

# Enhancing Employee Engagement through Improving Motivation

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## Abstract

**Purpose** –The purpose of this paper is to test employee motivation how to influence employee engagement.

**Design/methodology/approach** – Based on Herzberg's two factor theory and Maslow's hierarchy of needs theory, the model of improving employees' motivation was constructed. According to the improved employee motivation model, the improved employee motivation and employee engagement model are constructed. By testing the model of improving employee motivation and employee engagement, this paper studies how to improve employee motivation to enhance employee engagement.

**Findings** –By testing the model of improving employee motivation and employee engagement, it is found that improving employee motivation can motivate employees' emotion and enhance employee engagement.

**Research limitations/implications** –This paper just tests the motivational factors that affect employee engagement; future research will design specific interventions and conduct related analysis.

**Practical implications** – The paper describes how the model can be applied to help individuals navigate the realities and challenges of their careers. Enterprises need to grasp the degree of work motivation, focus on the development of personal motivation and strengthen environmental motivation.

**Originality/value** – The previous research has scattered factors that affect the degree of engagement. This paper has conducted a comprehensive and systematic review of the motivational factors that affect the degree of employee engagement.

**Keywords:** Cloud computing, Employee motivation, Herzberg's two factor theory, Employee engagement, Job motivation

## 1. Introduction

In today's world, science and technology are advancing by leaps and bounds, the competition for national power is becoming increasingly fierce. One of the major challenges faced by organizations is to achieve sustainable competitive advantage. To survive and develop effectively, organizations must recruit and retain a talented workforce, and encourage them to employ and express their full capabilities at work. In other words, organizations must have engaged employees who are willing to invest their physical, cognitive, and emotional energies in their job performance. Employees' job engagement, as a result, has received much attention from both scholars and practitioners in recent years (Saks and Gruman, 2014).

"Employee Engagement" as a concept has started gaining momentum in past decade (Saks, 2006; Lacy, 2009). Organizations have understood that to remain competitive it has become important to retain skilled employees (Lockwood, 2007). An engaged workforce with a willingness to invest energy in job performance is a crucial asset of organizations. Specifically, within the context of highly socialized higher education, universities have to strive for higher competitive competencies and reputation (Delbariet al., 2020).

In summary, this study used the work characteristics model to build a model of improving employee motivation and employee engagement. Testing the model of improving employee motivation and employee engagement, this paper studies how to improve employee motivation to enhance employee engagement.

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## 2. Review of Related Literature

### 2.1 Literature related to the variables

#### 2.1.1 Engagement.

One of the core issues of human resource management is how to retain talents and fully mobilize the enthusiasm of employees in the fierce competition environment (EP and Crowley-Henry, 2019). Hawthorne's experiment makes the management research focus on the human factors. On the one hand, managers began to pay attention to the needs of employees. How to motivate employees and meet the needs of employees has become an important issue in human resource management. Many studies also focus on the exploration of incentive factors and incentive methods. On the other hand, Hawthorne's experiment also points out the important influence of employees' emotions in work. Employees' emotion management has become an important factor affecting personal performance. In recent years, more and more studies have begun to explore the influence of employees' s in work situations. The traditional incentive theory takes individual needs as the starting point to meet the needs of employees. According to Maslow's hierarchy of needs theory, individuals have not only physical, security and other material needs, but also non-material needs such as belonging, respect and self-realization (Lee, Rocco and Shuck, 2020). The existence of employees' multi-level needs inevitably requires organizations to take a variety of incentive measures to improve employees' motivation. At present, the incentive mode of Chinese enterprises is still based on material incentives. A large number of previous empirical studies have proven that material incentives such as salary, welfare and equity play an important role in mobilizing the enthusiasm of employees. However, material incentives are not the main source of employees' enthusiasm. Simple material incentives will make employees have anti incentive. When the material incentive increases to a certain extent, its marginal benefit to employees decreases (Wu and Wu, 2019). At the same time, the material incentive effect is also limited by the position of employees, enterprise policies, economic environment and other aspects, which cannot be increased without limit. Therefore, given the material incentives cannot be fully in place and the incentive effect is limited, increasing the non-material incentive for employees can effectively alleviate employees' inner dissatisfaction, stimulate their work enthusiasm, and then improve organizational performance.

