Factors Contributing to Labor Law Violations and Employees' Subjective Perceptions of "Black Companies": Focus on Workplace Characteristics and Human Resource Management

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This article deals primarily with two analyses. The first is an analysis of factors contributing to uncompensated overtime, failure or inability to take paid leave, and coerced resignation, all of which are frequently cited as labor law violations, and the correlations between each of these issues and business performance. The second examines which issues, including the above labor law violations as well as workplace harassment and so forth, are most crucial in shaping employees' perceptions of their employers as "black companies," defined as rogue companies or those that habitually flout labor standards, which have increasingly been recognized as a social issue. The results of the analyses indicated that while harassment and unreasonable quotas enhanced the perception of companies as being "black," the most clearly identifiable factors were uncompensated overtime, failure or inability to take paid leave, and coerced resignation. In addition, it was found that uncompensated overtime had a statistically significant positive effect on workplaces' ordinary income growth over the past three years, showing that over the short term, companies were rewarded for violating the rules with commensurate profits.

I. Introduction

The Framework for Comprehensive Countermeasures against Uncompensated Overtime, formulated in May 2003, states that uncompensated overtime "violates the Labor Standards Act and is unacceptable," and outlines multiple specific countermeasures including formulation of Guidelines for Measures to Take for Elimination of Uncompensated Overtime and implementation of active oversight. However, the total amount of wage corrections for uncompensated overtime resulting from this oversight in fiscal 2012 was ¥10.45693 billion. While this was down from the amount in fiscal 2009,[1] it indicates that "unacceptable" uncompensated overtime is still widespread. With regard to percentage of allotted paid holidays that are actually taken, as well, the 2013 rate of 47.1% is far below the 70% target for 2020 set in the Action Plan for Promotion of Work-Life Balance (revised

[*] I am deeply grateful for the valuable data I received from the Research Institute for the Advancement of Living Standards when researching this article. It should be noted that any errors in this paper should be attributed to the author, and that the content reflects the author's personal opinions and does not represent an official position of the organization to which I (the author, Kobayashi) belong.

[1] Refer to Figure 1 for the results of correction of uncompensated overtime through supervision and guidance (FY2012). http://www.mhlw.go.jp/bunya/roudoukijun/dl/chingin-c_02.pdf (In Japanese). In the figure, the blue bar, the black bar and the line show the number of companies, the number of worker subjects for wage correction and the total amount of wage corrections, respectively.

June 2010), and in fact it has been trending downward over the past 20 years (General Survey on Working Conditions). Coerced resignation, as well, was identified as a problem at major corporations in a December 31, 2012 article in the *Asahi Shimbun* newspaper, and there is growing recognition of it as a social issue.

With regard to these issues, Ogura (2006) and Oki and Taguchi (2010) showed the effects of industry categories where work tends to be irregular and the presence or absence of an overtime pay system. This article seeks first of all to add to these findings by analyzing the impact of workplaces' internal and external environments and HRM (human resource management) systems on uncompensated overtime, failure or inability to take paid leave, and coerced resignation, using the Survey on the Status of Diverse Working Styles and Human Resource Portfolios, which contains detailed questions on these subjects. In addition, the correlations between these problems' presence or absence and business performance were analyzed, and incentives for illegal labor management were examined.

This article's second analysis deals with which problems are particularly correlated with workers' subjective evaluations of their employers as "black companies." The slang term "black companies," which emerged in the late 2000s and rapidly gained popularity among young Japanese workers, refers to companies with illegal or barely legal labor management practices, marked by high rates of turnover and high risk of physical and mental disorders affecting workers while they are employed there. There is broad public recognition of the issue, with the Budget Committee of the lower house of the National Diet raising it for consideration in May 2013 and the Ministry of Health, Labour and Welfare declaring September of the same year Special Overwork Surveillance Month, but consensus on an objective definition is yet to be reached, and subjective perceptions of "black companies" differ.[2] To address the problem of "black companies," Ouchi (2014, 90) notes that it is more important to disclose as much information about companies as possible so that workers can reference it when searching for jobs than to label specific companies as "black" or otherwise according to an objective standard and take measures against these companies. With this in mind, in this article we will clarify which workplace characteristics are most correlated with employees' subjective perception of "black companies," and consider what information most needs to be disclosed to prospective employees beforehand. Specifically, we will analyze which factors, such as unreasonable quotas, long working hours, and uncompensated overtime, had the highest impact in the 26th Questionnaire on Workers' Jobs and Lifestyles (referred to below as the 26th Workers' Tankan), which contains questions pertaining to perceived degree of "blackness," and in light of this analysis, what information items should be disclosed.

Section II contains an overview of existing studies on uncompensated overtime, failure or inability to take paid leave, and coerced resignation, and establish this article's hy-

[2] "Black companies" have been described in numerous books such as Konno (2013) and Kanisawa (2010), but definitions have not been consistent.

pothesis on the factors contributing to these problems. Section III outlines the data and analysis methods used for analysis of the occurrence of the problems and their impact on business performance, and enumerates the results of the analysis. Section IV outlines existing studies and examines how workers view and evaluate their "black" employers. Section V outlines the data and procedures used in the analysis of subjective perceptions of "blackness," and considers what kinds of workplace problems are most central to these perceptions. Section VI sums up the analysis results described thus far and examines their policy implications.

II. Hypothesis regarding Factors Contributing to Uncompensated Overtime, Failure or Inability to Take Paid Leave, and Coerced Resignation

1. Uncompensated Overtime

There have been many previous studies on uncompensated overtime, including Mitaini (1997), Takahashi (2005), and Oki and Taguchi (2010). Takahashi (2005) has pointed out one aspect of uncompensated overtime, namely, that workers who are supposed to apply for permission each time they work overtime fail to do so. Analyses have shown that among white-collar employees of large enterprises, more uncompensated overtime is directly correlated with higher compensation including bonuses, and white-collar workers in the late 1990s seem to have worked off the clock willingly in expectation of such rewards. Mitaini (1997) also observes that when evaluations based on results and performance are carried out, there is an incentive for workers to do uncompensated overtime of their own accord, as demonstrated by analyses showing that employees in workplaces with performance-based evaluations tend to do more uncompensated overtime. The study suggests that not only the presence or absence of performance evaluations, but also the use of performance indicators dependent on cost-based factors such as amount of profit generated, are factors contributing to workers' not applying for overtime (i.e. working overtime, but not applying to receive compensation for it).

From the perspective of these studies, uncompensated overtime may be perceived as voluntary and leading to higher compensation, and therefore may not be a significant problem. On the other hand, Oki and Taguchi (2010) point out that non-voluntary overtime, with no potential reward, also exists. Their analysis points to lack of a company-wide system for monitoring work hours, and existence of a system setting limits for overtime hours, as factors exacerbating non-voluntary uncompensated overtime. These systems may reflect a stance of making efforts toward compliance, but it seems what is truly important is a systemic, company-wide effort to monitor and manage overtime hours in practice.

Although it is not possible to ascertain, from the data used for analysis in this article, whether uncompensated overtime is voluntary or non-voluntary, we would like to verify whether there is a link between the various variables impacting voluntary and non-voluntary uncompensated overtime and the perception of a company as "black," and consider the im-

portance of the non-voluntary uncompensated overtime issue.

2. Failure to Take Annually Allotted Paid Leave

Next, with regard to inability to take annual paid leave, Ogura (2006) carried out an analysis of factors for a dummy for taking paid leave and percentage of paid leave taken. The analysis showed that higher income was correlated with lower percentage of vacation days used, and it has been pointed out that taking few days of leave may be incentivized, as it leads to promotions or raises. It is suspected the same systemic, structural problems that encourage voluntary uncompensated overtime also lead to failure or inability to take paid leave.

In addition, being in the wholesale, retail or food-service industries, or sales, marketing and customer service occupations, makes workers less likely to take paid vacation days. Ogura (2006) identified the cause of this as lying in the irregularity of work schedules, which make it difficult to plan to take vacation days in advance.

Workers in the wholesale, retail, and food-service industries and sales, marketing and customer service positions are prone to doing non-voluntary uncompensated overtime, as stated by Oki and Taguchi (2010), and it is evident that the irregular nature of the work is linked not only to non-voluntary uncompensated overtime but also to failure or inability to take paid leave.

3. Coerced Resignation

With regard to the issue of forced resignation, Gunji and Okuda (2014) have observed that a larger scale of enterprise, and worsening business performance, are often correlated with companies encouraging workers to resign. However, Gunji and Okuda's analysis was only a cross tabulation of data, and it is not clear why large companies are more likely to push employees to resign. Also, it is conceivable that encouragement to retire when performance is deteriorating cannot always be equated with coerced resignation. When encouragement to resign resembles unavoidable dismissal due to economic conditions, employees may accept the situation and not need much convincing. For the purposes of this article, what we want to focus on is encouragement to resign under circumstances far removed from so-called "restructuring" (unavoidable layoffs due to business performance). Specifically, this means encouragement to resign in a situation that does not meet the four conditions[3] for economically motivated layoffs enumerated under the Japanese labor law system. When employees are encouraged to resign even while personnel number are increasing, or encouragement to resign or reshuffling of personnel only targets employees who are consid-

[3] These conditions on the employer's side are (i) that there is a need to reduce personnel, (ii) that the obligation to make efforts to avoid dismissal has been discharged, (iii) that the standards for selecting staff for dismissal are reasonable, and (iv) that full discussions have been held with workers or labor unions. For more details on conditions for dismissal under Japanese labor law, refer to Araki and Otake (2008).

ered underperforming, it is regarded as a form of coerced resignation, and we will analyze the factors in this article.[4]

Coerced resignation is suspected under the following three sets of circumstances: First, after hiring staff, the employer directly monitors employees at work, determines which employees to keep and which to dismiss, and after dismissing employees, replaces them with new ones. In these workplaces, performance-based compensation (wages determined based on work outcome) is common, and such differing wage systems are correlated with differences in coerced resignation. Second, the employer does not require sophisticated human capital, and there is little disadvantage even if employees are repeatedly dismissed and replaced. In such situations, companies will not need extensive or long-term training programs. A third indicator is rapid obsolescence of skills and/or drastic changes in the business environment. Under such circumstances, companies have an incentive to encourage middle-aged personnel, who have difficulty keeping up, to resign, and to continually replace them with young employees who are highly adaptable to change. It seems probable that the situation vis-à-vis coerced resignation differs depending on job characteristics such as industry, occupation, and susceptibility to change.

