Effect of Empowering Leadership on Creativity and Ability of Employees: Comparison of Regular and Non-Regular Employees

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Abstract  
The aim of this paper is to clarify the effect of empowering leadership on the exertion of employees' creativity and ability from comparison of regular and non-regular employees. Based on the results of the literature review, we set the hypothesis that empowering leadership influences creativity and ability through mediation of psychological empowerment. In order to verify the hypothesis, multiple-group structural equation modeling (Structural Equation Modeling: SEM) was performed using questionnaire survey data obtained from 423 employees working in the wholesale and retail industries. From the analysis results, the mediating effect of psychological empowerment was confirmed only for the ability of regular employees. The mediation effect of psychological empowerment on the exertion of employees' creativity and ability of non-regular employees was not confirmed. From the results of this study, it has been clarified that the influence of empowering leadership on employee's creativity and ability depends on the employment type of the employee.

Keywords  
Regular employees, Non-regular employees, Empowering leadership, Psychological empowerment, Multiple-group SEM

(1) Introduction  
The aim of this paper is to clarify the following research questions: "Is empowering leadership by managers effective for exertion
of employees’ creativity and ability when comparing regular and non-regular employees?"¹

In recent years, the business environment has changed significantly. Therefore, not only the top management of companies but also general employees are required to exert their creativity and ability. Toma and Okamoto (2005, 2006) and Toma (2006, 2013) reveals that managerial leadership behavior plays an important role in these.

Specifically, many studies have shown that empowering leadership is effective. And, it has been clarified that the execution of empowering leadership indirectly influences creativity and abilities employees.

The effects of this execution of empowering leadership will be examined in more detail. Therefore, it is necessary to verify the effect based on the difference in industries, occupations and employment type. However, there are not so many such studies. In other words, there are few studies that demonstrate how the effects of the execution of empowering leadership differ due to these differences. Therefore, this study was reexamined by focusing on the effects of the execution of empowering leadership and the employment type (especially comparing regular and non-regular employees).

(2) Outline of Empowering Leadership Research

1. Definition of empowering leadership

Originally, leadership research focused on the principles of leadership represented by trait theories, behavioral theories, and contingency theories. In recent years, the focus has shifted to building leadership styles for application in the field. Among them, empowering leadership is the representative leadership style².

Empowering leadership is a leadership style that promotes the autonomous behavior of employees. It is defined as "this leadership style empowers employees psychologically and encourages their autonomous behavior." There are various views on the concept of empowering leadership. A common feature of these studies is the view that "leadership aims to enhance the psychological empowerment of employees³."

As an example, Aoki (2013) and Sharma and Kirkman (2015) pointed out that empowering leadership is the leadership that makes employees perceive themselves to be psychologically empowered. Empowering leadership means more than just involving employees in delegation and decision making. Rather, this leadership involves a wide range of motivations, such as the employees themselves setting goals and changing their willingness and behavior.

It was Thomas (2000) who pointed out

¹ Currently, there are more than just two types of employment in Japan: full-time and part-time. For example, regular employees, rehired regular employees, temporary employees and part-time employees, etc. Because of this situation, the terms regular employees and non-regular employees are used in this paper.

² In addition to empowering leadership, there are several leadership styles. For example, typical styles are transformational leadership and servant leadership.

³ The psychologically empowered state is that the employee recognizes himself/herself as a powerful person. In order to recognize in this way, it is said that the following specific psychological states need to be enhanced. That is, (1) sense of meaning, (2) sense of self-determination, (3) competence, and (4) sense of influence. These four psychological states are collectively called “psychological empowerment”.
that empowering leadership is a leadership that encourages autonomous behavior of employees. In recent years, companies need to acquire and maintain a sustainable competitive advantage. Therefore, it is more and more necessary for employees to think on their own, make their own decisions, and act. And these needs for employees have recently been demanded due to the lack of independence of young employees. Based on the above points, this research defines empowering leadership as follows. That is, it is "empowering leadership is a leadership that psychologically empowers employees and promotes their autonomous behavior."

2. Effects of the execution of empowering leadership

In the late 2000s, not only theoretical research but also empirical research has been focused and conducted in relation to the effects of empowering leadership exercise. As mentioned at the beginning, empowering leadership exertion is said to indirectly influence the exertion of creativity and ability by psychologically empowering employees.

