

# Empirical Study on Long Working Hours and Unpaid Working Time in Japan

## Summary

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### Research Period

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### Objective

While the number of part-time workers and other workers who have short working hours is increasing in recent years, the number of workers who work more than 60 hours a week is also on the rise. The long working hours are having various unfavorable effects on workers' health and other aspects of their working lives. Therefore, in this research, the authors attempted to examine the state of affairs regarding long working hours, make an analysis on (1) effects that long working hours have on workers' health and other aspects of their lives and on (2) causes of unpaid working time (working hours exceeding the standard working hours for which no overtime allowance is paid), and draw up necessary policy implications.

For this purpose, the authors conducted a questionnaire survey on 3,000 workers throughout Japan (2,557 people responded). While referring to previous research, the authors analyzed the results of the questionnaire survey.

## Outline of Research Results

### 1. Issues and method of survey and research

#### (a) Objective and issues

In recent years, working hours of the entire working population have trended downwards with a substantial increase in the number of part-time workers. However, among those in the latter half of their 20s to early half of 40s in the most productive years of their working lives (and particularly among full-time regular employees), the number of workers who “work 60 or more hours a week” is increasing (Ministry of Internal Affairs and Communications, Statistics Bureau, *Labor Force Survey*). The authors, while referring to previous research, conducted a large-scale questionnaire survey on 3,000 people throughout Japan to understand the state of long working hours and unpaid working time, analyze the impact that long working hours has on workers’ health and perception, and investigate which types of workers are being subjected to unpaid working time.

#### (b) Method of questionnaire survey

The outline of the questionnaire survey is as shown below.

- (1) Subject: 3,000 employees nationwide who are from 20 to less than 60 years of age

Considering comprehensively the survey environment in recent years and the fact that the nature of this current survey is not well-suited to distributing questionnaires directly to firms, we selected 3,000 employees from among the monitors registered with a private research firm that has a large number of monitors for a variety of surveys (220,000 registered monitors). The selection was based on the distribution of employees by gender and age (age groups for every five years of age) used in the *Population Census 2000*.

- (2) Survey method: a mail survey

- (3) Period: The survey was conducted in July and August of 2004 to investigate on the situation in June 2004.

The month of June was chosen because it is least affected by national holidays.

- (4) Number of responses: 2,577 (response rate of 85.2%)

- (5) Survey items: personal attributes such as age and gender; attributes related to the workplace such as business type and size of firm; working hours (scheduled working hours, working hours systems, method of managing employees’ arrival at and departure from workplaces, the actual working hours, hours exceeding scheduled working hours, hours exceeding scheduled working hours for which overtime allowance is paid, the number of days worked overtime, etc.); workers’ perception of

their firms; health concerns; businesses' measures against long working hours; depression as indicated in a questionnaire survey filled in by the respondents themselves; etc.

### **(c) Definition of terms**

The definitions of some of the terms are given below.

- (1) "Total number of hours worked": Includes hours actually worked during scheduled working hours, hours worked overtime and on holidays (regardless of whether overtime premium was paid), and hours worked at home. It does not include hours worked for side business or part-time job.
- (2) "Overtime hours": Of the total number of hours worked, the hours worked in excess of the scheduled working hours.
- (3) "Unpaid working time": Hours obtained by subtracting the hours for which overtime premium was paid from overtime hours.

## **2. State of working hours as shown in the questionnaire survey**

### **The state of working hours and reasons given by respondents**

An overview of the state of working hours as indicated by the results of the questionnaire survey is summarized on Table 1. We present the notable features from Table 1 as well as the results obtained from asking workers about the reasons for some of the questions covered in the survey.

