

[Research Note]

Effect of Demographic Factors on Satisfaction of Non-Regular Employees: Focusing on the financial burden of a household¹

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Abstract

Non-regular employees account for more than one third of total employees in Japan. This study investigates how the financial burden of a household influences the work-related satisfaction of non-regular employees, using data collected from 9,790 working persons in the Tokyo metropolitan area. The results show that the effect of a head of a household factor on work-related satisfaction is different depending on gender. While this factor does not produce a significant difference between the satisfaction of regular and non-regular male employees, it is an influential factor for female employees. Analysis of married employees revealed that one's own annual income has a significant effect on regular employees' satisfaction, and that the annual income of one's spouse significantly influences non-regular employees' satisfaction.

Keywords: non-regular employees, satisfaction, gender, heads of household

1. Introduction

According to a survey conducted from October to December 2015 by the Statistics Bureau of Japan's Ministry of Internal Affairs and Communication, the total number of employees in Japan is 53.22 million, of which 20.15 million people (37.86%) are employed as non-regular employees. The number of male non-regular employees is 6.41 million (22.04% of total male employees) and the number of female non-regular employees is 13.74 million (56.92% of total female employees). The fact that female non-regular employees constitute more than half of total female employees might mean

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that non-regular positions have become “regular” for female employees. Past studies revealed that non-regular employees have lower levels of job satisfaction (Booth, Francesconi, & Frank, 2002; Chambel & Castanheira, 2007; Davis-Blake, Broschak, & George, 2003; De Cuyper & De Witte, 2007; Dickson & Lorenz, 2009; Hom, 1979). In light of these results, the necessity of further analyzing the data regarding non-regular employees, to identify similarities or differences from regular employees, is clear.

In this study, non-regular employees are those who have a fixed-term employment contract with an organization, including temporary and part-time employees. Although Western studies have typically referred to full-time and part-time employees, we prefer to use the terms “regular” and “non-regular” employees, because a significant proportion of non-regular employees are expected to work long hours each day, even when their contracts with employers do not formally require such hours.

There are positive and passive reasons for employees’ choice of non-regular employment positions. Even when people believe they can obtain employment as regular employees, they tend to select non-regular positions when they want more flexible time and energy to devote to other activities (e.g., hobbies and studying) and are not obligated to financially support a family. On the other hand, people are reluctant to accept non-regular positions when they had hoped for regular positions, but could not find such positions due to their lack of ability or a competitive employment situation. Although these two groups are both classified as non-regular employees, levels of satisfaction between the two differ greatly.

How can one empirically determine the effect of different motives on satisfaction? The simplest method is to ask workers directly about their motives (Chambel & Castanheira, 2007; Marler, Barringer, & Milkovich, 2002). For example, Chambel and Castanheira (2007) used six items to measure “voluntariness” or preference for employment status. It is not always easy or even possible to directly question respondents about their motives because respondents are sometimes reluctant to reveal their emotions.

Another effective method is to consider the circumstances surrounding non-regular employees by analyzing other variables. This study focuses on whether a non-regular employee is a head of household. Regardless of marital status, the heads of household are expected to financially support their households. If individual preference for each type of employment position is not considered, heads of household have stronger

motives to be employed as regular employees. If those burdened with head-of-household obligations have non-regular positions, they tend to have passive motives for selecting such positions and lower satisfaction with their positions. By contrast, if workers are not heads of household, their obligation to support their family is diminished or nonexistent, and the likelihood that they chose a non-regular position based on personal preference is increased.

This analysis used the Working Person Data, 2012, which was collected by Recruit Works Inc. (RWI). The people surveyed were from 18 to 59 years old, and worked in the Tokyo metropolitan area at least one day in the last week of August 2012, as regular or non-regular employees (but excluding students). The total sample size is 9,790 (5,631 males and 4,159 females). This data was submitted to the Center for Social Research and Data Archives in the Institute of Social Sciences at the University of Tokyo, and the author is permitted to use them.