III. Analysis of Factors Contributing to Uncompensated Overtime, Failure or Inability to Take Paid Leave, and Coerced Resignation: Data, Analysis Methods, and Analysis Results

1. Data Used for Analysis

Data used in the analysis of factors contributing to uncompensated overtime, failure or inability to take paid leave, and coerced resignation is from the Enterprise Survey and Employee Survey sections of the Survey on the Status of Diverse Working Styles and Human Resource Portfolios, which the Japan Institute for Labour Policy and Training carried out in February 2014.

For analysis of uncompensated overtime and failure or inability to take paid leave, we used labor-management matching data that matched employee data from the Employee Survey with Enterprise Survey data from the enterprises the employees belonged to. Only data from respondents who were regular employees was used, as the Enterprise Survey questions pertaining to evaluation-based compensation systems and corporate training policies applied only to regular employees. Also, respondents were limited to those already working for one year or more, as they were likely to have finished training for new employees and begun their actual duties. Meanwhile, managerial personnel of section manager level or above were excluded. As a result, the survey target population numbered 5,632 people belonging to 1,352 establishments.

For analysis of coerced resignation, only data from the enterprise questionnaire was

[4] The specific variables are described in Section III-2.

used. This questionnaire contains a question about whether or not regular employees were actually encouraged to resign, and enables monitoring of the increase or decrease in the number of regular employees. Also, the questionnaire inquiries about enterprises' intentions regarding employees with poor performance—whether to encourage them to resign, dismiss them, or reassign them. Analysis was performed with data from 1,721 establishments, which includes all the variable data used in the analysis described later.

2. Analysis Procedures and Definitions of Variables

Next, we will describe the analysis model and the definitions of variables. The explained variables D_i in the analysis using labor-management matching data are "dummy with uncompensated overtime" and "dummy with failure or inability to take paid leave," while the explained variable in the analysis using enterprise data is regarded as a dummy with coerced resignation implemented, with a Probit analysis carried out according to formula (1) below. Note that in the analysis employing enterprise data, Probit estimates are weighted according to the number of regular employees at the enterprise.

$$\Pr(D_i = 1 \mid X_i, J_i, M_i) = \Phi(\delta_1 X_i + \delta_2 J_i + \delta_3 M_i) \qquad (1)$$

As for the definitions of explained variables, the "dummy with uncompensated overtime" is defined as a dummy variable with value of 1 when a respondent to the employee questionnaire did one or more hours of overtime per week while "almost never" applying for overtime pay, or else did 15 or more hours of overtime per week while "sometimes" applying for overtime pay. These responses point to two types of employees, those that do a significant amount of uncompensated overtime, and those that either do little uncompensated overtime or else work at enterprises where there is no overtime whatsoever. Also, because the survey is designed to inquire about application for overtime pay only when employees do one or more hour of overtime per week, the analysis was structured with two stages, i.e. the question of whether or not overtime was done, and whether employees applied for overtime pay in cases when they did overtime. Specifically, we carried out a two-stage Heckman estimation, with the first stage being estimation of the "dummy with one hour or more of overtime," and the second being a linear probability model estimation of "dummy with uncompensated overtime."

For the "dummy with failure or inability to take paid leave," a value of 1 was assigned when the employee questionnaire response indicated that an employee had taken 0 days of paid vacation in the year (starting in April) prior to the year the survey was implemented.

With regard to coerced resignation, there were two patterns, one where a value of 1 was assigned to a "dummy with encouragement to resign not accompanied by personnel reductions" (when at least one employee was encouraged to resign over the past three years while the number of regular employees had increased over the past year), and one where a value of 1 was assigned to a "dummy with encouragement to resign, dismissal, or reassign-

ment of poorly performing employees" (where employees whose performance was poorly evaluated for three consecutive years were dismissed, encouraged to resign, or reassigned.) The "dummy with encouragement to resign not accompanied by personnel reductions" is problematic in that coerced resignation may not have taken place at some enterprises, as two or three years ago employees may have been encouraged to resign due to personnel reductions, whereas the number of employees increased just during the past year. Another problem is that the "dummy with encouragement to resign, dismissal, or reassignment of poorly performing employees" sets the very high bar of poor performance evaluations for three consecutive years. For this reason, factors contributing to coerced resignation are interpreted in light of trends common to analysis results from both patterns.

Next, let us turn to the explanatory variables and their definitions. First of all, personal attributes X_i include age, a male dummy, a university or graduate school completion dummy, a married dummy, number of years of service, dummy for prioritization of leisure-time activities (a dummy variable with a value of 1 if the subject's reason for choosing a particular employer was "I want to work at a time that fits my schedule," "It is easy to take vacation days," "Because of my housework, child-rearing, or nursing care situation," or "Because I was ill"), and dummy for employees whose self-evaluations place them in the top 20% (a dummy variable with a value of 1 if the employee's subjective view of how they are evaluated in the workplace puts them in the top 20%). J_i represents workplace attributes, and a dummies for industry, enterprise size, and existence of an in-house labor union, year of establishment, regular employees as a percentage of all employees in the workplace, "sales office or storefront dummy" indicating the workplace is a sales office or storefront, and a "factory dummy" indicating the workplace is a factory were used.

M_i employs the variables that were examined in the previous section as factors contributing to uncompensated overtime and failure or inability to take paid leave. Specifically, the variables used were a "performance-based evaluation dummy" assigned a value of 1 if "performance evaluations" were selected as the factor that most affects the wages of regular employees, a "profit target dummy" with a value of 1 when the response to the question on the employee questionnaire related to target management was that "profit targets are established," a "dummy with prohibition on doing overtime" with a value of 1 when responses to the enterprise questionnaire question about overtime systems indicated that "as a general rule, overtime is prohibited company-wide," and a "dummy with system for surveying overtime hours" assigned a value of 1 when respondents reported that "in-house surveys and investigations of off-the-clock work are carried out."

Also, in order to control heterogeneity in perceptions of how workplaces abide by the law, we used a "dummy with compliance training program" assigned a value of 1 if the employee has received compliance training. For job characteristic variables, an "amount of discretion regarding volume of work" variable, derived from a four-step graded response to the employee questionnaire item "I can determine my volume of work myself," and an "amount of discretion regarding work procedures" variable, derived from a four-step graded

response to the item "I am free to determine how I carry out work duties," were used. Also, in addition to the "dummy for fluctuations of double or more in work volume for a single day" and "dummy for fluctuations of double or more in work volume for a single week," which show the extent to which amount of work fluctuates and can be created from the enterprise questionnaire, a "dummy for customers doing business with the company continually for five years or more" was used to assess the rate of customer turnover, so as to account for irregularities.

Next, let us discuss the explanatory variables in the analysis, derived from the enterprise data. Although personal attributes X_i are not monitored here, variables similar to those using in the labor-management matching data analysis were used for workplace attributes J_i, to which were added female employees as a percentage of all regular employees in the workplace and percentage of regular employees under 40 years of age so to take into employee attributes into account.

For M_i, variables were determined in light of the context of "coerced resignation" discussed in the preceding section. With regard to performance-based wage systems, we used a "performance-based evaluation dummy" and a "workplace profit management dummy" assigned a value of 1 when enterprise questionnaire response indicated that amount of profit is used as a key management indicator for the workplace. For a variable pertaining to the importance of human capital, a "dummy for length of time within which employees are expected to become autonomous" is used. In addition, a "degree of long-term development orientation" variable was used, based on a four-step evaluation of whether or not the workplace emphasizes long-term development. For variables related to the intensity of change, such as obsolescence of skills, a "dummy for increased scope, difficulty, or amount of work" was used, with a value of 1 when enterprise questionnaire response indicated that regular employees' work had become more advanced, broader in scope, and greater in volume compared to three years ago, and a "dummy for customers doing business with the company continually for five years or more," indicating that there have not been drastic changes in the business environment. See Appendix Table 1 for basic statistics on the data set.

3. Results of Analysis

The analysis results are shown on Table 1. First, let us examine the results of analysis of "dummy with uncompensated overtime." The bias adjustment term λ result was significant, but Probit model analysis results were nearly the same for both, and there are commonalities in interpretation of the results.

It was predicted that systemic prohibitions on doing overtime would affect the amount of non-voluntary uncompensated overtime, and the result was, as expected, a statistically significant positive correlation between company-wide bans on doing overtime and difficulty in applying for overtime pay. On the other hand, such systems were negatively correlated with incidences of working one hour or more overtime. It appears that such pro-

hibitions on overtime have the effect of reducing overtime itself, but when it does occur, employees are unable to apply for overtime pay, leading to the occurrence of uncompensated overtime. Examining the "dummy with system for surveying overtime hours," we find a negative impact on the occurrence of uncompensated overtime, but on the other hand an increase in generation of overtime exceeding one hour. With regard to occurrences of more than an hour of overtime, it seems unlike that the survey system itself is generating the overtime, and indeed the opposite causality seems likely, but as for the occurrence of uncompensated overtime, it is unnatural to assume a reverse causality in which ease of applying for overtime pay is positively correlated with implementation of a survey system. It is more conceivable that establishment of a survey system that monitors the actual amount of overtime work done results in a reduction in overtime with no application for overtime pay. In addition, the "dummy with compliance training" variable was negatively correlated with uncompensated overtime, and it appears that the stronger a stance toward compliance is adopted, the more workers are able to apply for overtime pay. Examining variables related to job characteristics, we find that the more discretion workers have over their volume of work, the more the amounts of both uncompensated overtime and overtime itself are curtailed, and it is only amount of discretion regarding work procedures that shows a statistically significant positive correlation with occurrence of overtime work. No significant results were obtained for variables related to irregularity and changes in work duties. Turning our attention to the workplace attribute variables, we find that the existence of a labor union is negatively correlated with overtime, including uncompensated overtime, and it appears that the efforts of labor unions help to combat illegal or excessive labor. Another finding is that uncompensated overtime is less common in the financial and information/communications industries and in factories, while it is more common for specialized services such as in the academic research and education, medical and welfare fields. Large corporations and enterprises with high percentages of regular employees were correspondingly less likely to have uncompensated overtime occur.

