

## Research Article

# Effect of Employees' Values on Employee Satisfaction in Japanese Retail and Service Industries

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Received 29 June 2018; Accepted 17 October 2018; Published 1 January 2019

Guest Editor: Akinori Abe

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The Japanese workforce has decreased rapidly over the past few decades, and this is expected to continue. Retail and service industries are already experiencing human-resource shortages. In these industries, nonregular employees feature prominently. For most companies, recruitment is difficult, and employees change jobs often, making securing staff an important business issue. Nonregular and regular employees are treated differently; the problem is thus partly social in nature. However, some nonregular employees are content, although their work conditions are not good. Here, text mining was used to explore differences between the values of regular and nonregular employees in the retail and service industries.

## 1. Introduction

The retail and service industry, which is labor intensive, is facing a turning point in human-resource management due to a decreasing labor force population and diminishing value for employees' work (the term "values" is defined as a way of thinking about work and workplace in this paper). In this industry, companies have used large numbers of nonregular employees for many years to accommodate fluctuations in supply and demand. According to MHLW [1], about 70% of nonregular employees in the accommodation and food service industries are nonregular employees. Urgent measures are required to identify how to grow the abilities and motivation of nonregular employees. Additionally, the high turnover rate of employees is a significant issue. Maintaining and training human resources have become increasingly demanding management tasks.

Many companies have legacy human-resource systems and employ students and housewives as part-time staff. These companies are not aligned with labor market needs.

Furthermore, the response to nonregular employees is often decided by the planning department at headquarters and does not take into account the values of nonregular employees recently engaged at stores.

Therefore, the author conducted a survey at seven major chains in the service industry to investigate intrinsic employee satisfaction (ES) factors and extrinsic ES factors such as the values of employees' work. The findings of this paper will provide guidance to store management in the service industry.

This paper is divided into four subsections. First, the current situation in the Japanese labor market is explained. Second, the effects of service industry characteristics on employees' values most affected by the labor market are described. Third, features of the retail and service industry are detailed. Finally, working conditions in the retail and service industry are described.

*1.1. The Current Situation in the Japanese Labor Market.* In recent years, the labor force in Japan has decreased sharply and this is expected to continue. The decrease is remarkably large compared to other developed countries (Figure 1). Thus, companies often seek to employ students, housewives, and the elderly, who comprise "nonregular" employees. The Ministry of Health, Labor and Welfare (MHLW) [1] published the "Vision for Working Habits", stating "Eschewing the bipolarized notion of regular and nonregular employment,

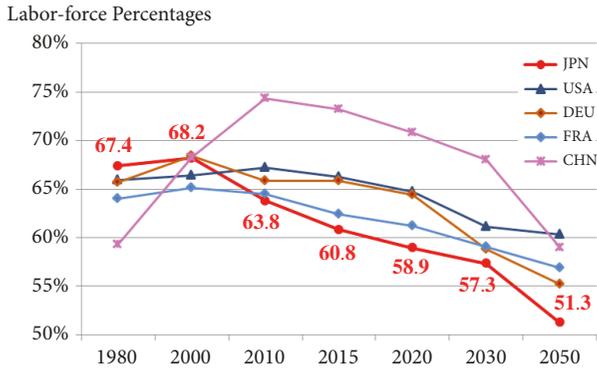


FIGURE 1: **Trends in labor force percentages by country.** The labor force percentage is the percentage of the total population aged 15–64. Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects*, 2015 [2].

the focus should be on stable employment, and improvements in worker morale and capability, thus improving and developing the Japanese economy and society.”

A “nonregular employee” is difficult to define, as people select various modes of working. The MHLW defined “nonregular employees” as employees who work for a flexible period and are either not in full-time work or not in direct employment. The MHLW identified the problems of nonregular employment as instability, difficulty in achieving economic independence, inadequate career progression, and lack of a safety net.

**1.2. Features of the Retail and Service Industries.** Employees in the retail and service industries were investigated in terms of attitudes and satisfaction. These industries are very labor intensive, so a lack of workers greatly affects their business growth. In these industries, customer demands vary greatly by time of day and day of the week, and most companies have traditionally hired nonregular employees and most did not require professional qualifications. However, nonregular employees who are paid and treated poorly are often better performers than regular employees. For example, in a clothes shop, nonregular employees sometimes generated higher sales than regular employees. Also, in the food service chains, some nonregular employees have worked longer than regular employees and, consequently, have better operational skills.

**1.3. Factors Affecting Employees’ Values.** This study analyzed the attitudes of nonregular and regular employees toward work. According to data in a report from the Japan Productivity Center [3], attitudes to work have changed recently. The report showed that the percentages of young people (under 25 years old) who “want to have a pleasant life” and “want to contribute to society” have risen since 2000, but the percentages who “want to challenge my ability” and “want to become economically rich” have declined (Figure 2). Thus, research into nonregular employees’ attitudes may reveal some novel motivations.

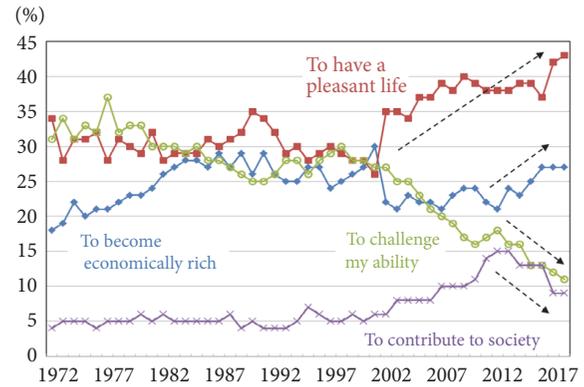


FIGURE 2: **Changing work attitudes of new graduates.** The vertical axis is the percentage of responses (n = 1882). Source: Japan Productivity Center, 2012.

