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
The primary wage comparison group				
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
Perception of wage equity toward the above comparison group				
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
Perception of wage differentials between standard and non-standard workers performing similar jobs				
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
Perception of wage equity between standard and non-standard workers, when 1, 2, 3 or 4 was chosen in the above question				
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?

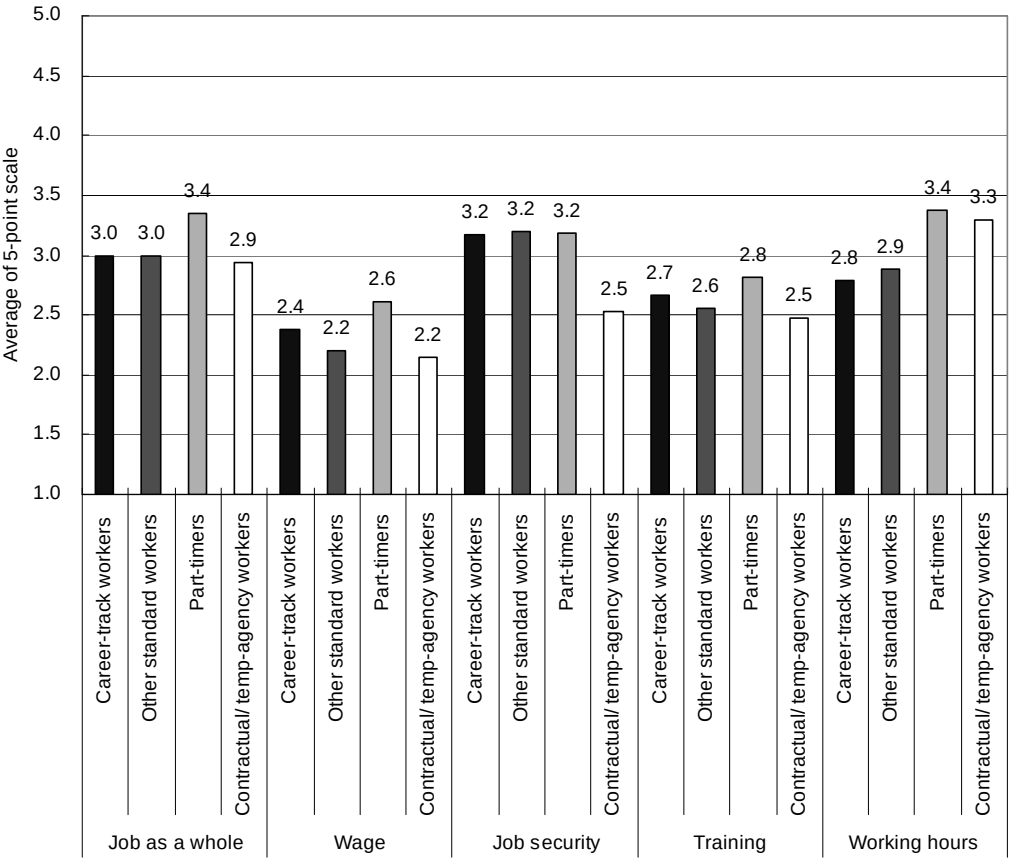

Figure 1. Job Satisfaction by Employment Category

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 **	-0.218	-0.398 **
	(0.113)	(0.177)	(0.160)
Importance of the wage income in the household	-0.151 *	-0.205 *	-0.131
	(0.080)	(0.115)	(0.123)
Hourly wage	-0.00002	0.0002 ***	-0.00003
	(0.00003)	(0.00009)	(0.00004)
(2) Variables signifying the strength of distinction by employment category			
Distinction by employment category	-0.219 ***	-0.161 ***	-0.355 ***
	(0.045)	(0.060)	(0.076)
Distinction by job content	0.159 ***	0.154 ***	0.229 ***
	(0.039)	(0.058)	(0.059)
Ratio of non-standard workers	-0.024	-0.010	-0.025
	(0.046)	(0.065)	(0.072)
Practice of conversion from non-standard to standard worker status	0.228 ***	0.283 ***	0.161
	(0.067)	(0.093)	(0.107)
(3) Job attributes			
Degree of non-routine tasks	0.038	0.014	0.037
	(0.043)	(0.060)	(0.067)
Required skill levels of the job	-0.030	-0.262 ***	0.184 *
	(0.064)	(0.090)	(0.108)
Having subordinates	0.109	0.181	0.072
	(0.082)	(0.114)	(0.127)
(4) Working hours			
Monthly regular working hours	-0.002	-0.0002	-0.001
	(0.001)	(0.002)	(0.002)
Monthly overtime hours	-0.003	-0.015 **	-0.0001
	(0.003)	(0.008)	(0.004)
Flexibility of working hours/days	-0.023	-0.081	-0.004
	(0.040)	(0.058)	(0.061)
(5) Career concerns of workers			
Willingness in choosing the present employment category	0.179 ***	0.202 ***	0.183 ***
	(0.045)	(0.069)	(0.065)
Dummy indicating if one desires to become a standard worker	-0.252 **	-0.538 ***	0.077
	(0.110)	(0.162)	(0.169)
(6) Attributes of the workplace			
Manufacturing industry dummy	0.0002	0.236	-0.100
	(0.139)	(0.242)	(0.181)
Establishment size	-0.052	0.018	-0.115 **
	(0.035)	(0.052)	(0.055)
(7) Individual and household attributes			
Dummy indicating if one has a spouse	0.097	0.258	-0.159
	(0.127)	(0.200)	(0.191)
Dummy indicating if one has a preschool child	0.063	-0.022	0.477 *
	(0.126)	(0.163)	(0.246)
Male dummy	0.221	0.450	0.021
	(0.136)	(0.284)	(0.175)
Dummy indicating those aged 35-44	-0.280 **	-0.198	-0.391 **
	(0.110)	(0.160)	(0.164)
Dummy indicating those aged 45-59	-0.057	-0.376 *	0.397
	(0.149)	(0.210)	(0.244)
Job tenure	-0.013	0.010	-0.038
	(0.014)	(0.020)	(0.025)
College graduate dummy	0.169	0.063	0.278 *
	(0.109)	(0.170)	(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-value≤0.01; ** signifies 0.01<p-value≤0.05; * signifies 0.05<p-value≤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

