



**A STUDY OF THE EFFECT OF PERCEIVED SUPERIOR
TRUST—WITH SELF-EFFICACY AS A MEDIATING VARIABLE
ON EMPLOYEES' VOICE BEHAVIOR**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT
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This Independent Study has been Approved as a Partial Fulfillment of the
Requirements for the degree of Master of Business Administration

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Title: A study of the Effect of Perceived Superior Trust with Self-efficacy as a Mediating Variable on Employees' Voice Behavior

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ABSTRACT

In recent years, as the global economy has continued to develop and grow, the trend of competition among enterprises has become increasingly intense. The competition of enterprises is ultimately reflected in the competition of talents and the creative achievements of talents. Employees' initiative and creative abilities are important sources to drive enterprises to maintain their core advantage in fierce competition and are also prerequisite requirements for the development of economic performance. Therefore, based on the framework of the leader-member exchange theory (LMX), social exchange theory and social cognitive theory, this study aimed to investigate the mechanism of action between the variables of employees' perceived superior trust and voice behavior with the mediating variable of self-efficacy (M) from the perspective of self-evaluation research in the social cognitive theory, so as to explore the degree of association and interaction between the three variables.

A theoretical relationship model between the employees' perceived superior trust, self-efficacy, and voice behavior was constructed, and the hypotheses of this study were proposed and verified. In the process of data validation, a quantitative research method was used to collect data by means of questionnaires from respondents within the home appliance industry in Hebei Province, China. A total of 450 questionnaires were distributed, and a total of 410 valid questionnaires were recovered through preliminary data screening and elimination. The SPSS statistical analysis software was used to conduct descriptive statistics, independent sample t-test, one-way ANOVA, correlation analysis and regression analysis on the collected valid sample data to verify the research hypotheses of this study.

The results of this study showed that employees' perceived superior trust had a significant positive effect on promoting both employees' self-efficacy and voice behavior; self-efficacy had a positive effect on voice behavior; Self-efficacy played a partially mediating role between perceived superior trust and employees' voice behavior; and employees' personal idiosyncrasies were partially confirmed in the sensitivity difference between the three variables. The differences in employees' personal traits in terms of perceived supervisor trust were partially confirmed. Specifically, the differences in position and years of experience in terms of employees' self-efficacy were significant. However, the differences in gender as a personal trait in terms of perceived supervisor trust were not significant. Based on the results, this study proposes practical and effective suggestions on how to build a good atmosphere of trust between superiors and subordinates, create a trusting environment, and offer recommendations on how employees can develop self-efficacy and actively and effectively contribute to corporate management and organizational optimization through the influence of self-efficacy.

Keywords: perceived superior trust, self-efficacy, voice behavior, home appliance industry

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QINGFENG LI

DECLARATION

I, QINGFENG LI, hereby certify that the research work embodied in this independent study entitled " A Study of the Effect of Perceived Superior Trust with Self-Efficacy as a Mediating Variable on Employees' Voice Behavior" is the result of original research and has not been submitted to any other university or institution for a higher degree.

(QINGFENG LI)

July 8, 2024

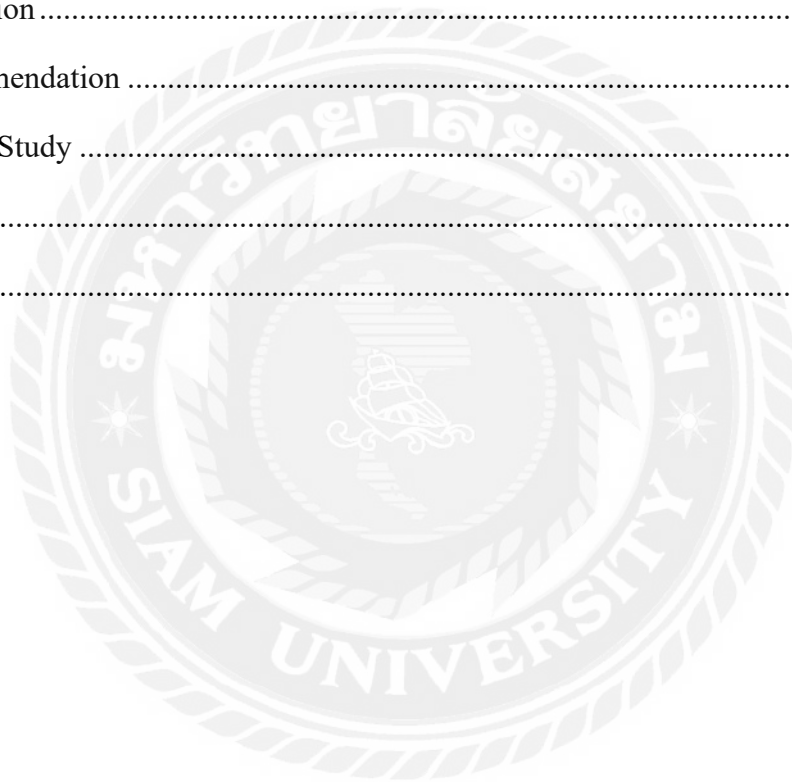


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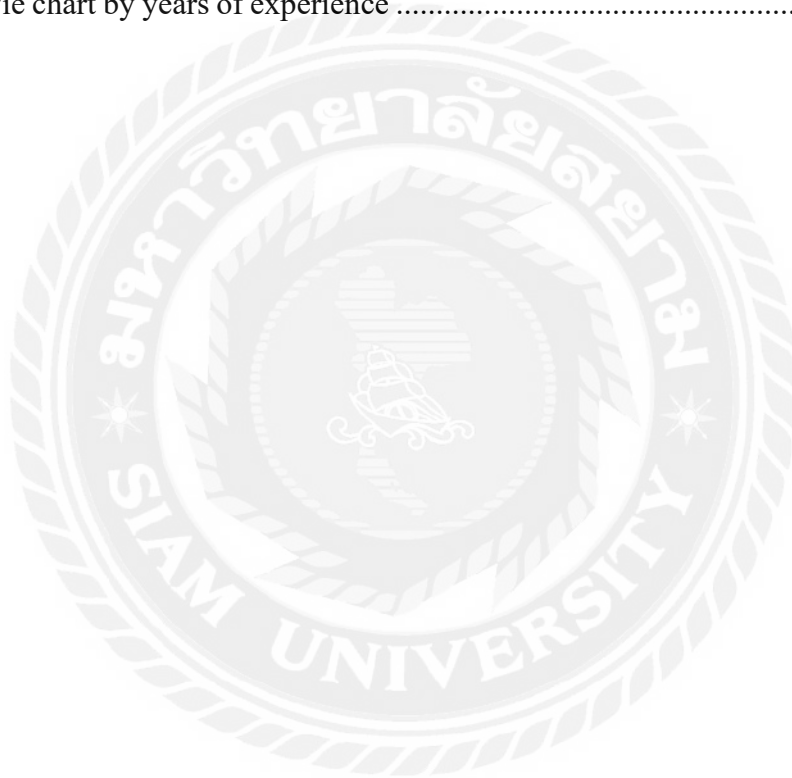
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Chapter 1 Introduction

