |
| | 37 | <Murmuring aloud.> The place of your choice is "Inside Tokyo", the commute time of your choice is "within 60 minutes", the duty hours of your choice is "about 8 hours between 9 am to 10 pm", "a 5-day work week" and "no work on Sundays, Saturdays and public holidays". |
| | 38 | Do you have any other requests? |
| JS15 | 39 | <Silence. 5s.> |
| CC16 | 40 | <With a troubled look.>Nothing? |
| JS16 | 41 | ...yes. |
| CC17 | 42 | Okay. |
| | 43 | Please wait while I register your job application form. |
| | 44 | <CC leaves to input the data of JS's application form. JS is left alone. 365s.> |

Case B

| Turn Number | Utterance Number | Utterances |
|-------------|------------------|--|
| CC01 | 1 | Sorry to keep you waiting. |
| JS01 | 2 | <Comes walking in, facing down, and quietly takes a seat. 5s.> |
| CC02 | 3 | Can I see your job application form? |
| JS02 | 4 | <She offers it to CC without a word nor any eye contact. 5s. > |
| CC03 | 5 | <Scanning through her job application form while looking down.> Is this your first time to come to <i>Hello Work</i> [†] ? [†] <i>Hello Work</i> is the name of the public job placement agency in Japan. |
| JS03 | 6 | <While looking down and with a small voice> ...yes. |
| CC04 | 7 | <Matching the tone and time of the voice.> Having come to Hello Work for the first time, how do you feel about Hello Work? |
| JS04 | 8 | < Silence. 8s.> |

| | | |
|------|----|---|
| | 9 | <While swallowing.>...I feel that Hello Work is in a state of commotion. |
| CC05 | 10 | <While nodding deeply.> Oh um, was it difficult to fill out the job application form? |
| JS05 | 11 | ...yes...I didn't know what to do. |
| CC06 | 12 | Well, it's your first time. |
| JS06 | 13 | ...yes.... |
| CC07 | 14 | Yeah, let's go through the job application together. |
| | 15 | You left the job last month, didn't you? |
| JS07 | 16 | ...yes. |
| CC08 | 17 | Was this part time employment? |
| JS08 | 18 | ...yes. |
| CC09 | 19 | Well...your work is given as "receiving and inspecting interior goods", what kind of work was it? |
| JS09 | 20 | ...if goods run out[I see], I restock them... |
| CC10 | 21 | Well...is that putting merchandise on display and on shelves? |
| JS10 | 22 | ...right |
| | 23 | <With a moment's thought. 5s.> |
| | 24 | Receiving goods. |
| CC11 | 25 | What is receiving goods? |
| JS11 | 26 | ... Counting the goods in the warehouse [okay], ordering them if necessary, and inspecting each of them when it arrives. |
| CC12 | 27 | Aha, would that be a stock management job? |
| JS12 | 28 | ... Well, yes. |
| CC13 | 29 | Though the reason why you left the job is written in the job application form, please explain the reason to me. |
| JS13 | 30 | Well... I left the job because I couldn't return home at the scheduled time. |
| CC14 | 31 | Um...at the scheduled time..., what were your work hours at that time? |
| JS14 | 32 | <Silence. 8s.> |
| | 33 | <Words begin to pour from her lips as though a dam inside her had broken.> There were many students working as part-timers [really], and they would often call in sick with very little notice. |
| | 34 | So the manager would ask me to come to work suddenly... |
| CC15 | 35 | <Nodding deeply.> Yeah, yeah, and so... |
| JS15 | 36 | I couldn't always reject his request [I see]...and <With tears running down.> I was always forced to work in place of them [wow]. |
| | 37 | <She looks up and turns to CC.>They were very selfish [umm]. |
| | 38 | I was awfully annoyed with them. |
| CC16 | 39 | <CC looks at her face.> You were forced to work overtime due to the student's selfish actions and then couldn't return |

| | | |
|------|----|--|
| | | home at your scheduled time [absolutely]. |
| | 40 | That made you feel annoyed, unnecessarily. |
| JS16 | 41 | Well...yes. |
| | 42 | <While looking away.>...but there was more [umm]. |
| | 43 | That work was interesting because I like interior goods, but... |
| CC17 | 44 | <While looking at her.> That work was interesting because..... |
| JS17 | 45 | <Silence. 5s.> |
| | 46 | <She lifts her face.> I recently wanted to get a secure job [I see]...and so I left the job. |
| CC18 | 47 | You recently wanted to get a secure job [yes]. |
| | 48 | What image do you have of a secure job? |
| JS18 | 49 | I think a regular salaried employee's job is a secure job. |
| CC19 | 50 | What is a regular salaried employee's job? |
| JS19 | 51 | Stable, scheduled work, that's what I mean. |
| CC20 | 52 | You want a regular salaried employee's job from now on [ha hum]. |
| | 53 | You like interior goods, and displaying merchandise and managing stock were interesting. |
| JS20 | 54 | That's right. |
| | 55 | If I can, I want to get such a job in the future. |
| | 56 | Is there such a job? |
| CC21 | 57 | <CC writes "merchandise display and stock management" in the job application form. 5S.> |
| | 58 | Well, let's start searching for such a job together. |
| JS21 | 59 | Yes. |
| CC22 | 60 | First, I am going to register your job application form [ha hum]. |
| | 61 | Meanwhile, would you look through this pamphlet? <CC holds out the pamphlet.> |
| JS22 | 62 | <She takes the pamphlet.> |
| CC23 | 63 | It explains how to look for a job and gives you a list of the ways Hello Work can help you. |
| | 64 | <While pointing at them.> This explains how to look for a job, and this is a list of the ways how Hello Work can help you. |
| | 65 | Though I will explain them in detail afterward, please look through it while I register your job application form. |
| JS23 | 66 | Certainly. |
| CC24 | 67 | Then please wait a moment. |
| | 68 | <CC stands up and goes to input the data of her job application form. She looks through the pamphlet.> |

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JILPT Research Activities

Research Topics in Fiscal 2009

The Japan Institute for Labour Policy and Training (JILPT) has conducted research activities centered on the following themes in fiscal 2009 (April 2009 to March 2010) based on the 2nd Medium Term Program during the five-year implementation period from April 2007 to March 2012.