Under the influence of positive psychology, the positive psychological and emotional experience of employees in the organizational context has become a hot spot of management research, which is embodied in the rise of employee engagement research (Johansen, Sowa, 2019). Employee engagement refers to the degree of employees' emotional, cognitive and behavioral involvement in the role of the organization. It is an important indicator of employees' working status. In recent years, it has received great attention in practical and academic fields. After years of research, several large foreign consulting companies have found that higher level of employee engagement has a significant positive effect on improving enterprise performance. In the academic field, relevant scholars have also conducted in-depth research on employee engagement. They found that employee engagement has an important impact in the organization, not only on employee attitudes such as job satisfaction and organizational commitment, but also on employee behaviors such as innovation, organizational public behavior and turnover intention. In addition, the rise of positive psychology also led to emotional research becoming a research hotspot. The research on employees' emotions has also penetrated into many aspects of research. Many researchers have come to realize that employees' affective behavior is the mediator of organizational performance. It is in this context that this study studies how to improve employee engagement by improving employee motivation

#### 2.1.2 Motivation.

In the late 20th and 21st centuries, theorists sought to determine what motivates people and, in response, a series of motivation theories were developed. In their study, Herzberg et al. (1959) described extrinsic motivation as hygiene factors. These hygiene factors included salary, working conditions, job security, quality of supervision, and company policies.

Extrinsic motivators were similarly understood by Alderfer (1972) as existence and McClelland (1961) as the need for affiliation. It has been theorized that these factors support the lower tiers of Maslow's (1943) Needs Hierarchy (Hersey & Blanchard, as cited by Pardee, 1990) and thus do not tend to act as motivators for higher-level needs (Pardee, 1990). Even so, Maslow (1943) noted the importance of having basic needs—physiological, safety, and love and belonging—met before higher-level needs—esteem and self-actualization—could be met.

Motivation theorists have generally described intrinsic motivation factors as meeting higher-level needs with a common understanding that humans are driven by a more emotional and personal reward (Alderfer, 1972; Hackman &

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Oldham, 1975; Herzberg et al., 1959; Maslow, 1943; McClelland, 1961; Pink, 2011; Ryan & Deci, 2000). Although there is some differentiation, the specific theorized intrinsic motivating factors tend to overlap (see Figure 8). Because of their maturity, adult learning is mostly driven by these internal rewards, including self-actualization, self-esteem, and the need to learn (Knowles, Holton, & Swanson, 2012; Tough, 1971).

## 2.2 Models

Based on Herzberg's two factor theory and Maslow's hierarchy of needs theory, this paper constructs the motivation model for improving employees. This paper constructs the motivation model for improving employees by using the structure of work motivation, employee personal motivation and organizational environment motivation (Kirrane, Kilroy and O'Connor, 2019).

The specific composition of the work itself incentive is as follows: the internal incentive theory holds that the incentive brought by the work itself, compared with the external incentive, has a more stable, more lasting and stronger incentive effect. Therefore, it is considered that the work incentive is a very important incentive factor in an organization. The definition of work incentive is based on the work characteristics model of Hackman and Oldham. The work characteristics model as proposed by Hackman and Oldham, is the most influential model in the research of job motivation. By studying the specific characteristics of the work and its mechanism, the theory identifies the work characteristics that need to be improved and increases the incentive potential of the work through the process of job redesign, so as to promote the positive attitude and behavior of the employees towards the work itself. Since the advent of the first mock exam theory, many scholars have studied the structure of this model. The research focuses on the definition of core work dimension and the mediation of key psychological states (Dawkins, 2019). The work characteristics model points out that any work can be divided into five dimensions for analysis, including skill diversity, task integrity, work importance, work autonomy and work feedback. Among them, skill diversity refers to the scope of employees' work, as well as the diversity of skills and abilities that employees should have to complete the work; task integrity refers to the extent that employees' work needs to be completed as a whole; work importance refers to the extent to which individual work affects others' life or work; work autonomy refers to the extent to which employees' work needs to be completed as a whole. It refers to the degree to which employees have the freedom and accuracy to complete their work plan in time and in the process of work execution.