**1.4. Working Conditions of the Retail and Service Industries.** Retail service is emotional labor [4], as employees must constantly control their emotions to accommodate demanding customers. Nonregular employees in accommodation and food service industries are paid at only 32.8% the rate of regular employees, which is the lowest of all industries (average 49.4%) [5, 6]. In addition, the percentage of full-time employees is low (30.8%; [1]), and employees frequently leave, rendering training and evaluation difficult. The turnover rate within 3 years is 50.2% for university and 64.4% for high-school graduates [5, 6], significantly higher than the average (32.2% for all industries [university graduates]; 40.8% [high-school graduates]). Traditional attitudes toward nonregular employees persist and management often has low expectations: “We do not allow these employees for much responsibility”, “We do not expect high quality” and “Job turnover is high, but this cannot be helped” [7].

Quantitative correlations analysis and qualitative text mining [8] were used to define what satisfies nonregular employees. In this paper, the retail and service industries were targeted because they often do not require professional qualifications or business proficiency. Thus, management will understand the findings; text mining will not unearth technical terms. Also, in sales departments, regular and nonregular employees play similar roles, sharing many tasks. Therefore, it is not difficult to compare their respective views and values based on employment patterns.

**1.5. Research Questions.** Many studies have investigated the influence of extrinsic factors on ES, but few have focused on intrinsic factors. This is because intrinsic factors are difficult to measure quantitatively. However, elucidating the intrinsic factors is important to understanding employee motivation and to increasing the effectiveness of various measures to enhance performance. Therefore, this study analyzed intrinsic factors based on qualitative data and investigated whether intrinsic factors affected ES. In addition, the analysis was based on conditions specific to the service industry, which include differences in employment patterns. Therefore, the research questions in this paper were as follows:

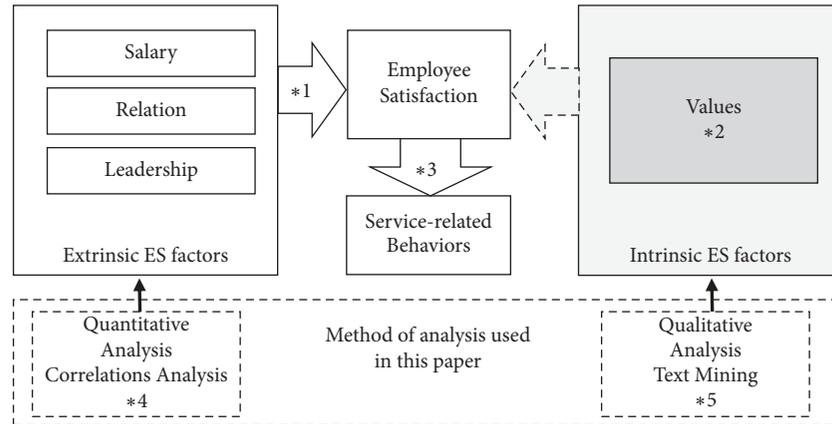


FIGURE 3: **Overview of the research.** Note: ( ) are the section numbers relating to previous research and method in this paper. \*1 concerns the effects of extrinsic factors on ES (Section 2.1). \*2 concerns the intrinsic ES factors (Section 2.2). \*3 concerns the effects of ES on service-related behaviors (Section 2.3). \*4 concerns the analytical method on extrinsic ES factors (Section 3.3). \*5 concerns the analytical method on intrinsic ES factors (Section 3.4).

**Research question 1:** Do the attitudes of employees in the retail and service industries affect their satisfaction?

**Research question 2:** Do attitudes differ by work, workplace, and/or employment pattern?

It is thought that answering these two research questions will be helpful to both the service industry and companies that hire nonregular employees.

**1.6. Hypothesis.** In the retail and service industries, even under the same conditions, employee satisfaction, behaviors, and performance differ by individual. This implies that in considering the factors that impact employee satisfaction there are some that cannot be fully explained only by extrinsic factors. Therefore, two hypotheses are considered:

**Hypothesis 1:** Values influence employee satisfaction. Changing attitudes to, and values associated with, work and the workplace influence employee satisfaction.

**Hypothesis 2:** Values differ by employment pattern.

## 2. Previous Research

Figure 3 provides an overview of previous research. This study focused on intrinsic and extrinsic drivers of employee satisfaction (ES). Such drivers and their effects on store performance were examined (Figure 3).

There is no fixed definition of ES in the literature. For example, some studies have focused on personal aspects such as treatment and wages, while others deal with the quality of human relationships in the workplace.

In this paper, ES is defined as the overall satisfaction level of working in a shop. There are many nonregular employees working in shops in the service industry, and they typically work in limited spaces with few coworkers. This paper analyzes how employee values influence employee satisfaction in such an environment. Our definition of ES does not

consider the degree of satisfaction related to position, honor, and future return. Herein, ES is only based on daily work. Employees cannot control external factors, although such factors influence ES.