Some research that highlights the exertion of creativity and ability as an effect of empowering leadership exercise are surveyed. As a result, two studies are found out. That is, 1. Research that targets individuals, 2. Research that targets teams. It has been pointed out that the effect of this exercise is not limited to innovation-related variables. And, because of exercising these, studies have also pointed out variables related to employee attitudes.

Here, specifically, some research will be presented. Zhang and Bartol (2010) studied the creativity of each employee as a result. Hon and Chan (2013) studied the creativity of the team as a result. And finally, Dewenttinck and Ameijde (2007) studied variables related to employee attitudes. This study specifically addressed job satisfaction and emotional commitment as outcome variables.

Interestingly, all of these studies had similar validation results. It was that the execution of empowering leadership indirectly influenced the outcome through the psychological empowerment of employees. This means that psychological empowerment functions as a mediation.

In order to produce results such as creativity, it is necessary to enhance the psychological empowerment of employees. And empowering leadership plays a role in making the employees perceive that they are psychologically empowered. In other words, empowering leadership does not directly affect achievements such as the exertion of employees’ creativity and ability, job satisfaction and emotional commitment. However, this means that by psychologically empowering the employee, it indirectly influences.

3. Analysis framework of this research

Based on the results of the previous studies that have already been described, this study constructed an analysis framework as shown in Figure 1. Here are the following questions. How does the execution of empowering leadership make employees exert the creativity through the psychological empowerment? And is it effective in increasing their performance? An empirical analysis of these two questions will be made clear for regular and non-regular employees within the same company.
The model in Figure 1 shows that: The manager executes empowering leadership for the employee. Then, the psychological empowerment of the employee increases. As a result, the exertion of employees’ creativity and ability are promoted. An overview of each variable in Figure 1 is shown below.

3.1 Psychological empowerment

Psychological empowerment is a concept that represents a specific psychological state of an individual. This concept consists of four dimensions: (a) meaning, (b) self-determination, (c) competence, (d) impact. The contents of these four dimensions are explained below.

(a) Meaning

A sense of meaning is the value of the goal or purpose of a task judged from the perspective of individual ideals or standards. The degree of meaning decreases when the ideals and standards of an individual deviate from the role requirements of work. On the contrary, the degree of sense of meaning increases when the ideals and criteria of the individual and the role requirements of the work match.

(b) Self-determination

A sense of self-determination means responsibility for individual behavior. It is the sense that the person has the option to initiate and control his/her actions.

(c) Competence

Competence is the ability of an organism to interact effectively with the environment by an individual. In other words, competence is the degree of confidence that one’s actions can influence the environment. It is a concept similar to self-efficacy. Some researchers consider these two to be the same concept. The difference between this competence and self-efficacy is that the belief in one’s own behavior is defined in its interaction with the environment.

(d) Impact

Impact is the degree of confidence that one’s actions make a difference from others from the viewpoint of achieving the purpose of the task, or that it produces the intended effect in the task situation.

In this research, three of these four dimensions as the constituent dimensions of psychological empowerment was set. That is a sense of meaning, a sense of self-determination, and competence.

In this study, the concepts of meaning, self-determination, and competence among these four dimensions were focused on. The reason is why these three concepts are the
preconditions for the exertion of employees’ creativity and ability. In addition, Bandura (1995) points out that self-efficacy (competence) is a prerequisite for a person to be in a state of influence. In other words, the impact is considered to be a psychological state as a result of human behavior. Therefore, this is excluded in this paper.

3.2 Empowering leadership

The dimensions that make up empowering leadership were captured from four dimensions with reference to the research by Thomas (2000). These are (a) support actions, (b) delegation of authority, (c) penetration of management policies, and (d) feedback.

(a) Support actions is to provide specialized knowledge, skills, and know-how in order to enable employees to perform their jobs well. This, of course, includes the manager's own illustration of exemplary behavior to the employee. These actions would be expected to enhance competence.

(b) Delegation of authority is a leadership action that was generally taken up in past empowerment research. As its name implies, delegation of authority would be expected to enhance self-determination.

(c) Permeation of the management policy is to make employees understand the philosophy and vision of the company. And this includes articulating the specific goals of the employee's job. Clarifying the philosophy, vision, and concrete goals will clarify the areas of action of the employees themselves. At the same time, it is expected that the employees themselves will be able to work on their jobs without feeling anxiety. The penetration of management policy, thinking from its content, would be expected to enhance its sense of meaning.