1.1 Background of the Study

With the continuous development and growth of the global economy in recent years, the world economy today has gradually moved into the era of knowledge-based economy and high-tech development. This makes the value of employees within the enterprise not limited to the physical labor they possess, but should pay more attention to the creativity and innovative thinking of employees. Encouraging and stimulating employees' creativity is to a large extent a necessary way for enterprises to survive and develop in an increasingly competitive market environment. Dyne and LePine (1998) argue that employees' constructive comments or measures on the current deficiencies within the organization are a necessary part of the innovation process. Dyne and LePine (1998) argue that employees' constructive comments or measures on current organizational weaknesses are necessary for the innovation process. Secondly, Zhou and George (2001) argue that employee voice behavior not only allows employees to express their demands and suggestions, but also allows organizations to realize the root cause of employee dissatisfaction, correct it in a more timely and effective manner, and optimize organizational processes. However, Liang (2012) and Morrison (2014) found that employee voice behavior is an extra-role behavior, which can sometimes be seen as a challenge to leadership authority and an outlet for employees' internal dissatisfaction, or as a way to trouble employees who have been treated unfairly and assigned poor work. This makes employee voice behavior risky and challenging. How to actively and effectively promote the occurrence of employee voice behavior, enhance employee creativity, and dispel the concerns of employee voice is an issue that needs to be addressed by various corporate and academic communities.

According to Dirks and Ferrin (2002), trust as the foundation and prerequisite in interpersonal interactions, a good trust relationship not only helps maintain organizational harmony and stability, but also helps stimulate positive employee attitudes and behaviors. Given that employees' superiors serve as their direct managers and voice objects, employees' perceived trust in their superiors can effectively dispel employees' voice concerns and promote their voice behaviors. Therefore, this paper explores the correlation between perceived supervisor trust, self-efficacy, and employee voice behavior based on the framework of leadership-member exchange theory (LMX) and social cognitive theory.

1.2 Problems of the Study

The study of risky and challenging employee voice behavior in organizations has received increasing attention from international scholars. Good and positive voice behavior is not only about the subjective creativity of employees, but also about the

optimization and upgrading of systems and decisions in corporate management. In previous studies, scholars have mainly focused on the relationship between the two variables and the concept of voice behavior, but few scholars have studied the mediating variables between the two, and the interviewees have mainly focused on the employees of private enterprises, and few have studied the voice behavior of sales employees in the home appliance industry in the Chinese context. Sales employees in the appliance industry are in direct contact with customers in their daily work, and they have the best understanding of customer feedback and current sales strategies or improvement ideas. However, supervisors as the direct object of employees' suggestions, when the employees' perceived trust and good trust relationship with their superiors is greater than the risk brought by voice behavior, the employees will actively try to make voice behavior for changing the current status or deficiencies of the company.

1.3 Questions of the Study

- 1、 Does perceived superior trust have a positive effect on employees' voice behavior?
- 2、 Does perceived superior trust have a positive effect on promoting employees' self-efficacy?
- 3、 Does employee self-efficacy have a positive effect on promoting employees' voice behavior?
4. Does employees' self-efficacy have a mediating role in the relationship between perceived superior trust and voice behavior?
5. Do employees' perceived superior trust, self-efficacy, and voice behavior differ in demographic variables?

1.4 Objectives of the Study

Based on the research perspective of employees as the trusted party in perceived superior trust, this study focuses on employee voice behavior in organizations with higher risks and challenges, and further analyzes the role of employees' perceived superior trust in influencing their voice behavior. The role of employee self-efficacy in mediating the relationship between perceived supervisory trust and employee voice behavior is explained based on the self-evaluation perspective of the social cognitive theory (Tian & Chae, 2023). The objectives of the study are as follows:

1. To examine the effect of employees' perceived superior trust on their voice behavior.
2. To examine the effect of employees' perceived superior trust on their self-efficacy.
3. To examine the effect of employees' self-efficacy on their voice behavior.
4. To examine the mediating role of employees' self-efficacy between perceived superior trust and voice behavior.
5. To examine the differences between employees' perceived superior trust, self-efficacy and voice behavior in terms of demographic variables.

1.5 Significance of the Study

With the development of the knowledge-based economy, the subjective creativity and motivation of talents have become valuable spiritual assets and necessary competitiveness of organizations. Chinese scholar Wang (2022) points out that, as employees are the ultimate executors and maintainers of corporate strategic decisions, organizations should pay due attention to listening to the suggestions and recommendations from employees' perspectives. This paper has the following research implications for the study between employees' perceived superior trust and voice behavior variables.

1. According to the relevant literature review, most of the existing research content on perceived trust and employee voice behavior tends to study the negative relationship between the two (Wang & Zhang, 2017). However, considering that employee voice behavior usually has the role of making up for the current deficiencies of the company, then this study explores perceived trust from a more positive aspect, which not only broadens a new perspective of the two studies but also has great reference significance for future research directions.

2. Based on the three theoretical perspectives, the relationship between the variables is examined simultaneously, and the explanatory path of mediating variables is added to explore and analyze the relationship between the three variables, which also provides a reference direction and basis for subsequent inter-variate studies, which will make this study more informative (Lau, 2008).

3. This study examined the differences between perceived supervisor trust, self-efficacy, and voice behavior based on the demographic variables of personal traits,

which can easily and clearly compare whether there are differences in personal traits among different employees on each research variable, and then different measures can be taken for different employees according to the size of the differences, so as to promote the healthy development of the company, promote employees' The study is based on the leadership-membership approach.

4. Based on the theoretical framework of the leadership-member exchange theory, the social exchange theory and the social cognitive theory, this study examines the effect of employees' perceived superior trust on voice behavior based on the perspective of the trusted, which is different from the perspective of previous scholars, which not only helps to elaborate and summarize the theories related to perceived superior trust on promoting employees' positive behavior, but also further provides business managers with a new perspective in the study of interpersonal trust relationships, and business managers can create a good trust atmosphere and work environment within the company to promote positive employee suggestions and strategies (Wang, 2022).

This study is a research on the relationship between perceived subordinate relationship and voice behavior based on the perspective of the trusted person, and the research helps to enrich the theoretical perspective between the two variables and expand the influencing factors of subordinate voice behavior. It provides a theoretical reference for corporate managers to clearly understand employees' voice behavior and how to create a good climate for constructing voice behavior to promote employees' voice behavior.