- (1) With respect to the total number of hours worked, people in younger age groups, particularly those in their 30s, are working long hours.
- (2) With regard to overtime hours, younger people are working noticeably longer as are those in their 40s. In terms of positions, general employees have relatively shorter extra hours. This may be attributed to the fact that the percentage of woman employees is high among general employees. It should be noted that "section heads" put in long overtime hours. Among all respondents, the percentage of those who work 50 hours or more overtime, which is the level of working hours that reportedly has a significant effect on a worker's health, as we shall see later, is as high as 21.3 percent.
- (3) With respect to the reasons for putting in overtime hours, the highest percentage, at 61.3 percent, replied that "the work load is too heavy to complete during the scheduled working hours." This was followed by "I want to do a satisfactory job" (38.9 percent), "The recent reduction in staff numbers has resulted in shortage of staff" (33.7 percent), "The nature of work demands working outside the scheduled

working hours” (30.4 percent), “There is a need to meet deadlines set with clients” (19.5 percent), “There is a significant difference between the business’s busy season and quiet season” (17.4 percent), and “It is difficult not to work overtime when superiors and colleagues are working overtime” (13.5 percent).

- (4) As regards unpaid working time, those in their 30s and other people in younger age groups tended to have longer unpaid working time. By job type, there is much unpaid working time among those who have jobs in “sales and attending customers” and “specialist jobs.” By industry, longer unpaid working time was observed in “wholesale and retail trade and restaurants,” “service sector,” “finance, insurance, and real estate,” and “civil service.”
- (5) As for the reasons for unpaid work, in other words, the reasons overtime premium is not paid (respondents were allowed to choose up to two answers), 23.2 percent said “I did not apply for overtime pay because I am working overtime to do a job that is satisfactory for me.” This was followed by “Even if I applied for overtime pay, it would not be paid from budgetary constraints” (19.4 percent) and “Wages are paid in fixed amount regardless of overtime work” (19.0 percent).
- (6) The number of days worked on holidays is relatively high among younger people. By job type, it is relatively high among those in “sales and attending customers, “specialist jobs,” and “manufacturing-related jobs.” By industry, it is relatively high in “electricity, gas, heat, and water supplies” and “construction.”
- (7) The percentage of those who take work home is relatively high among middle-aged workers in their 30s and 40s; among those with “specialist jobs;” among “section heads” and those in other management posts; and among those in “civil service,” “wholesale and retail trade and restaurants,” and “service sector.”
- (8) As for the reasons for taking work home, “It is more efficient working at home” (35.3 percent) and “I want to do a job that is satisfactory for me” (31.5 percent) were cited by respondents.

Table 1. Working Hours in June 2004 from the Results of Questionnaire Survey

	Total number of hours worked	Overtime hours		Hours for which overtime premium was paid	Unpaid working time		Days worked on holidays	Percentage of those whose working hours increased on the year (%)	Percentage of those taking work home	
		Hours	Percentage of those with 50 or more overtime hours (%)		Average among all respondents (hours)	Average among employees subject to unpaid work				
Total	198.9	31.6	21.3	14.1	16.6	35.4	1.0	22.3	28.8	
Gender / Age	Male	205.4	36.9	26.4	17.2	18.9	38.1	1.1	23.2	30.1
	Female	185.7	20.8	11.2	8.4	12.1	29.4	0.8	20.4	26.1
	20s	202.5	35.6	23.8	16.3	18.2	37.3	1.2	26.7	26.3
	30s	204.3	37.7	27.2	15.7	20.0	40.1	1.0	24.2	34.1
	40s	197.0	30.9	21.1	13.7	16.5	32.0	0.9	23.6	31.8
	50s	191.9	22.1	13.3	9.8	9.9	28.4	0.8	14.9	23.1
Job type	General clerical work	187.1	22.2	13.4	11.9	11.1	26.2	0.7	20.1	21.4
	Sales and attending customers	206.6	36.4	25.1	9.1	25.1	42.1	1.1	25.2	36.1
	Specialist jobs	203.5	38.7	28.4	16.5	20.3	39.7	1.1	26.4	41.6
	Manufacturing-related jobs	200.0	29.0	19.2	18.5	10.2	29.1	1.0	18.9	14.0
	Others	190.7	27.5	16.1	12.1	16.3	36.7	0.7	15.5	29.1
Position	General employees	197.1	29.1	19.0	13.7	15.1	34.7	0.9	22.2	23.5
	Chief clerk/supervisor	199.8	36.4	25.8	15.3	20.6	37.0	1.0	22.7	37.0
	Section head	207.9	38.8	28.6	---	---	---	1.2	21.9	41.1
	Division manager	206.3	34.6	22.9	---	---	---	0.8	24.3	38.6
	Others (director, etc.)	199.1	25.0	15.9	---	---	---	1.2	14.5	39.1

