



Employee trust in management and mutual gains hypothesis in Japanese firms

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ABSTRACT

This study analyzes whether employee trust in management results in mutual gains for employers and employees in the Japanese automobile industry. The results suggest that employees' productivity-enhancing efforts and sense of job security are both positively related to their trust in management. The findings clearly support the mutual gains hypothesis. The results also indicate that in fostering employee trust, management plays a supportive role in enabling unions to verify its claims by disclosing high-quality information, whereas unions play an important role in mitigating information asymmetry.

1. Introduction

The economics literature is increasingly recognizing the role of “trust”—defined as a “firm belief in the reliability, truth or ability of someone or something” (Oxford English Dictionary, 2019)—in the economy; however, its role within firms remains insufficiently examined. Social trust is believed to hasten financial development and economic growth by decreasing transaction costs, uncertainty, and information asymmetries, while increasing efficiency and facilitating cooperation and coordination (Knack and Keefer, 1997; La Porta et al., 1997). There are also some studies that explore the effects of specific workplace practices on employee trust. Mayer and Davis (1999) find that the introduction of a new performance appraisal system that is more acceptable to the employees than the previous system increases trust toward top management. Blunsdon and Reed (2003), using the Australian Workplace Industrial Relations Survey, find that trust is higher if the management devotes some time to corporate ethics and lower if policies and procedures are formalized. Grund and Harbring (2009) find that some indicators of control at the workplace, such as strict working time regulations, monitoring and lack of autonomy, are negatively related to trust. These studies lack investigations of the effects of workplace trust on the success of workplace innovations or the relationship between workplace trust and mutual gains, particularly benefits to employees.¹

The following two arguments on workplace innovation emphasize the importance of workplace trust for establishing productivity-

enhancing work practices. Trust in the workplace seems to contribute significantly to a successful High Performance Work System (HPWS). The work practices aim to facilitate employees' discretionary efforts to enhance productivity through employee-employer cooperation, employee involvement in decision-making, and employee participation in financial matters (Ichniowski et al., 1997). However, employees that fear job loss due to technological changes might be unwilling to share information that could facilitate productive innovations at their workplaces and resist investing in firm-specific skills. Employers should credibly commit to considering employees' interests to elicit their efforts and cooperation. Worker representation theory often emphasizes the importance of trust in workplace innovations. According to Freeman and Lazear (1995), the works council, which is the prominent example of nonunion employee representation in European countries, is a mechanism that improves information flow between workers and management and fosters the trust necessary to establish productivity-enhancing work practices. The theories of HPWS and works councils are based on Kochan and Osterman's (1994) idea that employers and employees can obtain mutual gains in a prevailing climate of trust. Freeman and Lazear (1995) focused on the role of works councils, which can be easily extended to HPWS (Black and Lynch, 2004).

The concept of HPWSs was widely disseminated and firmly established in the post-World War II Japanese economy, particularly in the manufacturing industry (Kato and Morishima, 2002). Based on the two arguments mentioned, the prevalence of HPWSs is considered the result of management efforts to gain the trust of employees, a key element in

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¹ Brown et al. (2015) found a positive relationship between workplace performance and employee trust in their managers and, further, that this trust was influenced by job- and work-related characteristics. However, they have not analyzed the relationship between employee trust in management and employees' interests.

eliciting their discretionary productivity-enhancing effort. The representative form of labor-management relations in large Japanese firms is a Joint Labor-Management Committee (JLMC), which enables the enterprise unions within companies and management to develop trusting industrial relationships (Kato and Morishima, 2002). JLMCs build such relationships by improving information flows between the union and management, deepening labor-management consultations, and encouraging union participation in decision-making, which is expected to affect employees significantly. As Kato and Morishima (2002) confirm, the positive effects of Japanese JLMCs on productivity indicate that they are an important factor in the successful implementation of HPWSs in the modern Japanese economy. Hence, it is a strong possibility that employee trust in management generated through JLMCs increases their discretionary productivity-enhancing efforts and their sense of job security.

To affirm the importance of employee trust in management in workplace innovations, it is important to clarify the role of trust in management in eliciting employees' productivity-enhancing efforts and increasing sense of job security in Japan where the HPWSs became more common. Such clarification may also reveal an important clue to the success of HPWSs as well as in other countries.

Previous studies have paid little attention to the mutual efforts of enterprise unions and management to foster among employees a level of trust in management that provides employees with a strong sense of job security and makes them willing to engage in productivity-enhancing efforts. Japanese JLMCs operate in a manner similar to German works councils (Rodgers and Streeck, 1995) in terms of increasing productivity by fostering employer-employee trust.² Unlike German works councils, however, Japanese JLMCs are not legally mandated (they have neither the right to information nor co-determination rights); they are voluntarily operated, and it seems to be more difficult for labor and management to build trustful and cooperative relationships through JLMCs than at works councils. This current study pays particular attention to the roles of unions and management in fostering employee trust in management to ensure the efficient operation of HPWSs.³

This study analyzes whether employee trust in management results in mutual gains—productivity-enhancing efforts of employees for management, and a sense of job security for employees—in the Japanese automobile industry. Furthermore, this study investigates how enterprise unions and management develop employee trust in management. Firms in the Japanese automobile industry, which is one of the Japan's leading industries, have strong global competitiveness. Hence, verifying that employee trust in management plays a major role in eliciting employees' efforts in globally competitive firms implies that trust is a crucial element in the success of HPWSs that enhance corporate productivity. The data were uniquely matched datasets based on three samples; three types of questionnaires were administered: firm (employer), union, and employee.

2. Literature review

2.1. Trust in management and mutual gain view

Higher-trust environments reduce the cost of economic activities that require individuals to rely on the future actions of others. According

²Kato and Morishima (2002) found that information sharing enhances workers' cooperation and contributes to increased productivity. However, the returns for workers' cooperation for productivity increases have yet to be determined.

³Although Kato and Morishima (2002) found positive effects of the complementarity between shop floor committees and joint consultations on productivity, they did not investigate the enterprise unions' own channels to solve communication problems among top management, union leaders, and the rank-and-file members.

to Arrow (1972:357), "virtually every commercial transaction has within itself an element of trust, certainly any transaction conducted over a period of time. It can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence." Luhman (1979) made the related point that trust reduces the complexity of modern society, suggesting it reduces the span of contingencies associated with any economic transaction or activity. Trust may, therefore, work as a risk-reducing factor and may ensure the smooth implementation of economic transactions, such as providing goods and services in exchange for future payment, and investments and savings for which people rely on governments or banks, under the belief that these institutions will not expropriate their assets.

The trust mechanism that prevents employers from engaging in opportunistic behavior may be important in the presence of incomplete or implicit labor contracts. To motivate employees to work harder and smarter, employers use implicit promises that employees will share in the enhanced profits in the form of higher wages, better benefits, and other rewards, such as job security. When management honors these promises, employees experience honesty and fair treatment. When employees perceive that their reward or treatment is equal to or better than that received by peers or relative to that justified by their work performance, these feelings of fair treatment are engendered. Thus, such feelings of honest and fair treatment reinforce employee loyalty and motivate them to work harder. Conversely, when employees experience dishonest and/or unfair treatment, they react with greater absenteeism or loafing on the job. As per the definition of trust, the influential factor in discretionary efforts by employees to improve productivity is their strong belief that they will receive honest and fair treatment from management.

However, incomplete contracts, in which an employer and its employees do not fully specify all employment terms and conditions in writing, expose both parties to numerous, potentially costly contractual breaches arising from opportunistic malfeasance, adverse selection, moral hazard, and principal-agent problems (Miller, 1991; Dow, 1997). In other words, under incomplete contracts, employees might fear that, although they exert maximum effort to increase productivity, employers might default on implicit promises by, for example, firing them, refusing to pay well-won reward for their efforts, or renegeing on promotion promises. The fear that the employer might cheat them demoralizes employees and lowers job satisfaction (Miller, 1991; Kaufman and Levine, 2000). Therefore, employee trust that management will treat employees honestly and fairly is an important factor in eliciting employees' discretionary productivity-enhancing efforts.