1.6 Limitations of the Study

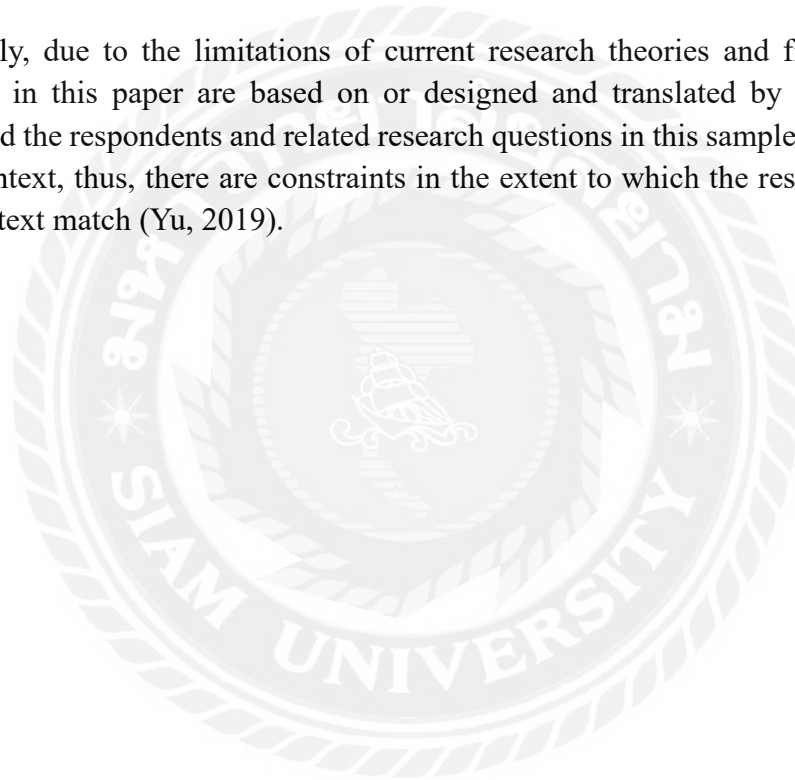
In this study, questionnaires were distributed to 450 employees within the home appliance sales industry in Hebei Province, China through an online platform (i.e. the Questionnaire Star platform). The data was collected and then screened and eliminated as invalid data, resulting in 410 valid data for this study. In the process of the study, due to the lack of time, energy and financial resources, the research in this paper has certain limitations, as shown below.

Firstly, the limitations of geography. Due to the different management, planning and economic conditions of the home appliance sales industry between different geographical areas, so that employees in different geographical areas present different characteristics. This study focuses on the household appliance sales industry in Hebei Province, China, and the scope of the sample collection is limited by geography and the sample is too narrow. Its objectivity and generalisability need to be further tested.

Secondly, trust is a bond between people. The perceived trust and trust mentioned in this paper are a set of corresponding concepts, but they are also fundamentally different from each other. Thirdly, the research involved in this study is based on the subordinates' perspective.

Thirdly, there is a time lag in the data collection process for the variables involved in this study. In the process of filling in the questionnaire, the content filled in by the respondents through the online platform and the valid data subsequently recovered were cross-sectional data of the sample, and due to the limitations of various conditions, the fluctuation of the data at one point in time could not be effectively collected and tracked.

Fourthly, due to the limitations of current research theories and findings. The scales used in this paper are based on or designed and translated by international scholars, and the respondents and related research questions in this sample are from the Chinese context, thus, there are constraints in the extent to which the research design and the context match (Yu, 2019).



Chapter 2 Literature Review

2.1 Introduction

The main focus of this study is to examine the relationship between employees' perceived supervisory trust and voice behavior.

First, based on the descriptive structure of the leader-member exchange theory (LMX) on the relationship between superiors and subordinates, it is clear that when employees are trusted by their superiors, they will invariably receive more resources and benefits, and in order to maintain the exchange relationship with their leaders in a lasting way, they will put in more efforts than before and promote their organizational citizenship behaviors, while employees' active voice behaviors are essentially a manifestation of organizational citizenship behaviors. A manifestation of organizational citizenship behavior. Second, leadership-membership exchange theory is based on social exchange theory and is generally applicable to the analytical framework of interpersonal exchange relationships. Social exchange theory proposes that there is an exchange relationship between people and organizations, and the exchange subject of the organization is the leader, and the leader's behavior, attitude and other factors represent the behavior and attitude of the organization. Therefore, when employees perceive that they are trusted by their superiors, they will reciprocate accordingly and then make good behaviors that are beneficial to the development of the organization, and the courage to suggest ideas is a way for them to repay the organization (Yan, 2011). Finally, social cognitive theory suggests that individual behavior comes from both individual and environmental factors, but the individual factor is more dominant. In organizations, voice behaviors are often risky and challenging, and individuals will evaluate and cognize the voice behavior before performing it, and will only perform the behavior if they are confident and competent in the process of constructing their own voice (Wang, 2022).

Therefore, based on the three theories of leader-member exchange, social cognition, and social exchange, this study focuses on the influence of employees' perceived superior trust on voice behavior.

2.2 Perceived Superior Trust

Trusting refers to a social relationship in which one party is willing to take risks for the other party in the process of social exchange. The concept first originated in social psychology, but as scholars from all over the world have explored the issue, it has been gradually extended to the fields of management and education. Mayer (1995) argues that trust is an associative relationship that individuals maintain with others in their social lives based on positive expectations, and that the trusting party is willing to take risks for the relationship. For example, a superior's trust in a subordinate is often reflected in the willingness to entrust him with important work and to take a series of risks that may arise from his actions or consequences. At the same time, Mayer (1995) introduced the term Perceived Trust, which Mayer defines as the trustee's perception that the trusting party is willing to take risks for the uncertainty of his or her actions or consequences. According to Lau (2014), trust and perceived trust are both interpersonal trust, and they are similar in that both trust and perceived trust are relationships with others based on positive expectations. The difference between the two is that the actor of trust is the trustor, referring to the party who performs the act of trust, while the actor of perceived trust is the trusted, referring to the party who receives the trust of others. According to Lau (2007), only the subordinates themselves know best whether they perceive the trust of their superiors, therefore, it can be called perceived superior trust only from the research perspective of the subordinates. Salamon and Robinson (2008) found that perceived superior trust indicates the willingness of superiors to take risks arising from employees' own weaknesses or lack of competence. Chinese scholars Wang and Zhang (2016) found that when superiors trust their subordinates, then it indicates that superiors are willing to take responsibility for the risks arising from their subordinates' actions or outcomes. It can be seen that a superior's trust in a subordinate is usually a belief that the subordinate will accomplish his or her expected goals, and even if the task assigned to him or her cannot be completed, it is still within his or her control, thus it can be said that perceived superior trust not only reflects the superior's attitude toward the subordinate, but also further indicates the superior's expectation of the subordinate. This study adopts the concept of perceived superior trust proposed by Wang and Zhang (2016), which is applicable to the Chinese context, that is, subordinates perceive that their superiors are willing to take responsibility for the risks associated with their actions, which is a more widely used concept at present.

