



**FACTORS AFFECTING EMPLOYEES' ENGAGEMENT IN
E-BUSINESS**



JUAN NI

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MANAGEMENT IN MANAGEMENT SCIENCE
INSTITUTE OF SCIENCE INNOVATION AND CULTURE
RAJAMANGALA UNIVERSITY OF TECHNOLOGY KRUNGTHEP
ACADEMIC YEAR 2024
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ABSTRACT

With the rapid growth of the e-business sector, employee engagement has become essential for organizational success, customer satisfaction, and corporate reputation. This study aims to examine the impact of demographic variables on employee engagement and explore how salary fairness, employee innovation behavior, and corporate social responsibility (CSR) influence cognitive, affective, and behavioral engagement among employees in China's e-business sector. A quantitative analysis was conducted using data collected from 400 e-business employees. Descriptive statistics, including frequency and percentage, and inferential statistics, such as independent sample t-tests, one-way ANOVA, LSD post-hoc analysis, and multiple linear regression, were applied at a 0.05 significance level. The results show that gender, age, educational background, and work department do not significantly affect employee engagement. However, monthly income does lead to differences in engagement levels. Furthermore, salary fairness, employee innovation behavior, and CSR significantly influence cognitive, affective, and behavioral engagement, with salary fairness having the most substantial impact on cognitive and overall engagement. In contrast, CSR had the greatest effect on affective and behavioral engagement. Detailed recommendations are provided to enhance employee engagement in the e-business sector.

Keywords: E-business, salary fairness, employee innovation behavior, corporate social responsibility, employee engagement

ACKNOWLEDGEMENTS

The successful completion of this comprehensive literature review on the multifaceted subject of business performance in the context of Internet enterprises would not have been possible without many individuals' invaluable contributions and support.

First and foremost, I would like to extend my sincere gratitude to the researchers, scholars, and academics whose pioneering work in organizational performance, the resource-based view, knowledge management, and employee engagement laid the foundation for this study. Their dedication to advancing knowledge has been a guiding light in shaping the perspectives and understanding presented in this review.

I am deeply indebted to my academic advisors and mentors for their unwavering support, insightful guidance, and thoughtful feedback throughout this journey. Their expertise and commitment to academic excellence have been instrumental in refining the direction and scope of this research.

My heartfelt thanks go to my colleagues and peers, whose constructive discussions, shared perspectives, and encouragement have enriched the depth and breadth of this study. Their intellectual generosity and camaraderie have made this endeavor truly collaborative.

Lastly, I sincerely appreciate my family and loved ones for their steadfast support, patience, and encouragement during this research process. Their belief in my potential has been a source of strength and motivation.

To all those who have contributed in large and small ways, your efforts and support have been vital to completing this work. For that, I am sincerely grateful.

Thank you.

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CHAPTER I

INTRODUCTION

1.1 Background and Rationale

Employee engagement is of paramount significance for success and sustained growth. In the current business landscape, especially within e-business, employee engagement influences an organization's performance and shapes customer experiences and corporate reputation. E-businesses are typically in highly competitive markets, where success hinges on employee innovation, commitment, and active participation. Therefore, comprehending the factors that affect employee engagement in e-business is paramount.

Past research has underscored the positive correlation between employee engagement and an organization's profitability, customer satisfaction, and employee retention. However, the unique nature of e-business may lead to some distinctive influencing factors. For instance, e-business often requires employees to possess innovative capabilities to adapt to rapidly changing market demands. Additionally, employees' work in e-business may involve online interactions with customers and partners, impacting their affective and behavioral engagement.

Over the past decade, China's e-business industry has experienced unprecedented explosive growth, quickly becoming one of the largest e-business markets in the world. According to China E-business Research Center, China's e-business transaction volume reached 40 trillion yuan in 2023, accounting for over 50% of the global e-business market. This remarkable growth is mainly attributed to the widespread Internet adoption, the extensive use of mobile payment tools, and significant improvements in modern logistics and distribution systems. China's major e-business platforms include Alibaba, JD.com, Pinduoduo, and Suning.com. These platforms are not merely venues for product transactions; they also provide various services, such as financial services, cloud computing, and big data analytics, forming a complex ecosystem. For example, Alibaba offers payment solutions through its subsidiary Alipay and cloud computing services through Alibaba Cloud; JD.com not

only holds a significant position in the e-business sector but has also made substantial investments in fintech and logistics technology.

Employee engagement enhances service quality, innovation capability, and customer satisfaction. Highly engaged employees typically exhibit higher job satisfaction, more substantial organizational commitment, and better job performance, which translates into increased productivity, reduced employee turnover, enhanced customer satisfaction, and innovation. Therefore, understanding and improving employee engagement is important for a company's internal management and external competitiveness. Customer service and company reputation are the main factors determining an e-business's success in a highly competitive environment, and employee engagement is a major contributor. Factors influencing employee engagement include the work environment, compensation and benefits, and career development opportunities. Key elements such as a comfortable workspace, a friendly team atmosphere, competitive compensation, comprehensive benefits, transparent career development paths, and training opportunities are essential for employee engagement. By providing these supports, companies can attract and retain high-quality employees and enhance their work motivation and satisfaction, thereby laying a solid foundation for the sustained development of the e-business industry (Erisman, 2017).

Hence, this study aims to explore the factors influencing employee engagement in e-business platforms by focusing on salary fairness, employee innovation behavior, and corporate social responsibility to understand how they affect employee engagement in cognitive, affective, and behavioral engagement. By delving into these factors, the results can provide targeted management recommendations to enhance employee engagement on e-business platforms, strengthening an organization's competitiveness and sustainability.

1.2 Research Questions

This study seeks to address the following research questions:

- 1 . How do demographic variables affect the identified factors shaping employee engagement in e-business?

2 . To what extent do internal factors, including salary fairness, employee innovation, and CSR, influence cognitive, affective, behavioral, and employee engagement in e-business?

1.3 Research Hypotheses

Based on various sources and research inquiries, this paper presents the following hypotheses:

Hypothesis 1: The difference in demographic factors, including gender, age, educational background, monthly income, and department work, affect employees' engagement in e-business differently.

Hypothesis 2: Internal factors, including salary fairness, employee innovation behavior, and CSR, influence employees' engagement in e-business.

1.4 Research Objectives

The primary objectives of this study are defined as follows:

1 . Investigate the effect of individual characteristics on employee engagement of e-business employees.

2 . Explore the influence of internal factors, including salary fairness, employee innovation behavior, and corporate social responsibility, on cognitive, affective, behavioral, and employee engagement in e-businesses.

1.5 Scope of the Research Study

The scope of the study on factors affecting employee engagement in e-business includes the following aspects:

1) Area of study: The highly competitive nature of e-businesses might cause pressure and stress for employees. This research emphasized employee engagement in e-business in China. The study concentrates on two independent variables: demographic and internal factors, including salary fairness, employee

innovation behavior, and corporate social responsibility. The dependent variable is employee engagement, which includes *cognitive, affective, and behavioral engagement*.

2) Population and sample: With the widespread use of new technology and changing lifestyles, e-business has become more widespread. The concentration of the research aimed at various e-business employees in China, and the population for this study came from various departments of various e-businesses in China; therefore, the population in this study was unknown, and 400 sample size was determined from Cochran's formula.

3) Sampling method: The convenient sampling method was used to collect data.

4) Duration: The study was planned to collect, analyze, and complete research from July 2024 to September 2024.

Limitations: The study acknowledges certain limitations, such as the potential for response bias in survey data and the influence of external factors not included in the research model.

1.6 Research Framework

The research framework for this study is as follows.

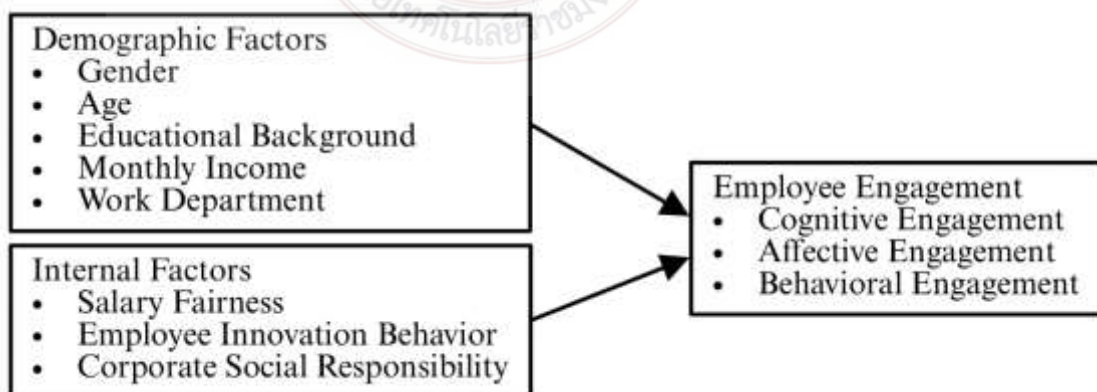


Figure 1.1 Research Framework

1.7 Significance of the Study

The significance of this study lies in its potential to contribute valuable insights to the field of e-business and organizational management. By examining the relationships between demographic factors and internal factors initiatives with employee engagement, this research can provide e-business companies with a better understanding of how to optimize their workforce and enhance engagement levels. Ultimately, the findings may improve employee satisfaction, productivity, and overall business performance in the rapidly evolving e-business industry. This study's results could inform strategic decisions and human resource management practices in e-business, potentially benefiting employees and employers in this sector.

1.8 Definition of Key Terms

The following key terms are defined:

E-business refers to an organization that uses digital technologies and networks to buy and sell goods and services, serve customers, collaborate with business partners, and conduct communications and transactions within the organization.

Employee engagement refers to employees' emotional, cognitive, and behavioral connection with their organization. It reflects their commitment, enthusiasm, and dedication to their work and the organization's goals.

Demographic factors are the characteristics of individuals, including gender, age, educational background, monthly income, and work department. These variables are often used to categorize and understand different segments of a sample.

Salary fairness relates to the perception of employees regarding the equity and justness of their compensation to their job responsibilities and performance.

Employee innovation behavior encompasses the extent to which employees actively contribute creative ideas, novel approaches, and innovative solutions to challenges and opportunities within the organization.