(d) The feedback is that the manager explains the result of the exercise by the employee. Employees cannot know their abilities (competence) unless feedback information is obtained. And without it, he / she cannot know the business meaning for his / her own work. Thus, it is expected that correct feedback will affect competence and a sense of meaning, enhance psychological empowerment.

3.3 the creativity exertion

The creativity was captured from four dimensions with reference to Takaishi and Furukawa (2008). That is, (1) problem discovery and solution, (2) important information action, (3) customer priority action, and (4) ideas and suggestions. Among these, three are (1) problem discovery and solution, (2) important information action, and (3) customer priority action, which are actions in the process of bringing improvement / reform to an individual’s work or plan. (4) Ideas and suggestions are actions in the process of promoting innovative proposals from the individual level to the organizational level.

3.4 the ability exertion

The ability exertion is captured from four dimensions with reference to Okubo (2011). These are (1) interpersonal ability, (2) self-ability, (3) task ability, and (4) specialized ability. Of these, competency expressed as behavioral characteristics is the three: (1) interpersonal ability, (2) self-ability, and (3) task ability. This is the ability to manifest by acting. (4) specialized ability is the ability to have the knowledge, skills and know-how necessary for work.
4. Hypothesis

The hypothesis of this research derived from the above analysis framework is as follows.

4.1 Hypothesis 1

For regular employees, the execution of empowering leadership by managers influence the exertion of their creativity and ability by enhancing their psychological empowerment.

4.2 Hypothesis 2

For non-regular employees, the execution of empowering leadership by managers influence the exertion of their creativity and ability by enhancing their psychological empowerment.

Hypothesis 1 targets regular employees. As in previous studies, the execution of empowering leadership is expected to influence the exertion of their creativity and ability by enhancing psychological empowerment.

Hypothesis 2 targets non-regular employees. Few studies have been conducted on non-regular employees. Aoki and Kitano (2019) have revealed that increased psychological empowerment of non-regular employees promotes the exertion of their creativity and ability. Therefore, in this study, even for non-regular employees, it is expected that the execution of empowering leadership influences the exertion of their creativity and ability by enhancing psychological empowerment.

(3) Method

1. Analysis method

In this study, multiple-group SEM was adopted as the analysis method. multiple-group SEM is an analysis method that compares different populations such as regular employees and non-regular employees. Therefore, in this research, empirical research is conducted using this analysis method.

By the way, the population-based analysis is an analysis method similar to the multiple-group SEM. Population-based analysis has the following two problems (Toyota, 2007). First, population-based analysis can assess differences between populations at different parts of the model. However, the differences in the model cannot be easily evaluated. Second, when analyzed by population, the number of samples per population decreases. Then, the stability of the estimated value in each population may be impaired.

Multiple-group SEM is the simultaneous analysis of different populations. Therefore, it is possible to judge the difference between populations in the entire model based on the model goodness-of-fit index. Furthermore, after the data are extracted from different populations, an analysis that considers the effects of the population is performed. Therefore, the problem that the number of samples decreases can be solved. Therefore, for the above reasons, multiple-group SEM is adopted in this study.

2. Survey method

A questionnaire survey was conducted to verify these two hypotheses. The outline is as follows.
2.1 Survey implementation period
The survey was conducted from 24 November 2017 to 11 January 2018.

2.2 Implementation location
The survey was conducted on employees in "Company A," who runs the ice cream wholesale business and the supermarket business.

2.3 Questionnaire distribution and collection method
The survey was distributed as a questionnaire through a person in contact with "Company A". And it was collected at a specific place.

2.4 Questionnaire collection rate
The questionnaire recovery rate was 84%. For details, 525 were distributed and 441 were collected. The final survey subjects were 423 people who did not have missing values for the question items used in the analysis of this study. The details were 216 regular employees and 207 non-regular employees.

2.5 Attributes of regular employees
Regarding sex, there were 216 males and 0 females. Regarding age, 57 were under 25 years old, 62 were 26-35 years old, 73 were 36-45 years old, 19 were 46-55 years old, and 5 were 56 years old or older. The number of years of service was 149 for 5 years or less, 52 for 6 to 15 years, 11 for 16 to 25 years, and 4 for 26 years or more.

2.6 Attributes of non-regular employees
Regarding sex, there were 42 males and 165 females. Regarding age, 60 were under 25 years old, 28 were 26-35 years old, 39 were 36-45 years old, 44 were 46-55 years old, and 36 were 56 years old or older. The number of years of service was 131 for 5 years or less, 54 for 6 to 15 years, 21 for 16 to 25 years, and 1 for 26 years or more.