**2.1. Effects of Extrinsic Factors on Employee Satisfaction.** This subsection outlines previous studies related to the influence of extrinsic ES factors on employee satisfaction (asterisk 1 in Figure 3). Alderfer [9] used a Likert questionnaire to investigate the motivations of 300 factory workers based on salary, benefits, supervisors, colleagues, and growth. In this paper, authors use the same method of questionnaire. Herzberg [10] evaluated 1,683 engineers, scientists, military personnel, and nursing staff in terms of their “satisfied” or “dissatisfied” status (positive motivations and negative hygiene factors, respectively). Harter et al. [11] meta-analyzed studies on 36 companies and 7,939 organizations (198,000 people in all) in terms of employee satisfaction (12 items). Authors referred these theories for structures of question items in ES factors. Carter and Bughurst [12] conducted focus group interviews on the importance of leadership to restaurant employees; the data have been used in the food service industry. Authors referred situation of service industries of the other country. Eggers and Kaul [13] analyzed the patenting patterns of various companies, exploring whether the inventions reflected high- or low-level motivation. It is interesting to show the relationship between ES and innovation. In this paper, By referring to research of other industry, authors can find characteristics of the retail and service industry. Pugliesi [14] noted that the effects of emotional labor reflect other work-related conditions. Indeed, emotionally laden work can sometimes have negative effects, including job stress and poor satisfaction.

It is important to consider both ratio centric and emotional work when analyzing the ES of retail and service industry employees. The relationships between employee motivation and behavior were reviewed above. However, few studies have focused based on employment. Given the

uniqueness of nonregular Japanese employees, it is important to analyze differences between regular and nonregular employees in terms of motivation, not simply money and treatment. Thus, prior studies established the model used in this paper. This study hypothesized that leadership, salary, and the ingenuity of management would influence employee behavior.

*2.2. Intrinsic Factors on Employee Satisfaction.* This subsection describes previous studies of values related to intrinsic ES factors (asterisk 2 in Figure 3). Schwartz [15] performed questionnaire surveys in 44 countries and classified universal human values into 10 types by motivational purpose. Due to factors base on personal types, the point that affects motivation is a reference to this paper. Ros [16] grouped the values as “intrinsic”, “extrinsic”, “social”, or “prestige-related” and discussed their interrelationships. In this paper extrinsic factors and intrinsic factors are separately positioned as factors affecting ES. Twenge [17] explored differences in the morality and values of baby boomers and those born after 1982. To and Tam [18] explored the values attached to the work of migrant women in China, their employment compensation, their satisfaction, and differences in values. The difference in values by these generations is often a theme. How to analyze the difference by these attributes is helpful.

Such studies structured and classified working values, but it remains unclear whether values intrinsically influence employee satisfaction. Values differ among individuals and are difficult to quantify. Thus, it has been impossible to conduct a study showing the relationship with employee satisfaction. However, with the development of an effective tool to quantify qualitative information, it has become possible to analyze such values.

*2.3. Effects of Employee Satisfaction on Service-Related Behaviors.* This subsection describes previous studies related to the influence of employee satisfaction on employees (asterisk 3 in Figure 3). Sun et al. [19] found that service-related actions affected employee productivity, turnover, and ultimately corporate performance. Heskett et al. [20] emphasized that profitability, customer loyalty, and employee satisfaction constituted a “service profit chain”. The theme in this paper is a factor influencing ES, and the behavior change is out of the scope. However, it will increase the significance of this research that ES has a big influence to achieve high performance. Amabile and Kramer [21] analyzed individual diaries, and observed events in the workplace and the inner workings of employees. Performance was influenced by recognition, emotion, and motivation associated with the workplace. Morrison [22] stated that, to avoid organizational problems, employees must receive information from those in higher positions; otherwise employees will be silent and fail to deliver important information to superiors. Matsuki and Nakamura [23] developed an ES–customer service (CS) model for the service industry using the service profit chain concept of Heskett [20] and the two-factor theory of Herzberg [10]. Their model identifies factors affecting employee behavior in terms of ES per se, CS, and store performance. Quantitative analysis of relationships between

service behavior and performance is commonplace in both academia and the real world. However, it is often difficult to identify actions affecting CS or employee performance.

Thus, this study evaluated employees from several companies. The studies cited above showed that employment conditions and the workplace influence employee awareness and behavior, but intrinsic employee values may also affect ES. This study focused on intrinsic employee values.

There is no fixed definition of ES in the literature. ES has been investigated in the context of discrete personal aspects such as treatment or wages, and in other cases in relation to the quality of human relationships in the workplace. Herein, ES refers to the overall satisfaction level of working in a shop. There are many nonregular workers in shops in the retail and service industry, and they typically work in limited spaces with few coworkers. This paper analyzes how employee values influence employee satisfaction in this environment. Therefore, our ES is not the degree of satisfaction related to position, honor and future return but, rather, to the current situation in the shop. Additionally, in this paper, extrinsic factors are defined as not controllable by companies while intrinsic factors can be controlled. Thus, companies should recognize the values of employees more and provide them with better support.

### 3. Methods

A survey of employees in the retail and service industries was conducted to investigate effects on customer satisfaction, both quantitatively and qualitatively. The overall survey is shown in Figure 4.

*3.1. Survey Planning.* A survey of employees at seven major companies in the retail and service industries was conducted. The questionnaire is shown in Table 1. The questions consisted of 11 single-answer items for ES and its factors and a free-answer item proposed by the employees. Table 1 shows the data obtained.