The work characteristics model is shown in Figure 1.

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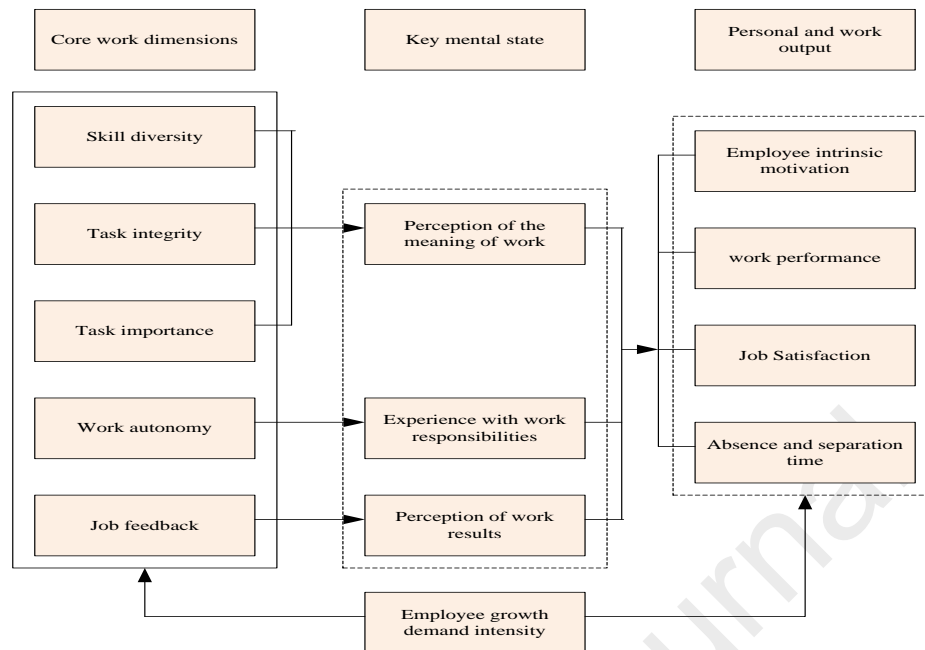


Figure1: Work characteristics model

As shown in Figure 1, five core work characteristics have a positive effect on individual work achievements by influencing the key psychological state of employees, including high internal motivation, high work performance, high job satisfaction, low absence rate and mobility rate. As the intermediary variable, employees have three key psychological states, including the sense of work meaning, the experience of work responsibility and the cognition of work results. Among them, diversity of skills, task integrity and work importance can make employees experience the significance of work, work autonomy makes employees feel the sense of responsibility of work, and work feedback helps employees understand the actual results of work activities. In addition, the work characteristics model also emphasizes the role of the intensity of the growth needs of employees in the adjustment between the work dimensions and work output. Among them, growth demand intensity refers to the needs of employees in learning, development and beyond themselves (Feibert and Jacobsen, 2019). The growth demand of employees is high, and the core dimension of work characteristics will have a stronger impact on the key psychological state of employees, thus showing more positive working attitude and behavior.

In order to specifically analyze the five dimensions of the work characteristic model, Hackman and Oldham designed a set of work diagnosis questionnaires and gave a calculation formula. Based on the score of the five dimensions of the work characteristics, they calculated the score of the incentive potential of the work, so as to measure the incentive effect of the work (Xing, et al., 2019).

The relationship between motivation and the five factors of the Hackman and Oldham design is as follows:

$$Score = \frac{(V + I + S) \times A \times F}{3} \quad (1)$$

In formula (1), *Score* represents the score of motivation potential; *V* represents the diversity of skills; *I* represents the consistency of tasks; *S* represents the importance of tasks; *A* represents autonomy; *F* represents feedback.

The Work characteristics model has a far-reaching influence in the field of employee motivation. The division of five dimensions of skill diversity, task integrity, work importance, work autonomy and work feedback is applicable to almost all work tasks, helping to comprehensively and systematically analyze the incentive effect of work itself on

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employees in practice (Basit, 2019). Therefore, using this model, the five factors of skill diversity, task integrity, work importance, work autonomy and work feedback are taken as the specific content of work motivation.