		Total number of hours worked	Overtime hours		Hours for which overtime premium was paid	Unpaid working time		Days worked on holidays	Percentage of those whose working hours increased on the year (%)	Percentage of those taking work home
			Hours	Percentage of those with 50 or more overtime hours (%)		Average among all respondents (hours)	Average among employees subject to unpaid work			
Industry	Construction	204.4	33.9	26.1	13.4	17.6	34.6	1.2	20.7	23.7
	Manufacturing	198.2	33.5	23.5	20.0	12.3	31.1	0.9	23.9	23.5
	Electricity, gas, heat, and water supplies	190.4	20.6	12.9	13.7	4.7	14.5	1.3	20.0	14.3
	Transport & communications	202.8	31.7	22.0	19.4	11.7	34.4	1.0	20.0	23.0
	Wholesale & retail trade and restaurants	201.8	30.9	20.2	8.2	22.4	35.4	1.0	23.2	34.2
	Finance, insurance, and real estate	194.1	30.7	20.5	11.9	18.7	38.7	0.8	17.5	28.1
	Service sector	200.5	32.9	21.9	13.7	19.9	40.2	1.0	24.6	31.1
	Civil service	198.0	30.8	21.0	9.8	20.7	37.7	1.1	23.0	39.6
	Others	193.5	27.4	15.8	8.7	17.4	37.8	0.9	18.7	28.0
Number of employees	29 or less	197.5	22.4	14.8	6.7	15.0	31.0	1.0	19.5	27.2
	30-99	204.1	33.4	22.0	12.6	20.5	39.6	1.0	22.2	30.5
	100-299	200.4	35.2	24.1	14.4	19.6	41.8	1.0	21.4	28.6
	300-999	199.1	35.6	23.8	15.4	17.6	36.4	1.0	23.5	25.4
	1,000-2,999	196.9	33.2	23.1	18.3	14.6	33.7	0.9	23.5	34.0
	3000-	197.0	33.2	22.8	18.1	14.0	32.9	0.9	23.8	29.0

Note: Figures for “Hours for which overtime premium was paid” and “Unpaid working time” do not include figures for section heads and those in higher management posts. Because there were respondents who did not reply to some questions, figures may not be logically consistent. “Those taking work home” include those who “often take work home” and those who “sometimes take work home.”

### Perception on work, workplace, and health

In addition to the above, questions were asked in the survey regarding workers' perception on their work and health. Some of the more interesting findings are shown below.