*3.2. Survey Implications.* The survey was conducted from June 10 to October 25, 2016 using an anonymous, Web-based response system. Multiple responses from the same source (e.g., smartphone, tablet, or PC) were not permitted. Each employee entered a QR code. One manager of a food service company commented that many regular and nonregular employees completed the questionnaire during lunch breaks or on their way home.

In total, there were 2,513 ES responses and 653 free-answer proposals. The responses to the survey by employment pattern are shown in Table 2.

*3.3. Quantitative Correlation Analysis.* The authors investigated the relationship between extrinsic factors and employee satisfaction through correlation analysis as a preliminary research. Correlation coefficients between ES and ES factors were calculated for regular employees and nonregular employees, respectively, and significant differences determined. If there is no statistically significant difference between the two, then the effect of extrinsic factors is the

TABLE 1: Whole question items in the research.

Variables/Category	Question Items (English)	Question Method
Salary	I think this store salary and working conditions is good.	Single Answer 5 Level
Equipment Environment	I think facilities and environment of this store is good.	
Leadership	I think this store takes good leadership supervisor.	
Personal Growth of Employees	I think that work in this store leads you to grow.	
Creative task	I think we work many creative tasks as well as routine tasks.	
Customers' reactions	I think this store service are happy customers.	
Financial performance	I think this store's performance will be better again.	
Promptness of service	I think the employee's "rapid response" in this store.	
Improvements in service	I think employees corresponds with a smile in this store.	
Service w/smile	I think not manual, think for yourself, acting as employees of this store.	
Employee Satisfaction	I think I am satisfied with working at this store.	Free Answer open-ended question
Proposals for improving stores	Please feel free to have opinions and ideas for making your store better with innovations and improvements.	

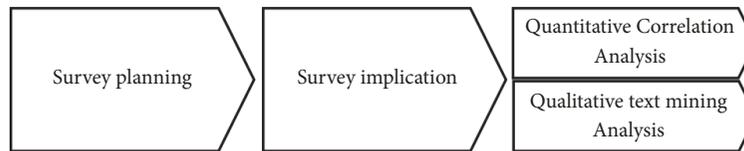


FIGURE 4: Overview of the research.

TABLE 2: Questions and numbers of respondents.

Regular employees	Non-regular employees	Total
773 (270)	1,740 (383)	2,513 (653)

Note: ( ) indicates respondents that answered the item "improvement proposals" using free text.

same for regular employees and nonregular employees. The difference between intrinsic factors then becomes clearer.

**3.4. Qualitative Text Mining.** The free-text comments were mined and analyzed using text analytics to quantify and visualize the comments.

**3.4.1. Text Mining Software.** Text mining was performed using the tool "Mieru-ka Engine" by Plus-Alpha Consulting. Text mining divides comments into words or phrases, and analyzes their frequencies and correlations. For example, Ford et al. [24] used text mining to extract items affecting employee engagement. Here, the employees' responses were analyzed both quantitatively and qualitatively in terms of ES and values, and whether differences were related to employment pattern was explored.

**3.4.2. Statistical Dependency Analysis of Employee Satisfaction and Views.** Statistical dependency analysis "visualizes the qualitative context inherent in text data". Such text mining analyzes qualitative language data, aggregates the associations and dependencies of words and phrases, and expresses relationships between words in diagrams. The comments of the employees were divided into those by employees who

were ( $\geq 3$  points) and were not ( $\leq 2$  points) satisfied, and further divided into those made by regular and nonregular employees. This formed groups of regular employees who were or were not satisfied (Groups A and B, respectively), and similar groups of nonregular workers (Groups C and D, respectively). Statistical dependency diagrams were then created. It was assumed that differences in the keywords in the free comments used by employees with high ES levels and those with low-ES levels reflected differences in employee satisfaction. Differences in keyword use based on employment pattern were also analyzed. Sentences are separated into each word and count the number of the specified word and its connected word. When qualifying a specified word, draw an arrow toward the specified word and draw backward arrows if modification is made from the specified word.

**3.4.3. Keyword Ranking Analysis.** Keyword ranking was used to extract keywords representing values. At the end of the survey, questions regarding proposals for store improvement were provided in free-comment form. Using keyword rank analysis, the keyword appearance rates in the respondents' proposals were extracted.

In addition, the top 20 keywords used by regular and nonregular employees were displayed in descending order and the values of  $d$  and  $s$  were analyzed by employment pattern.

$$\text{Keyword appearance rate} = \frac{\text{Number of keyword users}}{\text{Free comment number of respondents}} \quad (1)$$

TABLE 3: Relationships between employee satisfaction and various subfactors.

ES factor (subfactors)	Regular employee	Non-regular employee	z values
(1) Wages and treatment	0.38	0.36	0.46
(2) Workload	0.31	0.31	1.00
(3) The environment	0.39	0.41	-0.69
(4) Relationships in the workplace	0.58	0.54	1.39
(5) Leadership of supervisor	0.46	0.48	-0.46
(6) Company policy and administration	0.53	0.53	1.00
(7) Responsibility	0.50	0.49	0.23
(8) Evaluation	0.51	0.54	-0.92
(9) Customer satisfaction	0.47	0.46	0.23
(10) Growth	0.67	0.67	1.00

Note: the values are correlation coefficients between 10 possible ES factors and CS. The z values are those revealing a significant difference between the two correlation coefficients. When  $z > |1.96|$ , significance was assumed at a 5% rejection probability.

TABLE 4: Comparison of four groups in keyword map.