The research related to the concept of perceived superior trust is based on the evolution of trust relationship. According to the dimensional division of trust, it can be seen that most of the early international scholars used a single dimension, but as the related research continues to deepen and explore, Lewis (1985) proposed that trust is governed by personal emotion or rationality. McAllister (1995) argued that trust covers both cognitive and affective trust, where cognitive trust indicates dependence on and recognition of others, while affective trust is reflected in the process of getting along in

daily work life, and emotional trust arises from concern. trust and special trust, where special trust relationship refers to the trust established with a specific object, which in general refers to the trust formed based on blood or kinship relations, while universal trust refers to the trust relationship that arises between people and friends, colleagues and strangers in the process of social life or work. Usually, the effect of special trust is stronger than that of general trust, and Gillespie (2003) found that trust mainly consists of two components, Reliance and Disclosure. Based on Gillespie's study, Choi and Sung (2011) proposed that perceived superior trust can also be reflected in both dependence and disclosure of sensitive information, and further developed a two-dimensional structured scale. In summary, international scholars have different perspectives on trust and perceived superior trust and have proposed different structural dimensions.

Perceived superior trust is mainly due to the important role played by the trust relationship, and the trust of leaders in treating their subordinates both in attitude and behavior has an important impact on employees' perceived superior trust. International scholars such as Radulovic (2019) found that perceived superior trust can make subordinates have a relatively high sense of security and employee satisfaction in the work process. scholars such as Lester and Brower (2003) argued that subordinates' perceived trust from their supervisors will play an important role in their job satisfaction and can further reduce employees' willingness to leave. In China, Wang and Lu (2018) found that employees' perceived trust from their superiors' attitudes or behaviors can lead to more and more active organizational citizenship behaviors. However, due to the different research perspectives of international scholars, some scholars agree that subordinate employees' perceived trust from their superiors can effectively contribute to the development of corporate performance, but some scholars believe that perceived trust from superiors does not always bring positive effects to subordinates. Graen and Uhl-Bien (1995), based on the research perspective of the scarcity and specificity of leadership trust found that leadership trust can signal to subordinates that they are scarce and unique in the leadership psyche. Domagalski (2005) found that when employees perceive themselves as scarce or exceptional beings, leaders who trust employees who are less competent or less personable than themselves more may cause them to develop jealousy or even a sense of unfairness, which in turn induces employees' undesirable emotional reflection. For this kind of psychological imbalance due to misleading perceptions, the sense of being trusted continues to fail to be satisfied over time, which in turn leads employees to engage in behaviors that are detrimental to the sustainable and stable development of the organization. Chinese scholars such as Chen (2020) argue that when employees perceive that they are unique to the organization, they have the psychology of comparing themselves with other employees and believe that they should have more and better welfare benefits than other employees, and when such inflated and unrealistic expectations are not met in the actual work, employees will become dissatisfied with the organization and then When such inflated and unrealistic

expectations are not met in practice, employees may become dissatisfied and engage in counterproductive behavior toward the organization. Wang (2016) found through their study that superiors tend to assign more important work to employees they trust, which to some extent leads to the complexity and overlap of multiple work tasks, resulting in role conflict among employees. On the other hand, subordinates facing the trust of their superiors may have anxiety and anxiety about whether they can complete their work tasks and meet the expectations of their superiors, resulting in self-doubt about their own ability and role, which leads to stress and role load of employees. The study in this paper focuses on the positive effects of perceived superior trust, which in turn promotes positive voice behavior among employees.

2.3 Voice Behavior

Hirschman (1970) initially pioneered voice behavior in his EVL model and argued that based on the organizational situation, employees may have both satisfaction and dissatisfaction, and when employees are faced with dissatisfaction, their behavior may be reflected in exit or Voice. In contrast to withdrawal behavior, employees' voice behavior is more proactive in expressing their dissatisfaction with their job or organization and trying to change the current status quo and not enough to seek long-term development. "Voice behavior is further defined as "employees' direct suggestions to their supervisors to improve the organization's status quo". Therefore, voice behavior is also understood as a proactive and constructive behavior and serves to buffer the employment relationship between employees and the organization. Since its introduction, voice behavior has received a lot of attention from academics and business people because of its positive effects on organizational operations and management. As scholars continue to explore and discover voice behavior, many richer meanings have emerged. From the initial expression of employee dissatisfaction, it has been extended to include altruistic or organizational citizenship behaviors and other distinctive meanings. Among them, international scholars Le Van and Le Pine (1998) argue that voice behavior refers to constructive suggestions or measures on current work processes with the premise of improving the organization's current situation, and thus the process of voice behavior may be challenging as it may be opposed by others. And scholars believe that voice behavior is mainly about suggesting or improving measures rather than only representing critical opinions, and also has the role of optimizing the organization. Chinese scholars are late in their studies related to vocal behavior, among which Duan (2012) argue that vocal behavior is a constructive opinion based on the purpose of improving the environment.

This study adopts the definition of voice behavior proposed by Le Pine and Van Dyne (1998), which defines it as constructive comments and measures to improve the current status quo of a company with the aim of improving its current work processes, and emphasizes that improvement measures are not only to express critical opinions.

The essence of employee voice behavior is a proactive behavior to improve the current state of the organization and enhance its performance. The premise of voice behavior to improve the current situation of the organization will inevitably break the established interests and distribution methods within the organization, therefore, voice behavior is to a certain extent a challenge to the existing rules and leadership authority of the organization, and voice behavior for employees has a certain degree of risk and challenge.

Van Dyne (1998) defined voice behavior as a multidimensional concept based on the facilitative and challenging nature of voice behavior, i.e., voice behavior belongs to a behavior at the individual employee level, and classified it into pro-social, defensive, and acquiescent constructs based on the motivation and nature of the constructs and the purpose of their constructs. However, some scholars have also proposed other divisional dimensions. For example, Chinese scholars such as Liang (2008) based on the research of scholars such as Van (1998), and then proposed a two-dimensional structure of facilitative and inhibitory voice behavior. This definition is widely used by scholars in the Chinese cultural context.

Voice behavior is a constructive opinion or remedial measure proposed by employees to change the current status or deficiencies of the company, and to a certain extent has an important role in the stable development and organizational optimization of the organization. Voice behavior as an employee's extra-role behavior or organizational citizenship behavior, the factors influencing it can be summarized into three aspects, which are individual trait factors, leadership factors and organizational structure factors.

(1) Personal Trait Factors

Individual trait-based factors. Le Pine (1998) suggested that employee satisfaction largely affects employees' voice behavior, that is, the higher the employee's job satisfaction, the more likely to induce voice behavior, and scholars also found that The higher the employee's self-esteem level, the more likely he or she is to exhibit voice behavior. Chinese scholars such as Duan (2007) suggest that employees' perceived organizational fairness can positively and effectively promote their voice behavior.