- (1) The questionnaire asked, "Do you find that work is continuously being piled onto you and you have to handle many jobs all at once?" To this question, 22.6 percent replied "Always" and another 36.7 percent said "Often." More than half of the respondents were working with this impression. It is more common among younger workers. By job type, it is more common among those in "specialist jobs" and "sales and attending customers."
- (2) The questionnaire asked, "Do you feel so tired after work at the end of the day that you feel like doing nothing after work?" To this question, 14.7 percent answered "Always" and another 27.8 percent replied "Often," as more than 40 percent of the respondents had this extreme sense of fatigue. The sense of fatigue is more common among younger workers and among those in "sales and attending customers."
- (3) The questionnaire asked, "Is work always on your mind even when you are not at work so that you feel you can never relax?" To this question, 8.5 percent responded "Always" and another 19.5 percent said "Often," as about 30 percent of all respondents felt that work was always on their mind. This is more common among younger workers and among those in "specialist jobs" and "sales and attending customers." Among section heads and those in higher management posts, more than 10 percent said they "always" had this feeling.
- (4) The questionnaire asked, "Do you feel that you might ruin your health if you kept on working at this pace?" To this question, 17.8 percent replied "Often" and another 39.3 percent answered "Sometimes," as close to 60 percent of all respondents were concerned about their health. When asked what causes might have negative impact on their health, many respondents cited "stress from work and at the workplace" (65.1 percent), "overwork" (52.1 percent), and "lack of rest and sleep" (42.7 percent). Illnesses that many respondents were concerned about were "psychological and mental illnesses" (51.6 percent), "disorders of the locomotorium and sensorium such as the eyes, muscles, and nerves" (48.8 percent), and "illnesses and disorders of the circulatory and endocrine systems, such as high blood pressure, heart diseases, brain infarction, and diabetes" (43.2 percent).

### Measures adopted in workplaces and long working hours

In the survey, questions were asked on the measures taken by respondents' businesses with respect to long working hours and on what they thought was important in doing away with long working hours and unpaid overtime work.

- (1) On measures taken by respondents' businesses with respect to long working hours and health management, the response chosen by the largest number of respondents was "grasping hours actually worked by employees and calling the attention of and giving advice to workers who are working long hours and to their superiors" (30.0 percent), followed by "setting no-overtime-work days" (27.5 percent), "reminding employees to stop work at the end of the scheduled work hours" (24.2 percent), and "providing counseling on long working hours and stress besides regular health checks" (21.0 percent).
- (2) On the methods that respondents considered were important in doing away with long working hours and unpaid overtime work, the response chosen by the largest number of respondents was "making sure that each worker does not drag on with overtime work" (84.1 percent), "properly pay overtime premiums for hours put in" (79.2 percent), "employ new people" (58.9 percent), "reduce the work load" (51.5 percent), "change the work-comes-first attitude of working" (51.4 percent), "reinforce control on violators of the law" (50.4 percent), "labor unions should more seriously address the issue of overtime work" (43.0 percent), and "introduce tougher legal standards" (44.8 percent).

### 3. Analysis on the effect of long working hours on health, etc.

#### Viewpoints of analysis

Based mainly on the discussions of Yamazaki [1992]<sup>1</sup> and using the data of this survey (hereafter called the "JILPT 2004 Survey"), the authors made an analysis and study on the relation between long working hours and workers' health conditions and perceptions.

The analysis was carried out based mainly on four questions: (1) How many people have the tendency towards "excessive adaptation?"<sup>2</sup> (2) Is the overtime of over "50

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<sup>1</sup> As opposed to the theories of techno-stress resulting from technology innovation in microelectronics during the 1980s, Yamazaki said that it was "chronic or frequent occurrence of excessive job pressures and long working hours" or "stress arising from the need to fulfill one's quota" as a result of the "job requirement and pressures or pressures of involvement." On the occurrence of "super-long working hours" of monthly extra hours of more than 50 hours, he said it could not be sufficiently explained by Japan's work ethics or group identity and recommended that such "job requirement and pressures of involvement" should be ameliorated to shorten working hours. He claimed that "super-long working hours" resulted from "job requirement and pressures of involvement."

<sup>2</sup> In relation with the increase in job requirement and pressures, Yamazaki observed that there could

hours a month” a threshold (a critical point) of “super-long working hours” at which point workers start to feel considerable burden and fatigue? (3) What are the causes of “super-long working hours?” (4) By exploring the factors related to “super-long working hours,” we also tried to show “resultant long working hours,” to use Yamazaki’s expression, by using the data of the JILPT 2004 Survey.