The power balance between management and unions largely affects management's treatment of employees; therefore, this power balance is strongly associated with employee trust in management. According to Bryson (2001), employee trust in management is higher when there is a balance of power between unions and management in the workplace, because neither party can act unilaterally. Where unions are weak and employers are thus tempted to exercise unilateral actions that lead to feelings of being treated dishonestly and unfairly among employees, employee trust in management may be less. Where the union is particularly strong and the union and management are at loggerheads, a poor employment relations climate ensues, which makes workplace problem-solving difficult, and therefore, trust in management may also be low. The power balance is also a key component of employee trust in management because it captures the extent to which employees believe that management is sufficiently reliable not to exercise unilateral actions against unions.

Previous studies emphasized job security as the most significant factor for employee trust in management, which is an indispensable element for the successful functioning of HPWS (Pfeffer, 1998). Human resource management (HRM) innovations could increase workplace efficiency and decrease labor demand, resulting in fewer jobs and the risk of unemployment; this undermines employees' cooperative efforts to increase efficiency (Levine and Tyson, 1990). Moreover, the

knowledge emphasized in HPWS practices is often firm specific, and its value tends to be considerably lower outside the enterprise. Therefore, under HPWSs, when employees invest in firm-specific skills, they incur some risk. Unless an employer credibly commits to honoring job security, employees might withhold their discretionary efforts toward productivity improvements and resist investing in such skills. The most important element in the successful operation of HPWSs is employee trust in the management's commitment to ensuring job security. This is because it is possibly a risk-reducing factor that decreases employees' risk of investing in firm-specific skills and lessens their fear of job loss, thereby encouraging their productivity-enhancing efforts. In other words, the provision of employment security, which is an important aspect of employee trust, increases the likelihood that employees will cooperate with employers in pursuit of mutual goals.

2.2. Japanese context

There are several studies besides [Kato and Morishima \(2002\)](#) that investigated the influences of Japan's HPWSs. [Bae et al. \(2011\)](#) found that employees in enterprises with HPWSs, such as shop floor committees, small-group activities, and linking wages to firm performance, are more likely to make frequent suggestions related to productivity and quality improvements. [Kato \(2006\)](#) found that the productivity effects of JLMCs vary significantly depending on how widely the information shared in JLMCs is disseminated to employees. These studies confirmed the productivity effects of JLMCs and the successful operation of Japan's HPWSs; however, they lack an analysis of both of the effects of employee trust in management built by JLMCs on employee outcomes and of the benefits that HPWSs bring to employees.

No-layoff policies are implicit agreements to maintain the size of the workforce to the greatest extent possible, even at the expense of profits, and are therefore the underlying basis for achieving mutual gain, i.e., employees' productivity-enhancing efforts for management and job security for employees. Japanese-style HRM practices have characteristics that foster a wide range of firm-specific problem-solving skills within large firms through on-the-job training ([Koike 1988](#)), and exhibit the same functionality as HPWSs. Bearing the risk of investing in firm-specific skills that are less valuable to other firms and the risk that the increased productivity will lead to job cuts, employees are averse to "job insecurity," which [Van Vuuren \(1990\)](#) defines as implying uncertainty about future job prospects that employees will be able to continue to work. Organizational changes owing to the implementation of new employment practices such as HPWSs may adversely affect workers' well-being when changes generate uncertainty associated with future losses ([Bryson et al., 2013](#)). Further, organizational changes made in response to a downturn in product demand may also reduce workers' well-being when such changes cause similar uncertainty. If implicit employment contracts based on no-layoff policies can mitigate uncertainty, decreased future uncertainty enhances employees' sense of job security and enables employees willingly to make productivity-enhancing efforts and acquire firm-specific skills.

Implicit employment contracts based on no-layoff policies become effective only if employees have trust in management. As no-layoff policies are implicit agreements, future contingency cannot be described at the time of contracting. Therefore, the implicit contracts entered into that are in line with such policies are inherently insufficient by themselves for dispelling uncertainty associated with future losses or enhancing employees' sense of job security. Moreover, if employees have a concern based on distrust that management may violate the implicit contracts, they will perceive the implicit agreements as fragile and retain their concerns about the continued existence of the job in the future. The potential payoffs and long-term interests from introducing workplace innovations would be ensured by preventing management from making decisions to unilaterally rescind the implicit contracts. According to [Godard \(2004\)](#), trust between employers and employees and the presence of employee representation are

prerequisites for the successful implementation of workplace innovations. Because trust decreases the possibility that employees will perceive the employers' actions as violating "the psychological contract" ([Robinson, 1996](#)). In order to elicit employees' cooperation, management must foster employees' trust that it will comply with no-layoff policies and assure job security.

Employee representation has the beneficial feature of creating higher employee trust and increased cooperation between workers and management ([Kaufman and Levine, 2000](#)). In Japan, the role of employee representation is played by a JLMC, which has two major functions: sharing of business information between management and union representatives and prior consultation by management with the union on a large variety of issues regarding, for example, upcoming business decisions—such as investment programs, new technology, and plant relocation—and working conditions ([Shirai, 1983](#)). JLMCs are established at the top level (corporate or establishment level), involve both management and labor-side representatives or union representatives when there is a union, and serve as mechanisms for employee participation/involvement at the top level. Unlike Western unions, Japanese unions are organized company by company rather than along craft or industrial lines. Most Japanese enterprise unions comprise regular employees whose primary interest is job security in the internal promotion systems ([Brown et al., 1997](#)); therefore, they have strong incentives to participate in employers' decisions through JLMCs to achieve their goal of safeguarding long-term employment contracts and encouraging internal promotion prospects. Management invests time and effort in consultations and information sharing with unions through JLMCs and signals to employees that management sees employee relations as a major concern, serving to foster employee trust in management.

Consensus-based decision-making on matters that affect employees through JLMCs facilitates the development of employee trust that management will comply with no-layoff policies and thereby increase employees' sense of job security. "The basic nature of employee participation in JLMCs can be summarized as consultation on business strategies and plans, yet joint determination on their implementation" ([Kato, 2003:63](#)). However, unions and management jointly decide through JLMCs about the implementation of managerial plans, including plant closures and dismissals, which have significant effects on employees ([Kato, 2003](#)). Management includes unions in a decision-making process on matters related to employees through JLMCs and indicates their intention of not violating the implicit contracts. [Smith \(1991\)](#) argues that employee participation may reduce management's opportunistic behavior. Union participation in the decision-making process helps prevent management's unilateral actions, such as dismissals without union consent, resulting in the adoption of "benevolent" employment adjustments to the effect that dismissals are regarded as falling in line with union demand as constituting the last resort. From the employees' perspective, decisions made by management in JLMCs rarely seem unreasonable or as ignorant of the unions' intentions. ([Kato, 2003](#)).

Unions and management voluntarily share managerial information through JLMCs to mitigate informational asymmetry, build employee trust, and secure employee cooperation ([Shirai, 1983](#)). Information sharing regarding the company's financial condition and corporate strategies affecting employment prospects fosters employee trust that management will comply with no-layoff policies. Providing trustworthy and accurate information, including confidential in-house information, is evidence of a self-disciplined employer that would never betray its employees ([Kato and Morishima, 2002](#)) and makes its employees feel that they are being treated fairly and honestly. Unions ask management to clarify the reason for the implementation of detrimental measures to employees, such as wage freezes and cutbacks, bonus cutbacks, plant closures and the associated personnel transfers, prior to a dismissal ([Kato, 2003](#)). Then, management explains in detail justifiable reasons for these issues to convince employees that management is taking

benevolent employment adjustment measures to avoid dismissals and retain employee trust. If employees learn the necessity of these employment adjustments, they may be less likely to take them as a breach of implicit employment contracts.