2.7 Department
Regarding the departments to which they belonged, there were 216 root sales employees (regular) and 207 sales and customers (non-regular).

3. Question items
For the purpose of verifying the hypothesis presented in this research, the question items of the following four variables were created. These were empowering leadership (3.1), psychological empowerment (3.2), the creativity exertion (3.3), and the ability exertion (3.4). (Refer to List of question items)

All items were rated on a 6-point scale, from "exactly" to "totally different".

3.1 Measurement scale of empowering leadership
As a measure of empowering leadership, A total of 22 items were cited from the studies of Thomas (2000), Nakahara (2010) and Matsuo (2013). As for details, there were 7 items for support actions, 5 items for delegation of authority, 6 items for penetration of management policy, and 4 items for feedback.

3.2 Measurement scale of psychological empowerment
A total of 13 items of psychological empowerment were quoted from the measurement scale of Thomas (2000). As for details, 5 items were meaning, 3 items were self-determination, and 5 items were competence.

3.3 Measurement scale of creativity
A total of 16 items of creativity were quoted from Takaishi's (2013) measurement scale. The details were 4 items for problem discovery and solution, 4 items for important
information action, 4 items for customer priority action, and 4 items for ideas and suggestions.

3.4 Measurement scale of ability

A total of 12 items of ability were quoted from the measurement scales of Okubo (2010) and Motomura and Kawaguchi (2013). The details were 4 items for interpersonal ability, 2 items for self-ability, 4 items for task ability, and 2 items for specialized ability.

(4) Analysis result

1. Factor analysis results

It is necessary to verify that the data collected by the questionnaire survey has a factor structure according to the model assumed in advance. Therefore, exploratory factor analysis was conducted for all employees. This exploratory factor analysis was carried out until the structure became simple. In addition, with the eigenvalue of 1 or more as the factor extraction criterion, question items showing a factor load of less than 0.4 or multiple factors of 0.3 or more were deleted.

Then, a confirmatory factor analysis was performed based on the results of the exploratory factor analysis. This verified the goodness of fit of the model and the data. The model fitness index used here is as follows: GFI (Goodness of Fit Index), AGFI (Adjusted Goodness of Fit Index), CFI (Comparative Fit Index), RMSEA (Root Mean Square Error of Approximation).

In addition, it is considered that the model goodness of fit indexes does not show a sufficient value. Therefore, for the purpose of standardizing the coefficient from the latent variable of each factor to the observed variable, the items showing relatively low values were deleted. Then, confirmatory factor analysis was performed again. For the question items that make up each variable, the α coefficient was calculated based on 0.7 or more. Its reliability was confirmed. The results of these factor analyses are as follows.

Empowering leadership was a three-factor structure with a total of 13 items. Psychological empowerment was a three-factor structure with a total of seven items. Exertion of creativity was a four-factor structure with a total of 16 items. It was found that the exertion of the ability was a two-factor structure with a total of 12 items.

Regarding empowering leadership, this study did not identify support actions and delegation. Therefore, it is newly named as a delegation support action. Also, regarding the exertion of ability, no distinction was made between (2) self-ability, (3) task ability, and (4) specialized ability. Therefore, it was newly named personal ability. (Shown in Table 1~Table5).

The value of the α coefficient for each factor extracted by factor analysis was 0.7 or higher in all cases. Empowering leadership (delegation authority support action = .906, management policy penetration = .931, feedback = .941). Psychological empowerment (meaning = .879, self-determination = .821, competence = .907). The creativity exertion (problem discovery and solution = .900, important information action = .917, customer priority action = .927, ideas and suggestions = .937). The ability exertion Demonstrate ability (interpersonal ability = .877, personal ability = .887).
Even if the path diagrams are the same between analysis (Creativity) and non-regular employees, need to make sure that a factor model with the same structure can be assumed. For this reason, configural invariance was examined in a multiple-group SEM. Even if the path diagrams are the same between groups, the estimated values may be different.