Corporate Social Responsibility (CSR) is the practice of businesses behaving ethically and responsibly towards society and the environment. It includes community support, environmental sustainability, and social welfare initiatives.

Cognitive engagement refers to employees' mental and intellectual involvement in their work. It involves finding meaning and significance in one's tasks and understanding how they contribute to the organization's objectives.

Affective engagement pertains to employees' emotional attachment and enthusiasm for work and organization. It involves a sense of pride, loyalty, and commitment.

Behavioral engagement focuses on the actions and behaviors of employees in the workplace. It includes exceeding the minimum job requirements, putting in extra effort, and displaying a strong work ethic.



CHAPTER II

LITERATURE REVIEW

The research on the factors affecting employee engagement in e-business in China reviewed documents, textbooks, articles, and relevant research to formulate research concepts, and it is being carried out in the following sequence.

2.1 Related Theories

2.1.1 Employees Engagement

In recent years, various organizations have increasingly focused on employee engagement levels because these levels significantly impact employee job performance. The importance of engagement to employees lies in the fact that work is a significant part of their lives and substantially influences their well-being. Wrzesniewski et al. (2002) pointed out that work affects an individual's quality of life and physical and mental health. Most people rely on work to make a living, making work more of a responsibility than a choice. However, while we cannot choose whether to work, we can choose how to work. Thus, individuals' feelings and work experiences vary greatly; some see work as monotonous and merely a way to pass the time, while others see it as a means of self-realization (Hulin, 2002).

Goffman (1959, 1961) first introduced the term "embracement" to describe individuals' behavior when they invest themselves and their energy in their roles. Goffman argued that role embracement is a spontaneous investment in role behavior, meaning individuals put tangible attention and effort into their roles (Goffman, 1961). The alignment of individual behavior with role demands is called role embracement, while misalignment is called role deviation. Goffman used the example of a traffic police officer to explain this concept. When a traffic cop vigorously directs traffic during rush hours, it represents a high level of role embracement. If, during this time, they appear idle or perform unprofessional actions, it signifies role deviation.

2.1.2 The dimensions of employee engagement

Kahn (1990) proposed that engagement is closely linked to specific job roles, and an employee's level of engagement reflects their psychological investment in

a particular organizational role. Rothbard (2001) and May and colleagues (2004) have also pointed out that the study of engagement should be associated with different roles employees have within organizations. For most organizational members, their two most important roles are their job roles and roles as members of the organization.

Previous research on employee engagement has focused on studying job engagement while neglecting to explore organizational engagement among employees. As a work attitude, organizational engagement has a more direct impact on performance than related concepts such as organizational commitment and identification. Similar to how engagement in one's job role affects performance, an employee's investment in their organization, in terms of behavior, cognition, and emotion, also influences their job performance. Saks (2006) was the first to propose a model that differentiates between job and organizational engagement in studying employee engagement. Through empirical research, he analyzed the impact of these dimensions on antecedent and outcome variables. Saks' research confirmed the validity of distinguishing between job engagement and organizational engagement, as it demonstrated that job engagement is influenced by job characteristics and organizational support and, in turn, affects variables such as organizational commitment, organizational citizenship behavior, and turnover rates. It also confirmed that organizational engagement, similar to job engagement, is influenced by these antecedent variables and impacts many of the same outcome variables.

Previous research on employee engagement has mainly focused on job engagement while neglecting organizational engagement. However, as a work attitude, organizational engagement can directly impact performance more than related concepts like organizational commitment and identification. Individual investment in an organization's behavior, cognition, and emotions, like job engagement, can influence employee performance. Saks (2006) was the first to distinguish between job engagement and organizational engagement in the context of employee engagement and conducted empirical research to analyze their impact on antecedent and outcome variables. Saks's research validated the model distinguishing between job and organizational engagement, demonstrating that job engagement is influenced by factors such as job characteristics and organizational support and, in turn, affects organizational commitment, organizational citizenship behavior, and turnover. Organizational

engagement, like job engagement, is influenced by these antecedent variables and affects most outcome variables.

May et al. (2004) used a scale of 24 items to measure Kahn's three dimensions of engagement. However, factor analysis results did not support the validity of the three-dimensional model. Rich (2006) argued that May and his colleagues' research results might be related to their choice of items, as many of their measurement items did not fit exclusively into one dimension. For example, in their measurement of the behavioral dimension, items like "I stay until the job is completed" and "I wait to leave until the job is finished" also carried motivational implications, indicating individual willingness and perseverance. May et al. (2004) assessed the cognitive dimension with items like "*Time flies when I am working*" and "*I am so engrossed in my work that I forget about everything else,*" which, according to Kahn's definition of engagement, should reflect individuals' long-term attention and dedication to their work. Furthermore, Rich (2006) pointed out that many items in May et al.'s measurement of the emotional dimension implied a high level of Employee engagement (Kanungo, 1982).

2.3 Employee Engagement Theory

Engagement is classified into 3 categories: social, affective, and intellectual engagement (CIPD & Simply Health, 2021; Singh & Sant, 2023). Intellectual involvement comprises carefully examining the task and how to better it; affective engagement entails being pleased with one's work; and social engagement entails actively finding opportunities to convey work-related improvements with co-workers. Both research and theory support the importance of effective engagement (Bakker et al., 2014). Employee engagement denotes the degree to which a person shows self-preference in job tasks to promote connections between self and job. Employee engagement can significantly enhance role performance through cognitive, emotional, and physical self-investment (Kahn, 1990). Based on the employee engagement theory, this study argues that the theory should be divided into three aspects: cognitive engagement, affective engagement, and behavioral engagement.

Cognitive engagement refers to the cognitive resources an individual invests in their work, such as focus, concentration, and engrossment. By maintaining this cognitive focus, individuals can better accomplish their tasks, improving efficiency and quality. Rothbard (2001) identifies "absorption" as a representative variable for measuring cognitive engagement, emphasizing the state of being highly focused and immersed in work. Affective engagement pertains to the emotional resources an individual invests in their job, such as enthusiasm, joy, and positive emotions. Russell and Barrett (1999) introduce the concept of "core affect" as a representative variable for affective engagement, highlighting the fundamental emotional responses experienced by individuals in their work. Affective engagement can enhance work motivation and job satisfaction, thereby improving performance. Behavioral engagement refers to the physical resources an individual invests in their work, such as the intensity and density of energy expended. Brown and Leigh (1996) developed the concept of "work intensity" as a representative variable for behavioral engagement. Behavioral engagement reflects individuals' physical effort and energy in their tasks, directly impacting efficiency and completion.

Previous studies (e.g., Huang et al., 2021) have also adopted absorption, core effect, and work intensity as variables to measure Employee engagement. These studies indicate that cognitive, emotional, and behavioral engagements collectively form the overall concept of Employee engagement and play a crucial role in influencing employee performance. Furthermore, according to Kahn's (1990) employee engagement theory, safety, meaningfulness, and availability are three important driving factors of employee engagement. Safety refers to the degree to which employees feel secure and untroubled in their work environment; meaningfulness denotes the value and significance employees perceive in their work; and availability refers to the extent to which employees can access the necessary resources and support. These three factors collectively influence Employee engagement, thereby affecting performance outcomes.

In summary, employee engagement is a multidimensional concept. Employees can demonstrate higher efficiency and quality in their work through cognitive, emotional, and physical self-investment. Understanding and enhancing

employee engagement is crucial for organizations aiming to achieve high performance and employee satisfaction.

2.4 The Analysis of Factors Influencing Employee Engagement

2.4.1 Individual-Level Factors

Individual-level factors influencing employee engagement include demographic variables (such as gender and age), personality traits, and individual psychological states. Scholars like Rothbard (2001), Schaufeli and Bakker (2003), and Kim et al. (2009) have studied the impact of gender differences on employee engagement. Their findings suggest that women tend to be less engaged than men. Schaufeli et al. (2006) expanded on Rothbard's research and delved deeper into the influence of various individual characteristics on engagement. They confirmed the influence of gender on employee engagement and observed that employee engagement tends to increase with age. Another study by Li and Wang (2011) primarily focused on knowledge workers. It examined the effects of gender, age, work experience, marital status, job position, and educational background on employee engagement. The empirical results indicated that gender, work experience, and educational level significantly influence engagement, while age and job position have no significant impact. It is worth noting that the findings of these two scholars regarding the influence of gender differ from those of foreign researchers, with Chinese female employees generally exhibiting higher levels of engagement than their male counterparts, possibly due to the stable personality traits associated with traditional Chinese women.

2.4.2 Organizational-Level Factors

Organizational-level factors affecting employee engagement encompass organizational fairness, compensation systems, job characteristics, trust within the organization, and the fulfillment of corporate social responsibility. According to social exchange theory, when employees receive fair treatment at work, including respectful leadership and fair salary compensation, they are more likely to reciprocate with positive attitudes and behaviors, increasing their engagement levels (Liu and Yang, 2015). Huang and Qian (2014) argue that high-performance work systems enhance employees' autonomy and involvement, contribute to the accumulation of employees'

knowledge capital skill improvement, boost employees' self-confidence and efficacy, allow employees to fully utilize their talents, and promote their psychological presence, thereby enhancing engagement.

2.4.3 Individual-Organization Interaction Factors

Employees are likely to engage in various positive behaviors as a feedback response to their perception of organizational support (Zhao, 2013). Therefore, the degree of alignment between individuals and their organizations significantly affects employee engagement (Maslach and Leiter, 2008). Based on consistency and complementarity perspectives, Song Xiaomei et al. (2009) examined the impact of self-concept-work fit on employee engagement. They found that self-concept-work fit significantly influences employee attitudes and behaviors, motivating high levels of engagement. Research by Gao and Zhang (2015) demonstrated that the alignment of individual-organizational culture positively affects psychological capital in employees, thereby stimulating more positive engagement behaviors.

2.5 Research on the Influence of Employee Innovation Behavior and Employee Engagement on an E-business Platform

Employee innovation behavior is essential for the competitive edge and sustained growth of e-business businesses. Recent studies have highlighted the importance of a supportive organizational culture, transformational leadership, and adequate resources in fostering employees' willingness to innovate (Zhou & Pan, 2015). For instance, e-business giant Amazon's continuous innovation culture, as noted by Chaffey (2020), allows it to consistently introduce groundbreaking features and services, ensuring it remains at the forefront of the industry. By encouraging risk-taking and rewarding creative ideas, companies can cultivate an environment where innovation thrives, leading to the development of new products and services that enhance customer satisfaction and operational efficiency.