Historically, Japanese firms began widely to implement benevolent employment adjustments in response to the severe recession caused by the first oil shock of 1973 (Nitta and Hisamoto, 2008). Benevolent employment adjustments are a concrete form of non-layoff policies made to avoid by all available means implementation of dismissals until firms fall into a deficit (Koike, 1983). In subsequent recessions, Japanese firms have been unlikely to implement downsizing in the form of voluntary retirement programs until they experience at least one or two consecutive years of losses (Noda, 2013).⁴ These findings suggest that implicit contracts specifying that employers will not implement dismissals when profits are positive have been fulfilled. Only when management can maintain employee trust, such a benevolent approach provides employees with the perspective on job maintenance without a dismissal until the firm falls into a deficit, mitigates future uncertainty among the employees, and enhances the latter's sense of job security while facilitating employee cooperation for productivity enhancement. Conversely, employees may doubt management's intentions and worry that management may arbitrarily renege on implicit employment contracts when management excludes unions from a decision-making process and discontinue investing time and effort in close labor-management communication and daily information sharing through JLMCs. Consequently, employees' sense of job security will be also undermined by increased distrust of management.

If employee trust in management is built by the inclusion of unions in a decision-making process and management's voluntary information sharing to fill the gaps in information asymmetry nurtures a strong belief that management will follow no-layoff policies among employees, then the trust engendered would mitigate uncertainty associated with future losses and would enhance sense of job security. Therefore, we propose our first hypothesis as follows.

Hypothesis 1: Employee trust in management is positively related to the extent of employees' sense of job security.

When employee trust in management has a positive effect on employees' sense of job security, employees have a strong belief that management will not dismiss them as a consequence of improved productivity or worsened corporate performance. Therefore, they are willing both to invest in firm-specific skills and to make discretionary efforts such as making suggestions for boosting productivity and undertaking additional work. Under the prevailing climate of trust, employees believe that the management provides them with strong job security in return for productivity-enhancing efforts. Thus, we propose our second hypothesis as follows.

Hypothesis 2: Employee trust in management is positively related to the extent of productivity-enhancing efforts.

Next, I discuss the two factors influencing employee trust in management. Voluntary disclosure of managerial information is necessary for unions to act as employees' eyes and ears and build employee trust. In the absence of established practices for sharing trustworthy and accurate information, management might misinform employees about the enterprise's economic status to extract more productivity-enhancing effort. Knowing that management can use information strategically, employees might doubt the veracity of the information, even if it is true.

⁴ Unions tend to grudgingly accept downsizing in the form of voluntary retirement programs offered by firms because unions and employees believe that firms that initiate such programs have no other way to survive besides downsizing and have no intention of renegeing on employment contracts when they face serious financial difficulties, such as two years of losses (Noda and Hirano, 2013).

Thus, voluntary disclosure of high-quality information by management enables enterprise unions to verify management's claims in the absence of legal rights. As employees' eyes and ears, unions help to solve or at least reduce communication problems.

The quality of the information shared in JLMCs seems to be quite high. However, the effects of information quality, that is, the extent of disclosure of managerial information, on employee trust in management have not been analyzed. Kato's (2003) field research found that union representatives in JLMCs believe that some information received from top management is insider information shared with union representatives before being made public knowledge. Some of it cannot be disclosed to the rank-and-file employees, and this includes confidential information that could be used to profit in the stock market. Based on their close relationships with management, unions can obtain critical information from management and then provide trustworthy information to the employees. The extent of disclosure of managerial information to union officers also indicates information quality that management can disclose to employees. Getting access to high-quality information that could verify or disprove management's claims, unions can make those claims credible to the ordinary employees. This enables unions to detect management's deception and prevent employers from taking arbitrary actions. The disclosure of high-quality information is required to foster employee trust in management.

Hypothesis 3: The disclosure of high-quality information is positively related to employee trust in management.

Enterprise unions have an incentive to fill communication gaps among the three parties—management, union leaders, and rank-and-file employees—to improve employee morale and avoid a decline in corporate competitiveness, which might, in turn, destabilize long-term employment contracts (Kato and Morishima, 2002). Because enterprise unions distribute information obtained through JLMCs to the employees through union channels, such as shop floor meetings, mass meetings, and bulk e-mails, they are beneficial tools for management to use to solve communication problems. The function of unions is to improve information flows, which helps them to gain the management's trust; this also allows them to access high-quality information from management and act as employees' eyes and ears. Hence, the communicative function of unions is vital to increasing employee trust in management.

Hypothesis 4: Union's abilities to mitigate information asymmetry are positively related to employee trust in management.

3. Data

3.1. The survey

In Japan, there is no national survey of industrial relations and employment practices similar to the British national survey of the workplace employment relations study (WERS), the flagship survey of employment relations in Britain. As an alternative to the national survey, I used my original survey data collected from the questionnaires for firms (employers), unions (employee representatives), and employees in the automobile industry.

The Institute for Industrial Relation and Labor Policy, Chubu (*Chubu Sansei Ken in Japanese*) conducted a survey of 141 companies, their unions, and their employees in the Chubu area around Nagoya. Among the companies included in the survey were: an automobile assembler; its subsidiary, a parts supplier; and other related companies. The survey included separate questionnaires for firms, unions, and employees. All respondents to the employee survey considered in this study were unionized employees in unionized firms. The human resources departments were asked to complete the firm questionnaire. The union questionnaires were completed by one of the three highest-ranking

Table 1
The results of the three principal component analyses.

Variables	Mean	S.D.	Factor loading
Job security (Eigenvalue = 1.593, Rate of contribution = 0.531)			
Satisfied with job security	2.317	0.741	0.811
Free from anxiety about employment continuity	2.282	0.758	0.722
Free from anxiety about worsening working conditions	2.916	0.697	0.644
Employee effort (Eigenvalue = 2.519, Rate of contribution = 0.504)			
Improvement in the quality of the job	3.238	0.644	0.776
Challenging new tasks	2.838	0.762	0.787
Undertaking additional work beyond the regular duties	2.958	0.728	0.566
Acquiring firm-related skills and knowledge on the job	2.913	0.810	0.702
Making suggestions for enhancing productivity	2.802	0.785	0.703
Trust in management (Eigenvalue = 1.807, Rate of contribution = 0.451)			
Management can be relied on to provide trustworthy information	2.835	0.712	0.742
Management's treatment is satisfactory to be loyal to the company	3.029	0.607	0.741
Management's response is satisfactory to perceive its sincerity in inviting employees' suggestions	3.082	0.648	0.674
The balance of power in the workplace between the union and management	2.322	0.658	0.506

Note: Data were gleaned from three kinds of linked data, i.e., employer, employee, and union questionnaires conducted by The Institute for Industrial Relation and Labor Policy, Chubu (*Chubu Sansei Ken*).

union officers (chairman, vice-chairman, or secretary-general). The employee questionnaires were distributed and collected by the enterprise unions. To encourage candid responses and to safeguard employees' privacy, the employee questionnaires were collected in sealed envelopes. The questionnaires were distributed from March to April 2013 and collected at the end of April 2013. The institute distributed 141 firm questionnaires and collected 88 (response rate: 62.4%). Of the questionnaires distributed to 2255 randomly chosen employees, 2030 were collected (response rate: 90.0%). Because the respondents to the employee survey were union members, the questionnaire was not distributed to management-level employees. Of the 141 union questionnaires distributed, 112 were collected (response rate: 79.4%). The employees' response rate was quite high for this type of survey. After dropping the cases with incomplete responses, the final sample size reduced to 1502.

3.2. Variables

3.2.1. Dependent variables

Job security is the first dependent variable. I performed a principal component analysis (PCA) to combine the three items into a single variable for measuring employees' perceptions of their personal job security. All three items were measured using a four-point scale. Employees were asked to select a response ranging from 4 (*strongly agree*) to 1 (*strongly disagree*) to the following items: 1) the respondent is satisfied with the job security offered by management; 2) the respondent is free from anxiety about employment continuity; and (3) the respondent is free from anxiety about worsening working conditions. Table 1 displays the results of the three PCAs that enable us to identify the three components for measuring employee effort, job security, and employee trust in management. I employed the component created from the above three items as a variable ("Job security"). Column 3 in Table 1 documents that the above three items load powerfully onto one underlying principal component.