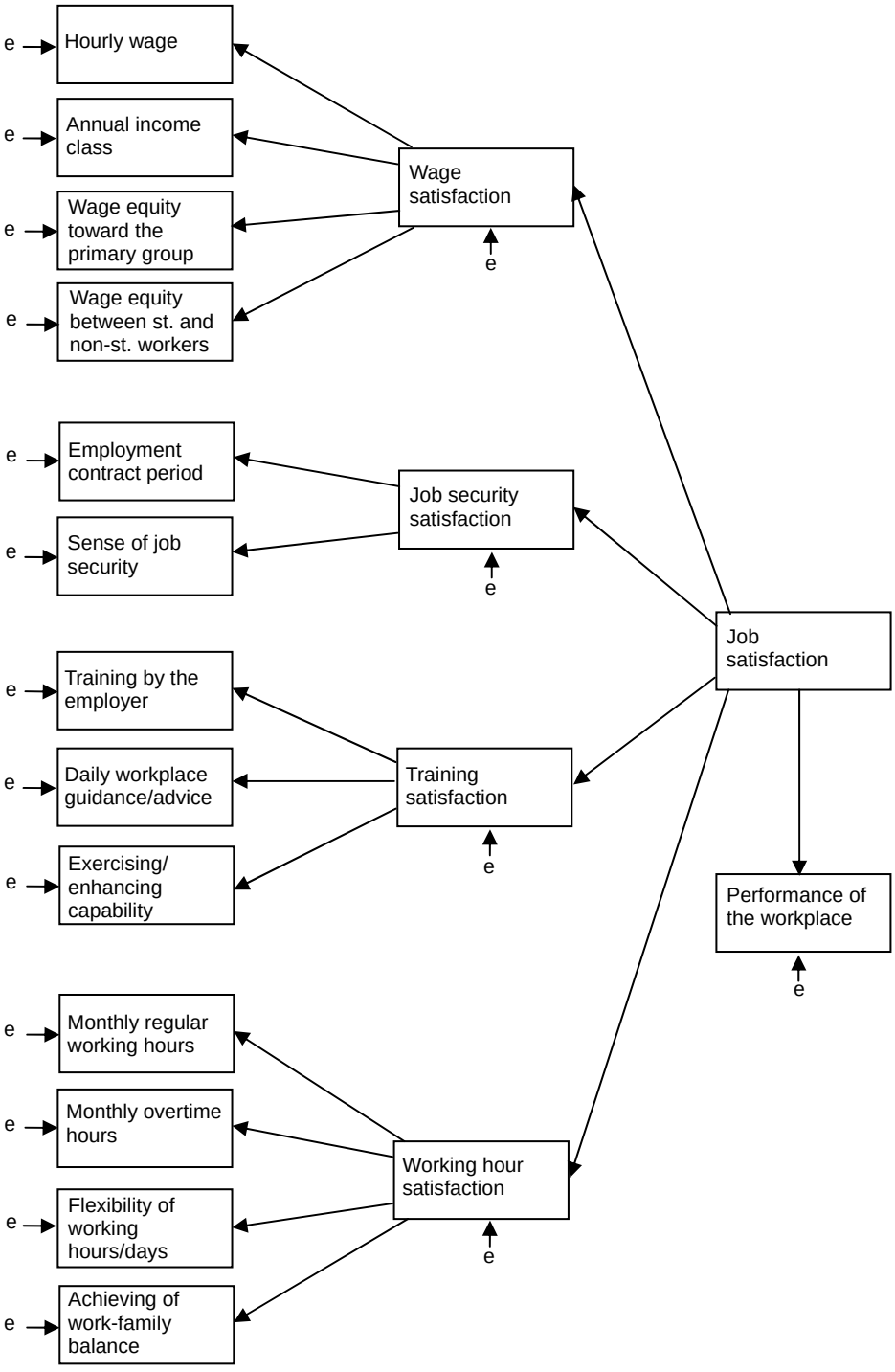

Figure 2. Structural Equation Model to Explain Job Satisfaction of Standard and Non-Standard Workers

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 capability	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
The degree of which one's capability is exercised or enhanced				
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
The obstacles to realizing that capability, when 3, 4 or 5 was chosen in the above question				
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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