Next, when we examine the impact of job characteristics thought to lead to non-voluntary failure or inability to take paid leave, we find a statistically significant positive correlation with "fluctuations of double or more in work volume for a single week." This is no doubt because paid leave is often taken in single-day units, meaning that irregularity on a weekly basis has a stronger impact than fluctuation in volume of work within a single day. Also, it was found that failure or inability to take paid leave is curtailed by the "dummy with system for surveying overtime hours." This would seem to reflect the workplace's efforts toward effective labor management. In terms of workplace attributes, failure or inability to take paid leave is negatively correlated with large enterprises, the information and communications industries, and factory work, and positively correlated with directly serving customers as in the wholesale and retail industries, sales offices, and storefronts, evidently reflecting irregularity of work, which could not be effectively controlled for among job characteristics variables in the analysis. Here, as well, higher percentage of

Table 1. Results of Analysis of Factors Contributing to Uncompensated Overtime,

Explained variables	Dummy with uncompensated overtime		Dummy with uncompensated overtime (second stage)	
Sample	Labor-management matching data		Labor-management matching data	
Model	Probit		Heckman	
Explanatory variables	Marginal effect	Marginal effect	Coef.	Coef.
Individual attributes				
Subject's annual income (unit: ¥1 million)	-0.003	-0.003	-	-
	[0.017]	[0.017]	-	-
Male dummy	0.045	0.045	0.044	0.045
	[0.046]***	[0.046]***	[0.024]*	[0.023]**
Dummy with university or graduate school degree	0.05	0.051	0.064	0.064
	[0.043]***	[0.043]***	[0.016]***	[0.016]***
Dummy for prioritization of leisure-time activities	-0.027	-0.027	-	-
	[0.067]	[0.067]	-	-
Enterprise attributes				
Dummy with in-house labor unions	-0.025	-0.025	-0.027	-0.026
	[0.047]**	[0.048]**	[0.015]*	[0.015]*
Dummy for regular employees as a percentage of all employees	-0.069	-0.068	-0.076	-0.077
	[0.086]***	[0.086]***	[0.030]**	[0.029]***
Sales office, storefront, or other customer service provider dummy (compared with offices and research facilities)	0.009	0.008	0.005	0.006
	[0.066]	[0.067]	[0.023]	[0.023]
Factory dummy (compared with offices and research facilities)	-0.096	-0.096	-0.112	-0.112
	[0.088]***	[0.089]***	[0.028]***	[0.028]***
Scale of enterprise (Reference group: 300−499 employees)				
Fewer than 100 employees	0.014	0.014	0.037	0.038
	[0.073]	[0.073]	[0.025]	[0.025]
100−299 employees	-0.01	-0.01	0.005	0.005
	[0.064]	[0.064]	[0.022]	[0.022]
500−999 employees	-0.046	-0.045	-0.044	-0.045
	[0.079]**	[0.079]**	[0.027]*	[0.027]*
1,000 or more employees	-0.053	-0.051	-0.048	-0.05
	[0.081]***	[0.082]***	[0.026]*	[0.026]*

Failure or Inability to Take Paid Leave, and Coerced Resignation

Dummy with 1 hour or more of overtime (first stage)		Dummy with failure or inability to take paid leave		Dummy with encouragement to resign, dismissal, or reassignment of poorly performing employees		Dummy with encouragement to resign not accompanied by personnel reductions	
Labor-management matching data		Labor-management matching data		Enterprise data		Enterprise data	
Heckman		Probit		Probit		Probit	
Coef.	Coef.	Marginal effect	Marginal effect	Marginal effect	Marginal effect	Marginal effect	Marginal effect
0.15	0.15	-0.001	0	-	-	-	-
[0.018]***	[0.018]***	[0.021]	[0.021]	-	-	-	-
0.487	0.485	0.067	0.066	-	-	-	-
[0.042]***	[0.042]***	[0.057]***	[0.057]***	-	-	-	-
0.181	0.182	0.017	0.019	-	-	-	-
[0.042]***	[0.042]***	[0.051]**	[0.051]**	-	-	-	-
-0.143	-0.143	-0.035	-0.035	-	-	-	-
[0.059]**	[0.059]**	[0.088]***	[0.088]***	-	-	-	-
-0.102	-0.108	0.003	0.007	-0.055	-0.064	-0.044	-0.045
[0.046]**	[0.046]**	[0.054]	[0.055]	[0.123]	[0.124]	[0.191]***	[0.188]***
-0.28	-0.279	-0.039	-0.038	-0.13	-0.128	0.005	0.005
[0.086]***	[0.086]***	[0.100]**	[0.100]**	[0.291]	[0.290]	[0.330]	[0.332]
-0.164	-0.171	0.03	0.026	0.033	0.04	-0.038	-0.035
[0.066]**	[0.066]***	[0.080]**	[0.080]**	[0.192]	[0.196]	[0.250]*	[0.255]
0.147	0.148	-0.033	-0.027	-0.024	-0.029	0.04	0.035
[0.085]*	[0.085]*	[0.102]**	[0.103]*	[0.236]	[0.239]	[0.355]	[0.351]
-0.077	-0.066	0.014	0.013	-0.031	-0.026	0.034	0.033
[0.073]	[0.073]	[0.086]	[0.087]	[0.171]	[0.169]	[0.292]	[0.298]
-0.084	-0.076	-0.008	-0.007	0.052	0.059	0.067	0.067
[0.064]	[0.064]	[0.076]	[0.076]	[0.156]	[0.154]	[0.274]**	[0.282]**
-0.204	-0.201	-0.025	-0.025	0.1	0.094	0.049	0.041
[0.076]***	[0.076]***	[0.096]*	[0.096]*	[0.211]	[0.209]	[0.393]	[0.398]
0.038	0.049	-0.031	-0.03	0.021	0.003	0.141	0.126
[0.081]	[0.080]	[0.096]**	[0.097]**	[0.236]	[0.235]	[0.361]***	[0.360]***

Table 1

Explained variables	Dummy with uncompensated overtime		Dummy with uncompensated overtime (second stage)	
Sample	Labor-management matching data		Labor-management matching data	
Model	Probit		Heckman	
Explanatory variables	Marginal effect	Marginal effect	Coef.	Coef.
Industry (Reference groups: Construction, manufacturing, other)				
Wholesale and retail trade	0.036	0.037	0.027	0.027
	[0.075]*	[0.075]*	[0.026]	[0.026]
Finance, insurance, real estate	-0.082	-0.081	-0.091	-0.096
	[0.122]***	[0.123]***	[0.034]***	[0.034]***
Dining and drinking, accommodations, amusement and living-related services	0.013	0.012	0.032	0.032
	[0.116]	[0.116]	[0.041]	[0.041]
Scientific research, professional and technical services, education, health care and welfare	0.057	0.058	0.088	0.088
	[0.081]**	[0.082]***	[0.027]***	[0.027]***
Compound services, human resources, and services (not elsewhere classified)	-0.005	-0.005	-0.011	-0.01
	[0.069]	[0.070]	[0.022]	[0.022]
Information and communications	-0.113	-0.112	-0.15	-0.151
	[0.173]***	[0.174]***	[0.046]***	[0.046]***
Wage system and overtime system				
Performance-based wages dummy	0.028	0.028	0.036	0.036
	[0.052]**	[0.052]**	[0.017]**	[0.017]**
Profit target dummy	0.029	0.028	0.028	0.029
	[0.045]**	[0.045]**	[0.016]*	[0.015]*
Dummy with prohibition on doing overtime	0.068	0.068	0.133	0.132
	[0.093]**	[0.093]***	[0.042]***	[0.041]***
Dummy with system for surveying overtime hours	-0.047	-0.046	-0.069	-0.069
	[0.042]***	[0.043]***	[0.015]***	[0.015]***
Dummy with compliance training program	-0.051	-0.05	-0.06	-0.061
	[0.049]***	[0.049]***	[0.015]***	[0.015]***
Importance of human capital				
Dummy for length of time within which employees are expected to become autonomous (compared to “6 years or more”):				
Approx. 1 year	-	0.001	-0.005	-
	-	[0.092]	[0.030]	-
Approx. 2–3 years	-	-0.004	-0.005	-
	-	[0.080]	[0.026]	-
Approx. 4–5 years	-	0.007	0.009	-
	-	[0.084]	[0.027]	-
Degree of long-term development orientation	-	-0.004	-0.007	-
	-	[0.025]	[0.009]	-

(*Continued*)