1. Study and Research of a Society in Which All Demographics Could Participate in an Age of Population Decline
 - This research focuses on the development of the environment in which the elderly, women, and youth can maximize their morale and ability in order to control the declining labor population and maintain and improve the vitality of the economic society.
 - Elderly employment, career path of temporary agency workers, individual contract employment, etc. are surveyed and analyzed in fiscal 2009.
2. Research on Factors Changing the Regional Structure for Employment/Unemployment
 - This multifaceted research analyzes the success and failure factors of local employment measures on the municipal level; develops and provides local economic indicators and their analysis methods, and examines support systems for imaginative creation of employment in the regions.
 - Role of the community for local employment creation, creation/loss of employment and interregional labor movement are surveyed and analyzed in fiscal 2009.
3. Research on response to diversification of employment formats and establishment of working conditions toward the realization of balancing work and private life
 - This research investigates the way conditions ought to be in order to have a fulfilling work life harmonizing with family and local life for both sexes from a long-term perspective of working life.
 - Continuation of employment during the period of childbirth and child rearing, enterprises' employment management and support for the balancing of work and family life, actual working hours, trend of non-regular employees, human resource management, etc. are surveyed and analyzed in fiscal 2009.
4. Comprehensive Research for building Stable Labor and Management Relations in Individualized Labor Relations
 - With ever more individualized labor and management relations, this research promotes studies of system solutions for labor and management conflicts inside and outside of corporations, and focuses on efforts for improving worker morale.
 - Individual labor dispute settlement and policy responses, response of labor unions, ac-

tual human resource and labor management, etc. are surveyed and analyzed.

5. Research on Human Resource Development and Career Support in the New Economic Society
 - This research examines support for skill and career development for employees at medium and small sized companies and non-regular employees who tend to receive less career development in this changing economic society.
 - In fiscal 2009, this research focuses on the way skill development and human resource development ought to be in small and medium-sized enterprises and how support for skill development and career development of non-regular employees and those with undeveloped career should be.
6. Research and Development on the Strengthening Supply and Demand Control Function and Career Support Function in the Labor Market
 - In order to effectively connect needs of individuals and industrial society in the labor market, this study involves research and development on the fulfillment of services for those who seek jobs or employees, improvement of workers' professional skills, and the development and fulfillment of comprehensive career information providing system and related tools including appropriate labor market information.
 - Consulting technique for improvement of services for enterprises seeking workers and job-seekers, career counseling, support tools for career guidance, research and development of integrated career information delivery system and occupational classification are researched in fiscal 2009.

Research Reports

The findings of research activities undertaken by JILPT are compiled into Research Reports (in Japanese). Below is a list of the reports published from June to August 2009. The complete text in Japanese of these reports can be accessed from the JILPT website (<http://www.jil.go.jp/english/index.html>). We are currently working on uploading abstracts of reports in English onto the JILPT website as well.

Research Reports

- No.113 Research on Job Security for Workers in Nursing-Care Businesses (July 2009)
- No.112 Human Resource Development and Skill Development for Technicians and Their Working Conditions in Manufacturing Industry—Current Status of Machinery and Metal-related Industries (July 2009)
- No.111 Mechanism of Labor Dispute and Its Settlement Process—Case Study of Community Union in Kyushu (July 2009)
- No.110 Analysis on In-House Training for Non-Regular Employees Based on Special Aggregation of “Basic Survey on Skill Development 2006” (June 2009)

Discussion Papers

- DPS-09-05 Consideration on United Kingdom's Code of Practice—Focusing on the Function to Lead Parties' Self-Sustaining Efforts (August 2009) Shino Naito

Research Series

- No. 63 Research on Working and Learning (July 2009)
No. 62 Research on the Actual Situation of Career Support Programs in Consulting Institutions—For the Development of Career Choice Support Tools (June 2009)
No. 61 Survey on Employment Reality of Foreign Laborers and Support for Their Employment and Livelihood (July 2009)
No. 60 Survey on Local Governments' Efforts toward Employment Creation (July 2009)
No. 59 Survey of Labor Unions on Communications in Workplaces and Resolutions for Complaints and Dissatisfactions (July 2009)
No. 58 Survey of Enterprises/Employees on Communications in Workplaces and Resolutions for Complaints and Dissatisfactions (July 2009)
No. 57 Survey on Foreign students' Employment in Japanese Enterprises (July 2009)
No. 56 Survey on Competencies in Which Enterprises Emphasize on When Recruiting New College Graduates—Report of Interview Survey Results with Enterprises (June 2009)
No. 55 Survey on Employment of Workers Doing Sideline Work (July 2009)
No. 54 Survey Results on Small to Medium-sized Enterprises' Employment Management and Support for the Balancing of Work and Family Life (July 2009)

Research Material Series

- No. 58 Acceptance System of Foreign Workers in the United States and Its Reality—Other Countries' Acceptance Systems of Foreign Workers and Its Reality 2009 (July 2009)
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