Table 1 Results of the exploratory factor analysis (EL)

<table>
<thead>
<tr>
<th></th>
<th>Delegation support</th>
<th>Penetration of management policy</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1-1</td>
<td>.776</td>
<td>.214</td>
<td>.189</td>
</tr>
<tr>
<td>Q1-3</td>
<td>.548</td>
<td>.263</td>
<td>.200</td>
</tr>
<tr>
<td>Q1-4</td>
<td>.566</td>
<td>.219</td>
<td>.069</td>
</tr>
<tr>
<td>Q1-6</td>
<td>.594</td>
<td>.250</td>
<td>.188</td>
</tr>
<tr>
<td>Q1-8</td>
<td>.702</td>
<td>.039</td>
<td>.096</td>
</tr>
<tr>
<td>Q1-9</td>
<td>.873</td>
<td>.021</td>
<td>.007</td>
</tr>
<tr>
<td>Q1-11</td>
<td>.709</td>
<td>.031</td>
<td>.018</td>
</tr>
<tr>
<td>Q1-14</td>
<td>.135</td>
<td>.746</td>
<td>.014</td>
</tr>
<tr>
<td>Q1-15</td>
<td>.105</td>
<td>1.005</td>
<td>.013</td>
</tr>
<tr>
<td>Q1-16</td>
<td>-.067</td>
<td>.955</td>
<td>.003</td>
</tr>
<tr>
<td>Q1-19</td>
<td>.223</td>
<td>.150</td>
<td>.800</td>
</tr>
<tr>
<td>Q1-20</td>
<td>-.046</td>
<td>-.018</td>
<td>.915</td>
</tr>
<tr>
<td>Q1-21</td>
<td>.077</td>
<td>.094</td>
<td>.869</td>
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Table 2 Results of the exploratory factor analysis (PE)

<table>
<thead>
<tr>
<th></th>
<th>Meaning</th>
<th>Self-determination</th>
<th>Competence</th>
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</thead>
<tbody>
<tr>
<td>Q2-1</td>
<td>.709</td>
<td>-.056</td>
<td>.100</td>
</tr>
<tr>
<td>Q2-3</td>
<td>.877</td>
<td>.020</td>
<td>-.005</td>
</tr>
<tr>
<td>Q2-4</td>
<td>.884</td>
<td>.045</td>
<td>-.067</td>
</tr>
<tr>
<td>Q2-7</td>
<td>.083</td>
<td>.656</td>
<td>.019</td>
</tr>
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<td>Q2-8</td>
<td>-.058</td>
<td>1.015</td>
<td>.005</td>
</tr>
<tr>
<td>Q2-10</td>
<td>.050</td>
<td>.023</td>
<td>.762</td>
</tr>
<tr>
<td>Q2-11</td>
<td>.027</td>
<td>.001</td>
<td>.966</td>
</tr>
</tbody>
</table>

Table 3 Results of the exploratory factor analysis (Creativity)

<table>
<thead>
<tr>
<th></th>
<th>Problem discovery and solution</th>
<th>Important information action</th>
<th>Customer priority action</th>
<th>Ideas and suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3-1</td>
<td>.868</td>
<td>.075</td>
<td>.099</td>
<td>-.022</td>
</tr>
<tr>
<td>Q3-2</td>
<td>.801</td>
<td>.047</td>
<td>.079</td>
<td>-.079</td>
</tr>
<tr>
<td>Q3-3</td>
<td>.687</td>
<td>-.004</td>
<td>.023</td>
<td>.079</td>
</tr>
<tr>
<td>Q3-4</td>
<td>.606</td>
<td>-.096</td>
<td>.054</td>
<td>.178</td>
</tr>
<tr>
<td>Q3-5</td>
<td>.193</td>
<td>.660</td>
<td>.073</td>
<td>.008</td>
</tr>
<tr>
<td>Q3-6</td>
<td>.015</td>
<td>.869</td>
<td>.062</td>
<td>.060</td>
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Table 4 Results of the exploratory factor analysis (Ability)

<table>
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<tr>
<th></th>
<th>Interpersonal ability</th>
<th>Personal ability</th>
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</thead>
<tbody>
<tr>
<td>Q6-1</td>
<td>.787</td>
<td>-.082</td>
</tr>
<tr>
<td>Q6-2</td>
<td>.792</td>
<td>-.049</td>
</tr>
<tr>
<td>Q6-3</td>
<td>.738</td>
<td>.018</td>
</tr>
<tr>
<td>Q6-4</td>
<td>.824</td>
<td>-.077</td>
</tr>
<tr>
<td>Q6-5</td>
<td>.110</td>
<td>.501</td>
</tr>
<tr>
<td>Q6-6</td>
<td>.205</td>
<td>.580</td>
</tr>
<tr>
<td>Q6-7</td>
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<td>.523</td>
</tr>
<tr>
<td>Q6-8</td>
<td>.184</td>
<td>.564</td>
</tr>
<tr>
<td>Q6-9</td>
<td>.245</td>
<td>.529</td>
</tr>
<tr>
<td>Q6-10</td>
<td>.280</td>
<td>.501</td>
</tr>
<tr>
<td>Q6-11</td>
<td>-.129</td>
<td>.969</td>
</tr>
<tr>
<td>Q6-12</td>
<td>-.048</td>
<td>.919</td>
</tr>
</tbody>
</table>