In the original Working Person Data, 2012, non-regular employees were divided into contract employees, dispatched employees, “freeters,” part-time employees, and employees who work under special service contracts. Because it is important to compare regular and non-regular employees in this study, the different types of employees other than regular employees are lumped together into a single category as non-regular employees. The original questionnaire provided job and workplace satisfaction questions, which have five-point scales ranging from [1] “unsatisfied” to [5] “satisfied.” When analyzing employee attitudes in Japanese organizations, it is important to consider not only satisfaction with the job, but also satisfaction with the workplace; accordingly, the work-related satisfaction variable was made by adding two scores of satisfaction items in this study (Cronbach’s alpha = 0.911).

2. Effect of Responsibility of Heads of Household on Satisfaction with Employment Status

In this paper, the effect of employment status on satisfaction will be examined by gender. Generally, annual incomes between regular and non-regular employees differ (for example, the data revealed an average annual income of regular employees of 5.59 million Japanese yen, while that of non-regular employees is 1.80 million Japanese yen). However, satisfaction with these incomes differs depending on whether an employee is a head of household. A two-way ANOVA with employment status (regular or non-

regular employees) and head of household (yes or no) as independent variables is used to identify the effect of these variables on work-related satisfaction.

Table 1 Employee Attributes

		a head of household	
		yes	no
male n = 5,631	regular employee	4,302 (76.40%)	570 (10.12%)
	non-regular employee	445 (7.90%)	314 (5.58%)
female n = 4,159	regular employee	802 (19.28%)	1,114 (26.79%)
	non-regular employee	443 (10.65%)	1,800 (43.28%)

Table 1 displays attributes of employees included in the sample. Among male employees, the number of regular employees who are heads of household in their families is the largest of all categories.

Male Employees

Table 2 shows the result of a two-way ANOVA for male employees. According to this table, the primary effects of employment status and heads of household, and their interaction effect on work-related satisfaction, are significant. Regarding the primary effects of the two independent factors, the marginal mean of male employees who are not heads of household ($\mu = 6.108$) is significantly lower than that of male employees who are heads of household ($\mu = 6.296$). The marginal mean of male regular employees ($\mu = 6.408$) is significantly higher than that of male non-regular employees ($\mu = 5.996$).

Regarding an interaction effect, the marginal mean of heads of household ($\mu = 6.588$) is higher than that of non-heads of household ($\mu = 6.228$) when they are regular employees, but non-regular male employees have almost equally lower satisfaction regardless of whether they are heads of household ($\mu = 6.004, 5.987$) (Figure 1). This is an unexpected result because we expected heads of household to have lower satisfaction than non-heads of household when they are non-regular employees. The result of equally lower satisfaction between heads and non-heads of household, despite the different

family support burdens, might mean that male employees' satisfaction is influenced by factors other than economic burdens, such as lower social status and lower security of non-regular employment.

Table 2 Result of Two-way ANOVA (Male Sample)

source	type III sum of squares	df	mean square	F	sig.
corrected Model	262.711	3	87.57	24.682	< .001
intercept	82,954.995	1	82,954.995	23,380.798	< .001
head of householder	19.161	1	19.161	5.401	.020
employment	91.562	1	91.562	25.807	< .001
head of householder * employment	15.818	1	15.818	4.458	.035
error	19,964.578	5,627	3.548		
total	256,081.000	5,631			
corrected Total	20,227.289	5,630			

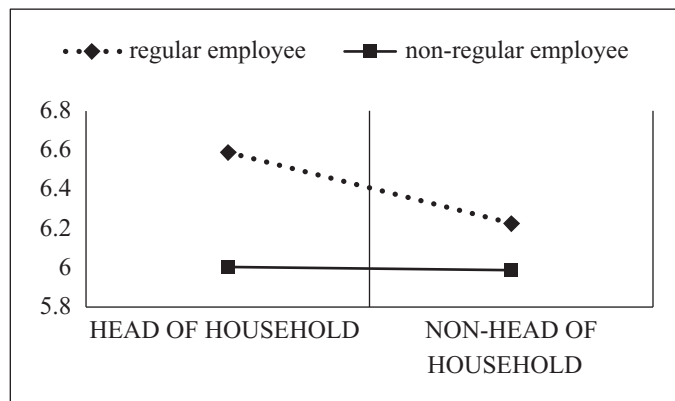


Figure 1 Interaction Effect (Male Sample)

Female Employees

Table 3 displays the result of a two-way ANOVA for female employees. As shown in this table, whether female workers are heads of household has a significant effect on work-related satisfaction, while employment status does not. The interaction effect of these two factors is also observed to some extent, although the significance level is marginal ($p = 0.067$). Specifically, the marginal means of heads of household ($\mu = 6.542$) is significantly lower than that of non-heads of household ($\mu = 6.769$), and this result is similar to male employees. On the other hand, the marginal mean of female non-regular employees ($\mu = 6.649$) is not significantly different from that of female regular employees ($\mu = 6.662$).