Employee engagement drives productivity and enhances customer service within e-business businesses. Engaged employees exhibit higher levels of dedication, enthusiasm, and productivity, which are crucial for maintaining high service standards

and achieving business goals (Albrecht et al., 2015). Research by Saks (2019) indicates that high employee engagement leads to better customer satisfaction and reduced turnover rates. Companies like Alibaba leverage strong employee engagement to maintain high customer service and operational efficiency levels, contributing to their success in the competitive market. Providing a positive work environment, recognizing employee contributions, and offering career development opportunities are key strategies to boost employee engagement and business performance.

The synergistic effects of high employee innovation behavior and engagement create a robust foundation for e-business businesses to thrive. A combined approach that promotes innovation and engagement improves organizational performance and employee satisfaction (Kim & Park, 2020). This dual focus drives operational excellence and ensures that employees remain motivated and committed, ultimately leading to sustained competitive advantage and growth for e-business businesses. For instance, integrating innovative practices and high engagement levels can result in more efficient processes, better customer experiences, and a stronger market position. Companies that effectively balance these elements are more likely to achieve long-term success and resilience in the fast-paced e-business industry.

2.6 The Relationship between CSR and Employee Engagement in E-business Companies

Corporate Social Responsibility (CSR) has emerged as a crucial element in modern business practices, influencing various aspects of organizational performance. In the context of e-business companies, CSR plays a significant role in shaping employee engagement. This research examines how CSR initiatives impact employee engagement levels, affecting overall company performance and success. CSR refers to a company's commitment to ethical practices and contributions to economic development while improving the quality of life of its workforce, their families, the local community, and society. For e-business companies, CSR can include sustainable business practices, ethical sourcing, community engagement, and environmental initiatives. Employees are increasingly valuing CSR as a core component of their work environment.

According to Glavas (2016), employees who perceive their company as socially responsible are more likely to exhibit higher levels of engagement. This is because CSR aligns with their values, providing them a sense of purpose and fulfillment in their work. CSR initiatives create a positive work environment, a significant driver of employee engagement. When companies invest in CSR, they demonstrate a commitment to ethical behavior and social welfare, fostering employee trust and loyalty (Brammer et al., 2007). This positive perception can increase job satisfaction and motivation, as employees feel proud to be associated with a responsible organization. CSR activities focusing on employee well-being, such as fair wages, health benefits, and professional development opportunities, directly impact employee morale.

Research by Kim et al. (2010) indicates that employees who benefit from their company's CSR policies are more likely to stay with the company longer, reducing turnover rates and fostering a stable workforce. For e-business companies, retaining experienced employees is crucial for maintaining continuity and expertise in a rapidly evolving industry. E-business companies that engage in community and environmental initiatives can significantly enhance employee engagement. According to a study by Deloitte (2018), employees who participate in company-sponsored volunteer programs and environmental projects report higher levels of engagement and job satisfaction. These activities allow employees to make meaningful contributions beyond regular job duties, enhancing their overall work experience. Amazon has implemented various CSR initiatives aimed at sustainability and community support. These initiatives include reducing carbon emissions, promoting renewable energy, and supporting local communities through charitable donations and volunteer programs. Chaffey (2020) noted that these efforts have improved Amazon's public image and boosted employee engagement by fostering a culture of responsibility and community involvement. Alibaba's commitment to CSR is evident in its environmental sustainability projects and philanthropic efforts. The company's programs focus on reducing environmental impact, supporting education, and promoting social welfare. These initiatives have increased employee engagement, aligning employees with Alibaba's mission to create positive social change (Zhang, 2019).

CHAPTER III

RESEARCH METHODOLOGY

Survey research is used to examine factors affecting employee engagement in e-business. This chapter begins with the research design, population and samples, data collection methods, research instrument, content validity and reliability, and data analysis used in this study, which is described in terms of statistical techniques and their interpretation.

3.1 Research Design

This study examined how individual characteristics impact employee engagement in e-businesses and how internal factors, including salary fairness, employee innovation behavior, and corporate social responsibility, influence employee engagement in e-businesses. The conceptual framework was developed from theories and related studies. Two independent variables are *demographic factors* and *internal factors*. The dependent variable is employee engagement, which includes *cognitive, affective, and behavioral engagement*.

3.2 Research Population and Sample

The concentration in research aimed at various e-businesses in China, and the population for this study was employees from various departments of various e-businesses in China. Therefore, the population in this study was unknown, and the sample size was calculated using Cochran's formula.

$$\begin{aligned}
 n &= \frac{P(1-P)Z^2}{e^2} \\
 &= \frac{0.5*0.5*1.96^2}{(.05)^2} \\
 &= 384.16 \quad \cong \quad 385
 \end{aligned}$$

The additional 15 samples were collected just in case of error and for the integrity of the data. Therefore, the total sample size is 400 samples.

3.3 Data Collection

This study employed quantitative research, and the questionnaire was designed based on a research framework to collect data using a convenient sampling method. The questionnaires were distributed to employees of various e-business companies in China. The questionnaire was designed to collect data on the participants' demographic features and opinions about internal factors, including salary fairness, employee innovation behavior, corporate social responsibility, employee engagement, and their additional suggestions. The questionnaires were distributed online using an internet platform, Questionnaire Star (a link to the questionnaire was sent to the target group through social media platforms such as WeChat and QQ, and respondents could directly click on the link to answer the questionnaire). In order to get more responses, the questionnaire has a paragraph dedicated to the nature and purpose of this study. The questionnaire also indicated that it took only 5 minutes for the participants to complete. Respondents were informed that their contributions were important and valuable. The participants could be assured that all responses were confidential and used only for research.

3.4 Research Instrument

This research used a questionnaire as a tool for data collection and proceeded to create the tools used in the research as follows:

1. Study the method of developing a questionnaire to collect data from relevant documents and textbooks as a guideline for defining the conceptual framework.
2. Study the concepts, theories, and other related research documents. The details are considered to cover the stated research objectives.
3. Drafting a questionnaire per the conceptual framework and research objectives that will be used to collect data from the sample.
4. Three (3) experts assessed the questionnaire's validity to check the understanding of language usage and content suitability.
5. Bring questionnaires that have been verified for content validity to collect data with a sample of 30 sets to test the reliability of the questionnaire.

6. Completely revised questionnaires that passed the reliability criterion are used to collect data from the specified sample size.

The questionnaire used to collect data in this research consists of questions related to *Factors Affecting Employee Engagement in E-Business*. The content of the questionnaire is divided into 3 parts as follows:

Part 1 is a question about the personal information of participants, including *gender, age, educational background, monthly income, and work department*. The question is a checklist type. The demographic factor is used to assess whether the sample is representative of the population and identify differences and disparities. The following is a description of each factor's variables:

Gender offers information on the distribution of genders in the sample.

Age distribution in the survey offers a better understanding of the participants' age disparities.

The educational background of the sample provides information on its degree of education.

Monthly income is used to analyze income disparities within the sample.

The work department is used to analyze work disparities within a sample group.

Part 2 is the questions about the respondents' perceptions of internal factors, including salary fairness, employee innovation behavior, and corporate social responsibility. These variables measure employees' perceptions of internal factors. It reflects the extent to which employees believe their compensation is just and equitable, employees' creative contributions to the organization, and aspects such as community support, environmental sustainability, and employee welfare programs.

Part 3 contains questions about the respondents' perceptions of employee engagement, including cognitive, affective, and behavioral engagement.

Cognitive Engagement: This dimension of employee engagement measures how employees find their work meaningful, feel that it contributes to organizational goals, and take personal responsibility for performing well.

Affective Engagement: This dimension assesses employees' emotional connection to the organization. It includes their pride in being part of the company, high

regard for the organization, willingness to recommend it to others, and resistance to leaving.

Behavioral Engagement: This dimension focuses on the behavioral aspects of engagement, including the effort and dedication employees put into their jobs, their ability to stay focused and committed, and their willingness to go above and beyond job requirements.

Questionnaire parts 2-3 used a 5-point Likert scale. The participants were asked to rate their level of opinion about the questions regarding the degree of agreement or disagreement that the following numbers can indicate: 1: Strongly disagree; 2: Disagree; 3: Neutral; 4: Agree; and 5: Strongly agree. Silpajaru (2010) interpreted the average values, as shown in Table 3.1. See Appendix A for completed questionnaires.

Table 3.1 Score Level, Average Value, and Meaning

Score Level	Average Value	Meaning
5	4.50 – 5.00	Strongly agree
4	3.50 – 4.49	Agree
3	2.50 – 3.49	Neutral
2	1.50 – 2.49	Disagree
1	1.00 – 1.49	Strongly disagree

3.5 Content Validity and Reliability

The content validity test using Item Object Consistency (IOC) and the reliability test using Cronbach's Alpha were performed as follows.

3.5.1 Content Validity

Three experts in creating research tools and those in the e-business examined the content and the measurement of the questions to cover and complete the research issues.

The experts are required to rate the questionnaires according to the following meaning.

+1 The question is consistent with the content of the measurement objective.

0 Not sure that the question is consistent with the content of the measurement objective.

-1 The question is not consistent with the content of the measurement objective. The results from all expert's evaluations will be used to calculate the IOC index according to the formulas of Rovinelli and Hambleton (1977) as follows:

$$\text{IOC} = \frac{\Sigma R}{N}$$

Where ΣR = total rating score from all experts for each question

N = number of experts

If the calculated IOC index was more significant than or equal to 0.5, it was considered that the questionnaire was measured following the research objectives. Therefore, the questions with the IOC index of 0.5 or higher were chosen. If any question had a value that did not reach the 0.5 criterion, but it was necessary to use that question to cover what needed to be measured, that question was revised again according to the advice of experts. For the questionnaires used in this study, the IOC index was more than 0.5 (See Appendix B). Therefore, all the contents of the questionnaires passed the validity test.