The second dependent variable measures employee effort. I conducted a PCA to combine five items into a single variable measuring employee effort. The response options of the first four items are measured on a four-point scale, where 4 indicates that the respondent *strives for* [each item] and 1 indicates that he or she *does not strive at all for* [each item]. The five items are: (1) improvements in the quality of a job; (2) challenging new tasks; (3) undertaking additional work beyond the regular duties assigned by the supervisor; (4) acquiring firm-related skills and knowledge on the job; and (5) making suggestions for enhancing productivity. Following Freeman and Rogers (1999), the fifth item measures the extent to which the respondents use opportunities to

make suggestions to their immediate supervisors for enhancing productivity and improving product quality and sales. Its response options are on a four-point scale, where 4 means *often makes suggestions about how to increase productivity and improve quality and sales*, 3 is *sometimes makes suggestions*, 2 refers to *rarely makes suggestions*, and 1 is *never makes suggestions*. Column 3 in Table 1 documents that the above five items load powerfully onto one underlying principal component. I employed the component created from the above five items as a variable ("Employee effort").

3.2.2. Independent variable

A PCA was conducted to combine four items into a single variable for measuring employee trust in management. The employee questionnaire obtained information about four different measures of employee trust in management. Employees were asked to indicate whether they *strongly agree* (= 4), *agree* (= 3), *disagree* (= 2), or *strongly disagree* (= 1) with the following three statements: (1) management can be relied on to provide trustworthy information regarding its financial condition and corporate strategy; (2) management's treatment is satisfactory for him/her to be loyal to the company (employees' loyalty is an appropriate proxy of management's honest and/or fair treatment); and (3) management's response is satisfactory for him/her to perceive and acknowledge its sincerity in attempting to invite employees' comments and suggestions. Further, the fourth question addresses (4) the respondents' perception of the balance of power between the union and management in the workplace. This respondents' perception is a proxy of employee trust in management not to defy the will of unions and employees and take unilateral action. Employees were asked to choose one from the following five options; (a) the union has been making large concessions rather than management, (b) the union has been making concessions rather than management, (c) management and the union appear as equals, (d) management has been making concessions rather than the union, and (e) management has been making large concessions to the union. Answers of (c) are designated as "*management and the union appear as equals* (= 3)"; those of (b) and (d) as "*either the union or management has been making small concessions* (= 2)"; and those of (a) and (e) as "*either the union or management has been making large concessions* (= 1)." The responses to these four questions are used to create four trust items to use for a factor analysis.

As a result of the PCA, I found only one factor for which the eigenvalue exceeded one. Column 3 in Table 1 documents that the signs of the four items are positive, and that these four items load powerfully onto one principal component. Based on the above results, the component is interpreted as describing employee trust that management treats employees honestly and fairly. Therefore, I employed the

component score as an index of employee trust in management.⁵

The union survey asked the union leaders about the extent of confidential information that was disclosed to them during the JLMC meetings before it was made public knowledge and some of which could be used to make money in the stock market (as an insider-trading material). Confidential affairs of companies include management index, business prospects, or plans for restructuring of business operations, and information that cannot be disclosed to the rank-and-file employees. The extent of disclosure of confidential information indicates the quality of information. The variable termed Disclosure of confidential information indicates the quality of information that unions obtain during the JLMC meetings when they request the management to disclose confidential information. The variable takes the following values: 2 = *the firm discloses any kind of corporate information*, 1 = *the firm does not disclose certain corporate information depending on the content*, and 0 = *the firm discloses no corporate information*.

I created a variable Disclosure of financial information as a second variable to measure the quality of information disclosed by management. The union survey asked the union leaders about the following items: (1) monthly sales, (2) quarterly sales, (3) half-yearly sales, and (4) half-yearly current profits. The measure is constructed based on whether the union conveys financial (confidential) information about the four items, which they obtained from management before the information become public knowledge, to the employees at an appropriate time. These are dummy variables that equal unity if the financial information is disclosed to the employees at an appropriate time and zero otherwise. These variables are then summed up to compute the variable. A value of 0 means that the employees are informed about none of the financial information from management and a value of 4 indicates that they are informed of all financial information from management through the union at an appropriate time. An increase in the number of disclosure items by management implies the provision of higher-quality information.

I created the variable Union ability from the firm survey to capture the union's abilities to bridge the communication gap among management, union leaders, and union members using three items from the management responses to the assessment of union activities for the dissemination of information. The human resources departments were asked to indicate whether they *strongly agree* (=3), *agree* (=2), *disagree* (=1), or *strongly disagree* (=0) with the following statements: (1) the union leaders ensure the transfer of precise managerial information and policies to the employees, based on their understanding of management position; (2) the union provides feedback to management about the dissemination of managerial information and policies at the workplace; (3) union activities encourage employees to become interested in productivity enhancement through the dissemination of managerial information and policies that they obtained through JLMCs to the union members at their workplaces. These items are then summed to compute the variable.

3.2.3. Control variables

There were eleven firm/union-level control variables and twelve individual-level control variables.

Three variables capture aspects of the firm's pay system during the past three years, using responses to questions in the union questionnaire. First, Performance pay indicates whether the firm adopt or improved the performance pay system, as reflected in wages and/or

bonus payments. Second, Reduction indicates whether there were any reductions or discontinuations in regular wage increases. Third, Raise indicates whether the firm implemented annual wage increases over the past three years. All four variables are coded as: 1 = *implemented the above pay system changes in the past three years* and 0 = *did not implement the above pay system changes in the past three years*.

The union survey asked union leaders their perceptions of the firm's management style. The variable, Management Style, is created based on the extent to which management is eager to solve problems at workplaces. Management Style is indicated as: 1 = *eager to solve problems* and 0 = *not eager to solve problems*.

Effectiveness of Voice, which measures employers' evaluations of the effectiveness of the unions' suggestions for the employers' management decisions and human resources management policies. The firm survey respondents were the personnel in charge in the human resources departments. The response options ranged from 0 = *not beneficial at all* to 3 = *highly beneficial*. When the effectiveness of union voice on productivity is large, management is less able to betray unions. Thus, the effectiveness of union voice is expected to have a positive effect on employee trust in management.

The union survey also asked union leaders to indicate whether they *strongly agree* (=3), *agree* (=2), *disagree* (=1), or *strongly disagree* (=0) with the following four statements about the outcomes brought by JLMCs: (1) the communication between management and union leaders was enhanced: (2) working conditions were improved by labor-management cooperation: (3) union members' voice was increased in the workplace: (4) the communication at workplaces was enhanced in the workplace. I created the four variables for the above as the followings: Union-management communication, Improved working conditions, Union member voice, and Communication at workplace.

The results of the questionnaire revealed that downsizing had not been implemented in the sampled firms during the past three years. In addition, I examined previous downsizing status through assets securities reports, newspaper articles, and other media, and I found the sampled firms had not implemented dismissals for at least 10 years.

The union survey asked the union leaders about corporate performance, and Firm performance indicates the respondents' opinions of their corporate performance compared to that of other companies in the same industry. The response options are: 4 = *good compared to other companies in the same industry*, 3 = *rather good*, 2 = *difficult to say whether the corporate performance is good or bad*, 1 = *rather bad*, and 0 = *bad*.

The variable, Firm size, is defined as the total number of employees in the firm where respondents work. The number was transformed to the logarithm in estimations.

An individual-level variable was used as an instrumental variable and twelve individual-level variables were used to control for the effects of the employees' characteristics on the focal relationships.

I included a measure of the maximum national implementation rate of dismissals and voluntary retirement programs in Japan that the employees experienced between ages 18 and 29 (Maximum national rate of dismissals and voluntary retirement 18–29) as an instrumental variable. The data on the national implementation rate of dismissals and voluntary retirement programs at the establishment level in Japan were gleaned from the Survey on Labour Economy Trend, which is conducted by the Ministry of Health, Labour and Welfare every quarter.

The variable Promotion speed measures the employees' perceptions of their career tracks compared to other employees who joined their company in the same year. The response options are: 4 = *fast track for promotion*, 3 = *same speed for promotion*, 2 = *slow track for promotion*, and 1 = *not sure about promotion*. The variable Earnings (ten thousand yen in logarithm) measures annual gross earnings. The number reported by the respondents was transformed to the logarithm and was analyzed in JPY 10-thousands.