Table 5 Results of the confirmatory factor analysis

<table>
<thead>
<tr>
<th></th>
<th>GFI</th>
<th>AGFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL</td>
<td>.887</td>
<td>.843</td>
<td>.906</td>
<td>.078</td>
</tr>
<tr>
<td>PE</td>
<td>.921</td>
<td>.897</td>
<td>.943</td>
<td>.065</td>
</tr>
<tr>
<td>Creativity</td>
<td>.916</td>
<td>.874</td>
<td>.957</td>
<td>.081</td>
</tr>
<tr>
<td>Ability</td>
<td>.898</td>
<td>.854</td>
<td>.914</td>
<td>.071</td>
</tr>
</tbody>
</table>

Next, two populations, regular employees and non-regular employees, need to make sure that a factor model with the same structure can be assumed. For this reason, configural invariance was examined in a multiple-group SEM.
As a result, the goodness-of-fit index was shown as a good model in any scale. The results are shown in Table 6. Thus, the configural invariance was confirmed.

Table 6 Goodness-of-fit index for placement-invariant model

<table>
<thead>
<tr>
<th></th>
<th>GFI</th>
<th>AGFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL</td>
<td>.855</td>
<td>.791</td>
<td>.938</td>
<td>.065</td>
</tr>
<tr>
<td>PE</td>
<td>.971</td>
<td>.925</td>
<td>.983</td>
<td>.033</td>
</tr>
<tr>
<td>Creativity</td>
<td>.905</td>
<td>.852</td>
<td>.931</td>
<td>.055</td>
</tr>
<tr>
<td>Ability</td>
<td>.894</td>
<td>.831</td>
<td>.917</td>
<td>.065</td>
</tr>
</tbody>
</table>

2. Results of model analysis by employment type

The aim of this research was to make a difference in each model due to the difference in employment type. To examine these, it was necessary to perform a multiple-group SEM. In the multiple-group SEM, the following three models were set.

Model 1: all path coefficients are unconstrained
Model 2: assuming equal path coefficients from latent variables to observed variables
Model 3: in addition to Model 2, it is assumed that the path coefficients between latent variables are also equal

It was examined whether a model of the same structure was assumed. Note that GFI, AGFI, CFI, RMSEA, and AIC (Akaike’s Information Criterion) were used as the fitness index of each model. As a result, the goodness-of-fit index of Model 2 was the best overall. (Shown in Table 7). For this reason, Model 2 was adopted in this study. Then, the subsequent analysis was conducted.

Table 7 Fitness index of each model

<table>
<thead>
<tr>
<th></th>
<th>GFI</th>
<th>AGFI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>AIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>.757</td>
<td>.716</td>
<td>.881</td>
<td>.056</td>
<td>2381.691</td>
</tr>
<tr>
<td>Model 2</td>
<td>.755</td>
<td>.720</td>
<td>.880</td>
<td>.052</td>
<td>2371.240</td>
</tr>
<tr>
<td>Model 3</td>
<td>.753</td>
<td>.720</td>
<td>.878</td>
<td>.055</td>
<td>2387.213</td>
</tr>
</tbody>
</table>

Please refer to Figure 2 and Figure 3. These figures show the results of the multiple-group SEM of Model 2 by employment type. For psychological empowerment, which is a mediating variable, the 95% confidence interval was calculated by the bootstrap method (1,000 re-samplings), and it was examined whether the indirect effect was significant.

We also confirmed the extent to which the path coefficient from the empowering leadership of the independent variable to the creativity and ability of the dependent variable were changed by interposing the mediating variable. Based on this, it was examined whether the mediating effect of psychological empowerment is a complete mediation or a partial mediation. The indirect effect is significant if 0 is not included in the 95% confidence interval. And, if 0 is included, it becomes insignificant. Also, when the value of the path coefficient becomes insignificant, it becomes a complete mediation. If it remains significant, it is a partial agent.
The results of the analysis partially supported Hypothesis 1. And, the result supporting Hypothesis 2 was not obtained.