### **Tendency towards excessive adaptation**

Generally, workers’ level of fatigues and stress has been high in recent years (Ministry of Health, Labour and Welfare, *Survey on Workers’ Health Conditions*).<sup>3</sup> In the JILPT 2004 Survey, the level of fatigue and stress among the respondents was also very high. The respondents were grouped into three types of workers based on their views about their firms: (A) “Want to make an effort for the company, and be recognized for his performance;” (B) “Want to contribute to the company to the extent generally required;” and (C) “Have no special feeling for the company as I work to make a living and for my life.” A comparison was made on the signs of “excessive adaptation” as indicated by such responses as “Work never leaves my mind” and “I am always concerned about the quota that I still need to meet.” The difference among the three groups was not very clear, but it was found that those in Group A had tendencies close to “excessive adaptation.”

### **Critical point of 50 hours of monthly overtime work**

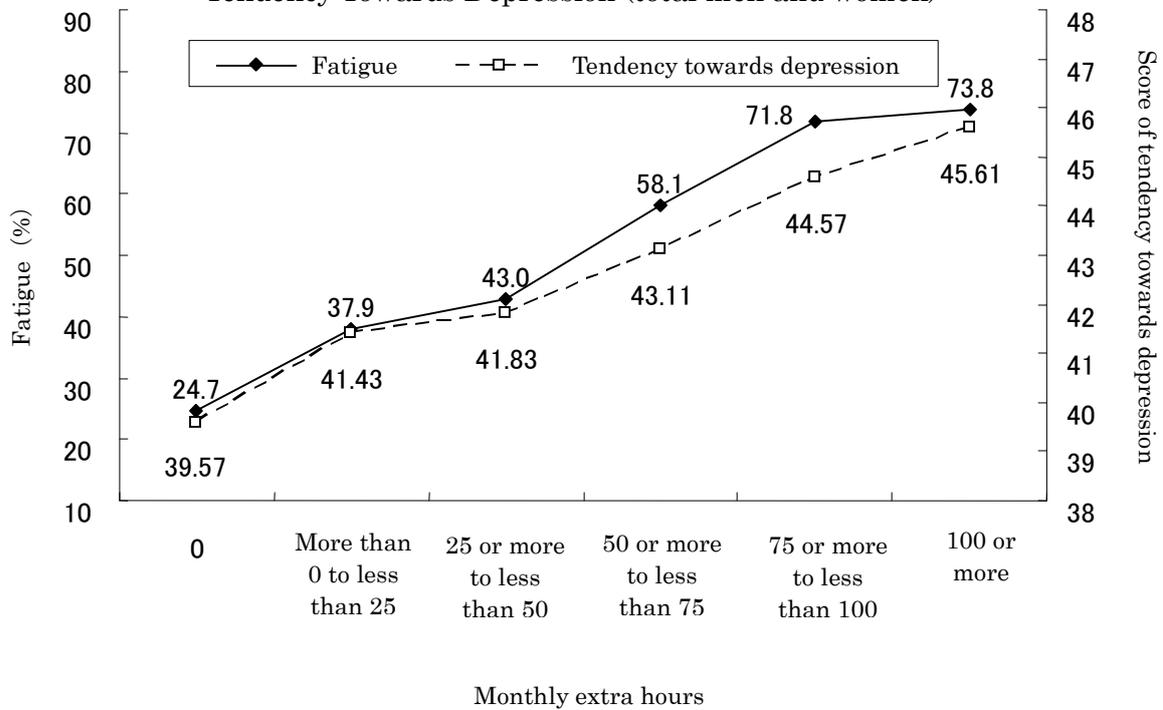
From the data of the JILPT 2004 Survey, we examined the relation between the level of overtime work and fatigue (“Feel so tired after work at the end of the day that I feel like doing nothing”). The results showed that with an increase in overtime work, the percentage of those complaining of fatigue also rose. A similar trend was observed with the score of tendency towards depression (Figure 1). The figures do not show a marked increase after 50 hours, but more than 50 percent of the respondents complained of fatigue after 50 overtime hours. Even though there must be personal differences in how much burden a worker feels putting in overtime work, it was found that workers uniformly felt an increase in burden in cases where monthly overtime work began to exceed 50 hours.