(2) Leadership factors

Based on the leadership factor, Detert (2007) explored the influence of leadership style and its related behaviors on employees' voice behaviors based on leadership-member exchange theory (LMX), and the study showed that high-quality leadership-member exchange relationships can effectively promote employees' voice behaviors. Chinese scholars such as Feng (2018), through a study of humble leaders, found that superior leaders possessing humble moral qualities can positively and positively

influence employees' voice behavior. Ruan (2018) suggested that the leadership style that is unique to the Chinese cultural scenario, namely the differential leadership style, has a positive impact on employees' voice behavior. Lu (2017) concluded that ethical leadership which includes paternalistic leadership, participative leadership, inclusive leadership, and transactional leadership styles all have an impact on employees' voice behavior.

(3) Organizational structure factors

Based on the organizational structure factor, Choi (2007) found that a good innovation climate or organizational environment would have a positive effect on employees' voice behavior. Chinese scholars such as Duan (2007) found that high levels of organizational equity or organizational climate have a positive effect on employees' voice behavior through a study on the relationship between organizational equity and voice behavior.

2.4 Self-efficacy

Bandura (1977) defined self-efficacy as the degree to which an individual shows a confidence in completing a specific job task or in his or her own performance, i.e., how employees perceive themselves and the degree to which they recognize themselves. Gecas (1982) found that when employees evaluate the importance, competence, and value of their existence through frequent evaluations of self, which in turn form habitual evaluations, and this self-evaluation will have a significant impact on subsequent employee attitudes and behaviors. Wang (2016) found that when the superior's position or power is high, the superior tends to classify employees as "insiders" and "outsiders", and being trusted by the superior is not only about the employee's status in the company but also about the employee's Mayer (1995) argues that the trust of superiors in their subordinates is often accompanied by additional tasks and responsibilities, and that this is an important way for employees to gain work experience, and that successful work experience is a particularly important factor for employees' self-efficacy.

Huang (2015) suggested that employees' perceived trust from their superiors is not only beneficial to improve their psychological state and work status, but also a major way to influence self-efficacy factors. Fredrickson (2001) found that individual self-efficacy in contexts based on perceived trust can effectively contribute to employees' confidence and self-affirmation in completing important work tasks. As research has progressed, scholars have likewise realized that employee voice behavior is risky and can easily ripple through the employee's image in the collective organization and the employee's self-esteem if the construct fails; therefore, employees must be well thought out or fairly confident in their constructs before voice behavior occurs. The self-efficacy of employees in the voice behavior context reflects precisely the employees' perceptions of whether they can make reasonable and effective suggestions and the degree of

confidence in completing the process of making suggestions. According to Song (2014), employees with a high sense of self-efficacy fully believe that they can handle the interfering factors in the process of constructing a speech well. Zhao (2014) and other scholars showed that employees are motivated to change the current organizational status quo or deficiencies only when they are fully aware that they are important and unique existences and accompanied by a high level of perceived experience of self-worth, while self-efficacy fully reflects the degree of employees' perception of self-evaluation.

2.5 Theory Review

2.5.1 Leader-Member Exchange Theory

The Leader Member Exchange (LMX) Theory is a descriptive model based on social exchange theory, defined by Graen (1972) as an analytical model that describes or emphasizes the exchange behavior of relationships between leaders and subordinate members or between superiors and subordinates in an organization. As a theoretical framework to study and explain the exchange relationship or behavior of employees' subordinates and superiors, the theory has received extensive attention from international scholars once it was proposed, and as the research continues to deepen and mature, the theory is gradually applied to the fields of management, psychology, and sociology (Qiu, 2010).

According to international scholars Graen (2013), the resources at the disposal of the leader in an organization are limited due to certain constraints, which include the limited availability of factors such as the leader's personal time and energy. Therefore, it is impossible for leaders to take care of every subordinate member's feelings or motivate them effectively. Graen (1995) concluded that in the leader-member exchange relationship, employees who receive special care or attention from the leader and have a good trust relationship with them are classified as "insiders", while the excluded subordinates are classified as "outsiders". As the "insiders" have good communication conditions with the leaders, they are taken care of or helped by the leaders more. Out of the rewarding exchange, they will show loyalty to the superior leadership, show more active organizational citizenship behavior, and willingly put into the work of the organization, so as to do to maintain a good exchange relationship between the two sides.

2.5.2 Social Exchange Theory

The Social Exchange Theory was originally derived from material exchange in primitive societies, and Gouldner (1960) argued that the parties to an exchange are judged by whether they have achieved an equilibrium of equal returns on goods or materials. Blau (1964) and other scholars proposed the concept of social exchange

theory, which argues that social exchange is fundamentally different from economic exchange and that social exchange is distinguished from other common behaviors by the fact that it occurs based on the premise of reciprocity between the two parties. The principle of reciprocity between the two parties. Homans (1974) suggests that social exchange is based on the principles of fairness and reciprocity, and combines this concept with the principle of reward, arguing that individuals will establish good social exchange relationships with others in order to obtain lasting personal benefits and to maintain them. individuals to establish good social exchange relationships with others and actively take actions or measures in return.

2.5.3 Social Cognitive Theory

The Social Cognition Theory (SCT) is one of the most important theories used in the field of psychology to explain the emergence of individual behavior. behavior. Among the dynamic equilibrium mechanism formed by the three factors, the individual factor has the greatest effect, because its intrinsic motivation is the direct factor that leads to the individual's behavior. Based on the above, it is clear that the theory emphasizes the behavior change triggered by intra-individual factors, and Bandura pioneered the term self-efficacy to explain the mechanism of intra-individual psychological factors on behavior based on cognitive factors. Gist (1987) defines it as an evaluation of a particular behavior based on the individual's subjective perception of the behavior performed, and that subjective evaluation greatly influences the individual's behavioral goals. Typically, self-efficacy emphasizes the individual's self-perception and confidence in achieving a particular behavioral goal or success in achieving that goal. Although there are numerous categories or domains derived from the idea of self-efficacy overview, the essence and core connotation of its emphasis has not changed substantially. The self-efficacy studied in this paper refers to vocal self-efficacy.

2.6 Research Relevant

Chinese scholar Wang (2017) proposed that perceived superior trust consists of two components: perceived superior dependence and perceived superior information disclosure. perceived superior dependence refers to the superior leader's reliance on subordinates' professional skills, knowledge, or employees' personal abilities; perceived superior information disclosure refers to the degree of the superior's willingness to share sensitive information with subordinates, which can also be viewed as Lau (2008), based on the fact that there is a vertical binary relationship between superiors and subordinates in organizations, found that the obvious status and power differences between superiors and subordinates lead to a more complex trust relationship between superiors and subordinates, and the greater the power of the superior as the trusting party in the organization, the stronger the effect of trusting behavior. Detert (2007) argue that the perceived risks and benefits that employees can perceive have a significant impact on

the generation of their voice behavior. Zhou (2013) argued that when employees perceive greater benefits of proposing a lesser risk, then employees will show more positive voice behavior in that organization or work process.