For regular employees, manager’s empowering leadership was influenced by psychological empowerment to exert their abilities. However, creativity was not influenced by psychological empowerment.

On the other hand, for non-regular employees, the manager's empowering leadership had no effect on the exertion of employees’ creativity and ability, through psychological empowerment.

In regular employees, the relationship between empowering leadership and the exertion of employees' ability did not include 0 in the 95% confidence interval (.040, .693). The value of the path coefficient from empowering leadership to ability development changed from .345 (p < .001) to .020 (non-significant). Therefore, the mediating effect of psychological
empowerment was complete mediation.

On the other hand, when the objective variable was creativity, 0 was included in the 95% confidence interval (-.134, .674). Therefore, the mediating effect of psychological empowerment was not confirmed.

The relationship between empowering leadership and the exertion of employees’ creativity and ability in non-regular employees is as follows. When the objective variable was creativity, 0 was included in the 95% confidence interval (-.027, .256). When the objective variable was ability, 0 was included in the 95% confidence interval (-.053, .260). In all of the above cases, the mediating effect of psychological empowerment was not confirmed.

(5) Conclusion of this study
1. Discussion of analysis results

Here, the analysis results of this research are summarized.

In short, the effects of empowering leadership were different for regular and non-regular employees.

In a conventional study of regular employees, it was said that empowering leadership influences the exertion of employees’ creativity and ability through psychological empowerment. In the present study, similar results were obtained with regard to the results of verification of employees’ ability exertion. However, the mediating effect of psychological empowerment was not confirmed in the result of verification of employees’ creativity exertion. This was thought to be because the data was collected and analyzed for employees whose tasks were relatively routine. It would, of course, be expected to have different results when targeting employees whose tasks are complex.

A study of non-regular employees found no mediating effect of psychological empowerment on either creativity or performance. However, looking at the magnitude of the pass coefficient for creativity and performance of abilities from the model for non-regular employees, psychological empowerment had a great influence. It was found that psychological empowerment needs to be enhanced to promote the creativity and ability of non-regular employees. That is, the reason why the mediating effect of psychological empowerment was not confirmed was examined. It shows that empowering leadership is not effective for non-regular employees.

The reason why empowering leadership did not affect the psychological empowerment of non-regular employees will be considered. The first reason is that when compared with regular employees, the purpose of work and the opportunity for vocational training were different. Non-regular employees and regular employees generally have different opportunities for in-house training. The lesser opportunities for in-house training, such as non-regular employees, make them less confident that they will be able to perform their actions well, even if they are assigned the job. Therefore, it becomes difficult to improve the competence.

The most common reason for non-regular employees to work under the status of non-regular employment is to earn supplementary income. In a comprehensive fact-finding survey (2014) on diversification of
employment styles, the Ministry of Health, Labor and Welfare shows the reasons for choosing the employment style of non-regular employment. Most often I was able to work at my convenience (37.9%). And the next most thing I wanted to do was get home assistance and tuition (30.6%). When working for this purpose, even if delegated to the power of the organization, they would only see it as an increase in the amount of work if they could not increase the income. In other words, the non-regular employee thinks that the purpose of the work and the role demand of the company are divergent. That means that the sense of meaning does not increase. As described above, in order to enhance the psychological empowerment of non-regular employees, not only empowering leadership but also a management system that supports them within the company (changes in job design and compensation system, etc.) is necessary.

2. Subsequent issues

Finally, the issues in this paper are summarized below. First, we could not clarify the process of non-regular employees to the exertion of their creativity and ability. The starting point of this research was the research question, "Is the empowering leadership by managers effective for the exertion of employees' creativity and ability?" It was to clarify this from the comparison between regular employees and non-regular employees. It was found that empowering leadership, which is valid for regular employees, is not valid for non-regular employees. However, it was not clear what was the factor that encouraged the exertion of employees' creativity and ability of non-regular employees. Regarding these points, it is necessary to empirically clarify the relationship between the management system (job design and reward system) and psychological empowerment as a factor different from empowering leadership. The above is the subsequent subject.

Secondly, there may be a bias in the collected data. For example, even employees with the same employment pattern may have different results depending on gender. However, the data collected in this study did not have any female regular employees. The effect of empowering leadership could not be verified by gender comparison. In the subsequent studies, it is necessary to verify the effect of empowering leadership from the combination of employment type and gender. In addition, it was the wholesale / retail industry that was the subject of this study. It was necessary to conduct a similar survey for other wholesale / retail and restaurant businesses where non-regular employees often carry out core business. These are indispensable verifications because they serve as the basis for examining the possibility of generalizing the theory. It will be the subject after that.