3.5.2 Reliability Test

To test the credibility of the instrument used in this study and to measure the internal consistency, the Cronbach's alpha (α) coefficient test method was conducted using thirty data sets in addition to the sample size. The acceptable reliability was that Cronbach's alpha (α) coefficient values must be greater than 0.7. Table 3.2 shows the Cronbach's alpha (α) coefficient values for all variables in the questionnaires. All results indicated the acceptable reliability of the questionnaire.

Table 3.2 Reliability of the Questionnaire

Item	Number of variable items	Cronbach's Alpha
Salary fairness	6	.933
Employee innovation behavior	3	.857
Corporate social responsibility	5	.931
Cognitive engagement	5	.928
Affective engagement	4	.914
Behavioral engagement	6	.945

Table 3.2 shows the reliability of each item in the questionnaire using Cronbach's alpha coefficient (α) as a measure of reliability. The variables, e.g., *salary fairness*, *employee innovation behavior*, *corporate social responsibility*, *cognitive engagement*, *affective engagement*, and *behavioral engagement*, have the reliability of 0.933, 0.857, 0.931, 0.928, 0.914, and 0.945, respectively (See appendix C). According to the calculation, all Cronbach's alpha coefficients (α) were more significant than 0.7, indicating the questionnaire has good reliability.

3.6 Data Analysis

Data were analyzed using a statistical software package to perform descriptive statistics and inferential statistics, as follows.

3.6.1 Descriptive Statistics

Descriptive statistics were used to analyze the participants' demographics, including gender, age, educational background, monthly income, and work department. The frequency, mean, and standard deviation were used to analyze data.

3.6.2 Inferential Statistics

Inferential statistics were used to analyze data and test the hypotheses at the statistical significance level of 0.05. An analysis to test the relationship or interplay between one dependent variable and several independent variables, which tests.

Hypothesis 1: The difference in demographic factors, including gender, age, educational background, monthly income, and department work, affect employees' engagement in e-business differently.

The independent sample t-test and one-way ANOVA were used to find the demographic factors that affect employee engagement in e-business.

Hypothesis 2: Internal factors influence employee engagement in e-business.

Multiple linear regression was used to analyze data.

CHAPTER IV

ANALYSIS RESULTS

This chapter presented the findings of research questions and hypotheses set forth for statistical analysis from the data collected from e-business employees in China. This chapter was organized into two sections. The first section covered the demographic summary and descriptive statistics. The following section covered the results of hypothesis testing.

4.1 The Descriptive Statistics

The sample of this study was 400 e-business employees in China. This section presents the descriptive statistics results for demographic factors, salary fairness, employee innovation behavior, and corporate social responsibility factors.

4.1.1 Demographic Factor

The participants' demographic information was summarized and described by category and frequency, as shown in Table 4.1.

Table 4.1 Analysis Results of the Demographic Factor

Variables	Classification	Frequency	Percentage
Gender	Male	189	47.3
	Female	211	52.8
	Total	400	100.0
Age	18-25 years old	37	9.3
	26-35 years old	172	43.0
	36-45 years old	98	24.5
	46-55 years old	62	15.5
	More than 55 years old	31	7.8
	Total	400	100.0

Table 4.1 Analysis Results of the Demographic Factor (cont.)

Variables	Classification	Frequency	Percentage
Educational Level	Diploma	79	19.8
	Undergraduate	215	53.8
	Postgraduate	77	19.3
	Others	29	7.3
	Total	400	100.0
Monthly Income	Less than or equal to 3000 yuan	44	11.0
	3001-5000 yuan	98	24.5
	5001-7000 yuan	181	45.3
	More than 7000 yuan	57	14.3
	Others	20	5.0
Total	400	100.0	
Work Department	Sales department	91	22.8
	Financial department	54	13.5
	Human resource department	61	15.3
	Research and development department	66	16.5
	Production department	105	26.3
	Others	23	5.8
	Total	400	100.0

Table 4.1 presents a comprehensive snapshot of the demographic composition and responses from a sample of 400 individuals. Firstly, concerning gender, the sample is relatively balanced, comprising 189 males (47.3%) and 211 females (52.8%). Regarding age distribution, the respondents cover a broad spectrum, with the majority falling between 26 and 45 years old, where 26 to 35-year-olds constitute the largest group at 43.0%. Meanwhile, the education levels of the participants vary, with a significant portion having undergraduate degrees (53.8%), followed by those with diplomas (19.8%) and postgraduate qualifications (19.3%).

Further on to monthly income, the data reveals that the most significant proportion of respondents earn between 5,001 and 7,000 yuan monthly (45.3%), while 3,001 to 5,000 yuan earners make up 24.5% of the sample. Furthermore, regarding the department where participants work, the sample represents diverse professional backgrounds, with the production department constituting the most extensive group at 26.3%, followed by the sales department at 22.8%. This demographic information is essential for conducting further analyses and drawing meaningful conclusions from the

survey data, allowing for a deeper understanding of how different demographic groups may respond to specific questions or variables of interest.

4.1.2 Independent Variables

The level of Chinese e-business employees' perception of the importance of independent variables is summarized and categorized by salary fairness, employee innovation, and corporate social responsibility, as shown in Table 4.2.

Table 4.2 Descriptive Statistics for Independent Variables

Product Feature	Level of Perception: Frequency (Percent)					\bar{X}	S.D.	Rank	Meaning
	1	2	3	4	5				
Salary Fairness	8 2.0%	220 55.0%	72 18.0%	84 21.0%	16 4.0%	2.70	0.955	1	Neutral
Employee Innovation	52 13.0%	159 39.8%	88 22.0%	85 21.3%	16 4.0%	2.64	1.077	3	Neutral
Corporate Social Responsibility	24 6.0%	190 47.5%	85 21.3%	84 21.0%	17 4.3%	2.70	1.004	2	Neutral

Table 4.2 shows a neutral perception among employees on salary fairness, with a mean score of 2.70 and a standard deviation (SD) of 0.955. This suggests that, on average, employees feel their salaries are moderately fair, but there is some variability in their opinions. The percentage distribution of responses indicates that 4.0% of employees strongly agree (level 5) with the fairness of their salary, while 21.0% agree (level 4), making up the majority. Meanwhile, 18.0% have a neutral opinion (level 3), 39.8% disagree (level 2), and 13.0% strongly disagree (level 1). This distribution highlights that a significant portion of employees perceive salary fairness negatively; a substantial number are either neutral or dissatisfied. Salary fairness has room for improvement to enhance overall employee satisfaction.

Employee innovation is rated the third among the influencing factors, with a mean score of 2.64 and an SD of 1.077. This indicates a moderately high engagement in innovative behaviors. The response distribution shows that 4.0% of employees strongly agree (level 5) with innovation-related statements, and 21.3% agree (level 4). The neutral responses (level 3) account for 22.0%, while 39.8% disagree (level 2), and 13.0% strongly disagree (level 1). The lower mean value suggests that while innovation is present, it is not as strongly perceived as other factors. However, its ranking as the

highest influencing factor highlights its importance in the workplace. Encouraging innovative practices and providing resources for creative problem-solving could further boost this positive perception.

Corporate social responsibility (CSR) is perceived neutrally, with a mean score of 2.70 and an SD of 1.004. The distribution of responses indicates that 4.3% of employees strongly agree (level 5) with CSR initiatives, and 21.0% agree (level 4), forming the majority opinion. Neutral responses (level 3) constitute 21.3%, while 47.5% disagree (level 2), and 6.0% strongly disagree (level 1). The mean score and the response distribution suggest that while a positive perception of CSR exists, a significant portion of employees strongly disagree. Ranked second, CSR is seen as an important factor, and efforts to enhance CSR initiatives could improve employee perceptions and engagement.

The descriptive statistics analysis for salary fairness, employee innovation, and corporate social responsibility reveals a neutral perception across all factors. Salary fairness has a mean score of 2.70, with a notable portion of employees feeling disagree or dissatisfied. Employee innovation, with the third rank, shows a neutral level of engagement, highlighting the potential for fostering a more innovative culture. With a mean of 2.7, corporate social responsibility indicates a positive but varied perception, suggesting opportunities for enhancing CSR efforts. Overall, while employees generally have a Neutral view of these factors, there is potential for improvement in each area to boost overall employee satisfaction and engagement.

4.1.3 Dependent Variable

The level of Chinese e-business employees' perception of the importance of employee engagement is summarized and categorized by salary cognitive, affective, and behavioral engagement, as shown in Table 4.3.

Table 4.3 Descriptive Statistics for Employee Engagement

Employee Engagement	Level of Opinion Frequency and Percent					Mean	SD	Meaning	Rank
	1	2	3	4	5				
Cognitive	27 6.8%	205 51.3%	71 17.8%	82 20.5%	15 3.8%	2.63	1.002	Neutral	3
Affective	19 4.8%	195 48.8%	84 21.0%	86 21.5%	16 4.0%	2.71	0.986	Neutral	2
Behavioral	8 2.0%	193 48.3%	87 21.8%	95 23.8%	17 4.3%	2.80	0.966	Neutral	1
Overview of Employee Engagement	2 0.5%	167 41.8%	167 41.8%	49 12.3%	15 3.8%	2.77	0.812	Neutral	

Based on Table 4.3, which presents descriptive statistics on employee engagement, it is evident that employees generally perceive their engagement levels as "neutral." Cognitive engagement, which involves employees' mental investment in their work, has a mean score of 2.63 with a standard deviation of 1.002. This suggests that while employees moderately engage cognitively, there is a reasonably consistent response distribution. Cognitive engagement ranks third among the evaluated aspects, highlighting its significant role in employee engagement. Affective engagement, which refers to the emotional attachment employees feel toward their work, has a mean score of 2.71 and a standard deviation of 0.986. This indicates a neutral level of affective engagement, with slightly more variation in responses than cognitive engagement. Affective engagement ranks second, suggesting that fostering emotional connections with work could be an area for improvement.

Behavioral engagement is about the actions and behaviors employees exhibit in their roles. It has the highest mean score of 2.80 and a standard deviation of 0.966. This suggests that employees' actions and behaviors are the most positively perceived aspect of engagement, making behavioral engagement the most significant factor in overall employee engagement, ranking first. The total mean score for employee engagement is 2.77, with a standard deviation of 0.812, indicating a neutral overall engagement level. While employees are generally moderately engaged, there is room for improvement, particularly in affective engagement. To enhance overall engagement, organizations should improve emotional and cognitive connections to work, ensuring employees feel more deeply connected and invested in their roles.