Group	ES Score	Employment pattern	n	keywords
A	$\geq 3$	Regular employees	211	human resource, staff, shop, part-time, supervisor, employee, motivation, opinion, whole work, service, pit, time
B	$\leq 2$	Regular employees	562	human resource, staff, shop, part-time supervisor, necessity, opportunity, company, everyone, salary, status, conscienceless, communication, meeting
C	$\geq 3$	Non-regular employees	344	Supervisor, employee, staff, opinion shift, air conditioner, control, sales floor, direction, teaching
D	$\leq 2$	Non-regular employees	1,396	Brand, kitchen, day, hourly wage
Total			2,513	

## 4. Results

Regular and nonregular employees coexist under different conditions, but seem to share values relevant to work and the workplace. Regular and nonregular employees were compared in terms of the effects of 10 subfactors on satisfaction. However, no significant differences were found by employment pattern (Table 3).

*4.1. Quantitative Correlation Analysis.* Correlation coefficients between ES and 10 Extrinsic ES factors were calculated for regular employees and nonregular employees, respectively. Although each extrinsic ES factor has an effect on employee satisfaction, no statistical significance was found for the difference in employment pattern.

*4.2. Comparison Keyword Map Analysis by ES and Employment Pattern.* Keyword analysis was performed to extract keywords that are characteristic to each group. Differences between such keywords were interpreted. Unlike the problem of the selection formula, what is routinely conscious is expressed directly without being induced by some answers. For this reason, text mining was selected as the method to analyze intrinsic factors.

The keyword map is useful to visualize the entire picture of distinctive differences. By using attribute data, keywords

characteristic to each group were compared in a map diagram. The blue circle indicates attribute data. The yellow circle linked to the blue circle shows keywords that are characteristically appearing in that attribute. The green circle encompasses common keywords. A yellow line connects a group to common keywords and the number of occurrences is shown in parentheses.

Satisfied employees ( $ES \geq 3$ ) used nouns relating to people such as “staff”, “employee”, or “superiors” more often than dissatisfied employees and the nouns reflecting improvements were more concrete. Regular employees commonly mentioned “time”, “service”, and “motivation”; while nonregular employees mentioned “shift” and “environment” (Table 4 and Figure 5).

This result does not support hypothesis 1 that values influence employee satisfaction in a precise manner. However, as noted above, characteristic values differ by ES level and employment pattern. Thus, the result implies that values influence ES.

*4.3. Dependency Word Map Analysis.* A dependency word map analysis was then performed based on shop, staff/employee, and customer, ranking the top three nouns in terms of appearance. These contexts in keywords were used in different ways (Figures 6, 7, and 8). The context in this

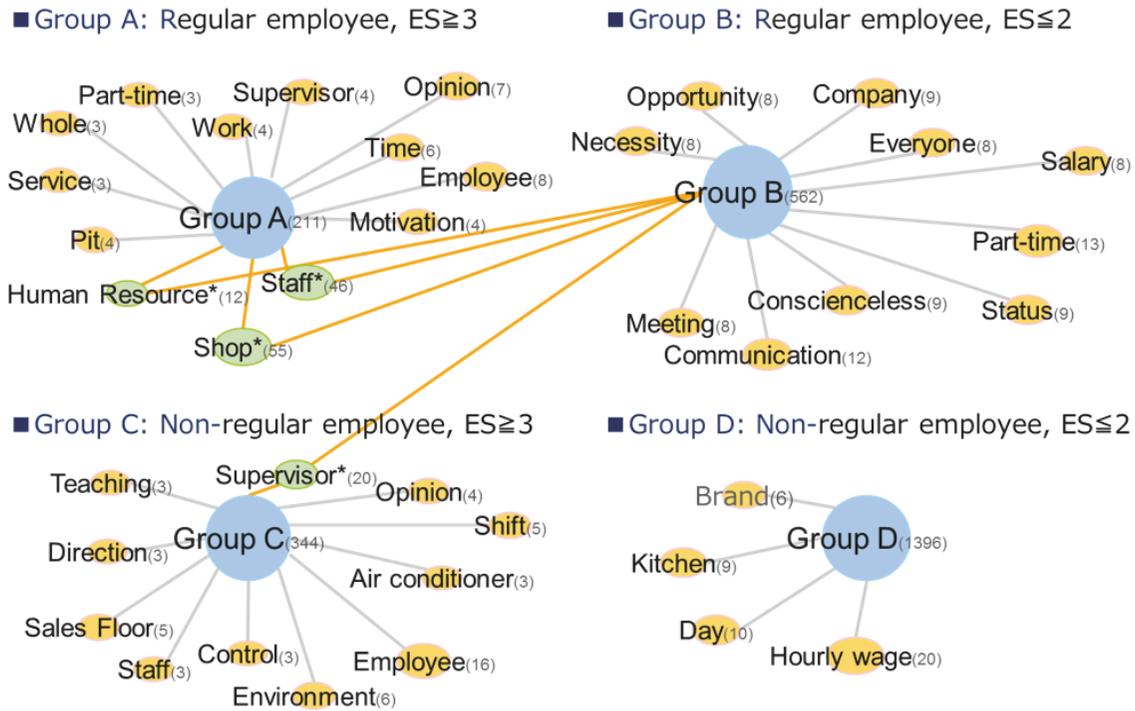


FIGURE 5: Keyword map by employee satisfaction/employment pattern.

context is to understand the values in the background from the connection between words and words.