The variable Frequency of union leaders' visits was created to measure how often the three highest-ranking union officers visited the employees' workplaces. The employees assessed the frequency. The

⁵ The three variables are measured from the same respondents with the same questionnaires, even if there are correlations between items. The correlations may be caused by common method bias; that is, by the respondents' unique characteristics. To examine the influence of common method bias, I conducted Harman's single factor test (Podsakoff and Organ, 1986). Using all twelve items to measure the three variables, I conducted an exploratory factor analysis. Three factors whose eigenvalue is equal or greater than 1 were extracted and the variance explained by the first factor was 26.5%. The test result shows that the influence of common method bias does not seem to be significant.

response options are: 3 = *often*, 2 = *sometimes*, 1 = *rarely*, and 0 = *never*. This variable captured the level of communication between the employees and union officers.

Whether an employee has supervisory responsibilities might relate to that employee's discretionary efforts and sense of job security. The indicator variable, No-rank, is coded: 1 = *no supervisory responsibilities* and 0 = *supervisory responsibilities*.

I created a variable Union official to indicate employees' experiences of being a union official because the experience of negotiations with management as a union official may affect employee trust in management. The employee survey asked the employees about their experiences of being a union official. The response options are: 1 = *a full-time or non-full-time union official*, and 0 = *otherwise*.

The extents of the above two individual outcomes differ across job types. To control for the effects of occupational differences, three occupational dummy variables are included in the analysis: (a) Engineer, coded 1 = *engineer or scientist* and 0 = *not engineer or scientist*; (b) Sales, coded 1 = *sales work* and 0 = *not sales work*; and (c) Staff, coded 1 = *office staff* and 0 = *not office staff*. "Production line worker" was the reference category in the analysis.

There are four demographic variables: (a) Tenure is the employee's tenure in years, (b) Gender is coded 1 = *male* or 0 = *female*, (c) University indicates the educational background as 1 = *university educated* or 0 = *otherwise*, and (d) Graduate is coded 1 = *graduate degree* or 0 = *otherwise*.

Table 2 shows the descriptive statistics of the three subsamples (employee, union, and firm). Table 3 contains the correlations among variables, and no high correlations that could significantly influence the results were found.

3.3. Analytical approach

There are two methodological problems in examining the relationship between employee trust in management and the two individual

Table 2
Descriptive statistics.

Variables	Mean	S.D.
Maximum national rate of dismissals and voluntary retirement 18–29	5.525	1.804
Disclosure of confidential information	1.119	0.454
Disclosure of financial information	2.085	1.191
Union ability	6.462	1.142
Firm performance	1.281	1.150
Performance pay	0.109	0.312
Reduction	0.071	0.258
Raise	0.122	0.327
Union-management communication	2.006	0.477
Improved working conditions	2.372	0.512
Union member voice	2.236	0.559
Communication at workplace	2.223	0.610
Effectiveness of voice	2.866	0.363
Management style	0.876	0.330
Firm size (the total number of employees)	11,222	17,792
Earnings (in logarithm)	6.230	0.367
Promotion speed	1.401	0.947
Frequency of union leaders' visits	2.161	1.105
Gender	0.898	0.302
University	0.272	0.445
Graduate	0.083	0.276
Engineer	0.201	0.400
Staff	0.203	0.402
Sales	0.053	0.225
No-rank	0.549	0.497
Tenure	13.29	8.765
Experience of being a union official	0.157	0.364

Note: Data were gleaned from three kinds of linked data, i.e., employer, employee, and union questionnaires conducted by The Institute for Industrial Relation and Labor Policy, Chubu (*Chubu Sansei Ken*).

outcomes. First, omitted individual characteristics affect both employee trust in management and the two individual outcomes. For instance, employees who hold negative views on everything are less likely to make many productivity-enhancing efforts; they are also more likely to express discontent with their job security and exhibit lower levels of trust in their management. Second, there could be reverse causality in that increasing employee satisfaction with their job security, making positive productivity-enhancing efforts, or both are more likely to enhance trust in management. To tackle these problems, I used the two-stage least squares (2SLS) method.

I use Japan's national implementation rate of dismissals and voluntary retirement programs to create an instrumental variable, as this rate is considered a factor influencing the individual perceptions of management attitudes toward job security. In Japan, strong social norms against downsizing have persisted throughout the post-World War II era (Usui and Colignon, 1996). Mass media and popular opinion encouraged norms against downsizing and emphasized the responsibility of corporates toward job security. In particular, during a period of increasing dismissals and voluntary retirement throughout Japan, the media reserved its harshest criticism for management that attempted to cut its workforce without due reasons of declining performance or imminent corporate failure (Ahmadjian and Robinson, 2001). Further, there was massive media coverage of the negative perceptions of management and the growing social trend of disbelief in management.⁶ Television news often reports on actual cases of workers eased out of jobs as voluntary retirements, because of the difficulties in undertaking dismissals under the no-layoff policies. Meanwhile, the media condemned massive downsizing by management as behavior that was contrary to no-layoff policies, and further, an abdication of its responsibility to ensure job security. Thus, personal experiences of living through the period of widespread corporate downsizing would lower trust in management compliance with no-layoff policies and in the associated norms. The media backlash and disenchantment with management due to the growth of downsizing generated a negative impact on individual perceptions of management's commitment to job security. Since the national rates of dismissals and voluntary retirement are considered indices of the degree of downsizing, the highest national rate that each individual experienced exerts a negative influence on individual perceptions of management attitudes toward job security.

Following social psychology and the findings of recent macroeconomic research, it is predicted that the experience of the highest national rate of dismissals and voluntary retirement during youth influences employees' perceptions about the management's commitment to ensuring job security. A recent macroeconomic study found evidence that macroeconomic shocks experienced during the critical years of early adulthood (18–25 years) shaped individual opinions of redistribution (Giuliano and Spilimbergo, 2014). It found that individuals whose childhood coincided with an economic recession tended to support greater governmental redistribution. Furthermore, these respondents also reported that success in life depends more on luck than effort. This finding is consistent with the "impressionable years" hypothesis (Krosnick and Alwin, 1989) in social psychology, which argues that core attitudes, beliefs, and values form during late adolescence and early adulthood (18–25 years) and remain unaltered throughout life. Based on this theory, employees' individual perceptions of management in protecting job security crystallize during youth, and employee trust

⁶In 2001, Matsushita Electric Industrial Co., Ltd. (currently Panasonic Corporation), which had never downsized in the history of a company, implemented downsizing in the form of a massive voluntary retirement program for the first time since its establishment. Subsequently, it was extensively quoted as the end of lifetime employment system in the media. In 1993, Pioneer earned a bad reputation for implementing an early retirement program. Japan's prime minister criticized the tactics of Carlos Ghosn, the COO of Nissan of that time, who was dispatched by Renault, to turnaround Nissan, when he announced factory closings involving a massive employment cut in 1999.