2.7 Conceptual Framework

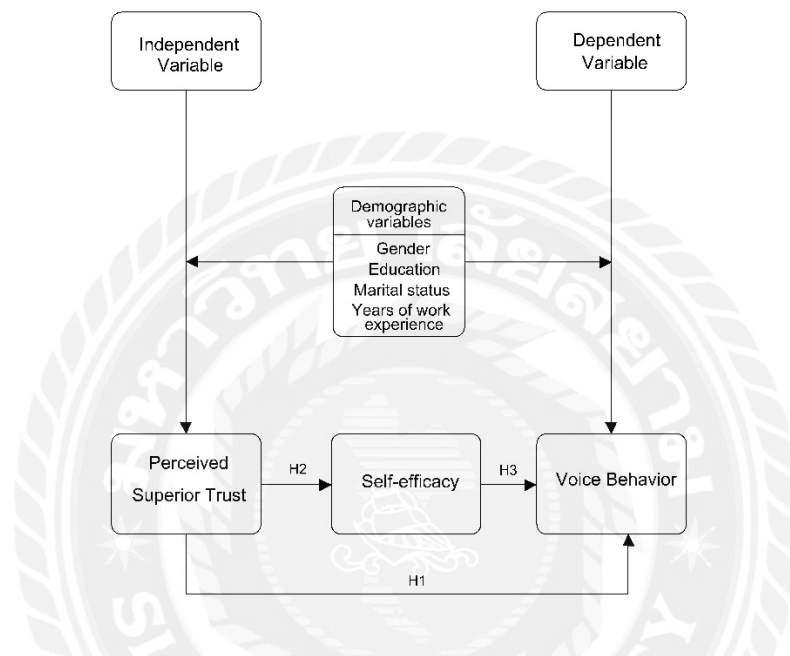


Figure 2.1 Conceptual Framework

2.8 Terms and Definitions Used in This Study

2.8.1 Perceived Superior Trust

Perceived superior trust was originally derived from trust, based on which Mayer (1995) proposed perceived trust and defined it as a behavior in which the trusted party perceives that the trusting party is willing to take risks for the actions or consequences of their uncertainty. Lau (2007), based on the essence of the difference between trust and perceived trust, argued that only subordinates themselves know best in an organization whether or not they perceive trust from their superiors, and therefore, it can only be called perceived superior trust from the subordinate's perspective.

2.8.2 Voice Behavior

Voice behavior is a concept developed by the international scholar Hirschman (1970) based on the EVL model. Rusbult (1998) expanded on Hirschman (1970) by further defining voice behavior as employees' proactive efforts to provide their superiors with constructive ideas or measures to improve the current organizational

situation and viewed it as a constructive behavior. constructive ideas or measures to improve the current organizational situation, and viewed it as a behavior that is constructive. Similarly, Le Van (1998) defined voice behavior as constructive ideas or measures to improve the current organizational status quo with the premise of improving the current work processes, but it is challenging and risky considering that the process of voice behavior may suffer from the opposition of others or violate the interests of others. Based on the above, most research scholars generally agree that voice behavior is somewhat constructive and optimizing for organizations, not just critical.

2.8.3 Self-efficacy

The definition of self-efficacy in this study is mainly explored from the perspective of constructive efficacy, which is defined by Bandura (1977) as a degree of self-confidence and perception of oneself in this behavioral process that an individual shows when completing a specific job task. Gecas (1982) argues that employees' assessment and judgment of their importance and competence in the organization or the value of their existence will lead to a habitual evaluation, which is very important for their attitude, behavior and constructiveness in the organization.

2.8.4 Home Appliance Industry

Home appliance is the abbreviation of household appliances. Electrical appliances in a narrow sense are loads on electrical circuits and devices used to control, regulate or protect circuits, motors, etc., such as speakers, switches, varistors, fuses, etc. Broadly speaking, electrical appliances are products that perform work using a combination of electrical components, and usually they use electricity as a source of energy. According to Luo (2022), "Analysis of the operation of the household appliance industry in 2021 and outlook for 2022", there are four categories of household appliances internationally: white appliances, black appliances, beige appliances and the emerging green appliances. White home appliances refer to products that can replace people's domestic work, including washing machines and refrigerators, or products that provide people with a higher quality of living environment, such as air conditioners and electric heaters; black home appliances refer to products that provide entertainment, such as color TVs, stereos and game consoles; beige home appliances refer to computer information products; green home appliances refer to products that can be used efficiently and save energy under the premise of qualified quality. Green home appliances do not cause harm to human body and the surrounding environment in the process of use, and can be recycled at the end of life.

Chinese scholar Luo (2022) points out that the mature home appliance category in the Chinese market is showing weak growth, along with the weakening cyclicity of the real estate industry associated with the home appliance industry, the industry's demand is gradually shifting to stock renewal, and the demand side is becoming more

stable. As a result, industry demand is changing with the development of consumer end demand, and some home appliance categories are facing fierce competition.



Chapter 3 Research Methodology

3.1 Introduction

This study used a quantitative research approach to explore the effect of perceived supervisor trust on employee voice behavior based on the mediating role of self-efficacy. Chapter 3 of this paper focuses on the design, use, distribution, and return of the questionnaire, as well as the validity and reliability tests of each scale item in the follow-up questionnaire. Based on this, the study further explored and analyzed the mechanism of employees' perceived supervisory trust on their voice behavior, proposed the hypotheses of this paper with the conceptual framework of the study, and tested them with the more widely used and mature scales developed by international scholars.

3.2 Research Design

In this paper, a sample of respondents was surveyed using a questionnaire as a way to obtain primary data for the study. The questionnaire consists of three parts: the Perceived Supervisor Trust Scale, the Self-Efficacy Scale and the Staff Suggestions and Behaviors Scale. The questionnaire contains four parts, the first part is the basic information of the respondents in this sample, which mainly includes the gender, current position, age, education level and years of work, and consists of five questions. The second part is the scale of perceived superior trust, which measures the degree of employees' perceived trust from their superiors, i.e., an evaluation of their attitude or behavior from their perspective. The third part is the employee's evaluation of self-efficacy i.e. the self-efficacy scale measurement questions, which is designed to measure the employee's confidence in the successful adoption of his or her proposed ideas and voice behaviors, and this part of the scale consists of 10 questions (Yu, 2019). The fourth part of the scale measuring questions of employees' voice behavior is designed to measure whether employees are proactive in expressing their suggestions to their supervisors, and this part of the scale consists of 10 questions (Wang, 2022).

3.2.1 Perceived Supervisor Trust Scale Items and their Measurement

The perceived superior trust component of the scale is based on a scale developed by Gillespie (2003) and widely used by scholars and has 10 questions. Among them, Wang and Zhang (2016) applied the scale developed by Gillespie to measure perceived superior trust in a Chinese cultural context, and their results showed that the scale had good reliability indicators in the Chinese context. The scale measures the perceived trust relationship from the employee's perspective by asking how much the respondent relies on his or her job or skills and whether he or she is willing to disclose his or her personal views, opinions, and sensitive information to the employee. The scale uses a five-point Likert scale in which 1 means "strongly disagree," 2 means "disagree," 3

means "average," 4 means "agree" and 5 means "strongly agree", i.e., 1 to 5 represent different levels of willingness.