The blue circles indicate the top three nouns. The green circles with gray lines display words that depend on the top three words. A gray arrow represents a relationship. Beginning at each word, arrows connect the most relevant words employed in conjunction with the former word. The numbers indicate the number of times a word was found in the comments.

**4.4. Characteristic Items by Employment Pattern.** Extraction of common keywords used by regular and nonregular employees yielded the data in Tables 5 and 6. The characteristic keywords showed different patterns. The total ranking of keywords are shown in Table 7.

Regular employees often commented on the organization, while nonregular employees tended to focus on their own personal problems. Employees with a high degree of satisfaction frequently commented on people, whereas low-satisfaction employees tended to list physical things such as salary.

## 5. Discussion

This result of correlation coefficients in Section 4.1 shows that the company motivates regular and nonregular workers by the same way to gain eternal ES factors despite the different positions. However, some nonregular workers may desire salaries rather than evaluation and growth. That is why it is important to focus on internal ES factors and analyze unique factors of regular and nonregular employees to really motivate them.

Text mining revealed differences between employees with a new perspective. Section 4.2 shows that the greater the employee satisfaction, the greater the interest in personal improvement and work. In the retail and service industries, it is extremely important to communicate with colleagues daily, often on a site-by-site basis. The higher the level of interest, the more challenging the task. However, retail and service shopfront operations are monotonous and stressful if employees lack interest in their future. Thus, hypothesis 1 (values influence employee satisfaction) was supported. The occurrence rates of 93 keywords cited by high- and low-ES employees were compared using the t-test. The rates were statistically significant for the nonregular employees ( $P < 0.001$ , two-sided).

Table 7 showed that even common words such as “shop”, “employee”, and “customer” assumed different meanings depending on employment pattern. Regular employees adopted the view of the organization and considered relationships in terms of “level” and “communication”, whereas nonregular employees linked the words to “environment” and “toilet”, thus viewing customers as individuals. Thus, the values of regular and nonregular workers differed. Table 7 showed that the principal keywords of regular and nonregular employees also differed. Regular employees suggested management improvements; they wished to be considered as more than “human resources” or the “company”; keywords used by nonregular employees often related to daily work. Thus, regular and nonregular employees differed in terms of work and workplace values, and in how to improve the workplace, supporting hypothesis 2. Thus, different labor orientations are in play even in the absence of any correlation between employee satisfaction and various factors.

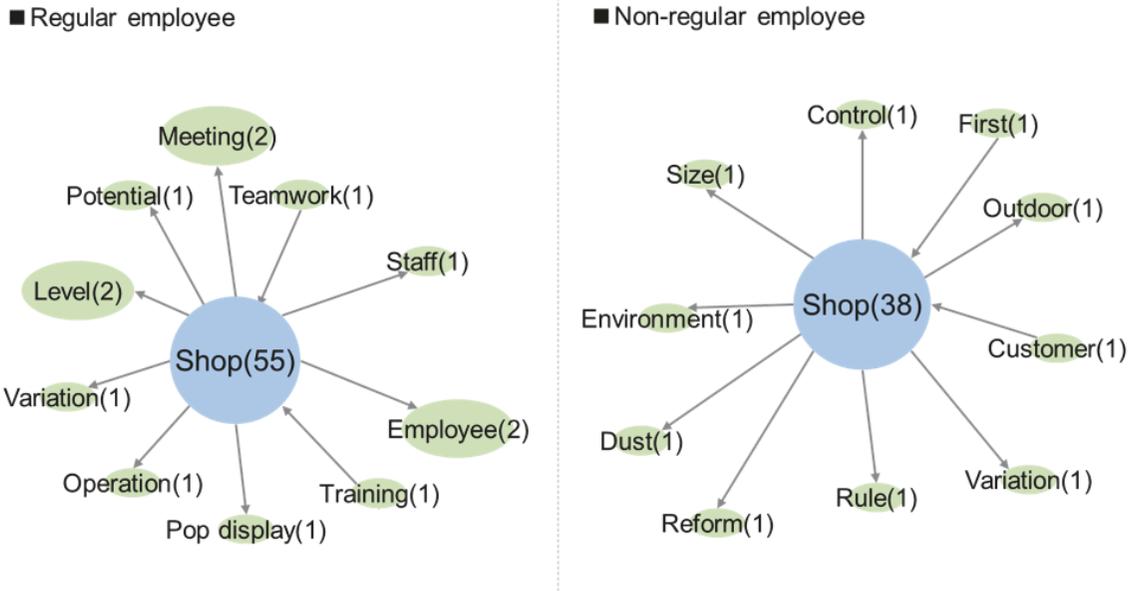


FIGURE 6: **Dependency word map of nouns by employment pattern regarding “Shop”.** Regular employees recognized improvement requirements in their organizations. For example, improvements in meetings, teamwork, and employees. Nonregular employees often commented on customers and the daily environment, including such words as customer, rule, and environment.