Table 3
Correlations among variables

Variables																	
Job security	1																
Employee effort	0.119	1															
Trust in management	0.405	0.316	1														
Maximum national rate of dismissals and voluntary retirement 18-29	-0.045	0.043	-0.025	1													
Disclosure of confidential information	-0.045	0.024	-0.006	0.012	1												
Disclosure of financial information	0.023	0.01	0.045	-0.003	-0.099	1											
Union ability	0.019	0.02	0.151	-0.034	0.003	0.019	1										
Firm performance	-0.089	-0.051	-0.095	0.047	0.164	0.046	0.125	1									
Performance pay	-0.034	0.012	-0.012	0.027	0.546	0.01	0.169	0.159	1								
Reduction	-0.073	0.005	-0.039	0.045	0.341	0.012	-0.04	-0.034	0.43	1							
Raise	-0.073	-0.019	-0.082	0.032	-0.174	0.142	-0.045	0.266	-0.04	-0.104	1						
Union-management communication	-0.009	0.042	0.093	-0.069	-0.036	0.043	-0.029	-0.074	-0.003	-0.002	0.155	1					
Improved working conditions	-0.123	-0.011	-0.063	-0.074	0.058	-0.111	-0.254	0.015	-0.178	-0.108	0.188	0.087	1				
Union member voice	0.002	-0.022	-0.027	-0.066	0.165	0.026	-0.038	-0.015	0.096	0.104	-0.03	0.184	0.289	1			
Communication at workplace	-0.002	-0.031	0.074	0.037	-0.049	0.055	-0.136	-0.134	-0.127	-0.042	-0.145	0.132	0.111	0.154	1		
Effectiveness of voice	0.019	0.019	0.125	-0.04	-0.129	0.138	-0.383	0.037	0.047	0.103	-0.125	0.084	-0.035	0.175	0.025		
Management style	-0.091	-0.026	-0.002	-0.028	-0.143	0.104	-0.078	0.036	-0.133	0.129	0.025	-0.016	0.17	-0.238	0.115		
Firm size (in logarithm)	0.152	0.063	0.185	-0.086	-0.17	0.162	0.156	-0.269	-0.228	-0.18	-0.242	0.234	-0.043	0.098	0.246		
Earnings (in logarithm)	-0.034	0.071	0.005	-0.147	0.013	-0.002	0.089	-0.091	-0.089	-0.048	-0.1	0.08	0.044	0.115	0.04		
Promotion speed	0.068	0.165	0.091	0.126	0.01	-0.021	-0.018	-0.041	-0.059	-0.038	-0.049	0.02	0.001	0.007	0.008		
Frequency of union leaders' visits	-0.01	0.08	0.062	0.001	0.055	-0.068	-0.077	0.087	0.012	0.018	0.03	0.004	0.008	-0.018	-0.065		
Gender	-0.097	0.073	-0.046	-0.006	0.069	-0.007	-0.024	0.042	-0.023	-0.017	-0.022	0.017	0.023	0.039	0.021		
University	-0.037	0.058	-0.023	0.182	-0.029	-0.024	-0.079	0.068	-0.019	-0.02	0.086	-0.077	0.032	-0.043	-0.045		
Graduate	0.066	0.041	0.001	0.146	-0.053	0.011	-0.028	-0.042	-0.06	-0.037	-0.061	-0.043	0.048	0.132	0.116		
Engineer	-0.002	0.048	-0.051	0.136	-0.066	-0.065	-0.101	-0.033	-0.097	-0.043	-0.061	-0.05	0.088	0.152	0.063		
Staff	-0.003	0.009	0.002	0.05	-0.027	0.115	-0.044	0.131	0.003	0.02	0.094	-0.05	0.039	-0.029	-0.031		
Sales	-0.012	0.026	-0.029	0.071	0.002	0.058	-0.032	-0.017	0.076	0.013	0.181	0.072	-0.019	-0.085	-0.038		
No-rank	0.034	-0.054	-0.005	0.097	0.002	0.006	0.028	0.064	0.134	0.102	-0.057	-0.046	-0.041	-0.045	-0.073		
Tenure	-0.067	-0.092	-0.041	-0.488	0	0.042	0.07	-0.046	-0.079	-0.044	-0.039	0.117	0.04	0.057	-0.002		
Experience of being a union official	-0.04	0.056	-0.032	-0.058	0.047	-0.062	-0.128	-0.028	-0.105	-0.057	-0.045	0.016	0.08	0.024	-0.007		
	1																
	-0.128	1															
	0.239	-0.244	1														
	0.097	-0.036	0.226	1													
	-0.033	0.049	-0.013	0.213	1												
	-0.147	0.024	-0.116	0.076	0.145	1											
	-0.021	0.04	-0.018	0.391	0.143	0.081	1										
	-0.088	0.014	-0.147	-0.041	-0.047	-0.016	0.008	1									
	0.098	-0.033	0.127	0.044	0	-0.103	0.054	-0.184	1								
	0.025	-0.033	0.039	0.097	0.002	-0.094	0.109	0.216	0.48	1							
	-0.005	0.06	-0.102	-0.195	-0.105	0.051	-0.306	0.26	-0.086	-0.253	1						
	-0.164	-0.001	-0.103	-0.027	0.01	0.043	0.051	0.258	-0.061	-0.12	-0.121	1					
	0.09	0.046	-0.105	-0.483	-0.298	-0.196	-0.217	0.082	0.031	0.004	0.095	-0.009	1				
	0.045	-0.029	0.137	0.515	0.072	0.14	0.128	-0.295	-0.216	-0.195	-0.059	-0.084	-0.5	1			
	-0.137	0.091	-0.096	0.18	0.165	0.201	0.098	0.08	-0.038	0.011	0.031	0.075	-0.25	0.175	1		

in the management of the firms in which they work would form on the basis of their deep-rooted perceptions. Employees who experience a high national rate of dismissals and voluntary retirement in their youth are more likely to have negative perceptions of management because of the perceptions crystallized during their youth. If so, there should be a difference in the level of trust in their current management, between employees who experienced the highest maximum national implementation rate in their youth (as Table 2 shows, the highest in the sample was 7% in 2002) as their personally-experienced highest rate, and those who had experienced the lowest rate (2% in 1987), as their personally-experienced highest rate.

Considering this perspective, I employed a measure of Japan's maximum national rate of dismissals and voluntary retirement when employees were between 18 and 29 years old (Maximum national rate of dismissals and voluntary retirement 18–29) as an instrumental variable and hypothesized the negative relationship between the instrumental variable and employee trust in their current management.⁷ The higher the maximum national rate of dismissals and voluntary

retirement experienced by employees in their youth, the more likely they are to perceive management, which normally emphasizes job security, as willing or unwilling to implement dismissals to survive in times of serious financial distress. Owing to the negative perceptions of management developed in their youth, such employees are likely to exhibit lower levels of trust in their management's commitment to ensuring job security, even if the firms they currently work for have never implemented dismissals.

Although [Giuliano and Spilimbergo \(2014\)](#) focused on ages 18–25, this study extended the critical age range to 29 for the instrumental variable. In the sample, numerous university graduates and those holding graduate degrees entered the workforce between the ages of 22 and 24, paying little thought to downsizing as a potential problem. In contrast, high school graduates in the sample entered the workforce at age 18 and immediately began to perceive dismissals as a possible problem at their workplaces. University graduates and those holding graduate degrees entered the workforce when they were older, and therefore, recognized downsizing problems later in life. Hence, ages 18 to 29 were considered the critical years for the formation of an individual's overall perceptions of the enterprise unions' abilities to protect job security.

“Maximum national rate of dismissals and voluntary retirement

⁷Noda (2018) used the variable as an instrumental variable to analyze the relationship between employee trust in unions and job satisfaction.

Table 4
Distribution of maximum national rate of dismissals and voluntary retirement 18–29.

Age at the time of the survey	Experienced maximum national implementation rate (%)	Year of the experience	Percentage
19–21	3%	First quarter in 2012	1.2%
22–28	5%	First quarter in 2009	20.8%
29–40	7%	First quarter in 2002	51.2%
41–43	5%	First quarter in 1999	9.7%
44–55	2%	First quarter in 1987	16.0%
56 +	5%	First quarter in 1975	0.8%

Note: The data were gleaned from the Survey on Labour Economy Trend conducted by the Ministry of Health, Labour and Welfare.

18–29” is an appropriate instrumental variable for capturing the extent of employee trust in management’s commitment to ensuring job security. After 18, the age at which employees experienced their highest maximum national rate of dismissals and voluntary retirement and its percentage are randomly assigned to individuals. Naturally, the maximum national rate of dismissals and voluntary retirement that employee respondents lived through between ages 18 and 29 was not influenced by employee trust in management. Therefore, the maximum national rate of dismissals and voluntary retirement 18–29 is exogenous to trust in management. The instrumental variable should not correlate with employees’ unobservable individual characteristics, and therefore, it should not directly influence the two individual outcomes. There is no direct association between maximum national rate of dismissals and voluntary retirement 18–29 and the two individual outcomes; however, there should be an indirect relationship between the instrumental variable and the two individual outcomes, operating through trust in management.