The results regarding an interaction effect are quite different from male employees. As shown in Figure 2, the satisfaction of non-regular female employees changes enormously depending on whether they are heads of household. When female workers are heads of household, non-regular employees have lower satisfaction ($\mu = 6.479$) than regular ones ($\mu = 6.605$). However, they have higher satisfaction ($\mu = 6.819$) than regular ones ($\mu = 6.719$) when they do not have the burden of financially supporting their families.

Table 3 Result of Two-way ANOVA (Female Sample)

Source	type III sum of squares	<i>df</i>	mean square	<i>F</i>	sig.
corrected model	53.961	3	17.987	5.862	.001
intercept	142,954.603	1	142954.603	46592.731	< .001
head of householder	41.692	1	41.692	13.588	< .001
employment	.140	1	.140	.046	.831
head of householder * employment	10.307	1	10.307	3.359	.067
error	12,748.263	4,155	3.068		
total	200,314	4,159			
Corrected Total	12802.224	4,158			

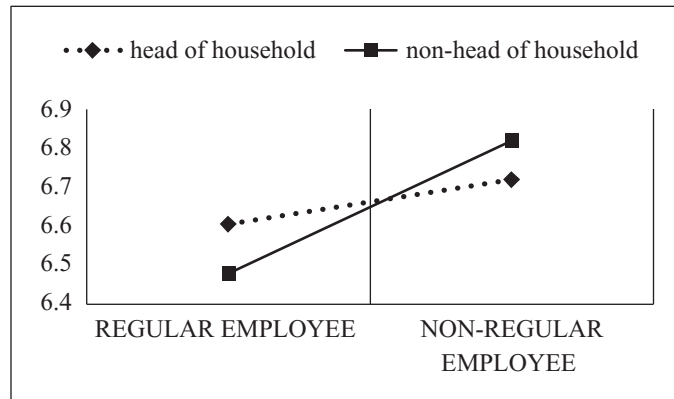


Figure 2 Interaction Effect (Female Sample)

3. Effect of Annual Income of Employees and Their Spouses

Inter-correlations

Is the work-related satisfaction of regular and non-regular employees influenced by the annual incomes of the employees and their spouses? Table 4 and Table 5 show inter-correlations of variables for regular and non-regular employees, respectively. A comparison of two tables reveals some interesting differences between regular and non-regular employees. First, while the correlation between age and annual income (self) is significantly positive for regular employees, it is not significant for non-regular employees. This means that the disparity of annual incomes between regular and non-regular employees increases as they age. Second, although a significantly positive correlation between annual income (self) and satisfaction is observed, it is not present for non-regular employees. A majority of non-regular employees tend not to care about their income because they favor other aspects of work, or because they tend to be insensitive to small changes in their low annual incomes.

Table 4 Inter-Correlations Regarding Variables (Regular Employees)

variables	Mean	Std. Deviation	1	2	3	4
1. gender	1.280	.450				
2. age	39.810	10.090	-.151**			
3. annual income (self)	559.350	312.679	-.320**	.443**		
4. annual income (spouse)	197.560	274.358	.608**	-.056**	-.164**	
5. whole satisfaction	6.581	1.866	.030*	.051**	.153**	.045**

n = 6,788, **: p < .01, * : p < .05

Table 5 Inter-Correlations Regarding Variables (Non-regular Employees)

variables	Mean	Std. Deviation	1	2	3	4
1. gender	1.750	.435				
2. age	39.940	11.264	.171**			
3. annual income (self)	180.190	140.945	-.245**	.021		
4. annual income (spouse)	557.480	353.211	.418**	.127**	-.210**	
5. whole satisfaction	6.561	1.783	.184**	.039*	-.035	.090**