Based on path theory, this paper studies the content of personal motivation. The specific composition of individual motivation is as follows: individual motivation is different from work motivation and environment motivation. It is mainly from the individual employees, and the organization directly acts on the employees and is reflected in the employees' perception of personal development, organizational recognition and care. Specifically, it includes six factors: salary promotion and reward, training and learning, career development, participatory management, recognition incentive and work life support. Among them, salary promotion and reward mainly refer to external material rewards.

Training and learning motivation includes training, continuing education, tutorial systems, temporary training, job rotation and other ways and mechanisms that are conducive to employees' learning and development. These learning and training opportunities, on the one hand, can provide employees with the skills they need in their work, on the other hand, they can help employees improve their ability and enthusiasm to work. Therefore, learning and training incentives in practice has been highly valued by human resource managers (Guo, et al., 2019). Through the systematic study and training of staff, we can mobilize well the work enthusiasm of the staff, and comprehensively improve the quality of the staff.

Career development incentive refers to the organization helping employees to plan and manage their career, including helping employees with career planning, providing necessary career guidance according to employees' needs, providing various forms of career channels, helping employees to obtain development space in the organization and achieve personal career success. Many scholars have done research on organizational career planning and career guidance, and found that employees who get more organizational career support tend to show higher job satisfaction, organizational commitment and job involvement. Zhang Xiujuan, a domestic scholar, believes that promotion is an important way for employees' personal career development. Employees who get promotion opportunities will think that it is an affirmation and appreciation of the enterprise's work ability and performance, which helps to mobilize employees' work enthusiasm.

Recognition incentive refers to an organization's timely affirmation of employees' working ability, efforts and achievements through intangible ways such as oral praise or tangible ways such as honorary titles (Sobhani, Haque and Rahman, 2021). S. H. Appelbaum and R. Kamal investigated the job satisfaction of employees in small enterprises, and found that the recognition behavior of employees, as a non-material incentive factor, plays an important role in the satisfaction of employees in small enterprises. Zhao Shuming, a domestic scholar, puts forward the concept of honor pressure. He thinks that organizations should regard honor as a pressure inducement to make employees have a strong sense of honor, and then generate internal pressure, and take the initiative to put forward higher work goals, so as to show a positive working state.

Participatory management refers to allowing employees to participate in the organization's daily management and decision-making process. In the process of participating in management, employees feel the trust and attention of the organization to themselves, thus producing a strong sense of responsibility and closely connecting their own development with the development of the organization. Likern believes that participation in management can satisfy employees' desire for self-realization, so as to further enhance employees' work enthusiasm and improve their work performance (Maki, et al., 2019). This is mainly because employees show a high degree of acceptance for the management decisions they participate in, and are willing to make more efforts to implement these decisions. When the decisions are successful, they can also meet the employees' self-realization needs to a certain extent.

Work life support refers to the measures that an organization provides to employees at work, which are conducive to promoting their family life and maintaining work life balance (Campos-Garcia and Zuniga-Vicente, 2019). Eisenberger, an American social psychologist, puts forward the concept of organizational support. He believes that when employees feel support and care from the organization, they will be inspired and motivated psychologically, and leading to better work performance. As a subset of perceived organizational support, work life support has been proven

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in previous studies to significantly reduce work family conflict and improve the level of work family promotion, so as to help employees put into daily work in a better state.

Environmental incentive refers to the enterprise providing various resources for employees, to create a comfortable working environment for employees, so that employees can better work. Organizational environment includes hard environment and soft environment. Workplace and office facilities belong to hard environment, while company systems, corporate culture and interpersonal relationships belong to soft environment.

Workplace facilities: workplace facilities, to a certain extent, will affect the psychological state of employees, and then affect the working state of employees, and ultimately affect the work efficiency of employees. Comfortable office space, complete office facilities and safety management in place can help employees improve their attention and devote themselves to work. At the same time, supporting entertainment places and canteens can help employees relax after work (Ahmat, Arendt and Russell ,2019) . Jiang Qinfeng and Jiang Hongling think that the influence of environment on people's ideology and behavior is very obvious, even decisive. The quality of the working environment is an important factor that affects employees' work enthusiasm and productivity.