3.2.2 Self-efficacy Scale Items and their Measurement

The self-efficacy component of the scale is based on a well-established scale developed by Schwarzer (1997) and others and widely validated by international scholars, and it has 10 questions. The scale is based on the respondents' confidence in their opinions or behavioral constructs. The representative questions are "I am confident that I can cope effectively with anything that comes up" and "I can cope with whatever happens to me". Some scholars, such as Zhang (2009) and Yu (2019), have demonstrated good reliability and validity of the scale in their studies based on Chinese scenarios. The scale uses a five-point Likert scale in which 1 means "strongly disagree," 2 means "disagree," 3 means "average," 4 means "agree," and 5 means "strongly agree". 4 means "agree" and 5 means "strongly agree", i.e., 1 to 5 represent different levels of willingness.

3.2.3 Voice Behavior Scale Items and their Measurement

This part of the voice behavior scale was developed by Liang (2012) and other scholars based on the Chinese context and has a high degree of maturity, and the scale has 10 questions. The scale has strong applicability to the measurement of employees' voice behavior in the Chinese context and has been widely used in the Chinese context with high reliability and validity. The scale measures voice behavior by asking respondents whether they take the initiative to make their own suggestions or improvements to their supervisors. The representative topics are "Proactive in making rational suggestions to help the unit achieve its goals," "Promptly discourage other employees in the unit from acting in a bad way that affects work efficiency," and "Actively reflect to the unit's leaders the inconsistencies and problems that arise in the workplace. The scale is based on the following questions The scale uses a five-point Likert scale, where 1 means "strongly disagree", 2 means "disagree", 3 means "average", 4 means "agree", and 5 means "strongly agree". 4 means "agree" and 5 means "strongly agree", i.e., 1 to 5 represent different levels of willingness.

3.3 Hypothesis

Law et al. (2000) found that employees who have relatively close relationships with their supervisors are more likely to have opportunities to engage with them in informal settings. Therefore, employees' perceived superior trust enables them to gain more resources and work advantages from frequent contact and two-way communication with their supervisors, and to adopt appropriate voice behaviors based on their supervisors' preferences. Song and Liu (2014) stated that self-efficacy refers to a level of confidence that individual employees have in themselves to perform a specific

behavior or to accomplish a specific task. Wang and Zhang (2016) pointed out that supervisors have higher positions and rights in the company, and employees' perceived trust from supervisors is an important sign of employees' "insider" status, as well as an important way for employees to be recognized. In view of the theoretical basis of the above scholars, the research hypotheses of this study are proposed.

H1: Perceived superior trust has a significant positive effect on promoting employee voice behavior

H2: Perceived superior trust has a significant positive effect on promoting employee self-efficacy

H3: Employee self-efficacy has a positive effect on promoting voice behavior

H4: Employee self-efficacy has a mediating role between perceived superior trust and voice behavior

H5: Perceived superior trust, self-efficacy, and voice behavior of employees in the home appliance industry differ significantly in terms of demographic characteristics, namely, gender, education, position, years of work experience, and age

3.4 Population and Sample

The target population in this study, i.e., the total population, refers to the whole of the object to be studied or the population from which the researcher wishes to obtain information, and the total population is composed of individuals with the same properties among the objects of study. Sampling refers to a randomly selected sample from the total population (Sun, 2007). In general, the sample total can be considered as the same as the target total. Sampling is one of the most common and used modes of questionnaire survey, which is a broad concept of sampling in which a sample of individuals is taken from the total population of the study, and the sampling is conducted according to the principle of equal opportunity. In this study, the employees of home appliance industry in Hebei Province, China were sampled as a whole.

3.5 Sampling

Methods regarding sampling can be divided into two categories, sampling in the non-probability case and sampling in the equal-probability case. In this study, the principle of equal-probability sampling is followed. Equal-probability sampling, also known as random sampling, means that the sample is selected randomly with a certain probability in the sampling process and the probability of each individual unit being

selected is known, non-zero or calculable, which means that each part of the total has an equal chance of being selected. In summary, random sampling is considered to maximize the representativeness and universality of the sample. Therefore, the sampling table proposed by Yamane (1967) was used as the basis of this sampling method with 95% confidence interval (i.e., P=0.5).

3.6 Sample Size

Based on the above principles of equal probability sampling, the number of samples can be determined and calculated by means of population collection. For the sample size used in this study, Yamane's (1973) sample size formula was used to calculate and determine the number of samples, and a 95% confidence level was used with a sampling error of 5% or 0.05. The overall sample was 17,500 people, N denotes the size of the overall study, n denotes the number of samples used in the study, and e denotes the error of the random sample set to 0.05. Based on the above formula, the sample size and calculation formula can be seen that the sample size drawn this time is 391 people, but due to the possibility of misfilling or omission in the process of sampling, in order to effectively ensure the accuracy of this data collection to this sample size for expansion. Among them, 450 questionnaires were officially distributed, and after eliminating the unqualified questionnaires such as wrongly filled or omitted, a total of 410 valid questionnaires were retained, and the recovery rate was 91.1%. The sample size and calculation formula are as follows.

$$N = \frac{N}{1+(Ne^2)}$$

$$N = \frac{17500}{1+(17500(0.05)^2)}$$

$$N = \frac{17500}{1+43.75}$$

$$N = 391$$

(Equation 3-1)

3.7 Data Collection

Due to the fact that the randomly selected individual employees in the home appliance sales industry in Hebei Province, China are in different stores, their positions are far away and involve a wide range, and secondly, due to the impact of the new crown epidemic in recent years, in order to respond to the national call and epidemic prevention needs, the questionnaire was distributed through the online platform "Questionnaire Star" (www.wjx.cn). Respondents filled in the questionnaire and submitted it through the "Questionnaire Star" platform, and the whole process was done anonymously. After 15 days of collection, all receipts of the questionnaire were

collected. After eliminating the invalid questionnaires that were wrongly filled or omitted, a total of 410 valid questionnaires were obtained as the data for this study and then analyzed (Sun, 2007).

3.8 Data Analysis

In this study, primary research data were collected by means of a questionnaire and the 410 valid data collected were analyzed using SPSS 27.0.1 statistical software. Based on the SPSS data analysis and quantitative study by Ma and Wu (2020) as a reference, the research hypotheses proposed in this paper were tested. These included descriptive statistical analysis, independent sample t-test, one-way ANOVA, correlation analysis, and regression analysis. The meanings of each data analysis index are as follows.

Descriptive statistics is the process of organizing, analyzing and describing the data collected through the research process. Descriptive statistics analysis can be said to be an important part of the sample data analysis process and an important way for us to process the data. In general, descriptive statistics involves the study of data concentration trends, discrete trends and data distribution characteristics of the three categories (i.e., mean, standard deviation, kurtosis and skewness), etc. It mainly uses graphs or mathematical operations to describe the basic situation and distribution characteristics presented by the sample data accordingly.