Dummy with 1 hour or more of overtime (first stage)		Dummy with failure or inability to take paid leave		Dummy with encouragement to resign, dismissal, or reassignment of poorly performing employees		Dummy with encouragement to resign not accompanied by personnel reductions	
Labor-management matching data		Labor-management matching data		Enterprise data		Enterprise data	
Heckman		Probit		Probit		Probit	
Coef.	Coef.	Marginal effect	Marginal effect	Marginal effect	Marginal effect	Marginal effect	Marginal effect
0.275	0.279	0.038	0.038	0.052	0.047	0.046	0.039
[0.080]***	[0.080]***	[0.088]**	[0.088]**	[0.212]	[0.211]	[0.270]	[0.266]
0.007	0.014	-0.029	-0.027	-0.145	-0.15	0.007	0.003
[0.105]	[0.104]	[0.139]	[0.141]	[0.244]*	[0.246]*	[0.402]	[0.389]
-0.115	-0.107	0.037	0.036	-0.044	-0.033	0.034	0.033
[0.114]	[0.114]	[0.128]	[0.129]	[0.281]	[0.283]	[0.437]	[0.423]
0.121	0.138	-0.003	-0.006	-0.203	-0.193	0.061	0.067
[0.084]	[0.083]*	[0.100]	[0.100]	[0.241]**	[0.238]**	[0.386]	[0.358]
0.214	0.215	0.014	0.012	-0.073	-0.073	-0.032	-0.032
[0.068]***	[0.068]***	[0.079]	[0.080]	[0.194]	[0.194]	[0.239]**	[0.240]**
0.146	0.163	-0.06	-0.06	-0.104	-0.089	0.007	0.013
[0.145]	[0.144]	[0.233]**	[0.232]**	[0.339]	[0.329]	[0.437]	[0.438]
-0.073	-0.074	0.013	0.013	0.043	0.044	0.005	0.005
[0.050]	[0.050]	[0.060]	[0.061]	[0.144]	[0.145]	[0.175]	[0.176]
0.219	0.218	0.024	0.025	-	-	-	-
[0.044]***	[0.044]***	[0.052]***	[0.052]***	-	-	-	-
-0.474	-0.467	-	0.01	-	-0.073	-	-0.022
[0.086]***	[0.086]***	-	[0.117]	-	[0.231]	-	[0.385]
0.195	0.195	-	-0.033	-	0.094	-	0.029
[0.041]***	[0.041]***	-	[0.051]***	-	[0.126]**	-	[0.143]**
-0.012	-0.013	-0.012	-0.01	-	-	-	-
[0.047]	[0.046]	[0.056]	[0.057]	-	-	-	-
-0.063	-	-	0.009	0.164	0.159	0.033	0.032
[0.088]	-	-	[0.110]	[0.255]*	[0.256]	[0.340]	[0.341]
0.012	-	-	0.006	0.203	0.201	0.073	0.07
[0.078]	-	-	[0.095]	[0.232]**	[0.230]**	[0.325]**	[0.325]**
-0.107	-	-	-0.006	0.189	0.185	0.039	0.036
[0.081]	-	-	[0.100]	[0.248]**	[0.249]*	[0.312]	[0.314]
0.068	0.069	-	0.001	-0.02	-0.024	0.007	0.005
[0.025]***	[0.024]***	-	[0.030]	[0.069]	[0.069]	[0.083]	[0.084]

Table 1

Explained variables	Dummy with uncompensated overtime		Dummy with uncompensated overtime (second stage)	
Sample	Labor-management matching data		Labor-management matching data	
Model	Probit		Heckman	
Explanatory variables	Marginal effect	Marginal effect	Coef.	Coef.
Job characteristics				
Increased scope, difficulty, or amount of work	-0.002 [0.047]	-0.002 [0.047]	-0.008 [0.015]	-0.008 [0.015]
Dummy for customers doing business with the company continually for five years or more	0.001 [0.055]	0.001 [0.055]	-0.003 [0.018]	-0.002 [0.018]
Dummy for fluctuations of double or more in work volume for a single day	0.003 [0.059]	0.003 [0.059]	-0.009 [0.020]	-0.01 [0.020]
Dummy for fluctuations of double or more in work volume for a single week	0.005 [0.061]	0.006 [0.062]	0.019 [0.020]	0.017 [0.020]
Amount of discretion regarding volume of work	-0.017 [0.028]**	-0.017 [0.028]**	-0.018 [0.010]*	-0.018 [0.010]*
Amount of discretion regarding work procedures	0.007 [0.033]	0.008 [0.033]	0.018 [0.011]	0.018 [0.011]
Workplace attributes				
Profit amounts are managed on a workplace basis (dummy)	- -	- -	- -	- -
Less than 20% of regular employees are under 40 years of age (compared with 60% or more)	- -	- -	- -	- -
Between 20% and 59% of regular employees are under 40 years of age (compared with 60% or more)	- -	- -	- -	- -
Constant term	- [1.304]	- [1.315]	0.846 [0.419]**	0.792 [0.414]*
Sample size	5632	5632	4207	4207
λ	- -	- -	- -	- -

Notes: 1. Figures in brackets indicate the standard error.
2. Explanatory variables include age, years of continuous service dummy, dummy for employees and female employees as a percentage of all regular employees.
3. *** indicates significance at the 1% level, ** at the 5% level, and * at the 10% level.

(*Continued*)

Dummy with 1 hour or more of overtime (first stage)		Dummy with failure or inability to take paid leave		Dummy with encouragement to resign, dismissal, or reassignment of poorly performing employees		Dummy with encouragement to resign not accompanied by personnel reductions	
Labor-management matching data		Labor-management matching data		Enterprise data		Enterprise data	
Heckman		Probit		Probit		Probit	
Coef.	Coef.	Marginal effect	Marginal effect	Marginal effect	Marginal effect	Marginal effect	Marginal effect
0.014	0.013	0	-0.001	0.102	0.107	0.032	0.035
[0.045]	[0.045]	[0.055]	[0.055]	[0.148]*	[0.147]*	[0.189]*	[0.183]*
-0.027	-0.018	0.004	0.004	0.087	0.087	0.021	0.02
[0.054]	[0.054]	[0.064]	[0.065]	[0.163]	[0.164]	[0.202]	[0.203]
0.017	0.015	0.001	0	-	-	-	-
[0.059]	[0.058]	[0.070]	[0.070]	-	-	-	-
-0.025	-0.015	0.063	0.061	-	-	-	-
[0.061]	[0.061]	[0.067]***	[0.067]***	-	-	-	-
-0.119	-0.119	-0.007	-0.007	-	-	-	-
[0.028]***	[0.028]***	[0.034]	[0.034]	-	-	-	-
0.067	0.069	0.004	0.004	-	-	-	-
[0.032]**	[0.032]**	[0.039]	[0.039]	-	-	-	-
-	-	-	-	-0.01	-0.014	-0.019	-0.019
-	-	-	-	[0.125]	[0.126]	[0.172]	[0.169]
-	-	-	-	0.107	0.108	0.259	0.25
-	-	-	-	[0.280]	[0.274]	[0.327]***	[0.328]***
-	-	-	-	-0.007	-0.006	0.034	0.033
-	-	-	-	[0.138]	[0.139]	[0.202]**	[0.207]**
-0.957	-0.802	-	-			-	-
[1.346]	[1.344]	[1.536]	[1.563]	[3.012]	[3.031]	[3.488]	[3.504]
5632	5632	5632	5632	1721	1721	1721	1721
0.146	0.15	-	-	-	-	-	-
[0.074]**	[0.071]**	-	-	-	-	-	-

whose self-evaluations place them in the top 20%, married dummy, year of establishment,

regular employees was negatively correlated to a statistically significant degree. It appears that the more non-regular employees and fewer regular employees there are, the more difficulty regular employees have in taking paid leave.

Finally, let us turn our attention to the analysis of coerced resignation. Here we will look at results common to explained variables fitting two patterns. With regard to wage system, an increase in coerced resignation was not seen even when performance-based evaluations were carried out or profits are managed on a workplace basis. However, examination of variables pertaining to importance of human capital reveals a statistically significant positive correlation with the dummy for "length of time within which employees are expected to become autonomous: two or three years," suggesting that when development of human capital is completed in only two or three years, it has a tendency to lead to coerced resignation. However, for the even shorter dummy for "employees expected to become autonomous in around one year," a clear impact could not be seen. This suggests that there are few incentives for employees to remain at companies that devote practically no effort to development of human capital, and many employees resign of their own accord (rather than being coerced.) Also, expansion of the scope of work duties, rising degree of difficulty, and increasing amount of work are correlated with coerced resignation, indicating the significant impact of change in work contents.

Next, we will analyze the impact on performance of each of the issues, using the Propensity Score Matching method, based on the results of analysis with Formula (1). To explain this analysis in simple terms, it is a comparison of changes in workplace business performance between workplaces where the issues (uncompensated overtime, failure or inability to take paid leave, and coerced resignation) occur and workplaces where they do not, using specimens with similar theoretical probability of the issues occurring obtained from analysis using Formula (1). Then, the question of whether illegal labor practices exert a positive impact on business performance is examined, along with the question of whether the work environment promotes illegal labor practices.

The specific analysis procedure used is ATT (Average treatment effect on the treated), in which workplaces, with similar values for theoretical probability of problems' occurring, are compared to see differences in business performance between workplaces where the problems occurred (1) and those where they did not (0). ATT is defined according to Formula (2) below.[5]

$$\begin{aligned} ATT &= E(Y_1 - Y_0 \mid D=1) \\ &= E\mid_{p(\cdot)\mid D=1} \{E(Y_1 \mid D=1, P(X,J,M)) - E(Y_0 \mid D=1, P(X,J,M))\} \\ &= E\mid_{P(\cdot)\mid D=1} \{E(Y_1 \mid D=1, P(X,J,M)) - E(Y_0 \mid D=0, P(X,J,M))\} \end{aligned} \tag{2}$$

[5] Explanatory variables used when estimating the Propensity Score are placed in a model that includes many of the explanatory variables in Table 1 that are subject to analysis. None of the targets of analysis were rejected due to testing based on balancing properties as per Dehejia and Wahba (1999, 2002).