Company system: a mature company should have a set of scientific and perfect rules and regulations. At the same time, these rules and regulations should be strictly implemented, and pay attention to the fairness and impartiality of rewards and punishments. Graham found that a scientific and perfect company management system can help employees get rid of other factors that interfere with their work, concentrate on their work and improve their work efficiency.

Corporate culture: corporate culture includes values, development prospects and missions, among which values are the core of corporate culture. A good corporate culture is reflected in the company values being highly recognized by employees, a development strategy consistent with employees' personal goals, clear development vision and mission, and good corporate image (Zhang and Inness ,2020). McKinsey ranked the key factors to motivate employees and found that organizational culture and values ranked first in importance to motivation. Excellent corporate culture can become the spiritual sustenance and belief of employees, enhance their sense of identity to the enterprise and sense of honor as members of the organization, and greatly stimulate their work enthusiasm and potential.

Interpersonal relationships: in the organizational environment, harmonious interpersonal relationships help employees to carry out work and relieve psychological pressure. The study found that good interpersonal relationships can effectively stimulate the enthusiasm and initiative of employees, and then improve the work performance of employees. The interpersonal relationship is further divided into colleague relationships and superior subordinate relationships (Lee and Song,2019). Among them, the relationship between superior and subordinate is the focus of relationship research. Many studies show that the quality of superior and subordinate relationship will directly affect employee's job performance, organizational citizenship behavior, job satisfaction and turnover intention. In the context of Chinese culture, superior subordinate relationship is more sensitive and plays a more important role in the attitude and behavior of employees.

The improving employee motivation model is shown in Figure 2.

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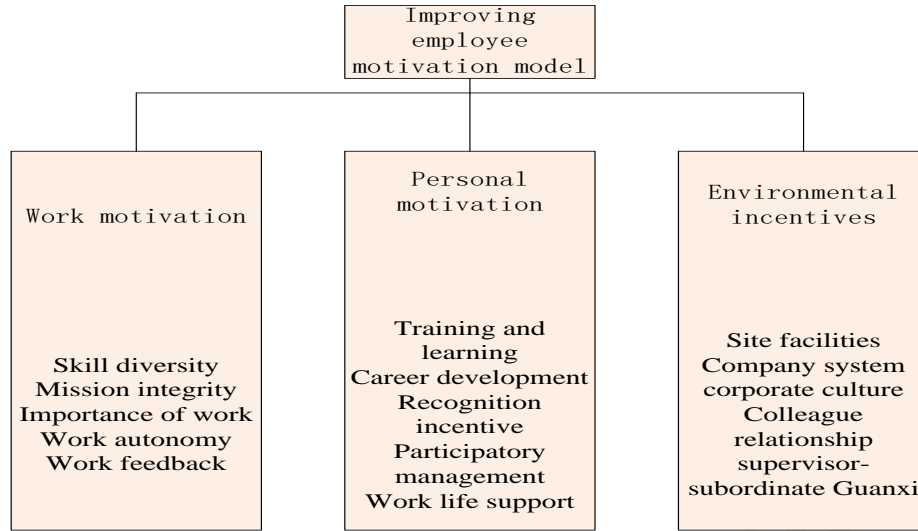


Figure2: Improving employees motivation models

### 2.3 Conceptual framework of the study

According to the improving employees motivation model, the improved employee motivation and employee engagement model are constructed (Suliman, Steitz and Rosenbloom, 2020).

In the aspect of job motivation, the most mature and widely used job feature model is adopted. The theory divides the work tasks into five dimensions: skill diversity, task integrity, work importance, work autonomy and work feedback. According to the scores of these five dimensions, the paper investigates the incentive degree of the work itself to the employees. Campion believes that complex work design can motivate employees and enhance their inner satisfaction. The work requirement resource model in the field of employee engagement research believes that work resources have a direct role in promoting employee engagement. Although the existing research rarely takes the five job dimensions of JCM as the job resource variables of JD-R model, many empirical studies have confirmed that job autonomy, job skill diversity, performance feedback and other job resource variables have a positive role in promoting employee engagement, and these job resource variables are basically consistent with the five job dimensions of JCM. Therefore, combined with JD-R and JCM models, it is considered that skill diversity, task integrity, work importance, work autonomy and work feedback can be used as antecedents to affect employee engagement, and five dimensions of work characteristics are used as antecedents, which is more comprehensive and systematic than previous studies (Aria, et al., 2019).