References


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**Appendix**

**Questions about empowering leadership (22 items)**

**Support actions**
Q1-1 Your boss often provides specialized knowledge, skills, and know-how that will improve your work.
Q1-2 My boss often dispatches a help boat when you are in trouble.
Q1-3 Your boss patiently takes time to discuss your business problems.
Q1-4 My boss is trying to lead his subordinates by setting an example.
Q1-5 Your boss will give you an objective opinion about your work.
Q1-6 Your boss is encouraging you to come up with a way to work when your job goes wrong.
Q1-7 My boss treats his subordinates equally.

**Delegation of authority**
Q1-8 My boss listens to the ideas and suggestions given by his subordinates.
Q1-9 My boss often gives my subordinates a chance to express their opinions.
Q1-10 The boss basically entrusts you with the work.
Q1-11 Your boss will let you do the work you can do if you work hard.
Q1-12 My boss entrusts me with a task that is slightly higher than your ability.

**Penetration of management policy**
Q1-13 Your boss will explain how meaningful your work is for you.
Q1-14 Your boss will explain how meaningful your job is for your company and workplace.
Q1-15 Your boss will explain to you the policies, policies and goals of the company.
Q1-16 Your boss will explain to you the meaning of the company’s policies, policies and goals.
Q1-17 Your boss will explain your workplace vision and role in relation to company-wide policies, policies and goals.
Q1-18 My boss is focusing on a few important items about your workplace issues.

**Feedback**
Q1-19 My boss will always give me hard work regardless of the success or failure of your work.
Q1-20 Your boss first tells you what is good about your work and then points out the problem.
Q1-21 Your boss will tell you the parts you feel have grown up in your regular work.
Q1-22 Your boss will honor your growth honestly.

Questions about psychological empowerment (13 items)

Meaning
Q2-1 You value your current work.
Q2-2 You think that your work is useful for important things.
Q2-3 The work you are doing is important to you.
Q2-4 It is meaningful to you that you try to achieve it at work.
Q2-5 You are doing something worthwhile.

Self-determination
Q2-6 How you deal with things is up to you.
Q2-7 You decide for yourself what to do at work.
Q2-8 You decide a lot of things yourself.

Competence
Q2-9 I am good at your current job.
Q2-10 You are now proficient in what you are doing.
Q2-11 You can work efficiently.
Q2-12 You can do your job well.
Q2-13 You can manage your job well.

Question items about creativity (16 items)

Problem discovery and resolution
Q3-1 You solve work problems efficiently.
Q3-2 You work while improving daily.
Q3-3 You clarify work issues/problems.
Q3-4 You work more efficiently.

Important information action
Q3-5 You are collecting information related to the company and workplace.
Q3-6 You are deepening your knowledge of the industry and competitors.
Q3-7 You are studying a field that you think is necessary for your company or work.
Q3-8 You are collecting the information necessary to carry out your work.

Customer priority action
Q3-9 You respond based on the requests and interests of customers and related departments.
Q3-10 You often hear the needs and complaints from customers and related departments.
Q3-11 You give priority to customers and related departments.
Q3-12 You give an opinion from the standpoint of the customer and related departments.

Ideas and suggestions
Q3-13 You are giving out an idea that you have never seen.
Q3-14 You come up with a better way.
Q3-15 You come up with a more efficient way.
Q3-16 You are explicitly proposing ideas for new projects and work style reforms.

Question items about demonstrating ability (12 items)

Interpersonal ability
Q4-1 You can respect the opinion of the other person more than before.
Q4-2 You can be more interested in the other person's facial expression, appearance, physical condition, etc.
Q4-3 You can talk to any person from the same point of view than before.
Q4-4 You can honestly praise the good points of the other party.

Self-ability
Q4-5 You can stabilize your mind and work more everyday than before.
Q4-6 You are more confident that your work will be accomplished better than before.

Task ability
Q4-7 You can investigate the causal relationship of problems and clarify what is the real problem than before.
Q4-8 You are not distracted by past cases and emotions and do not offer easy solutions than before.
Q4-9 You can make solutions and deal with problems faster than before.
Q4-10 You can act with the belief that you can always achieve it more than before.

Specialized ability
Q4-11 You are able to work faster than before.
Q4-12 You are able to work more accurately than before.

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