In Formula (2), *Y* is the index of performance change for each individual workplace. In this article, responses to the enterprise questionnaire that show the workplace's difference in ordinary profit and sales amounts between three years ago and today are used, and in one analysis an "improved performance dummy" assigned a value of 1 when these figures increased is employed, while in another analysis degree of change in performance was expressed as increase = 1, unchanged = 0, and decrease = -1, with both analyses applied to ordinary profit and sales. *D* are the dummy variables for occurrence of each of the problems in workplaces, used in the Formula (1) analysis employing explained variables. *P (X, J, M)* is the theoretical probability value of problems' occurrence obtained from the Formula (1) analysis results, for which the consistent estimator of ATT was obtained by matching similar specimens.[6]

The analysis results are shown on Table 2. First, examining uncompensated overtime, we find a clear and statistically significant positive correlation, with workplaces where uncompensated overtime occurs tending to show improvement in ordinary profits. With regard to sales, however, no impact could be recognized. From these results, we can infer that uncompensated overtime contributes to cost cutting by reducing the amount of compensation paid, implying that the uncompensated overtime is not done voluntarily in expectation of compensation, but rather is non-voluntary.

As for failure or inability to take paid leave, there is a particularly clear positive impact on sales. Also, in some but not all cases, there was a statistically significant positive effect on ordinary profit. The implication is that when workers take paid leave, economically productive activities are curtailed, meaning that fewer days of leave taken lead to increased sales. However, no clear correlation could be found in terms of profits, and the results did not indicate that failure or inability to take paid leave has a positive impact on companies' business performance.

Finally, vis-à-vis coerced resignation, consistent results were not found for the two indicators, and in terms of ordinary profits, a statistically significant positive correlation could only be found with "dummy for encouragement to resign, dismissal, or reassignment of poorly performing employees." This dummy is based on a strongly worded question, regarding employees who received the lowest possible evaluations for three consecutive years, and even if encouragement to resign is occurring in these cases, it cannot be directly viewed as problematic.

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[6] The consistent estimator is shown as $ATT = \frac{1}{n_1}\sum_{i=1\{D_i=1\}}^{n_1}\left[Y_{1i} - \sum_{j=1\{D_i=0\}}^{n_0} W(i,j)Y_{oj}\right]$, where n_1 is the sample size where D = 1, and n_0 is the sample size where D = 0. $W(i,j)$ represents the weighting toward subjects where D = 0 based on the Propensity Score, and is equivalent to $\sum_j W(i,j) = 1$. It should be noted that the two weighting methods used, Nearest Neighbor Matching and Kernel Matching, are those that have commonly been used in previous studies.

Table 2. Results of Analysis of Impact on Business Performance of Uncompensated Overtime, Failure or Inability to Take Paid Leave, and Coerced Resignation

	D: Dummy with uncompensated overtime							
	Nearest Neighbor Matching				Kernel Matching			
	N (Treatment)	N (Control)	ATT	Standard error	N (Treatment)	N (Control)	ATT	Standard error
Y: Change in ordinary profit of workplace (1: Increase, 0: No change, -1: Decrease)	1082	662	0.135	[0.058]**	1082	4521	0.084	[0.030]***
Y: Dummy for ordinary profit increase at workplace	1082	855	0.066	[0.024]***	1082	4521	0.039	[0.013]***
Y: Change in sales of workplace (1: Increase, 0: No change, -1: Decrease)	1082	665	0.091	[0.068]	1082	4521	0.041	[0.037]
Y: Dummy for sales increase at workplace	1082	855	0.048	[0.054]	1082	4521	0.023	[0.019]

	D: Dummy with failure or inability to take paid leave							
	Nearest Neighbor Matching				Kernel Matching			
	N (Treatment)	N (Control)	ATT	Standard error	N (Treatment)	N (Control)	ATT	Standard error
Y: Change in ordinary profit of workplace (1: Increase, 0: No change, -1: Decrease)	579	404	0.021	[0.070]	579	4976	0.046	[0.033]
Y: Dummy for ordinary profit increase at workplace	579	502	0.038	[0.022]*	579	4976	0.038	[0.023]*
Y: Change in sales of workplace (1: Increase, 0: No change, -1: Decrease)	579	407	0.134	[0.036]***	579	4976	0.130	[0.030]***
Y: Dummy for sales increase at workplace	579	502	0.093	[0.019]***	579	4976	0.079	[0.017]***

	D: Dummy with encouragement to resign, dismissal, or reassignment of poorly performing employees							
	Nearest Neighbor Matching				Kernel Matching			
	N (Treatment)	N (Control)	ATT	Standard error	N (Treatment)	N (Control)	ATT	Standard error
Y: Change in ordinary profit of workplace (1: Increase, 0: No change, -1: Decrease)	638	345	0.124	[0.013]***	638	1100	0.094	[0.045]**
Y: Dummy for ordinary profit increase at workplace	638	433	0.071	[0.01]***	638	1100	0.067	[0.024]***
Y: Change in sales of workplace (1: Increase, 0: No change, -1: Decrease)	638	347	0.124	[0.143]	638	1100	0.136	[0.060]**
Y: Dummy for sales increase at workplace	638	433	0.075	[0.050]	638	1100	0.087	[0.021]***

	D: Dummy with encouragement to resign not accompanied by personnel reductions							
	Nearest Neighbor Matching				Kernel Matching			
	N (Treatment)	N (Control)	ATT	Standard error	N (Treatment)	N (Control)	ATT	Standard error
Y: Change in ordinary profit of workplace (1: Increase, 0: No change, -1: Decrease)	80	60	0.065	[0.126]	80	1537	0.074	[0.103]
Y: Dummy for ordinary profit increase at workplace	80	76	0.013	[0.117]	80	1537	0.042	[0.064]
Y: Change in sales of workplace (1: Increase, 0: No change, -1: Decrease)	80	60	0.281	[0.203]	80	1537	0.184	[0.142]
Y: Dummy for sales increase at workplace	80	76	0.125	[0.173]	80	1537	0.073	[0.072]

Notes: 1. Figures in brackets indicate the standard error.
2. Kernel Matching bandwidth is 0.05.
3. *** indicates significance at the 1% level, ** at the 5% level, and * at the 10% level.

IV. Interpretations of Employees' Subjective Perceptions of "Black Companies"

This section addresses the second analysis, i.e., employees' subjective perceptions of their employers as "black companies." Here, in addition to the uncompensated overtime, failure or inability to take paid leave, and coerced resignation discussed in the preceding section, we will examine whether characteristics of "black companies" cited by Konno (2013), Kanisawa (2010), and Ouchi (2014), such as harassment and unreasonable quotas, are linked to subjective perceptions of "blackness."

This article considers employees' perceptions of "blackness" to be a subjective variable. There is a wealth of existing quantitative analysis dealing with subjective variables like those examined in this article, including Ota (2013), Sannabe and Saito (2008), Shimanuki (2007), and Shinozaki et al. (2003). In all of these studies, the subjective variables subject to analysis are believed to be assessed by employees through comparison of their companies with others having similar attributes. With this in mind, this article follows previous studies in assuming that employees' subjective perceptions of whether or not they work for a "black company" are formed through comparison with other workplaces.

Also, as reflected in the phrase "self-sacrifice without reward" in Hamaguchi (2013),[7] even when assuming that employees in two different workplaces face similar degrees of adversity, and the workers' subjective perceptions are formed in similar ways, assessments of their workplaces as "black" differ depending on whether or not they consider their efforts rewarded in some manner. For example, the same person forced to do uncompensated overtime may not perceive the employer as "black" if this effort is rewarded in some way other than overtime pay, such as long-term training, a raise in basic wages, or job security, whereas the company will be seen as "black" if these rewards are scarce or nonexistent. The theory of compensatory wages (i.e. that wages compensate for working time overall, even when some specific work performed is uncompensated) holds that if wages are high enough, workers will act with the same utility even when their jobs entail risks. With this in mind, it is necessary to take differentials in wages as a whole, as well as non-monetary compensation, into account when analyzing the problems affecting workplaces.

[7] According to Hamaguchi (2013), in the past many Japanese companies were what would today be considered "black companies" purely in terms of working styles, but employees reaped benefits in terms of long-term job security and seniority-based pay increases. Today's "black companies" tend to saddle employees with the same burden as the traditional companies but without rewards such as long-term job security and seniority-based raises, which Hamaguchi characterizes as "self-sacrifice without reward."

V. Analysis of Subjective Perceptions of "Blackness": Data, Analysis Methods, and Analysis Results

1. Data and Procedures Used for Analysis

Data from the Workers' Tankan 26[8] survey is employed in analysis of workers' subjective perceptions of "blackness." This survey, which directly asked workers whether or not they consider their employers "black companies," was an online survey[9] targeting employees of private-sector enterprises aged 20–64, in the Tokyo and Kansai (Osaka-Kyoto-Kobe) regions, and although allocation was used to avoid the tendency of online surveys to be biased toward younger respondents, Japan Institute for Labour Policy and Training (2005) and Ishida et al. (2009) have noted that subjective responses on online surveys also tend to be more negative, meaning we must take into account the possibility of exaggerated perceptions of "blackness." For consistency with early analyses in this article, non-regular employees and management-level personnel (section manager or above) were omitted from the analysis.