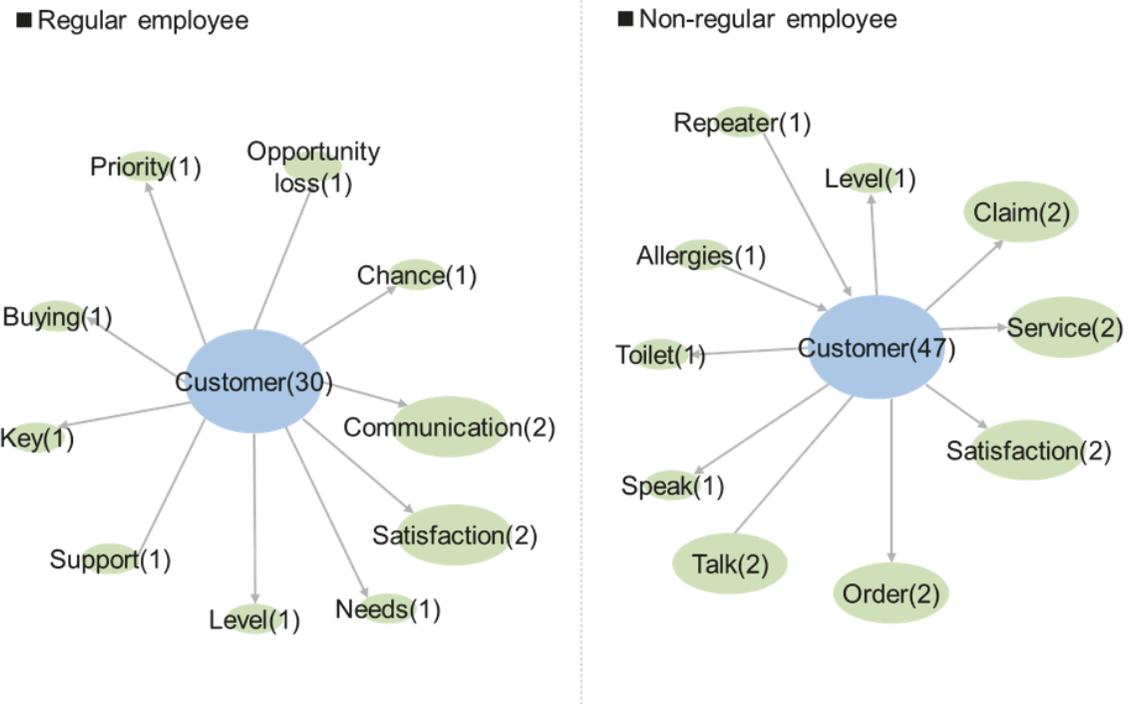


FIGURE 7: **Dependency word map of nouns by employment pattern regarding “Customers.”** Regular employees often used keywords associated with the future, such as chance, opportunity, or priority. In contrast, nonregular employees included many keywords for the present, such as order, service, or claim.

TABLE 5: Regular employees (n = 270).

Keyword	n	Rate	Representative comment (underlined words indicate keywords.)
Human resources	19	7.0%	There are few <u>human resources</u> and many are not hospitable. There seems to be a lack of customers who are highly motivated to purchase.
Company	12	4.4%	Company management is concerned only with profit. For that reason, employees' wages are low and motivation is falling.
Consciousness	10	3.7%	I feel that <u>consciousness</u> of one's position as a professional salesperson can be connected to customer satisfaction by greater sharing of promotional ideas.
Individual	7	2.6%	We should develop <u>individual</u> skills, respect human nature, and use as many coaching strategies as the number of employees.
Headquarters	6	2.2%	I said at the meeting with my boss at <u>headquarters</u> that I would improve; I will not hesitate. I understand that there are too few people. In case. . .
Field	5	1.9%	Please understand why many people leave and listen to the voices of employees in the <u>field</u> .

Many keywords pertain to the entire organization rather than daily life in the workplace.

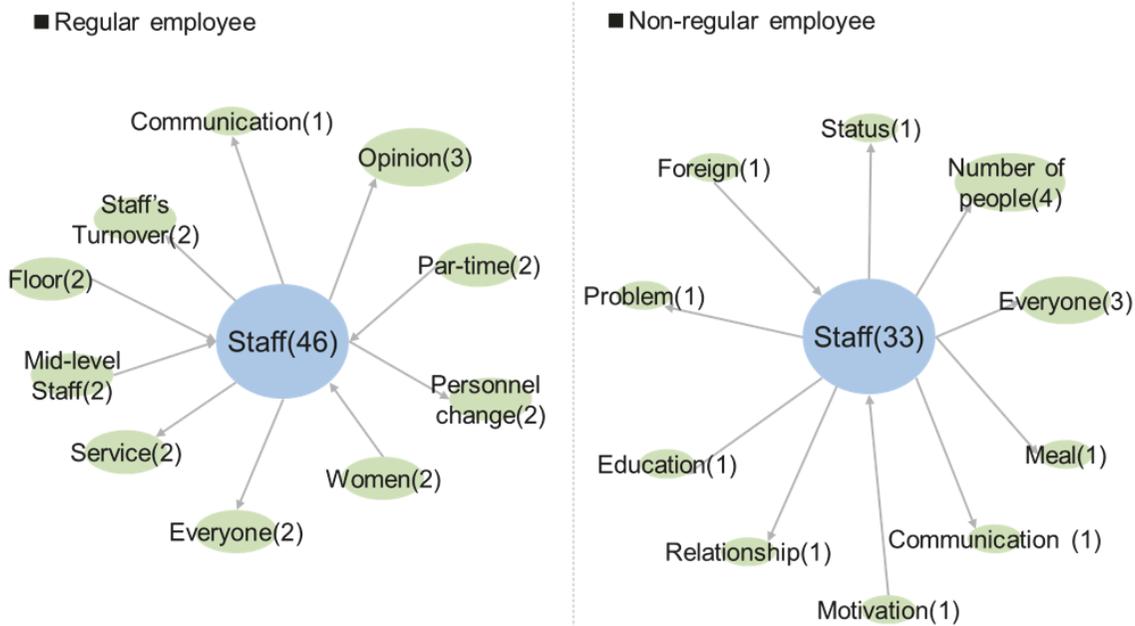


FIGURE 8: Dependency word map of nouns by employment pattern regarding “Staff”. Regular employees used keywords concerning human resources measures related to the organization. These keywords included staff turnover, mid-level, and personnel change. Nonregular employees used keywords that related to their own issues surrounding their daily work.