n = 3,002, **: p < .01, * : p < .05

Multiple Regression Analysis

The following two tables show the results of multiple regression analysis with gender, age, and last year's annual incomes of employees and their spouses as independent variables. Table 6 displays the results of regular employees, and Table 5 features non-regular employees. Although both models have rather low adjusted coefficients of determination, interesting results are available from a comparison of the two models. First, for regular employees, work-related satisfaction is influenced by gender (female employees are more satisfied than male employees) and annual incomes of employees (as income is higher, satisfaction is also higher), but it is not affected by age and annual income of employees' spouses. In the case of non-regular employees (Table 7), while gender has a similar effect to regular employees, age, and annual income of spouses also have a significant effect on work-related satisfaction. Annual income of employees, however, has no significant effect.

The results regarding the effect of annual income of spouses on the work-related satisfaction of non-regular employees is quite interesting. One possible explanation of why age has no effect is that, because it is understood that non-regular employees are disadvantaged vis-a-vis regular employees in terms of annual income, they are less sensitive to the amount of their annual income. On the other hand, when the annual income of their spouse is high, they are not worried about supporting their households, so they tend to have positive motives and enjoy their work.

Table 6 Result of Regression Analysis of Regular Employees

model (adj R ² = 0.029)	unstandardized coefficients		standardized coefficients	t	sig.
	b	std. error	beta		
(constant)	5.560	.183		30.458	<.001
gender	.520	.096	.113	5.406	<.001
age	-.001	.003	-.004	-.228	.819
annual income	.001	.000	.171	9.666	<.001
annual income (spouse)	3.126E-05	.000	.005	.239	.811

Table 7 Result of Regression Analysis of Non-regular Employees

model (adj R ² = 0.024)	unstandardized coefficients		standardized coefficients	t	sig.
	b	std. error	beta		
(constant)	6.627	.401		16.541	<.001
gender	.443	.163	.086	2.714	.007
age	-.017	.005	-.095	-3.651	<.001
annual income	-9.757E-05	.000	-.009	-.305	.761
annual income (spouse)	.000	.000	.067	2.335	.020

4. Conclusion

This study uses a robust sample that includes data from more than nine thousand workers in the Tokyo metropolitan area. Although a complete understanding of regular and non-regular employees cannot be obtained through a simple study such as this, its analysis produces several interesting results for researchers. Specifically, this study

found that it is too simplistic to say that regular employees are happier than non-regular ones because of higher incomes and better treatment. The work-related satisfaction of these two kinds of employees is affected by various factors, which can be demographic and situational, and in some cases, non-regular employees have higher work satisfaction than regular ones. The following are important findings of this study.

1. On the whole, gender affects work-related satisfaction, and female employees tend to be more satisfied with work than their male counterparts. The effect of gender, however, is actually quite complicated. In the case of male employees, the work-related satisfaction of non-regular employees is significantly lower than that of regular employees, regardless of whether the employees are heads of household. For female employees, the work-related satisfaction of non-regular employees is largely affected by whether they are heads of household.

2. Age does not influence work-related satisfaction of regular employees, but it has a negative impact on that of non-regular employees. This is true because non-regular employees become frustrated with being treated differently than regular employees and they worry about their future, as they grow older.

3. According to the analysis of married employees, work-related satisfaction of regular employees is affected by their own annual incomes, while that of non-regular employees is influenced by their spouses' annual incomes. Their spouses support the family when they have high annual income, regardless of whether they are nominal heads of household, and we can conclude that the work-related satisfaction of non-regular employees becomes higher when their burden of financially supporting their families is lower.

In this study, we conducted a simple empirical analysis to determine how a burden to support one's family influences the work-related satisfaction of regular and non-regular employees, assuming that this burden is associated with passive motives to choose non-regular positions. This argument is still simplistic, though, and it is not sufficient to recognize all of the complicated situations surrounding non-regular employees, although much of our empirical result was as expected. Today, non-regular employees' social role continues to expand as their numbers increase. Further investigation of such non-regular employees is needed.

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