4.2 Inferential Statistics

In this survey, gender is two discrete variables. Age, educational level, monthly income, and work department are more than three discrete variables. Therefore, Independent sample t-test and One-way Analysis of Variance (ANOVA) were used to test whether there are differences in the demographic factors that affect employees' engagement in e-business. The influences of salary fairness, innovation behavior, and corporate social responsibility on Chinese employees' engagement in e-business were also analyzed.

This section is divided into two parts according to the research objectives to present the results.

Part I: The analysis results of demographic factors affecting employees' engagement in e-business.

Part II: The analysis results of product features influence employees' engagement in e-business.

4.2.1 Demographic Factors Affect Employees' Engagement

Hypothesis 1: The difference in demographic factors, including gender, age, educational background, monthly income, and department work, affect employees' engagement in e-business differently.

H1a: The gender differences affect employees' engagement in e-business differently.

Independent sample t-test was used to test the difference of mean values between 2 data groups at the statistically significant level of 0.05.

Table 4.4 presents the results of the analysis of the gender group that affects employee engagement in e-business. An independent sample t-test was conducted to examine the effect of differences in gender groups. There were 189 male participants and 211 female participants in the study. Mean: shows the average value of the variable for each gender group. For males, the mean is 2.60, and for females, the mean is 2.58. The standard deviation indicates the measurement variability or dispersion of data within each gender group. The t-value, which measures whether the difference in means between the two gender groups is statistically significant, the results showed a t-value of 0.124 and a significance level of 0.901 (>0.05), indicating the differences in gender groups affect the overview of employees' engagement in e-business, not a difference at

a statistically significant value of 0.05 [$t(398) = 0.124, p = 0.901$]. The findings suggest that the differences between male and female participants affect the overview of employee engagement in e-business, not a difference at the statistically significant level of 0.05.

Table 4.4 The Independent Samples t-test of the Gender Factor

Employee's Engagement	Gender	n	Mean	S.D.	t-value	df	p-value
Cognitive Engagement	Male	189	2.72	1.025	1.749	398	0.081
	Female	211	2.55	0.976			
Affective Engagement	Male	189	2.79	0.999	1.458	398	0.146
	Female	211	2.64	0.972			
Behavioral Engagement	Male	189	2.88	1.004	1.642	398	0.101
	Female	211	2.73	0.926			
Overview	Male	189	2.60	1.156	0.124	398	0.901
	Female	211	2.58	1.237			

For the cognitive, affective, and behavioral engagement, the analysis results found that ($t(398) = 1.749, p = .081$), ($t(398) = 1.458, p = .146$), ($t(398) = 1.642, p = .101$) accordingly at the significant value greater than 0.05. The results demonstrate that gender differences affect employees' cognitive, affective, and behavioral engagement, not a difference at the statistically significant level of 0.05.

H1b: The age differences affect employees' engagement in e-business differently.

One-way ANOVA was used to analyze data to test the difference of mean values among more than 2 data groups at the statistically significant level of 0.05.

Table 4.5 Age Affects Employee Engagement in E-business

Employee's Engagement		Sum of Squares	<i>df</i>	Mean Square	F	p-value
Cognitive Engagement	Between Groups	4.240	4	1.060	1.055	0.378
	Within Groups	396.738	395	1.004		
	Total	400.987	399			
Affective Engagement	Between Groups	5.785	4	1.446	1.495	0.230
	Within Groups	382.152	395	.967		
	Total	387.937	399			
Behavioral Engagement	Between Groups	6.036	4	1.509	1.629	0.166
	Within Groups	365.964	395	.926		
	Total	372.000	399			
Overview	Between Groups	8.788	4	2.197	1.539	0.190
	Within Groups	563.972	395	1.428		
	Total	572.760	399			

Table 4.5 presents the results of the analysis of the age group that affects employee engagement in e-business. A one-way ANOVA was conducted to examine the effect of differences in age groups. The results showed an F-value of 1.539 and a significance level of 0.190 (>0.05), indicating the differences in age groups affect the overview of employees' engagement in e-business, not a difference at a statistically significant value of 0.05 [$F(4, 395) = 1.539, p = 0.190$]. Specifically, the between-groups sum of squares was 8.788, while the within-groups sum was 563.972, demonstrating variability in employee engagement between and within age groups.

The analysis results found p-values of 0.378, 0.230, and 0.166 at a significant value greater than 0.05 for cognitive, affective, and behavioral engagement. The results demonstrate that the differences in age group affect employees' cognitive, affective, and behavioral engagement, not a difference at the statistically significant level of 0.05. The finding suggests that the choice of age group may not significantly affect employees' engagement in e-business, highlighting the lack of need for age-specific strategies to enhance overall employee engagement.

H1c: The differences in educational background affect the employees' engagement in e-business differently.

One-way ANOVA was used to analyze data to test the difference of mean values among more than 2 data groups at the statistically significant level of 0.05.

Table 4.6 Educational Background Affects Employee Engagement in E-business

Employee's Engagement		Sum of Squares	<i>df</i>	Mean Square	F	p-value
Cognitive Engagement	Between Groups	0.917	3	0.306	0.303	0.824
	Within Groups	400.061	396	1.010		
	Total	400.977	399			
Affective Engagement	Between Groups	3.528	3	1.176	1.211	0.304
	Within Groups	384.410	396	.971		
	Total	387.938	399			
Behavioral Engagement	Between Groups	4.142	3	1.381	1.486	0.218
	Within Groups	367.858	396	.929		
	Total	372.000	399			
Overview	Between Groups	3.904	3	1.301	0.906	0.438
	Within Groups	568.856	396	1.437		
	Total	572.760	399			

Table 4.6 presents the results of the analysis of the educational background group that affects employee engagement in e-business. A one-way ANOVA was conducted to examine the effect of differences in educational background groups. The results showed an F-value of 0.906 and a significance level of 0.438 (>0.05), indicating the differences in educational background groups affect the overview of employees' engagement in e-business, not a difference at a statistically significant value of 0.05 [$F(3, 396) = 0.906, p = 0.438$]. Specifically, the between-groups sum of squares was 3.904, while the within-groups sum was 568.856, demonstrating variability in employees' engagement between and within educational background groups.

For the cognitive, affective, and behavioral engagement, the analysis results found the p-values of 0.824, 0.304, and 0.218 accordingly at the significant values greater than 0.05. The results demonstrate that the differences in educational background groups affect employees' cognitive, affective, and behavioral engagement, not a difference at the statistically significant level of 0.05. The finding suggests that educational background does not significantly affect employees' engagement levels in the e-business. Consequently, factors other than educational background should be considered to enhance employee engagement.

H1d: The differences in monthly income affect employees' engagement in e-business differently.

One-way ANOVA was used to analyze data to test the difference of mean values among more than 2 data groups at the statistically significant level of 0.05.

Table 4.7 Monthly Income Affects Employee Engagement in E-business

Employee's Engagement		Sum of Squares	df	Mean Square	F	p-value
Cognitive Engagement	Between Groups	2.577	3	0.859	0.854	0.465
	Within Groups	398.401	396	1.006		
	Total	400.977	399			
Affective Engagement	Between Groups	7.048	3	2.349	2.442	0.064
	Within Groups	380.890	396	0.962		
	Total	387.938	399			
Behavioral Engagement	Between Groups	0.509	3	0.170	0.181	0.909
	Within Groups	371.491	396	0.938		
	Total	372.000	399			
Overview	Between Groups	15.281	3	5.094	3.618	0.013*
	Within Groups	557.479	396	1.408		
	Total	572.760	399			

Table 4.7 presents the analysis results of the monthly income group that affects employee engagement in e-business. A one-way ANOVA was conducted to examine the effect of differences in monthly income groups. The results showed an F-value of 3.618 and a significance level of 0.013 (<0.05), indicating differences in monthly income affect the overview of employees' engagement in E-business differently at a statistically significant value of 0.05 [$F(3, 396) = 3.618, p = 0.013$]. Specifically, the between-groups sum of squares was 15.281, while the within-groups sum was 557.479, demonstrating variability in employee engagement between and within monthly income groups. The results indicated that the difference in monthly income group affects the overview of employees' engagement in E-business differently.

The analysis results found p-values of 0.465, 0.064, and 0.909 at a significant value greater than 0.05 for cognitive, affective, and behavioral engagement. The results demonstrate that the differences in the monthly income group affect employees' cognitive, affective, and behavioral engagement, not a difference at the statistically significant level of 0.05. However, the finding suggests that the difference in monthly income group significantly affects the overview of employees' engagement in e-business. This suggests that monthly income significantly affects the overview of employees' engagement levels in the e-business.

LSD post-hoc tests were conducted to explore pairwise differences further, as shown in Table 4.8. The LSD post-hoc analysis indicated that the monthly income group " $\leq 3,000$ RMB" and group "3,001-5,000 RMB" showed a significant difference in mean test scores ($p = 0.002$), while monthly income group " $\leq 3,000$ RMB" versus group "5,001-7,000 RMB" ($p = 0.046$) and monthly income group " $\leq 3,000$ RMB" versus group " $>7,000$ RMB" ($p = .010$) and the other groups did not reach significance."

Table 4.8 The Pairwise Comparison of the Different Monthly Income Group that Affects Employees' Engagement in E-business

Monthly income	Mean Difference (I-J) Group J				
	Mean	<= 3,000 RMB	3,001-5,000 RMB	5,001-7,000 RMB	>7,000 RMB
Group I		3.05	2.38	2.65	2.47
<= 3,000RMB	3.05	-	.668 (0.002*)	.399 (0.046*)	.578 (0.010*)
3,001-5,000 RMB	2.38		-	-0.269 (0.072)	-0.090 (.619)
5,001-7,000 RMB	2.65			-	.179 (.269)
> 7,000 RMB	2.47				-

H1e: Different work departments affect employees' engagement in e-business differently.

One-way ANOVA was used to analyze data to test the difference of mean values among more than 2 data groups at the statistically significant level of 0.05.