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be problems with a group of people prone to “excessive adaptation” of “actively accepting or easily involving themselves with the increasing job requirement and pressures.” These people had a strong sense of commitment to their firms or work and tended to overlook strain or disorder on their body or mind.

<sup>3</sup> For instance, the results of the 2002 survey showed that more than 70 percent of the respondents either said “very tiring” and “slightly tiring”. The percentage is rising in each survey (1992 and 1997).

Figure 1. Monthly Overtime Hours, Fatigue, and Tendency Towards Depression (total men and women)



**Factors related to overtime hours**

The effect of personal attributes (age, education, industry, company size, job type, position, etc.) on overtime hours was examined through multiple-regression analysis (Tobit). The results showed that, for both men and women, the attributes of younger age, college education, and specialist jobs were related to longer overtime work. Among men, the attributes of shorter length of service, work at middle-size firms (100 to 999 employees), jobs in sales and attending customers, the position of chief clerk or supervisor, and higher income were related to longer working hours.

On the reasons for putting in overtime work, the response, “the work load is too heavy to complete all work during the scheduled working hours,” which indicates the effects of job requirement and pressures, was statistically significant in its relation with longer overtime hours. On the other hand, the response, “I want to do a satisfactory job,” which indicates that the worker is voluntarily putting in overtime work, was not significant in its relation with longer extra hours. This shows that, as stated by Yamazaki, “job requirement and pressures” were related to longer overtime hours.

#### 4. Analysis on workers subjected to unpaid work

##### Results of analysis

To identify the factors related to unpaid working time, we conducted an exploratory analysis.<sup>4</sup> After taking various cross tabulations for both men and women to explore the attributes that were expected to be related to unpaid working time, we conducted a multiple regression analysis (Tobit) using those attributes as independent variables. Figure 2 shows the results of the analysis.

Figure 2. Factors Related to Unpaid Working Time

##### Male

Factors related to longer unpaid working time
<ul style="list-style-type: none"> <li>- Industry “wholesale and retail trade and restaurants”</li> <li>- Industry “civil service”</li> <li>- Job type “sales and attending customers”</li> <li>- Method of managing time of arriving at and leaving work “name card or entry into a white board”</li> <li>- Method of managing time of arriving at and leaving work “nothing in particular”</li> <li>- Total number of hours worked</li> <li>- Overtime hours</li> <li>- Reason overtime premium is not paid “Wages are paid in fixed amount regardless of overtime work”</li> <li>- Perception on working hours “would like to make the working hours shorter”</li> </ul>
Factors related to shorter unpaid working time
<ul style="list-style-type: none"> <li>- Age</li> <li>- Length of service</li> <li>- Industry “electricity, gas, heat, and water supplies”</li> <li>- Job type “manufacturing-related jobs”</li> <li>- Working hours system “flex time”</li> <li>- Working hours system “job rotation”</li> <li>- Method of managing time of arriving at and leaving work “personal ID card”</li> <li>- Hours for which overtime premium was paid</li> <li>- Reasons for nonpayment of overtime premium “It is within the statutory working hours”</li> <li>- Increase or decrease in working hours “increase”</li> <li>- Measures against long working hours “no-overtime-work days”</li> <li>- Measures against long working hours “grasping hours actually worked by employees and calling the attention of and giving advice to workers who are working long hours and to their superiors”</li> </ul>

<sup>4</sup> Because the analysis is on unpaid work, the samples of “section heads” and those in higher management posts as well as those “not managed by time (working hours system)” were excluded because it was difficult to determine their unpaid working time.