The analysis model is expressed as Formula (3) below. B_i on the far left side of Formula (3) is a subjective variable expressing each subject's response to the question of whether his or her employer is a "black company," assigned the values of 4 (Yes, I think it is), 3 (I agree more than disagree that it is), 2 (I disagree more than agree that it is), and 1 (No, I don't think it is). OLS and order logit analysis[10] were carried out with these as the explained variables.

$$B_i = a + \beta_1 \ln w^a + \beta_2 \ln w^b + \beta_3 A^{a-b} + \beta_4 p^{a-b} + \beta_5 j + \beta_6 i + \varepsilon \qquad (3)$$

W^a the far right-hand side are values for the workers' annual income from working, obtained from the survey. However, these are approximated continuous variables, as the Workers' Tankan 26 features multiple-choice responses placing workers in income brackets, so, for example a worker making "from ¥3 million to ¥39.9 million" is calculated as earning ¥3.5 million, the median for this category. W^b was derived by obtaining employees' "prescribed monthly salary" and "annual bonuses and other compensation" by prefecture, industry, size category of company, age group, and gender from data of the 2012 Basic Survey on Wage Structure, and inserting the numerical value for "prescribed monthly salary × 12 + annual bonuses and other compensation" of the cell that most closely fits the Workers' Tankan 26 survey subject's attributes out of 7,800 possible cells. Thus, it is possible to

[8] Individual sample data for the Workers' Tankan 26 (courtesy of the Research Institute for the Advancement of Living Standards) was supplied by the SSJ Data Archive of the University of Tokyo Center for Social Research and Data Archives.

[9] For sample extraction and allocation methods, refer to the Research Institute for the Advancement of Living Standards (2013, 2).

[10] A separate Probit analysis was also carried out with the dummy for perception of subject's employer as a "black company" assigned as value of "1" when the response to the question is valued 3 or 4.

compare workers' incomes with other people who have similar attributes and work for enterprises with similar attributes.[11] $A^{a\text{-}b}$, $P^{a\text{-}b}$ of the right-hand side are variables relating to non-monetary rewards at each place of employment, and variables representing the severity of workplace issues. Although the Workers' Tankan 26 contains answers to questions relating to the presence or absence of problems such as workplace harassment, and about the presence or absence of opportunities for career advancement, these are subjective responses and are thought to constitute survey respondents' evaluations of the situations at their own workplaces in comparison with those of another comparable workplace *b* that they envisioned. Specifically, as shown in Table 3, for each explanatory variable involved, $A^{a\text{-}b}$, $p^{a\text{-}b}$ was created from the responses to the relevant questions. *j* on the right-hand side represents the enterprise attributes, consisting of enterprise size, industry dummy, and dummy with in-house labor unions within the enterprise. *i* represents individual attributes, dummy with university or graduate school degree, age, male dummy, married dummy, dummy for having a child, years of continuous service, dummy for number of working hours per week last month, and area of residence dummy used, with data controlled for economic circumstances at the time the employee began working by matching with the annual average ratio of job offers to job seekers by prefecture at the time the employee was hired, derived from the general employment placement situation data.

This analysis controls for monetary and non-monetary rewards, so as to elucidate which among the multiple labor problems have a particularly strong impact on subjective perceptions of "blackness." The results should provide insight into which information ought to be provided to workers when they are choosing a place of employment. For example, if workplace harassment has a major impact, we can conclude that word-of-mouth comments on corporate culture from employees, which are made available by some employment placement information services, ought to play an important role. See Appendix Table 2 for basic statistics on the data set.

2. Results of Analysis

The results of analysis using Formula (3) are shown on Table 4.[12] Here, taking into account the possibility that for women, the workplaces with which they are comparing their own workplaces contain many non-regular workers, with a corresponding impact on income, an analysis limited to male subjects was added. In addition, an analysis was added in which variables related to non-monetary rewards and workplace problems are omitted from the

[11] However, as Shinozaki et al. (2003) have pointed out, it is not clear what sort of other workers the workers are comparing themselves to, and there is a problem in that w^b defined in this way includes some degree of observational error. In fact, in the analysis results of Shinozaki et al. (2003), there were multiple cases in which a wage gap that corresponds to the w^a, w^b in this article did not affect the subjective responses.

[12] In the estimate using OLS, the Variance Inflation Factor (VIF) was calculated in order to verify the multicollinearity problem, but in all models there were no more than a few variables with a maximum VIF of around 3.5 at the maximum, and the average VIF was below 2 in all models.

Table 3. Treatment of $A^{a\text{-}b}$, $p^{a\text{-}b}$ Based on Responses to the Workers' Tankan 26

Variable	Question item	Value after treatment	
		1	0
Non-monetary amenities: $A^{a\text{-}b}$			
Opportunities for development of skills or career	I have opportunities or support for development of my professional skills or career	Agree, or agree more than disagree	Response other than those at left
Allocation of responsibility and discretion	I am allocated a certain degree of responsibility and/or discretion	Agree, or agree more than disagree	Response other than those at left
Realization of work-life balance	I am able to achieve an appropriate balance between work and personal life	Agree, or agree more than disagree	Response other than those at left
Status of workplace problems including illegal labor practices: $p^{a\text{-}b}$			
Employer does not pay the designated overtime wages	My employer does not pay some or all of the designated overtime wages	Yes	No
Unable to take paid leave days	I am unable to get paid leave approved even if I submit an application	Yes	No
Sexual harassment or power harassment occurs	Sexual harassment or power harassment occurs in the workplace (employees are sexually harassed or psychologically abused by supervisors, violence takes place in the workplace without consequences)	Yes	No
Unreasonable quotas are assigned	I am assigned quotas that would be impossible to meet through ordinary effort	Yes	No
Employees are encouraged to resign or reassigned so as to encourage resignation	Employees are reassigned, relocated, placed on loan, etc. as punitive measures, or company otherwise seeks to drive workers to voluntary resignation	Yes	No
High rate of employee turnover	Many workers resign within a short period of time	Yes	No

Table 4. Analysis Results for Subjective

Explained variables	Degree of subjective perception			
Model	Order logit			
Sample	Total		Male	
Explanatory variables	Coef.	Coef.	Coef.	Coef.
Subject's annual income (log value)	-0.213	-0.371	-0.249	-0.316
	[0.161]	[0.153]**	[0.211]	[0.197]
Annual income of object of comparison (log value)	0.182	0.278	0.303	0.702
	[0.395]	[0.361]	[0.543]	[0.493]
Number of work hours per week last month (compare with "less than 40 hours")				
40−45 hours dummy	0.287	0.092	0.102	-0.022
	[0.183]	[0.169]	[0.240]	[0.225]
45−50 hours dummy	0.326	0.385	0.044	0.141
	[0.214]	[0.197]*	[0.266]	[0.248]
50 hours or more dummy	0.482	0.978	0.383	0.932
	[0.205]**	[0.187]***	[0.248]	[0.229]***
Male dummy	-0.035	0.13	-	-
	[0.186]	[0.173]	-	-
Age	-0.05	-0.037	-0.046	-0.041
	[0.011]***	[0.009]***	[0.015]***	[0.013]***
Dummy with university or graduate school degree	0.05	0.022	0.271	0.16
	[0.150]	[0.138]	[0.184]	[0.170]
Ratio of job offers to job seekers at time employee was hired	0.091	0.098	0.001	-0.015
	[0.230]	[0.212]	[0.275]	[0.260]
Scale of enterprise (Reference group: Fewer than 100 employees)				
100−999 employees dummy	0.054	0.199	-0.143	0.083
	[0.183]	[0.168]	[0.227]	[0.212]
1,000 or more employees dummy	0.018	0.149	-0.306	-0.086
	[0.234]	[0.216]	[0.300]	[0.278]
Industry (Reference groups: Other)				
Construction, manufacturing dummy	0.32	-0.008	0.097	-0.295
	[0.270]	[0.245]	[0.324]	[0.295]
Wholesale and retail trade dummy	0.273	-0.061	-0.006	-0.36
	[0.315]	[0.293]	[0.384]	[0.362]
Finance, insurance, real estate dummy	0.535	0.055	0.372	-0.185
	[0.355]	[0.327]	[0.461]	[0.433]
Services dummy	0.351	0.106	0.193	-0.231
	[0.290]	[0.265]	[0.351]	[0.324]
Information and communications dummy	0.664	-0.346	0.358	-0.628
	[0.340]*	[0.314]	[0.405]	[0.375]*

Perceptions of "Blackness"

of "black company" (4−1)				Subjective "black" perception dummy			
OLS				Probit			
Total		Male		Total		Male	
Coef.	Coef.	Coef.	Coef.	Marginal effect	Marginal effect	Marginal effect	Marginal effect
-0.1	-0.206	-0.102	-0.167	-0.052	-0.086	-0.073	-0.085
[0.059]*	[0.073]***	[0.080]	[0.094]*	[0.127]*	[0.110]***	[0.167]*	[0.149]**
0.008	0.01	0.021	0.185	0.012	-0.005	0.02	0.057
[0.132]	[0.163]	[0.185]	[0.219]	[0.314]	[0.269]	[0.435]	[0.376]
0.074	0.029	0.028	-0.007	0.047	0.017	0.039	0.008
[0.063]	[0.078]	[0.085]	[0.103]	[0.152]	[0.131]	[0.205]	[0.181]
0.105	0.197	0.006	0.088	0.074	0.109	0.037	0.075
[0.074]	[0.092]**	[0.095]	[0.114]	[0.174]*	[0.148]**	[0.222]	[0.195]
0.155	0.471	0.142	0.457	0.093	0.213	0.102	0.222
[0.074]**	[0.089]***	[0.091]	[0.107]***	[0.165]**	[0.139]***	[0.204]*	[0.177]***
-0.009	0.076	-	-	-0.035	0.003	-	-
[0.066]	[0.082]	-	-	[0.151]	[0.130]	-	-
-0.014	-0.015	-0.014	-0.017	-0.005	-0.004	-0.005	-0.006
[0.003]***	[0.004]***	[0.005]***	[0.006]***	[0.008]***	[0.007]**	[0.012]*	[0.010]**
0.018	-0.011	0.078	0.041	0	-0.015	0.01	-0.007
[0.052]	[0.065]	[0.065]	[0.078]	[0.121]	[0.103]	[0.146]	[0.128]
0.037	0.002	0.015	-0.044	-0.023	-0.039	-0.055	-0.079
[0.081]	[0.101]	[0.101]	[0.121]	[0.193]	[0.170]	[0.237]	[0.219]
0.03	0.1	-0.027	0.047	0.001	0.027	-0.003	0.015
[0.065]	[0.080]	[0.082]	[0.098]	[0.147]	[0.126]	[0.181]	[0.158]
0.033	0.112	-0.078	-0.017	0.059	0.082	0.011	0.026
[0.081]	[0.100]	[0.107]	[0.128]	[0.181]	[0.158]*	[0.237]	[0.211]
0.107	0.004	0.026	-0.123	0.027	-0.002	0.012	-0.031
[0.091]	[0.112]	[0.112]	[0.133]	[0.202]	[0.178]	[0.245]	[0.218]
0.075	0.003	-0.011	-0.122	-0.011	-0.022	-0.024	-0.049
[0.109]	[0.135]	[0.137]	[0.162]	[0.245]	[0.212]	[0.300]	[0.261]
0.179	0.07	0.127	-0.041	0.06	0.034	0.031	-0.024
[0.122]	[0.151]	[0.167]	[0.199]	[0.272]	[0.235]	[0.371]	[0.327]
0.139	0.068	0.057	-0.107	0.049	0.035	0.016	-0.029
[0.099]	[0.122]	[0.123]	[0.146]	[0.218]	[0.191]	[0.265]	[0.235]
0.198	-0.193	0.089	-0.314	0.018	-0.106	-0.005	-0.117
[0.120]*	[0.148]	[0.146]	[0.172]*	[0.285]	[0.249]*	[0.335]	[0.294]*