Table 4 shows the distribution of Maximum national rate of dismissals and voluntary retirement 18–29. The group who lived through the highest maximum national implementation rate was the group that was 29 to 40 years old at the time of the survey; thus, they were 18–29 years old when they experienced their highest maximum national implementation rate, 7% in the first quarter of 2002; this accounts for 51.2% of the sample. On the other hand, the members of the group that lived through the lowest maximum national implementation rate were between 44 and 55 years old at the time of the survey; that is, they were between 18 and 29 years old when they experienced their highest maximum national implementation rate, 2%, in the first quarter of 1987; they account for 16.0% of the sample.

To analyze the effects of Trust in management on the two individual outcomes, the following equation is devised:

$$\text{Employee effort (Job security)}_i = \alpha \text{Trust in management}_i + \beta X_i + \gamma Z_{f(i)} + \varepsilon_i$$

where, $f(i)$ denotes the firm of the respondent employee i , X_i is a set of person-specific control variables, and $Z_{f(i)}$ denotes a vector of firm-specific control variables.

4. Results and discussion

4.1. Employee trust in management and employee outcomes

Table 5 shows the results of the ordinary least squares (OLS) estimations. Importantly, the results presented in Columns 1 and 2 of Table 5 support Hypothesis 1 and those in Columns 3 and 4 support Hypothesis 2. As expected, Trust in management has positive and statistically significant associations with Job security in Columns 1 and 2, and with Employee effort in Columns 3 and 4. These results suggest that employee trust in management improves employees’ sense of job security and encourages their productivity-enhancing efforts, thereby supporting the mutual gains hypothesis.

The results for the control variables for each dependent variable are noteworthy. Columns 1 and 2 feature three particular results. First, the

coefficients of Promotion speed are positive and significant, suggesting that employees whose careers are on the fast track are more likely to be free from anxiety of job loss. Second, the coefficients of Gender are negatively significant, indicating that male employees are more likely to feel anxiety about job security than female employees. The result suggests that male employees tend to demand longer tenure than female employee under the Japanese long-term employment system, and they are therefore more sensitive to job loss. Third, the coefficients of Reduction are negatively significant, suggesting that a reduction and/or a discontinuation in regular wage increases negatively affect employees’ sense of job security. They worry that the last resort, dismissals will follow wage freezes and cutbacks.

Columns 3 and 4 feature four particular results. First, the coefficients of Gender are positively significant, indicating that male employees are more likely to exert higher discretionary efforts than female employees. Second, the coefficients of Promotion speed are positive and significant. This result indicates that among those who joined the company in the same year, those who are on a fast track in terms of promotion are more likely to make s discretionary efforts. Thus, the speed of promotion is a significant factor that influences employees’ discretionary efforts. The significance of employee trust even after controlling for the speed of promotion shows how important employee trust is for eliciting employees’ discretionary efforts. Third, the coefficients of Earnings are positive and significant, suggesting that high earnings motivate employees into discretionary efforts. Earnings can be contingent on merit ratings, and this is the most distinct characteristics of the pay system for Japanese production workers. Ishida (1990) found this in comparing Japanese workers and British workers. The result indicates that as earnings are determined by the outcome of merit ratings, employees are incentivized by the rating system, even with job security. Fourth, the coefficients of Tenure are negatively significant, indicating that employees with long tenure are less likely to make discretionary efforts. Employees who are not in managerial positions with long tenure are those who face fewer career advancement prospects under the Japanese internal promotion system.

The results above show a statistically significant correlation between employee trust in management and the two individual outcomes, but to gain some confidence on the causal nature of this association, employee trust is instrumented with Maximum national rate of dismissals and voluntary retirement 18–29. The instrument has the expected sign and performs very well in the first stage (the coefficients on Maximum national rate of dismissals and voluntary retirement 18–29 are significant at 1%, and the F-value of the joint significance are significant at 1%). The result of the first stage is shown in Columns 1 and 2 of Table 7.

Table 6 presents the results when employee trust in management is instrumented with Maximum national rate of dismissals and voluntary retirement 18–29. As predicted, all the coefficients of employee trust in management are positive and significant. This suggests that employee trust in management has positive relationships with the two individual outcomes. In summary, the statistically positive correlation between employee trust in management and the two individual outcomes found using OLS estimations persists when employee trust in management is instrumented, suggesting that employee trust in management has a

Table 5
The effects of employee trust in management on employees' productivity enhancing effort and sense of job security: OLS .

Variables	OLS 1 Job security	OLS 2 Job security	OLS 3 Employee effort	OLS 4 Employee effort
Trust in management	0.295*** (0.022)	0.295*** (0.022)	0.220*** (0.019)	0.220*** (0.019)
Disclosure of confidential information	-0.046 (0.064)		0.018 (0.068)	
Disclosure of financial information		-0.001 (0.025)		0.011 (0.027)
Union ability	-0.060*** (0.019)	-0.061*** (0.020)	-0.009 (0.025)	-0.007 (0.026)
Firm performance	-0.017 (0.025)	-0.020 (0.024)	-0.230 (0.030)	-0.023 (0.029)
Performance pay	0.000 (0.112)	-0.028 (0.098)	0.070 (0.116)	0.078 (0.111)
Reduction	-0.233** (0.114)	-0.250** (0.119)	0.121 (0.122)	0.128 (0.116)
Raise	-0.026 (0.079)	-0.008 (0.082)	0.028 (0.108)	0.009 (0.101)
Union-management communication	-0.124** (0.054)	-0.125*** (0.059)	0.057 (0.050)	0.060 (0.049)
Improved working conditions	0.213** (0.050)	0.220** (0.053)	0.056 (0.057)	0.068 (0.059)
Union member voice	0.109** (0.036)	0.108** (0.038)	-0.079* (0.043)	-0.082* (0.047)
Communication at workplace	-0.088** (0.038)	-0.088** (0.039)	-0.105** (0.052)	-0.105** (0.052)
Effectiveness of voice	-0.077 (0.077)	-0.065 (0.080)	0.011 (0.097)	0.004 (0.100)
Management style	-0.041 (0.083)	-0.031 (0.085)	-0.113 (0.130)	-0.121 (0.130)
Firm size (in logarithm)	0.166** (0.057)	0.171** (0.062)	0.087 (0.086)	0.075 (0.093)
Earnings (in logarithm)	0.006 (0.078)	0.004 (0.077)	0.215*** (0.072)	0.218*** (0.072)
Promotion speed	0.057** (0.026)	0.057** (0.026)	0.115*** (0.028)	0.114*** (0.028)
Frequency of union leaders' visits	-0.021 (0.026)	-0.020 (0.026)	0.039 (0.029)	0.040 (0.028)
Gender	-0.244*** (0.087)	-0.247*** (0.086)	0.217** (0.096)	0.216** (0.094)
University	-0.051 (0.068)	-0.020 (0.026)	-0.015 (0.066)	-0.014 (0.065)
Graduate	0.193** (0.076)	0.193** (0.077)	-0.026 (0.097)	-0.025 (0.096)
Engineer	-0.037 (0.068)	-0.033 (0.068)	0.133* (0.086)	0.132* (0.085)
Staff	0.006 (0.067)	0.007 (0.066)	0.171* (0.072)	0.167* (0.072)
Sales	0.067 (0.115)	0.072 (0.116)	0.088 (0.126)	0.080 (0.127)
No-rank	0.077 (0.066)	0.078 (0.066)	-0.073 (0.059)	-0.074 (0.059)
Tenure	-0.002 (0.004)	-0.002 (0.004)	-0.018** (0.003)	-0.018** (0.003)
Experience of being a union official	-0.016 (0.069)	-0.020 (0.068)	0.108 (0.079)	0.112 (0.078)
Industry dummies	YES	YES	YES	YES
F-Value	56.91	54.31	23.73	22.71
AdjR ²	0.216	0.216	0.158	0.158
Observations	1502	1502	1502	1502

Notes: a. Each column reports the coefficients and clustered standard errors (in parentheses).

b. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

causal effect on the two individual outcomes.