The occurrence rates of 93 keywords cited by regular and nonregular employees were also compared using the t-test. No statistically significant difference was found for the nonregular employees ( $P = 0.128$ , two-sided).

Recently, the MHLW [25] released “Draft guidelines for same-labor, same-wage” seeking to improve the treatment of nonregular employees; employment should be regular. However, the focus here is not on improvement of working conditions but, rather, on motivation patterns. Companies can match human resources to workplace needs by recognizing employees’ work. It is also necessary to convey companies’ philosophies to the employees. If they are able to work in a workplace that offers a good fit for their values, many

nonregular employees will not leave. This is more powerful than support from extrinsic factors.

## 6. Conclusion

In this paper authors explore the effects of the values and attitudes of retail and service industry employees on ES and identified differences between regular and nonregular employees. Employee values affected ES; the values of regular and nonregular employees are not significantly statistically different. However, keywords of free-answer comments implied the values of both features.

TABLE 6: Nonregular employees (n = 383).

Keyword	N	Rate	Representative comment
Hourly wage	22	5.7%	Everyone is suffering from low <u>hourly wages</u> and the newsletter says that some people worry; I am one of them.
Goods	19	5.0%	The <u>goods</u> are of poor quality. If items that are dirty or broken are replaced or made more attractive, I think that the <u>quality of the shop</u> would go up.
Kitchen/hall	19	5.0%	I often feel the communication gap between the hall and the <u>kitchen</u> , so I want to communicate more and improve the atmosphere of the shop.
Newcomer	12	3.1%	There are almost no manuals at this store. I think that everyone, privately, agrees with this. I think there are some good aspects here, but for <u>newcomers</u> , there may also be a lot of confusion.
Shifts	10	2.6%	I think that you should be strict, and not careless about time; insist that <u>shifts are kept</u> , so that the physical condition of the store can be managed.
Toilet	7	1.8%	I think that a toilet check would be a good idea for the business. The <u>toilet</u> is always in a miserable state.
Members	7	1.8%	I think the differences in the skills of <u>members</u> should be improved.
Order	5	1.3%	I do not mind taking over work or giving <u>orders</u> , but I feel that this has become a vicious circle recently.

Many keywords expressed views based on the daily work at the site rather than that of the whole organization.

TABLE 7: Keywords in free comments on proposals for improving stores (top 20 nouns).

Regular employee	N	%	Non-regular employee	N	%
Shop* * *	71	26.3	Staff/employee* * *	86	22.3
Staff/employee* * *	70	25.9	Shop* * *	69	17.9
Customer* * *	46	17.0	Customer* * *	47	12.2
Manager	30	11.1	Non-regular employment	41	10.6
Work	24	8.9	Work	30	7.8
Non-regular employment	17	6.3	Salary	22	5.7
Communication	16	5.9	Products**	19	4.9
Opinion	15	5.6	Manager	25	6.5
Time	15	5.6	Communication	15	3.9
Company*	12	4.4	Environment**	12	2.0
Human resource*	12	4.4	Education	12	2.0
Motivation*	10	3.7	Time	12	2.0
Consciousness*	10	3.7	Newcomer**	12	2.0
Improvement*	10	3.7	Opinion	11	1.8
Salary	10	3.7	Salary	11	1.8
Opportunity	9	3.3	Way**	11	1.8
Education	9	3.3	Kitchen**	10	1.7
Status	9	3.3	Shift**	10	1.7
Individual	9	3.3	Place	10	1.7
Meeting	8	3.0	Days	10	1.7
Environment	8	3.0			

Question: Please tell how you would make your store better via innovations and improvements. Percentages of all respondents who used the words to the left. Respondents: regular employees (n=270); nonregular employees (n=383). In the table above, the number of uses at 20th was the same, so 21 keywords are posted.

\*Keywords frequent only in regular employee comments.

\*\*Keywords frequent only in nonregular employee comments.

\* \* \*Keywords frequent (over 10%) in both regular and nonregular employee comments.

The findings of this study suggest a management model of service industries. However, the model should not be always applicable to all service industries. Combinations of text mining and quantitative methods will yield data that are more accurate; such work is planned.

### Data Availability

The.xlsx data used to support the findings of this study are available from the corresponding author upon request. However, since some text information in the original data includes personal information, some text may be edited before being provided.

### Conflicts of Interest

The authors declare that they have no conflicts of interest.

### Acknowledgments

The authors are deeply grateful to the companies and store employees who responded to the study questionnaire. The authors would also like to thank the employees of Recruit Management Solutions, who provided helpful comments and suggestions related to new developments in survey techniques. The authors also thank the Foundation for the Fusion of Science and Technology for a research grant that made this study possible.

### Supplementary Materials

Supplementary Materials shows trends in the labor force population ratios around the world. And the ratio generally refers to the population of 15 to 65 years old or 15 to 60 years old) in the total population in each country. This data supports the fact that the decline in the labor force in Japan is remarkable compared to other countries. (*Supplementary Materials*)

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