According to the work resource model, learning opportunities, career development, participatory management, organizational support and recognition are all work resources, which have a positive impact on employee engagement. At the same time, a large number of empirical studies also prove that these factors have a significant effect on improving employee engagement. The opportunities for learning and training, career development and participation in management provided by the organization can help employees improve themselves and better cope with the requirements of work roles. In this paper, the author points out that career development, participation in management and organizational recognition can bring employees a sense of psychological significance, and regard these incentives as the affirmation of the organization's own efforts to stimulate the enthusiasm of employees to participate in the work role. In addition, the support of the organization can bring employees a sense of psychological security, so that they can participate in the work role without worry (Smite, Solingen and Chatzipetrou, 2020). In personal motivation, organizational compensation is regarded as an important part of work resources, and its impact on employee engagement was studied. It was found that compensation can positively predict employee engagement. Therefore, the material incentive factors are also taken as the important antecedents of employee engagement.

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In the aspect of organizational environment incentive, scholars believe that the influence of environment on people's ideology and behavior is significant or even decisive. Moreover, a large number of empirical studies have proven that a company's management system, management mode and management procedures, corporate culture, employees' recognition of the organization's core values, the relationship between colleagues, and the relationship between superiors and subordinates can significantly affect employee engagement. Environmental incentives create a good working environment for employees, provide resources and psychological support, help them better engage in their work role, and show more concentration, vitality and dedication (Liu, 2021).

This paper mainly test employee motivation how to influence employee engagement.

### Research hypothesis:

Hypothesis	
	It is hypothesized that improving employee motivation has a positive impact on employee engagement.
Hypothesis h1.1	Job motivation has a positive impact on employee engagement.
Hypothesis h1.2	Personal motivation factors have a positive impact on employee engagement.
Hypothesis h1.3	Environmental incentive factors have a positive impact on employee engagement.
	It is assumed that H2 can improve employees' motivation and affect employees' work emotion.
Hypothesis h2.1	Work motivation factors have a positive impact on employees' positive emotions.
Hypothesis H2.2	Personal motivation factors have a positive impact on employees' positive emotions.
Hypothesis H2.3	Environmental incentive factors have a positive impact on employees' positive emotions.
Hypothesis h2.4	Work incentive factors have a negative impact on employees' positive emotions.
Hypothesis h2.5	Personal motivation factors have a negative impact on employees' positive emotions.
Hypothesis h2.6	Environmental incentive factors have a negative impact on employees' positive emotions.
	It is assumed that the work emotion of H3 employees plays an intermediary role in improving the influence of motivation on engagement.
Hypothesis h3.1	Positive emotion plays an intermediary role in the influence of work incentive factors on engagement.
Hypothesis h3.2	Positive emotion plays an intermediary role in the influence of individual incentive factors on employee engagement.
Hypothesis h3.3	Positive emotion plays an intermediary role in the influence of environmental incentive factors on employee engagement.
Hypothesis h3.4	Negative emotion plays an intermediary role in the influence of work incentive factors on employee engagement.
Hypothesis h3.5	Negative emotion plays an intermediary role in the influence of individual incentive factors on employee engagement.
Hypothesis h3.6	Negative emotion plays an intermediary role in the influence of environmental incentive factors on employee engagement.

## 3. Research methodology

By testing the model of improving employee motivation and employee engagement, this paper studies how to improve employee motivation to enhance employee engagement.