Table 4

Explained variables	Degree of subjective perception			
Model	Order logit			
Sample	Total		Male	
Explanatory variables	Coef.	Coef.	Coef.	Coef.
Dummy with in-house labor unions	-0.261 [0.173]	-0.519 [0.160]***	-0.272 [0.212]	-0.631 [0.196]***
Non-monetary amenities				
Dummy for opportunities for development of skills or career	-0.075 [0.173]	- -	-0.056 [0.219]	- -
Dummy for allocation of responsibility and discretion	-0.033 [0.149]	- -	-0.037 [0.186]	- -
Dummy for realization of work-life balance	-0.673 [0.153]***	- -	-0.627 [0.190]***	- -
Status of workplace problems including illegal labor practices				
Employer does not pay the designated overtime wages (dummy)	0.67 [0.165]***	- -	0.652 [0.203]***	- -
Unable to take paid leave days (dummy)	0.877 [0.193]***	- -	0.763 [0.242]***	- -
Sexual harassment or power harassment occurs (dummy)	0.373 [0.186]**	- -	0.339 [0.228]	- -
Unreasonable quotas are assigned (dummy)	0.339 [0.208]	- -	0.5 [0.249]**	- -
Employees are encouraged to resign or reassigned so as to encourage resignation (dummy)	1.318 [0.201]***	- -	1.176 [0.250]***	- -
High rate of employee turnover (dummy)	0.924 [0.167]***	- -	0.712 [0.209]***	- -
Cut point 1	-1.334 [5.775]	-2.554 [5.273]	-0.402 [7.811]	3.844 [7.116]
Cut point 2	0.466 [5.776]	-1.261 [5.272]	1.456 [7.811]	5.241 [7.117]
Cut point 3	2.366 [5.776]	0.125 [5.272]	3.299 [7.812]	6.642 [7.118]
Constant term	- -	- -	- -	- -
Sample size	961	961	637	637
Quasi-coefficient of determination	0.212	0.044	0.197	0.051
Coefficient of determination adjusted for degree of freedom	-	-	-	-

Notes: 1. Figures in brackets indicate the standard error.
2. Explanatory variables include male dummy, continuous years of service, married dummy, at time employee was hired.
3. *** indicates significance at the 1% level, ** at the 5% level, and * at the 10% level.

(*Continued*)

of "black company" (4−1)				Subjective "black" perception dummy			
OLS				Probit			
Total		Male		Total		Male	
Coef.	Coef.	Coef.	Coef.	Marginal effect	Marginal effect	Marginal effect	Marginal effect
-0.09	-0.235	-0.103	-0.275	-0.059	-0.1	-0.071	-0.114
[0.061]	[0.076]***	[0.076]	[0.090]***	[0.143]*	[0.122]***	[0.175]*	[0.152]***
-0.044	-	-0.042	-	-0.024	-	-0.02	-
[0.059]	-	[0.076]	-	[0.137]	-	[0.175]	-
0.001	-	0.003	-	0.009	-	0.035	-
[0.052]	-	[0.067]	-	[0.118]	-	[0.148]	-
-0.186	-	-0.172	-	-0.044	-	-0.052	-
[0.053]***	-	[0.067]**	-	[0.124]	-	[0.155]	-
0.277	-	0.279	-	0.081	-	0.079	-
[0.062]***	-	[0.078]***	-	[0.124]**	-	[0.152]**	-
0.39	-	0.331	-	0.148	-	0.148	-
[0.073]***	-	[0.093]***	-	[0.138]***	-	[0.173]***	-
0.162	-	0.147	-	0.113	-	0.089	-
[0.068]**	-	[0.087]*	-	[0.136]***	-	[0.172]**	-
0.185	-	0.237	-	0.096	-	0.131	-
[0.078]**	-	[0.094]**	-	[0.154]**	-	[0.183]***	-
0.498	-	0.446	-	0.128	-	0.084	-
[0.075]***	-	[0.096]***	-	[0.145]***	-	[0.186]*	-
0.39	-	0.309	-	0.171	-	0.119	-
[0.062]***	-	[0.080]***	-	[0.122]***	-	[0.154]***	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
3.254	5.202	3.23	2.38	-	-	-	-
[1.943]*	[2.397]**	[2.694]	[3.211]	-	-	-	-
961	961	637	637	961	961	637	637
-	-	-	-	0.321	0.078	0.307	0.102
0.407	0.078	0.373	0.089	-	-	-	-

dummy with children, place of residence dummy, and ratio of job offers to job seekers

explanatory variables, and only the easily and externally verifiable explanatory variables such as labor conditions and indicators such as industry and enterprise size were used.

On Table 4, turning our attention first to labor-derived income, we find that the respondent's own labor-derived income generally has a significant negative impact. In particular, when variables such as labor issues are omitted from the explanatory variables, it is clear that the higher the income, the lower the likelihood of subjective perceptions of "blackness." We may infer that among the rewards cited by Hamaguchi (2013), monetary rewards are highly important. On the other hand, the annual income at workplaces with which subjects compared their own workplaces did not show a statistically significant result. As Shinozaki et al. (2003) have indicated, there is a possibility of wide margin of observational error for such variables. As for working hours, a significant positive result emerged from the "50 hours or more" dummy. While the results may be seen as not significant when men only are treated, as a general rule longer working hours are positively correlated with subjective "black" perceptions. Examining the variable related to non-monetary rewards, in the analysis using perceived "blackness" as the explained variables, the "dummy for successful work-life balance" shows a significant negative correlation. However, significant impact was not found for variables such as professional development and allocation of responsibility and discretion. It can be inferred that the more workplaces are designed to facilitate work-life balance, the more the perception of "blackness" is diminished.

Next, let us examine the analysis results for variables related to workplace problems such as uncompensated overtime. Each of these problems generally shows a statistically significant positive result, i.e. the more these problems are present, the greater the subjective perceptions of "blackness." In particular, the variables pertaining to uncompensated overtime, failure or inability to take paid leave, and coerced resignation, as well as "high rate of employee turnover," showed a clear impact across all analysis results. We may conclude that these problems are especially strongly linked to workers' subjective perceptions of "blackness," and thus that information on whether or not these issues exist, and if so to what degree, should be disclosed to job seekers regarding potential places of employment.

Finally, when we examine the individual attribute and enterprise attribute variables, it is evident that age has a statistically significant negative correlation across all analyses, i.e. the younger workers are, the more likely they are to perceive workplaces as "black."[13] Meanwhile, with regard to the dummy with in-house labor union, when using a model that does not include workplace problem variables or non-monetary compensation variables,

[13] Konno (2013) states that what differentiates contemporary "black companies" from traditional companies where illegal labor practices existed is that young workers, who at conventional companies would be cultivated for the future, are instead "used up and discarded." The Research Institute for the Advancement of Living Standards (2013) notes that the younger workers are, the less likely they are to seek help outside the company regarding labor law violations, and it is possible that workplaces with many young employees are have a low risk of legal consequences and little motivation to address illegal labor practices.

there is a consistent result of statistically significant negative impact. However, the impact of labor unions disappears when the above-mentioned variables are included in the explanatory variables, suggesting that companies with in-house labor unions are more likely to have improved with regard to workplace problems and non-monetary compensation. No clear impact was visible with regard to the industry and enterprise size dummy variables. This is true also if subjective responses are omitted from the explanatory variables, indicating that it is difficult to judge whether a workplace is likely to be perceived as "black" from industry and enterprise size alone.

VI. Summary

The analyses in this article found that workers tend not to apply for overtime pay, even when overtime work is performed, when performance-based evaluations and profit targets are in place, as well as when there is a company-wide prohibition on overtime. On the other hand, the problem was less likely to occur when compliance training was carried out, and when there was a company-wide system of overtime surveys in place. With respect to performance-based evaluations and profit targets, in some cases workers may do uncompensated overtime voluntarily with the expectation of receiving high remuneration for results achieved, but this study found the effects of overtime survey systems and compliance training on occurrence of uncompensated overtime were significant, implying that the problem largely arises due to management's lax stance toward compliance. It was also found that although the practice of uncompensated overtime has no apparent effect on business establishments' sales figures, it does have the effect of boosting ordinary income. This suggests that the cost reduction benefits of not paying wages outweigh the potential punitive costs of not following labor rules,[14] and if the situation does not improve, there is a risk of economic "natural selection" weeding out the rule-abiding businesses in favor of the non-abiding ones. Uncompensated overtime was found to be a major factor in employees' subjective perceptions of their employers as "black companies," suggesting that much uncompensated overtime should be considered non-voluntary.