Table 4.9 presents the analysis results of the work department group that affects employee engagement in e-business. A one-way ANOVA was conducted to examine the effect of differences in work department groups. The results showed an F-value of 2.078 and a significance level of 0.067 (>0.05), indicating that the differences in work department groups affect the overview of employees' engagement in e-business, not a difference at the statistically significant value of 0.05 [$F(5, 394) = 2.078, p = 0.067$]. Specifically, the between-groups sum of squares was 14.712, while the within-groups sum was 558.048, demonstrating variability in employees' engagement between work department groups.

Table 4.9 Work Department Affects Employee Engagement in E-business

Employee's Engagement		Sum of Squares	df	Mean Square	F	p-value
Cognitive Engagement	Between Groups	3.515	5	0.703	0.697	0.626
	Within Groups	397.463	394	1.009		
	Total	400.978	399			
Affective Engagement	Between Groups	7.885	5	1.577	1.635	0.150
	Within Groups	380.052	394	0.965		
	Total	387.937	399			
Behavioral Engagement	Between Groups	3.841	5	0.768	0.822	0.534
	Within Groups	368.159	394	0.934		
	Total	372.000	399			
Overview	Between Groups	14.712	5	2.942	2.078	0.067
	Within Groups	558.048	394	1.416		
	Total	572.760	399			

The analysis results found the p-values of 0.626, 0.150, and 0.534 for cognitive, affective, and behavioral engagement at a significant value greater than 0.05. The results demonstrate that the differences in work department groups affect employees' cognitive, affective, and behavioral engagement, not a difference at the statistically significant level of 0.05. This suggests that the work department does not significantly affect employees' engagement levels in the e-business. Consequently, other factors besides the work department should be considered to enhance employee engagement.

4.2.2 Internal Factors Influence Employees' Engagement

This study's internal factors include salary fairness, employee innovation behavior, and corporate social responsibility. Employee engagement consists of cognitive engagement, affective engagement, and behavioral engagement. Therefore, the independent variables are *salary fairness*, *employee innovation behavior*, and *corporate social responsibility*. The dependent variables are *employees' engagement*, *cognitive*, *affective*, and *behavioral engagement*. Multiple linear regression is used to

analyze data and develop the forecasting equation at the % confidence level of 95%.

The forms of the estimating equation are as follows.

$$Y_T = b_0 + b_1X_1 + b_2X_2 + b_3X_3$$

$$Y_1 = b_0 + b_1X_1 + b_2X_2 + b_3X_3$$

$$Y_2 = b_0 + b_1X_1 + b_2X_2 + b_3X_3$$

$$Y_3 = b_0 + b_1X_1 + b_2X_2 + b_3X_3$$

Where Y_T = employees' engagement

Y_1 = cognitive engagement

Y_2 = effective engagement

Y_3 = behavioral engagement

X_1 = Salary fairness

X_2 = Employee innovation behavior

X_3 = Corporate social responsibility (CSR)

Hypothesis 2: Internal factors influence employees' engagement in e-business.

Table 4.10 Regression Analysis to Predict the Influence of Internal Factors on Employee Engagement

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Dubin-Watson
Employees' engagement	0.679	0.461	0.457	0.598	1.993

Predictors: (Constant), salary fairness, employee innovation behavior, CSR

Dependent Variable: employee's engagement

The analysis results in Table 4.10 show that internal factors, including *salary fairness, employee innovation behavior, and CSR*, are positively related to *employee engagement*, with multiple correlations (R) = 0.679. At a statistical significance level of 0.05, the power of the predictive analysis equation is 45.70%. Durbin-Watson value = 1.993, ranging from 1.5-2.5, indicating no autocorrelation problem in multiple regression residuals.

From Table 4.11, the tolerance value of all independent variables is not less than 0.2, and VIF values are less than 10 (Hair et al., 2009). It indicates that there is no correlation between 2 independent variables.

Table 4.11 The Multiple Linear Regression Coefficients for the Influence of Internal Factors on Employees' Engagement

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.975	0.102		9.562	0.000		
Salary Fairness	0.282	0.039	0.332	7.274	0.000	0.654	1.529
CSR	0.221	0.038	0.273	5.818	0.000	0.616	1.624
Employee Innovation Behavior	0.166	0.033	0.220	4.961	0.000	0.694	1.440

Dependent Variable: Employee's engagement

Table 4.11 consists of 3 predictor variables, including *salary fairness*, *employee innovation behavior*, and *CSR*, and its prediction equation is as follows.

$$\hat{Y}_T = 0.975 + 0.282X_1 + 0.221X_3 + 0.166X_2$$

This equation can explain the coefficients, including *salary fairness*, *employee innovation behavior*, and *CSR*. The R-squared equals 0.461, the adjusted R-squared is equal to 45.70%, and the independent variables are uncorrelated.

In summary, the analysis results show that the significant value of salary fairness, employee innovation behavior, and CSR on cognitive engagement is 0.000, 0.000, and 0.000, respectively. Among the three independent variables, salary fairness influences employees' engagement most.

H2a: Internal factor influences cognitive engagement in e-business.

Table 4.12 Regression Analysis to Predict the Influence of Internal Factors on Cognitive Engagement

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Dubin-Watson
Cognitive engagement	0.562	0.316	0.311	0.832	2.026

Predictors: (Constant), salary fairness, employee innovation behavior, CSR
Dependent Variable: cognitive engagement

The analysis results in Table 4.12 show that internal factors, including *salary fairness, employee innovation behavior, and CSR*, are positively related to *cognitive engagement*, with multiple correlations (R) = 0.562. At a statistical significance level of 0.05, the power of the predictive analysis equation is 31.10%. Durbin-Watson value = 2.026, ranging from 1.5-2.5, indicating no autocorrelation problem in multiple regression residuals.

From Table 4.13, the tolerance value of all independent variables is not less than 0.2, and VIF values are less than 10 (Hair et al., 2009). It indicates that there is no correlation between 2 independent variables.

Table 4.13 The Multiple Linear Regression Coefficients for the Influence of Internal Factors on Cognitive Engagement

Model	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.802	0.142		5.653	0.000		
Salary Fairness	0.340	0.054	0.324	6.308	0.000	0.654	1.529
Employee Innovation Behavior	0.181	0.046	0.194	3.893	0.000	0.694	1.440
CSR	0.161	0.053	0.162	3.050	0.002	0.616	1.624

Dependent Variable: Cognitive engagement

Table 4.13 consists of 3 predictor variables, including *salary fairness, employee innovation behavior, and CSR*, and its prediction equation is as follows.

$$\hat{Y}_1 = 0.802 + 0.304X_1 + 0.181X_2 + 0.161X_3$$

This equation can explain the coefficients, including *salary fairness*, *employee innovation behavior*, and *CSR*. The R-squared equals 0.316, the adjusted R-squared is equal to 31.10%, and the independent variables are uncorrelated.

In summary, the results of the analysis show that the significant value of *salary fairness*, *employee innovation behavior*, and *CSR* on cognitive engagement is 0.000, 0.000, and 0.002, respectively. Among the three independent variables, salary fairness influences cognitive engagement the most.

H_{2b}: Internal factors influence affective engagement in e-business.

Table 4.14 Regression Analysis to Predict the Influence of Internal Factors on Affective Engagement

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Dubin-Watson
Affective engagement	0.589	0.347	0.342	0.800	1.855

Predictors: (Constant), salary fairness, employee innovation behavior, CSR
Dependent Variable: cognitive engagement

The analysis results in Table 4.14 show that internal factors, including *salary fairness*, *employee innovation behavior*, and *CSR*, are positively related to *affective engagement*, with multiple correlations (R) = 0.589. At a statistical significance level of 0.05, the power of the predictive analysis equation is 34.20%. Durbin-Watson value = 1.855, ranging from 1.5-2.5, indicating no autocorrelation problem in multiple regression residuals.

From Table 4.15, the tolerance value of all independent variables is not less than 0.2, and VIF values are less than 10 (Hair et al., 2009). It indicates that there is no correlation between 2 independent variables.

Table 4.15 The Multiple Linear Regression Coefficients for the Influence of Internal Factors on Affective Engagement

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.829	0.136		6.078	0.000		
CSR	0.234	0.051	0.238	4.599	0.000	0.616	1.624
Employee Innovation Behavior	0.219	0.045	0.240	4.919	0.000	0.694	1.440
Salary Fairness	0.250	0.053	0.242	4.818	0.000	0.654	1.529

Dependent Variable: affective engagement

Table 4.15 consists of 3 predictor variables, including *salary fairness*, *employee innovation behavior*, and *CSR*, and its prediction equation is as follows.

$$\hat{Y}_2 = 0.829 + 0.234X_3 + 0.219X_2 + 0.250X_1$$

This equation can explain the coefficients, including *salary fairness*, *employee innovation behavior*, and *CSR*. The R-squared equals 0.347, the adjusted R-squared is equal to 34.20%, and the independent variables are uncorrelated.

In summary, the results of the analysis show that the significant value of *salary fairness*, *employee innovation behavior*, and *CSR* on cognitive engagement is 0.000, 0.000, and 0.002, respectively. Among the three independent variables, salary fairness influences affective engagement the most.

H_{2c}: Internal factors influence behavioral engagement in e-business.

Table 4.16 Regression Analysis to Predict the Influence of Internal Factors on Behavioral Engagement

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Dubin-Watson
Behavioral Engagement	0.579	0.335	0.330	0.790	2.142

Predictors: (Constant), salary fairness, employee innovation behavior, CSR
Dependent Variable: behavioral engagement

The analysis results in Table 4.16 show that internal factors, including *salary fairness, employee innovation behavior, and CSR*, are positively related to *behavioral engagement*, with multiple correlations (R) = 0.579. At a statistical significance level of 0.05, the power of the predictive analysis equation is 33.0%. Durbin-Watson value = 2.142, ranging from 1.5-2.5, indicating no autocorrelation problem in multiple regression residuals.

From Table 4.17, the tolerance value of all independent variables is not less than 0.2, and VIF values are less than 10 (Hair et al., 2009). It indicates that there is no correlation between 2 independent variables.