## Female

<b>Factors related to longer unpaid working time</b>
<ul style="list-style-type: none"> <li>- Industry “service sector”</li> <li>- Job type “specialist job”</li> <li>- Working hours system “free working hours system/de facto working hours system”</li> <li>- Total number of hours worked</li> <li>- Overtime hours</li> <li>- Reason overtime premium is not paid “Wages are paid in fixed amount regardless of overtime work”</li> <li>- Reason overtime premium is not paid “I did not apply for overtime pay because I am working overtime to do a job that is satisfactory for me”</li> <li>- Increase or decrease in working hours “increase”</li> <li>- Perception on working hours “would like to make the working hours shorter”</li> </ul>
<b>Factors related to shorter unpaid working time</b>
<ul style="list-style-type: none"> <li>- Hours for which overtime premium was paid</li> <li>- Reasons overtime premium is not paid “It is within the statutory working hours”</li> </ul>

For example, for both men and women, factors related to longer unpaid working time included total number of hours worked, overtime work, the response “Wages are paid in fixed amount regardless of overtime work” to the question on the reason overtime premium is not paid, and the response “would like to make the working hours shorter” to the question on the perception on working hours. On the other hand, factors related to shorter unpaid working time included hours for which overtime premium was paid and the response “It is within the statutory working hours” to the question on the reason overtime premium is not paid.

### Who are subjected to unpaid work?

- (1) Among men, the higher the age and the longer the length of service, the shorter the unpaid working time. This suggests longer unpaid working time for younger workers in the most productive years of their working lives.
- (2) By industry, unpaid working time is longer for those in “wholesale and retail trade and restaurants” and “civil service.” For the former, long working hours are commonplace because of the industry’s peculiar business days and hours. For the latter, it can be assumed that because the deteriorating financial conditions in recent years have cut back personnel costs and put a curb on the capacity number of civil servants, the unpaid working time of existing employees is becoming longer.
- (3) Those in “sales and attending customers” are subject to longer unpaid working time. This suggests that management of their business days and working hours revolves around their clients’ schedules and that they are given excessive work load.

- (4) In terms of working hours systems, those working under “flex-time system” and “job rotation” have shorter unpaid working time. In terms of the method of managing time of arriving at and leaving work, those using “personal ID card” have shorter unpaid working time; while those who use “name card or enter their names on a white board” or those who work in a workplace that have “no system for managing time of arriving at or leaving work” tended to have longer unpaid working time. This suggests that devising methods to manage working hours is effective in reducing unpaid working time.
- (5) Among women, firstly, those in the “service sector” tend to have longer unpaid working time. This suggests that they have many business days, work longer hours, and their working hours are set by giving priority to their clients’ schedules.
- (6) Women in “specialist jobs” have longer unpaid working time. This result suggests that woman nurses and teachers have longer unpaid working time.
- (7) It was also found that among women, those who responded, “I did not apply for overtime pay because I am working overtime to do a job that is satisfactory for me,” to the question on the reason overtime premium is not paid tended to have longer unpaid working time. This tendency was not observed among men. It suggests that more women are voluntarily choosing to put in overtime work without pay. It is possible that the pressure to “perform well even if it meant doing unpaid work” is felt more strongly among women.

##### **5. Policy implications on long working hours and unpaid work**

The policy implications obtained from the above analysis can be summarized below.

- (1) Considering workers’ health, efforts should be made to limit monthly overtime work to within 50 hours. There is a need not only to simply manage working hours more actively, but also to review workers’ working styles. In other words, job requirement and pressures should be reduced through workplace management. In this effort, the inequality between men and women and among different age groups should be remedied.
- (2) It should be noted that there are not a few workers who fail to notice disorders of their body and mind because they are “excessively adaptive.” Attention should be given to this type of workers by having them take regular inspections and so forth.
- (3) It should also be noted that a substantial number of workers have a tendency towards depression. Measures should be implemented to improve their mental health.
- (4) Management of working hours through appropriate systems and the use of personal

ID cards for time management as well as introduction of “no-overtime-work days” are effective to a certain extent. Corporate efforts in this area should be reinforced further.

- (5) Individual firms should accurately grasp the causes of unpaid work and manage the situation appropriately.

## **Composition of the Report (Contents)**

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