### 3.1 Research instrument

The motivation of improving employees is divided into non-material incentive factors and material incentive factors. Among them, the non-material incentive factors are defined as the incentive means in addition to the salary and welfare used by enterprises to meet the high-level needs of employees, such as self-development and respect. The measurement of this variable adopts the self-developed 57 item non-material motivation questionnaire, which is divided into three parts: work motivation, personal motivation and environmental motivation, each containing 15, 24 and 18 items. The reliability and validity of the questionnaire are verified. The 5 point Likert scale is used in this part, 1 stands for "strongly disagree", 2 stands for "relatively disagree", 3 stands for "uncertain", 4 stands for "relatively agree", 5 stands for "strongly agree".

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Material incentive factors are defined as tangible material means such as salary and welfare provided by enterprises to employees. The questionnaire of this variable includes four items, which measure employees' satisfaction with material incentives from the aspects of basic salary, performance salary, bonus, allowance and statutory security benefits. The Likert-5 scale is used in this part, 1 stands for "very dissatisfied", 2 stands for "relatively dissatisfied", 3 stands for "uncertain", 4 stands for "relatively satisfied", 5 stands for "very satisfied".

Work emotion is defined as people's emotional experience and mood at work, including two dimensions of positive emotion and negative emotion. The variables were measured with the work emotion scale. There were 20 items in total, which were divided into two parts: positive emotion and negative emotion, with 10 items in each part. Specifically, Likert-5 scale, 1 stands for "very little", 2 stands for "a little bit", 3 stands for "moderate", 4 stands for "much", 5 stands for "very much".

This paper adopts Kahn's definition of employee engagement, and considers that employee engagement is the process of combining individual and work role in the organizational context, which is embodied in the employee's emotional, cognitive and physical input. Schaufeli points out that employees' engagement in emotion, cognition and behavior is manifested in three aspects: concentration, dedication and vitality. Schaufeli's UWES scale is the most widely used one in current research, with high reliability, validity and cross-cultural stability. Therefore, the measurement of employee engagement is based on the uwes-9 short version scale adapted by schaufeli, with a total of 9 items, including 3 items of dedication, 3 items of vitality and 3 items of focus. It is a Likert-5 scale, with 1 representing "strongly disagree", 2 representing "relatively disagree", 3 representing "uncertain", 4 representing "relatively agree", and 5 representing "strongly agree".

A large number of existing studies have proved that employees' personal factors will directly affect their perception of enterprise incentive factors, work emotion and employee engagement. Therefore, five personal background characteristics variables namely employees' gender, age, education level, position level and working years are selected as control variables.

### 3.2 Profile of the Sample for the study

Our questionnaire sample comes from employees of power enterprises in 8 regions of Fujian Province, including 8 municipal subsidiaries, 20 county-level subsidiaries and 1 directly affiliated unit, with a total of 29 enterprises.

A total of 1592 questionnaires were distributed, of which 1426 were valid, with an effective questionnaire rate of 89.6%.

Before the formal analysis, the sample characteristics of 1426 valid questionnaires were analyzed to observe the sample distribution.

The sample distribution is as follows:

First, the proportion of male employees is higher than that of female employees (68.0% male employees), which is related to the nature of the surveyed enterprises. The nature of work in the power industry needs more male frontline employees.

Second, the age structure of the survey sample mainly concentrated in the 25-35 and 35-50 age groups, accounting for 40.5% and 51.1% of the total sample respectively, because the main distribution objects of our questionnaire are regular employees of enterprises, and the age distribution is consistent with the characteristics of the survey objects.

Third, most of the respondents' education level has reached the undergraduate level or above, and the respondents' education level is generally high.

Fourth, from the perspective of the position level of employees, most of the respondents belong to ordinary employees and grassroots managers, accounting for 80.8%.

Fifth, from the perspective of employees' entry years, the distribution of different years is relatively average, and the sample is generally representative.

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Descriptive statistical analysis of work motivation, personal motivation, environmental motivation, material motivation, positive emotion, negative emotion and engagement. It can be seen that:

First, the standard deviation of each variable is not big, but it is more than 0.5, which indicates that the degree of perceived difference of each variable is acceptable.

Second, for the average value of non-material incentive factors, employees' perceived work incentive and environmental incentive are relatively high, reaching 3.89 and 3.35 respectively; but the average value of individual incentive is only 3.35, which is in the middle and lower level, indicating that compared with other non-material incentive factors, enterprises' investment in individual incentive factors is low.