Table 4.17 The Multiple Linear Regression Coefficients for the Influence of Internal Factors on Behavioral Engagement

Model	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.997	0.135		7.400	0.000		
CSR	0.306	0.050	0.318	6.101	0.000	0.616	1.624
Salary Fairness	0.227	0.051	0.225	4.432	0.000	0.654	1.529
Employee Innovation Behavior	0.138	0.044	0.154	3.123	0.002	0.694	1.440

Dependent Variable: Behavioral engagement

Table 4.17 consists of 3 predictor variables, including *salary fairness*, *employee innovation behavior*, and *CSR*, and its prediction equation is as follows.

$$\hat{Y}_3 = 0.997 + 0.306X_3 + 0.227X_1 + 0.138X_2$$

This equation can explain the coefficients, including *salary fairness*, *employee innovation behavior*, and *CSR*. The R-squared equals 0.579, the adjusted R-squared is equal to 33.0%, and the independent variables are uncorrelated.

In summary, the results of the analysis show that the significant value of *salary fairness*, *employee innovation behavior*, and *CSR* on cognitive engagement is 0.000, 0.000, and 0.002, respectively. Among the three independent variables, *CSR* influences behavioral engagement the most.

4.2.3 Summary

The results of hypotheses 1 and 2 are summarized in Table 4.18 - 4.19, which contains the following details.

Table 4.18 Summary Results of the Differences in Demographic Factors Affect Employee Engagement in E-business Differently

Demographic Factors	Employee's Engagement
Gender	- t(398) = 1.786, p = 0.075
Age	- F(4,395) = 1.940, p = 0.103
Educational Background	- F(3,396) = 0.621, p = 0.602
Monthly Income	√ F(3,396) = 3.618, p = 0.013*
Work Department	- F(5,394) = 2.078, p = 0.067

- No different effects at the statistically significant of 0.05

√ having different effects at the statistically significant of 0.05

According to the results in Table 4.18, the differences in gender, age, educational background, and work department have no significant effect on employees' engagement in e-business. However, the differences in monthly income significantly affect employees' engagement in e-business at the statistically significant level of 0.05. Therefore, the study shows that monthly income significantly influences employees' engagement in e-business. In contrast, gender, age, educational background, and work department did not significantly affect this study.

Table 4.19 Summary of the Influence of Salary Fairness, Employee Innovation Behavior, and Corporate Social Responsibility on Employee Engagement in E-business.

Hypotheses	Forecasting Equations
H ₂ : Internal factors influence employees' engagement in e-business.	$Y_T = 0.975 + 0.282X_1 + 0.221X_3 + 0.166X_2$
H _{2a} : Internal factors influence cognitive engagement in e-business.	$Y_1 = 0.802 + 0.340X_1 + 0.181X_2 + 0.161X_3$
H _{2b} : Internal influence affective engagement in e-business.	$Y_2 = 0.829 + 0.234X_3 + .219 X_2 + .250X_1$
H _{2c} : Internal factors influence behavioral engagement in e-business.	$Y_3 = 0.997 + 0.306X_3 + 0.227X_1 + 0.138X_2$

$X_1 = \text{Salary fairness}, X_2 = \text{employee innovation behavior}, X_3 = \text{CSR}$

Table 4.19 shows the prediction equation for the influence of internal factors on employees' engagement and all variables towards employees in E-business. The results suggest that as perceptions of salary fairness, employee innovation behavior, and CSR increase, so does employees' engagement in e-business. Among the three variables, salary fairness substantially influences cognitive and employee engagement, while CSR influences effective and behavioral engagement more.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This chapter provides a summary of the results, discussions, and recommendations. Firstly, this section presents the research conclusion. Secondly, a discussion of the findings and limitations. Finally, suggestions for future research are given. This research aimed to examine how individual characteristics impact employee engagement in e-businesses and explore how salary fairness, employee innovation behavior, and corporate social responsibility influence employee engagement in e-businesses. The recommendations based on the findings are also provided.

5.1 Conclusions

Demographic Factors:

The findings demonstrate that no significant difference between males and females affects employees' engagement differently in e-business, which does not comply with Hanggarawati and Kismono (2022). As mentioned by Eagly and Wood (2016), from the traditional perceptions related to social roles based on gender, males are expected to take a more active role in the domain of work while females are in the household domain. However, Zhang and Li (2020) described that in recent years, the Chinese government has launched various initiatives to promote women's employment and entrepreneurship. These efforts aimed to reduce gender gaps in economic participation and empower women economically. The findings of this study can be explained by the fact that, with the efforts to reduce the gender gap and the high competition in e-business in China, males and females are under pressure to work at the same level. Therefore, there was no significant difference in employees' engagement. In practical terms, this means that, within the scope of this study, gender does not play a significant role in influencing employee engagement levels. Organizations can reasonably expect similar engagement levels from both male and female employees.

When investigating the impact of age groups on employee engagement, the analysis revealed that the differences in age groups did not exhibit significant differences in employee engagement. This may be caused by the fact that the age grouping in the questionnaire was not distributed according to age group generation; therefore, the results cannot clearly show employee engagement. As described by Hanggarawati and Kismono (2022), younger generations may experience more stress or burnout. As a result, the younger generation would have less work engagement than the older generation. Age grouping in this research is mainly in Generation Y, and this generation's characteristics are valued work-life balance, confidence, tech-savvyness, and results orientation. The disadvantages of this group are a lack of patience and frequent job changes, which affect employee engagement. This finding is significant for organizations that tailor engagement strategies to specific age demographics. It may indicate that younger employees have unique needs or preferences regarding engagement initiatives.

The study explored whether education background and work department affect employee engagement. However, all p-values related to education backgrounds and work department were more outstanding than 0.05, signifying no statistically significant differences in engagement based on educational attainment and work department. This implies that an employee's level of education and work department do not appear to be a determining factor in their engagement level within the context of this study.

The findings indicate that the difference in monthly income affects employee engagement differently, supported by Tartari and Salter (2015), who state that the decision to engage depends on each individual's perception of the costs and benefits earned. Baqir et al. (2022) mentioned that reward, recognition, and supervisor support can engage employees for better performance. Hence, employee engagement can improve through reward and recognition and supervisor support.

Predictor Variables and Employee Engagement:

The results provided insights into how each of these factors influences employee engagement. Salary Fairness exhibited a coefficient (B) of 0.359 and a constant of 1.670. This indicates that employee engagement increases significantly for every one-unit increase in Salary Fairness. Salary Fairness plays a moderately positive

role in influencing employee engagement. Employee Innovation Behavior: with a coefficient (B) of 0.288 and a constant of 1.852, Employee Innovation Behavior also significantly contributes to employee engagement. A one-unit increase in this factor positively impacts employee engagement, though slightly less than salary fairness. Corporate social responsibility (CSR): among the three predictor variables, corporate social responsibility substantially impacts employee engagement. It boasts a coefficient (B) of 0.349 and a constant of 1.673. This suggests that enhancing CSR initiatives within the organization can lead to a significant increase in employee engagement.

In conclusion, this detailed analysis underscores the importance of considering various demographic factors, monthly income levels, and predictor variables in understanding and enhancing employee engagement within an organization. Specific demographics, such as gender, age, educational background, and work department, may not significantly impact employee engagement. However, monthly income does play a significant role in employee engagement. Moreover, the analysis highlights the substantial influence of factors like salary fairness, employee innovation behavior, and corporate social responsibility on employee engagement. Organizations can leverage these insights to tailor their engagement strategies effectively and foster a more engaged and productive workforce.

5.2 Discussion

The results showed an employee's engagement level of 2.77 (SD = 0.812) from a maximum of 5 points. The score was not very high. This may be because most of the participants in this study were from the Y generation, who lacked patience and frequently changed jobs. Therefore, the employee's engagement was not very high. It was also found that the variables in the employee's engagement, e.g., cognitive, practical, and behavioral, are not so high; however, among these three variables, behavioral engagement had the highest level. Although behavioral engagement focuses on the willingness to go above and beyond job requirements, the personal characteristics of Generation Y still greatly influence the employee's engagement.

The differences in monthly income affect employees's engagement in e-business differently. Monthly income is considered an extrinsic reward, which is one of

the motivation factors in work engagement, following a study by Dwivedi and Rajendran (2022) that found rewards and recognition influenced employee engagement. The findings can be used to develop strategies for supporting human resource management and maintaining employees within the business. Due to the high competition in e-business, experienced employees are valuable to business growth.

The variable “salary fairness” has a positively significant influence on employees’ engagement, which is supported by a variety of research, such as Meng and Wu (2015), that the procedural fairness of merit pay positively affects employees’ relationships with job engagement. Ruihong (2023) mentions that all dimensions of salary satisfaction are significantly positively affected by job engagement. Ardian et al. (2023) mention that compensation procedural fairness and employee engagement have significant effects on employee performance.

This research demonstrated that salary fairness, employee innovation behavior, and corporate social responsibility influence employee engagement. Employee engagement is one of the organizational assets that employees are highly loyal to, thus providing an agile way of working (Aidan et al., 2018). Employee engagement significantly impacts employee performance (Ardian et al., 2023), and good employee performance will highly benefit e-business. Businesses should pay attention to salary or compensation fairness to support employee engagement. Even though Generation Y prefers changing jobs, they also focus on innovations and forms of technology.

5.2 Recommendations

5.2.1 Enhancing Salary Fairness

Salary Review and Adjustments: Organizations should conduct regular salary reviews, including assessing salary disparities among positions and levels. If inequalities are identified, appropriate actions should be taken, such as raising the salary levels for lower-paying roles to ensure salary fairness.

Transparent Salary Policies: Establishing transparent salary policies is crucial. This policy should clearly outline how salaries are calculated, raise standards,

and how employee performance is assessed and rewarded. Employees need to understand how their work affects their salaries to increase trust in fairness.

5.2.2 Fostering Employee Innovation

Innovation Incentive Programs: Organizations can establish incentive programs to encourage employees to develop innovative ideas and solutions. These incentives may include cash bonuses, special awards, or extra paid leave. Furthermore, reward programs should specify criteria and evaluation processes.

Innovation Training: Providing innovation training helps employees develop innovative skills and mindsets. Training can cover problem-solving, design thinking, and team innovation approaches. This will help employees better tackle daily challenges and propose new solutions.

5.2.3 Strengthening Corporate Social Responsibility (CSR)

Community Engagement: Encourage employees to participate actively in CSR projects and volunteer activities. Organizations can establish and leave policies that allow employees to engage in volunteer activities during work hours. This will help employees feel that their work has a meaningful impact on society, enhancing their sense of involvement and satisfaction.