Causes of failure or inability to take paid leave were found to include being assigned profit targets, and irregularity in workload on a week-to-week basis. Meanwhile, factors contributing to coerced resignation were found to include job attributes such as lack of major emphasis on human capital accumulation, even though it may be considered important to some extent, and significant fluctuations in volume or difficulty of work. Neither issue

[14] The Ministry of Health, Labour and Welfare "Results of Correction of Uncompensated Overtime Through Supervision and Guidance" (FY2012) lists enterprises that paid 1 million yen or more to compensate for unpaid wages at higher overtime rates. The figures show that the maximum amount paid by a single company was 540.8 million and the average amount 8.19 million, and one may assume that these amounts would have gone directly into the companies ordinary income if government guidance had not taken place.

seems to be clearly correlated with improved profitability of workplaces, thus this cannot be considered an incentive for non-compliance with labor regulations in this regard. However, no negative impact on profit was evident either. This indicates that there is a need for measures to induce voluntary compliance with rules governing both paid leave and resignation. It should also be noted that failure or inability to take paid leave, and coerced resignation, both clearly heightened employees' perceptions of "blackness."

This study found that in addition to the above three issues, workers' subjective perceptions of "blackness" are shaped by such factors as high rate of employee turnover, excessively long working hours, workplace harassment, and unreasonable quotas. As described in Ouchi (2014), disclosure to job seekers of as much information as possible about prospective employers, to aid in the process of selecting an employer, is an important social mechanism to address the problem of "black companies." It is vital that information about companies, enabling the labor force to gauge the extent of problems such as those described in this article, be made available in advance. Specifically, this information could include actual, rather than nominal, working hours and salary payments; percentage of paid leave days actually taken; rate of employee turnover and employees' primary reasons for resigning. As this information is organized and made available, business establishments where these problems are severe will have a corresponding degree of difficulty in securing human resources, and compliance with labor rules will be linked to better business performance even in the short term. We can conclude that such information disclosure would be a highly significant step forward.

Appendix Table 1. Basic Statistics for Data Set Used in Analysis of Factors of Contributing to Labor Law Violations

Explanatory variables	Labor-management matching data		Enterprise data	
	Average	Standard deviation	Average	Standard deviation
Explained variables				
Dummy with uncompensated overtime	0.192	0.394	-	-
Dummy with failure or inability to take paid leave	0.103	0.304	-	-
Dummy with encouragement to resign, dismissal, or reassignment of poorly performing employees	-	-	0.365	0.482
Dummy with encouragement to resign not accompanied by personnel reductions	-	-	0.046	0.211
Individual attributes				
Subject's annual income (unit: ¥1 million)	3.535	1.412	-	-
Male dummy	0.633	0.482	-	-
Age	31.528	5.067	-	-
Married dummy	0.541	0.498	-	-
Dummy with university or graduate school degree	0.442	0.497	-	-
Dummy for prioritization of leisure-time activities	0.110	0.313	-	-
Dummy for employees whose self-evaluations place them in the top 20%	0.118	0.322	-	-
Continuous service for 1 or more years, but less than 3 years	0.188	0.390	-	-
Continuous service for 3 or more years, but less than 5 years	0.156	0.363	-	-
Continuous service for 5 years or more	0.657	0.475	-	-
Enterprise attributes				
Dummy with in-house labor unions	0.361	0.480	0.347	0.476
Year of establishment	1955.198	33.236	1956.804	34.157
Dummy for regular employees as a percentage of all employees in the workplace	0.743	0.246	0.674	0.281
Sales office, storefront, or other customer service provider dummy	0.527	0.499	0.528	0.499
Factory	0.244	0.430	0.209	0.406
Other workplace format	0.473	0.499	0.472	0.499
Dummy with compliance training implemented	0.287	0.452	-	-
Scale of enterprise				
Fewer than 100 employees	0.174	0.379	0.202	0.402
100–299 employees	0.428	0.495	0.402	0.490
300–499 employees	0.112	0.315	0.120	0.325
500–999 employees	0.135	0.342	0.125	0.331
1,000 or more employees	0.144	0.351	0.143	0.350

Appendix Table 1 (*Continued*)

Explanatory variables	Labor-management matching data		Enterprise data	
	Average	Standard deviation	Average	Standard deviation
Industry				
Wholesale and retail trade	0.107	0.309	0.125	0.331
Finance, insurance, real estate	0.046	0.209	0.043	0.203
Dining and drinking, accommodations, amusement and living-related services	0.042	0.201	0.067	0.251
Scientific research, professional and technical services, education, health care and welfare	0.231	0.422	0.225	0.418
Compound services, human resources, and services (not elsewhere classified)	0.153	0.360	0.178	0.382
Information and communications	0.022	0.147	0.016	0.127
Construction, manufacturing, other	0.398	0.490	0.346	0.476
Wage system and overtime system				
Performance-based wages dummy	0.193	0.395	0.193	0.395
Profit target dummy	0.297	0.457	-	-
Dummy with prohibition on doing overtime	0.043	0.203	0.044	0.204
Dummy with system for surveying overtime hours	0.414	0.493	0.393	0.489
Importance of human capital				
Length of time within which employees are expected to become autonomous:				
Approx. 1 year	0.174	0.379	0.203	0.403
Approx. 2–3 years	0.487	0.500	0.475	0.500
Approx. 4–5 years	0.262	0.440	0.250	0.433
Approx. 6 years or more	0.064	0.246	0.071	0.257
Degree of long-term development orientation	2.586	0.868	2.504	0.889
Job characteristics				
Increased scope, difficulty, or amount of work	0.254	0.435	0.270	0.444
Dummy for customers doing business with the company continually for five years or more	0.704	0.456	0.693	0.461
Dummy for fluctuations of double or more in work volume for a single day	0.157	0.364	-	-
Dummy for fluctuations of double or more in work volume for a single week	0.138	0.345	-	-
Amount of discretion regarding volume of work	2.552	0.809	-	-
Amount of discretion regarding work procedures	2.919	0.708	-	-
Workplace attributes				
Profit amounts are managed on a workplace basis (dummy)	-	-	0.515	0.500
Female employees as a percentage of all regular employees in the workplace	-	-	0.300	0.253
Less than 20% of regular employees are under 40 years of age (compared with 60% or more)	-	-	0.126	0.332
Between 20% and 59% of regular employees are under 40 years of age (compared with 60% or more)	-	-	0.660	0.474
Sample size	5632		1721	

Appendix Table 2. Basic Statistics for Data Set Used in Analysis of Subjective Perceptions of "Blackness"

	Total		Male	
	Average	Standard deviation	Average	Standard deviation
Degree of subjective perception of "black company"	1.776	0.949	1.782	0.939
Subjective "black" perception dummy	0.222	0.416	0.217	0.412
Subject's annual income (log value)	15.186	0.505	15.306	0.470
Annual income of object of comparison (log value)	15.297	0.317	15.408	0.286
Number of work hours per week last month				
Less than 40 hours	0.272	0.445	0.209	0.407
40−45 hours dummy	0.328	0.470	0.312	0.464
45−50 hours dummy	0.182	0.386	0.206	0.404
50 hours or more dummy	0.219	0.413	0.273	0.446
Individual attributes				
Male dummy	0.663	0.473	1.000	0.000
Age	39.260	10.188	39.843	9.801
Years of continuous service	10.079	8.620	10.881	9.125
Married dummy	0.493	0.500	0.578	0.494
Dummy with children	0.380	0.486	0.436	0.496
Dummy with university or graduate school degree	0.574	0.495	0.620	0.486
Ratio of job offers to job seekers at time employee was hired	0.785	0.330	0.789	0.337
Tokyo dummy	0.285	0.452	0.267	0.443
Kanagawa, Chiba, Saitama dummy	0.374	0.484	0.394	0.489
Scale of enterprise				
Fewer than 100 employees	0.383	0.486	0.336	0.473
100−999 employees dummy	0.305	0.461	0.323	0.468
1,000 or more employees dummy	0.312	0.464	0.341	0.474
Industry				
Construction, manufacturing dummy	0.376	0.485	0.394	0.489
Wholesale and retail trade dummy	0.124	0.330	0.118	0.323
Finance, insurance, real estate dummy	0.079	0.270	0.060	0.237
Services dummy	0.233	0.423	0.204	0.403
Information and communications dummy	0.092	0.289	0.110	0.313
Other indstries dummy	0.097	0.296	0.115	0.319

Appendix Table 2 (*Continued*)

	Total		Male	
	Average	Standard deviation	Average	Standard deviation
Dummy with in-house labor unions	0.386	0.487	0.424	0.495
Non-monetary amenities				
Dummy for opportunities for development of skills or career	0.283	0.451	0.272	0.445
Dummy for allocation of responsibility and discretion	0.510	0.500	0.493	0.500
Dummy for realization of work-life balance	0.451	0.498	0.407	0.492
Status of workplace problems including illegal labor practices				
Employer does not pay the designated overtime wages (dummy)	0.254	0.435	0.264	0.441
Unable to take paid leave days (dummy)	0.171	0.376	0.179	0.384
Sexual harassment or power harassment occurs (dummy)	0.272	0.445	0.276	0.448
Unreasonable quotas are assigned (dummy)	0.153	0.360	0.176	0.381
Employees are encouraged to resign or reassigned so as to encourage resignation (dummy)	0.223	0.416	0.234	0.424
High rate of employee turnover (dummy)	0.267	0.443	0.262	0.440
Sample size	961		637	

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