Third, the average value of material incentive is 3.60, which is in the upper middle level.

Fourth, in terms of work emotion, positive emotion (mean 2.99) was higher than negative emotion (mean 2.12).

Fifth, the average value of employee engagement is 3.35, which is in the middle and lower level.

### 3.3 Data analysis

Reliability and validity analysis of the scale: In addition to the non-material motivation self-made questionnaire, other variables are using the maturity scale as a measurement tool. Therefore, this part will use Cronbach a coefficient method and confirmatory factor analysis CFA to test the reliability and validity of the overall questionnaire.

Then the correlation analysis is carried out. Correlation analysis refers to the analysis of the degree of correlation between different variables, which is the basis of multiple regression analysis. Through correlation analysis, we can preliminarily judge whether there is interaction among dependent variables, independent variables, intermediary variables and regulatory variables.

Discuss whether there are significant differences in personal background characteristics among work motivation, personal motivation, environmental motivation, positive emotion, negative emotion and employee engagement. Five characteristic variables were selected for independent sample t-test of gender, ANOVA analysis of age, education level, position level and working years, and post comparison of Scheffe and Tamhane methods.

Significant correlation between variables does not mean that there must be causal relationship between variables, so regression analysis is needed to further analyze the relationship between variables. Therefore, multiple regression analysis is used to explain the causal relationship among the variables, the mediating role of employees' work emotion, and the moderating role of material incentives. The personal background characteristic variables (gender, age, education level, position level, working years) that affect the research variables are taken as the control variables and put into the regression equation at the same time.

### 3.4 Results and conclusion

The final test results of improving employee motivation and employee engagement model are shown in Table 1.

**Table 1:** Test results of improving employee motivation and employee engagement model

	Hypothesis	Test results
	It is hypothesized that improving employee motivation has a positive impact on employee engagement.	establish
Hypothesis h1.1	Job motivation has a positive impact on employee engagement.	establish
Hypothesis h1.2	Personal motivation factors have a positive impact on employee engagement.	establish
Hypothesis h1.3	Environmental incentive factors have a positive impact on employee engagement.	establish
	It is assumed that H2 can improve employees' motivation and affect employees' work emotion.	Partially established
Hypothesis h2.1	Work motivation factors have a positive impact on employees' positive emotions.	If not, it is a significant negative impact.
Hypothesis H2.2	Personal motivation factors have a positive impact on employees' positive emotions.	establish
Hypothesis H2.3	Environmental incentive factors have a positive impact on employees' positive emotions.	establish

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Hypothesis h2.4	Work incentive factors have a negative impact on employees' positive emotions.	establish
Hypothesis h2.5	Personal motivation factors have a negative impact on employees' positive emotions.	Not established
Hypothesis h2.6	Environmental incentive factors have a negative impact on employees' positive emotions.	establish
It is assumed that the work emotion of H3 employees plays an intermediary role in improving the influence of motivation on engagement.		Partially established
Hypothesis h3.1	Positive emotion plays an intermediary role in the influence of work incentive factors on engagement.	establish
Hypothesis h3.2	Positive emotion plays an intermediary role in the influence of individual incentive factors on employee engagement.	establish
Hypothesis h3.3	Positive emotion plays an intermediary role in the influence of environmental incentive factors on employee engagement.	establish
Hypothesis h3.4	Negative emotion plays an intermediary role in the influence of work incentive factors on employee engagement.	establish
Hypothesis h3.5	Negative emotion plays an intermediary role in the influence of individual incentive factors on employee engagement.	establish
Hypothesis h3.6	Negative emotion plays an intermediary role in the influence of environmental incentive factors on employee engagement.	establish

According to the test results in Table 1, by improving employee motivation, it can motivate employees' emotion and improve employee engagement.

#### 4. Conclusion

From the test results, at the present stage, enterprises still need to pay attention to the material incentives for employees, and improve the material conditions such as salary and welfare, which can not only effectively eliminate the negative emotions of employees, but also the premise and basis for other non-material incentive factors to provide their incentive effect. At the same time, we should grasp the degree of work motivation, focus on the development of personal motivation and strengthen environmental motivation.

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