Sustainability of CSR: Ensure CSR projects and initiatives are sustainable. Organizations should involve employees in designing and implementing these projects to ensure they align with their core values and mission. Transparent reporting of CSR outcomes is essential for employees and external stakeholders.

5.2.4 Addressing Age and Salary Levels

Personalized Development Plans: Employees in different age groups may have varying development needs. Organizations can create personalized development plans based on individual needs and goals. These plans may include training, mentorship support, and career advancement opportunities.

Salary Adjustments: Organizations should consider providing salary adjustments or improving benefits for employees with lower salaries. Ensure that salary levels reflect employees' skills and experience and align with market salary levels.

5.2.5 Promoting Cross-Departmental Collaboration

Cross-Departmental Projects: Organizations can establish cross-departmental projects and teams to encourage cross-departmental collaboration. These

projects can cover critical business challenges that require diverse expertise and resources. Employees can benefit from diverse work experiences while also fostering innovation.

Leadership Development: Nurturing leadership skills for cross-departmental collaboration is crucial. Organizations can offer training to help leaders manage diverse teams and coordinate cross-departmental cooperation. Leaders' performance significantly impacts employee engagement and performance.



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APPENDICES

APPENDIX A QUESTIONNAIRE

Dear Respondent,

I am working on my thesis as a requirement for my studies for a Master's in Management Science at the Institute of Science Innovation and Culture (ISIC), Rajamangala University of Technology Krungthep, Thailand. I am conducting a thesis on factors affecting employees' engagement in e-business. This research aims to explore the effect of demographic factors and the influences of internal factors on employees' engagement in e-business.

Your participation in this survey is crucial and invaluable to me. This survey was designed to collect data concerning employees' engagement in e-business. The questionnaire consists of 3 parts: demographic profile, internal factors, and employee engagement.

Before answering the questions, please carefully read the explanations provided. Kindly respond to all questions in all sections. Completing this survey should take approximately 5 to 10 minutes of your time. All information collected from you will be treated as strictly confidential. All responses and results will be used for academic purposes only.

I greatly appreciate your contribution to this survey. Thank you for taking the time to participate in this survey.

Sincerely,

Ms. Juan Ni

Master's degree student in Management Science

Institute of Science Innovation and Culture, Rajamangala University of Technology
Krungthep, 10120 Bangkok, Thailand

Part 1: Demographic Profile

Please answer the following questions based on your opinion by tick (✓) in the most appropriate box.

1. Gender

 Male Female

2. Age

 18 – 25 years old 26 – 35 years old 36 – 45 years old 46 – 55 years old Others

3. Educational Background

 Diploma Undergraduate Postgraduate Others

4. Monthly Income (THB)

 Less than 30,000 THB 30,001 – 50,000 THB 50,001 – 70,000 THB 70,001 – 100,000THB More than 100,000 THB

5. Work Department

 Sales Department Finance Department Human Resources Department Research and Development

Department

 Production Department Others

Part II: Internal Factors

The internal factors include salary fairness, employee innovation behavior, and corporate social responsibility. Please answer carefully and choose the option that best represents your opinion by marking it with "√" on the rating scale provided.

Use a scale of 5 for "Strongly Agree," 4 for "Agree," 3 for "Neutral," 2 for "Disagree," and 1 for "Strongly Disagree."

	Questions	1	2	3	4	5
Salary Fairness	6. I believe my workload is reasonable.					
	7. I believe my salary level is fair.					
	8. I believe my job responsibilities are reasonable.					
	9. Overall, I receive rewards that are quite fair.					
	10. My salary can reflect my job performance.					
	11. I think the company's task allocation methods are reasonable.					
Employee Innovation Behavior	12. I often employ new working methods when addressing work challenges.					
	13. Within my work domain, I have proposed creative ideas and execution plans for innovative changes to specific company initiatives.					
	14. I have successfully addressed multiple challenges with innovative approaches when dealing with complex problems.					
Corporate Social Responsibility	15. The company actively participates in community support and charitable activities.					
	16. The company is committed to reducing environmental impact and sustainable development.					
	17. The company demonstrates excellent concern for employee rights and welfare.					
	18. The company encourages employees to engage in volunteer activities and social services.					
	19. The company considers social and environmental responsibility in its products and services.					

Part III: Employees' Engagement

Employees' engagement consists of cognitive, affective, and behavioral engagement. Please answer carefully and choose the option that best represents your opinion by marking it with "√" on the rating scale provided. Use a scale of 5 for "Strongly Agree," 4 for "Agree," 3 for "Neutral," 2 for "Disagree," and 1 for "Strongly Disagree."

	Questions	1	2	3	4	5
Cognitive Engagement	20. My work is meaningful and valuable.					
	21. I believe my work contributes to the achievement of organizational goals.					
	22. I consider it my responsibility to perform well at work.					
	23. My job is very motivating.					
	24. I derive a sense of accomplishment from my work.					
Affective Engagement	25. I take pride in being a member of this company.					
	26. I hold my organization in high regard.					
	27. I am willing to recommend the benefits of working here to others.					
	28. I am not likely to leave the company efficiently.					
Behavioral Engagement	29. I put much effort into my job.					
	30. I rarely get distracted when I work.					
	31. Time always flies when I am working.					
	32. I often do more than what is required.					
	33. I tirelessly work without feeling exhausted.					
	34. I do not leave work until it is completed.					

Once again, thank you for your cooperation, and goodbye.

APPENDIX B
INDEX OF ITEM-OBJECTIVE CONGRUENCE
(IOC)

IOC on Independent Variables	Expert 1	Expert 2	Expert 3	IOC Index
Salary Fairness				
I believe my workload is reasonable.	+1	+1	+1	1
I believe my salary level is fair.	+1	+1	+1	1
I believe my job responsibilities are reasonable.	+1	+1	+1	1
Overall, I receive rewards that are quite fair.	+1	+1	+1	1
My salary reflects my job performance.	+1	+1	+1	1
I think the company's task allocation methods are reasonable.	+1	+1	+1	1
I often employ new working methods when addressing work challenges.	+1	+1	+1	1
Employee Innovation Behavior				
Within my work domain, I have proposed creative ideas and execution plans for innovative changes to specific company initiatives.	+1	+1	+1	1
I have successfully addressed multiple challenges with innovative approaches when dealing with complex problems.	+1	+1	+1	1
The company actively participates in community support and charitable activities.	+1	+1	+1	1
The company is committed to reducing environmental impact and sustainable development.	+1	+1	+1	1
Corporate Social Responsibility				
The company demonstrates a high level of concern for employee rights and welfare.	+1	+1	+1	1
The company considers social and environmental responsibility in its products and services.	+1	+1	+1	1

IOC on Dependent Variables		Expert 1	Expert 2	Expert 3	IOC index
Cognitive Engagement	My work is meaningful and valuable.	+1	+1	+1	1
	I believe my work contributes to the achievement of organizational goals.	+1	+1	+1	1
	I consider it my responsibility to perform well at work.	+1	+1	+1	1
	My job is very motivating.	+1	+1	+1	1
	I derive a sense of accomplishment from my work.	+1	+1	+1	1
Affective Engagement	I take pride in being a member of this company.	+1	+1	+1	1
	I hold my organization in high regard.	+1	+1	+1	1
	I am willing to recommend the benefits of working here to others.	+1	+1	+1	1
Behavioral Engagement	I am not likely to leave the company quickly.	+1	+1	+1	1
	I put much effort into my job.	+1	+1	+1	1
	I rarely get distracted when I work.	+1	+1	+1	1
	Time always flies when I am working.	+1	+1	+1	1
	I often do more than what is required.	+1	+1	+1	1
	I tirelessly work without feeling exhausted.	+1	+1	+1	1
	I do not leave work until it is completed.	+1	+1	+1	1



APPENDIX C

RELIABILITY TEST

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded	0	.0
	Total	30	100.0

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.933	.935	6

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.606	2.267	2.767	.500	1.221	.030	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Salary Fairness 1	13.37	19.068	.913	.854	.910
Salary Fairness 2	13.03	23.206	.799	.655	.921
Salary Fairness 3	12.97	24.654	.736	.623	.929
Salary Fairness 4	12.97	26.240	.694	.522	.935
Salary Fairness 5	12.97	21.551	.905	.858	.906
Salary Fairness 6	12.87	22.878	.834	.819	.916

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded	0	.0
	Total	30	100.0

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.857	.883	3

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.611	2.567	2.667	.100	1.039	.003	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Innovation 1	5.27	3.099	.802	.645	.801
Innovation 2	5.17	5.040	.757	.573	.788
Innovation 3	5.23	5.564	.765	.586	.810

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.931	.940	5

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.693	2.600	2.733	.133	1.051	.003	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
CSR1	10.77	14.185	.858	.755	.914
CSR2	10.73	17.237	.842	.718	.913
CSR3	10.77	17.909	.775	.615	.925
CSR4	10.73	18.271	.853	.731	.916
CSR5	10.87	14.947	.866	.757	.908

Scale: ALL VARIABLES**Case Processing Summary**

		N	%
Cases	Valid	30	100.0
	Excluded	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.928	.932	5

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.620	2.433	2.733	.300	1.123	.015	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Cognitive1	10.67	14.575	.848	.725	.910
Cognitive2	10.53	17.844	.761	.615	.921
Cognitive3	10.43	17.289	.784	.668	.916
Cognitive4	10.40	17.214	.863	.746	.903
Cognitive5	10.37	17.413	.843	.719	.906

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.914	.926	4

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.708	2.433	2.900	.467	1.192	.043	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Affective1	8.17	7.040	.851	.744	.896
Affective2	8.40	10.110	.786	.630	.899
Affective3	7.93	9.582	.826	.688	.884
Affective4	8.00	9.517	.851	.734	.876

Scale: ALL VARIABLES**Case Processing Summary**

		N	%
Cases	Valid	30	100.0
	Excluded	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.945	.951	6

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.633	2.367	2.833	.467	1.197	.029	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Behavioral 1	13.43	21.151	.893	.824	.935
Behavioral 2	13.30	24.838	.872	.798	.931
Behavioral 3	13.10	26.645	.868	.777	.934
Behavioral 4	13.13	25.775	.785	.668	.941
Behavioral 5	12.97	26.102	.819	.693	.937
Behavioral 6	13.07	25.789	.860	.747	.933

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