All the coefficients of Trust in management, obtained by instrumental variable (IV) estimations in Table 6 are larger than those obtained by ordinary least squares (OLS) in Table 5. This suggests that OLS estimations are negatively biased. This indicates that there are negative correlations between employee trust in management and unobservable individual characteristics that affect the two individual outcomes. These negative correlations suggest the possibility that

employees who are willing to make efforts, and those who have a high sense of job security are likely to take a critical view of management.

4.2. Analysis of the determinants of employee trust in management

Given that the findings presented in Section 4.1 indicates a positive relationship between employee trust in management and each of the two individual outcomes, the natural next step is to ascertain the factors

Table 6

The effects of employee trust in management on employees' productivity enhancing effort and sense of job security: 2SLS

	2SLS			
	1 Job security	2 Job security	3 Employee effort	4 Employee effort
Trust in management	1.006 *** (0.311)	1.004*** (0.308)	0.556** (0.229)	0.559** (0.231)
Observations	1,502	1,502	1,502	1,502

Notes: a. Each column reports the coefficients and clustered standard errors (in parentheses).

b. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

that influence the degree of employee trust in management.

First, I analyze the effect of the quality of information offered by management on employee trust in management. Trust in management was found to be positively related to Disclosure of confidential information, and not related to Disclosure of financial information, as shown in Columns 1 and 2, respectively, of Table 7. The positive relationship shown in Column 1 supports Hypothesis 3, and suggests that the voluntary disclosure of high-quality information by management increases unions' abilities to verify management's claims and develops better employee trust in management. These results suggest that employee trust in management is established based on intimacy between unions and management to such a degree that management discloses confidential information to the union, regardless of the number of disclosed items. Based on the favorable relationship with management, unions may obtain detailed information (some of which cannot be disclosed to the employees) and provide trustworthy information to the employees. Employees can more precisely perceive the true economic state of the firm when they receive higher quality information, which results in the detection of management deception. The results in Column 1 indicate that the disclosure of confidential information is a key factor in functioning as employees' eyes and ears.

Second, I examine the effect of unions' abilities to mitigate information asymmetry on employee trust in management. Union ability is positively and significantly related to Trust in Management in both estimations, supporting Hypothesis 4. The results suggest that a union's abilities to bridge a communication gap is strongly associated with the degree of employee trust. Unions convey managerial information in workplaces through their grassroots communication, and close communication gaps among the three parties; thus, they make management's claims credible to the rank-and-file employees. To fulfill their role as employees' eyes and ears, enterprise unions elicit high-quality information from management by functioning as beneficial tools for the dissemination of management information about company events to employees.

Third, positive relationships were found between Effectiveness of voice and Trust in management in Columns 1 and 2, suggesting that union voice fosters employee trust in management by improving the quality of management decisions and strengthening cooperative labor-management relationships. Japanese unions actively express a collective voice as an important information source, as an important information source for management in improving the quality of management's decision making (Koike, 1988). Unions can increase enterprise surplus when they have some information or ideas that management lacks and then suggest solutions that are better than those proposed by the management. Voice benefits motivate management to emphasize employees' interests, particularly job security, and thereby facilitate the development of employee trust in management.

The results regarding the other control variables affecting employee trust in management are summarized as follows. First, the coefficients

Table 7

The determinants of employee trust in management: 1st stage of 2SLS.

Variables	1st stage of 2SLS Trust in management	1st stage of 2SLS Trust in management
Maximum national rate of dismissals and voluntary retirement 18–29	−0.067*** (0.021)	−0.068*** (0.021)
Disclosure of confidential information	0.241** (0.117)	
Disclosure of financial information		0.037 (0.036)
Union ability	0.095** (0.035)	0.102** (0.039)
Firm performance	−0.091*** (0.030)	−0.078*** (0.029)
Performance pay	−0.150 (0.190)	−0.011 (0.205)
Reduction	−0.112 (0.242)	−0.026 (0.260)
Raise	−0.055 (0.109)	−0.180 (0.102)
Union-management communication	0.252*** (0.076)	0.263*** (0.071)
Improved working conditions	−0.062 (0.091)	0.015 (0.098)
Union member voice	−0.089 (0.056)	−0.094 (0.058)
Communication at workplace	0.081 (0.064)	0.086 (0.061)
Effectiveness of voice	0.435*** (0.138)	0.364*** (0.121)
Management style	0.266** (0.131)	0.206** (0.135)
Firm size (in logarithm)	0.377*** (0.079)	0.323*** (0.088)
Earnings (in logarithm)	−0.077 (0.137)	−0.061 (0.142)
Promotion speed	0.131*** (0.041)	0.130*** (0.041)
Frequency of union leaders' visits	0.153*** (0.033)	0.152*** (0.033)
Gender	−0.145 (0.109)	−0.137 (0.107)
University	0.063 (0.093)	0.062 (0.094)
Graduate	−0.055 (0.143)	−0.054 (0.142)
Engineer	−0.137 (0.102)	−0.155 (0.102)
Staff	0.032 (0.102)	0.017 (0.105)
Sales	−0.219 (0.173)	−0.264 (0.185)
No-rank	−0.068 (0.102)	−0.076 (0.102)
Tenure	−0.022*** (0.005)	−0.023*** (0.005)
Experience of being a union official	−0.092 (0.097)	−0.066 (0.101)
Industry dummies	YES	YES
AdjR ²	0.119	0.099
First stage F-test	10.13***	10.21***
Observations	1502	1502

Notes: a. Columns 1 and 2 show the result of the first stage of two-stage least-squares.

b. Each column reports the coefficients and clustered standard errors (in parentheses).

c. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

of Firm performance are negative and significant, suggesting that employees who work for a declining firm are likely to show increased trust in management. That is, management tries to convey more precise managerial information to employees. They attempt to demonstrate a positive stance toward employment maintenance to dispel the fear of

layoffs; by doing so, they hope to elicit workers' concessions in economically difficult situations and maintain their motivation and cooperation for business recovery. Second, the coefficients of Frequency of union leaders' visits are positively significant, suggesting that the level of communication between the employees and union officers is positively associated with employee trust in management. Good communication between the employees and union officers fosters better understanding of management's stance, thereby improving employee trust in management.

5. Conclusion

This study's results show that employee trust in management reduces employees' fear of job loss, thereby encouraging employees' productivity-enhancing efforts. These findings clearly support the mutual gains hypothesis. The results also confirm that enterprise unions and management develop employee trust by fulfilling their respective roles in the Japanese automobile industry. To foster employee trust, management plays a supportive role in unions' function as employees' eyes and ears by disclosing high-quality information, whereas unions play an important role in mitigating information asymmetry.

The primary contribution of this study is that it clarifies the importance of employee trust in management for the successful operation of HPWSs by eliminating employees' fear of job loss and motivating them to make productivity-enhancing efforts in the Japanese automobile industry. This study presents evidence that trust, which is considered a significant factor for macroeconomic growth, also plays an important role in facilitating workplace innovations within companies.

This study suggests that the reason for the success of HPWS in Japan is that employee trust in management is relatively easy to develop at a broad level. Previous studies have attributed a significant part of the cooperative and trustful labor-management relationships in Japan to the organizational structure of enterprise unions, which increases the likelihood of common interests leading to sharing of mutual benefits. However, previous studies have failed to consider the concrete ways through which unions and management build trustful industrial relations. This study provides new evidence of the mutual efforts of labor and management to increase employee trust in management that is necessary to establish productivity-enhancing work practices in a way that brings about mutual benefit.

The Japanese automobile industry that I chose to examine is one of the Japan's leading industries and has strong global competitiveness. The results of this study imply that employees' high discretionary efforts are one of the key pillars of their strong competitiveness, and underlying these are "gift exchanges" (Akerlof, 1982) of higher effort and higher job security between employees and management when a climate of trust prevails.

Additional research in this field needs to be carried out. The relationship between employee trust in management and HPWS should be investigated in other industries as well. This study found that employee trust in management is an essential factor for the successful operation of HPWSs as well as for mutual gains for employers and employees in the automobile industry (Japan's leading industry). Thus, it would be useful to analyze the effects of employee trust in management on HPWS in other Japanese industries as well, particularly its declining electronics industry.

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Supplementary materials

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