Independent Sample T-test: refers to a sample in which the elements in one sample are independent of each other and the elements in the other sample. This method is used to test whether two independent samples come from the same mean overall, which can also be understood as testing whether two normal overall means are equal. The method is also used to test two independent samples from the overall population and to test two independent samples from the overall population.

Analysis of Variance. ANOVA, also known as "analysis of variance" or "F-test," is a method used to test whether there is a significant difference between the means of two or more samples. The data obtained from the study showed fluctuations due to various factors. The causes of fluctuations can be divided into two categories, one belonging to uncontrollable random factors and the other to controllable factors imposed in the study that form an impact on the results. Analysis of variance is performed by analyzing the variance of the observed values of the variables to determine the magnitude of the influence of the controllable factors on the study results by analyzing the contribution of the variance from different sources to the total variance in the study.

Correlation Analysis (CA). Correlation analysis is to test whether there is some kind of dependence or correlation between the research objects, and to explore the direction and magnitude of the phenomena with dependence, which is a way to study the correlation between random variables.

Regression analysis: Regression analysis is a statistical analysis method to determine the quantitative relationship between two or more variables that are dependent on each other. Regression analysis is widely used. Regression analysis is divided into two types of regression analysis: univariate regression and multiple regression analysis, according to the number of independent variables involved. If only one independent variable and one dependent variable are included in the regression analysis, and the relationship between them can be approximated by a straight line, this regression analysis is called univariate linear regression analysis. If two or more independent variables are included in the regression analysis, and the relationship between the dependent variable and the independent variable is linear, it is called multiple linear regression analysis.

3.9 Reliability and Validity Analysis of the Scale

3.9.1 Reliability Analysis of the Scale

Reliability can be understood as a kind of reliability, which mainly refers to the consistency of the results obtained when the same method is used to measure the same object repeatedly, and is an important index for judging research work. The methods of reliability analysis can be summarized into four types, namely, the remeasurement reliability method, the replicate reliability method, the half reliability method, and the alpha reliability coefficient method. In this study, the internal consistency of Cronbach's alpha coefficient is mainly used as an indicator to test the stability and homogeneity of the scale. In general, the reliability alpha coefficient of a total scale should preferably be above 0.8, and between 0.7 and 0.8 indicates that the scale is of an acceptable degree. If the Cronbach's alpha coefficient is below 0.6 a reformulation of the scale should be considered (Yan, 2011). The Cronbach's alpha test coefficients for the three components of the scale involved in this study, perceived superiority letter, self-efficacy, and voice behavior, are shown in Table 3.5.

Table 3.1 Reliability analysis of questionnaire scales

Factor	N	Cronbach's alpha
Perceive the trust of superiors	10	0.895
Self-efficacy	10	0.913
Voice Behavior	10	0.951
Overall reliability of the scale	30	0.938

Source: Based on the results of SPSS27.0.1 software analysis

According to the statistical results of the reliability analysis of the questionnaire scales in Table 3.1, the Cronbach's alpha coefficient of the part of the scale on employees' perceived superior trust is 0.895; the Cronbach's alpha coefficient of the part of the scale on self-efficacy is 0.913; the Cronbach's alpha coefficient of the part of the scale on voice behavior is 0.951; the overall Cronbach's alpha coefficient of the scale part of the questionnaire The overall Cronbach's alpha coefficient for the scale part of the questionnaire is 0.938, and all of them are higher than 0.8 or more. Thus, it can be shown that the reliability of the three parts of the scale, namely perceived superior trust, self-efficacy and employee voice behavior, is good and has high reliability, which further indicates that the maturity of the scale used in this study is high and the reliability is good.

3.9.2 Validity Analysis of the Scale

The Perceived Superior Trust Scale, the Voice Behavior Scale, and the Self-Efficacy Scale, which were drawn upon for this study, are all mature scales. Validity tests can be summarized as content validity, structural validity, and associative validity. The superior trust scale, self-efficacy, and voice behavior scales used in this study were based on well-established scales developed and widely used by international scholars, and the theoretical components of their content and correlational validity have been confirmed. Therefore, for testing the structural validity of the scales in this study, exploratory factor analysis was used to test them (Tan, 2018). In summary, the KMO and Bartlett's spherical tests were conducted for each subscale to further confirm its suitability for the next step of exploratory factor analysis. the value of KMO ranges from 0 to 1, and the closer the value is to 1, the more suitable it is for factor analysis. when the KMO value reaches 0.6 or more, the validity is acceptable, and the Bartlett's sphericity test statistic has a significance is below 0.05, indicating that the scale is suitable for factor analysis. The results of the validity analysis for each component of the scale are shown below.

(1) Validity test of perceived superior trust

Table 3.2 KMO and Bartlett's test

KMO Sampling suitability quantity		0.936
Bartlett's sphericity test	χ^2	1685.346
	df	45
	sig	0.000

According to the results of the analysis in Table 3.2, the KMO value of the perceived superior trust partial scale is 0.936, the chi-square value in Bartlett's spherical test is 1685.346, the degree of freedom is 45, and the significance is 0.000. Thus, it is clear that the KMO value of perceived superior trust is close to 1 and the Bartlett's spherical test reaches the significance level, and the next step of exploratory factor analysis is available the conditions for the next exploratory factor analysis.

Table 3.3 Total variance explained

Ingredients	Initial Eigenvalue			Extraction of the sum of squares of loads		
	Total	Percentage	Cumulative %	Total	Percentage	Cumulative %
1	5.174	51.738	51.738	5.174	51.738	51.738
2	0.742	7.422	59.160			
3	0.626	6.255	65.415			
4	0.609	6.086	71.501			
5	0.582	5.821	77.321			
6	0.523	5.226	82.548			
7	0.489	4.886	87.434			
8	0.471	4.710	92.144			
9	0.440	4.402	96.546			
10	0.345	3.454	100.000			

Extraction method: principal component analysis.

Table 3.4 Perceived Superior Trust Matrix

	Ingredients
	1
A1 What my direct supervisor feels is important, he will set me up to participate and make an impact.	0.662
A2 My direct supervisor will not be watching my every move.	0.710
A3 My direct superior would be more than willing to leave critical tasks to me, even if he could not detect my movements.	0.754

A4 My direct supervisor will tell me about mistakes he has made on the job, even if they may damage his reputation.	0.708
A5 My direct supervisor will share his thoughts on some sensitive issues with me, even if his ideas are not very popular.	0.747
A6 My direct supervisor is not worried that I will do something against him at work.	0.742
A7 When I question something at work, my direct supervisor tells me without reservation.	0.744
A8 If someone questions my motives, my immediate superior will choose to believe me.	0.702
A9 When I make requests, my immediate superior responds readily and does not consider whether these responses are beneficial to him.	0.659
A10 My direct supervisor is willing to give me full responsibility for some projects that are important to him.	0.758

Based on the results of the total variance interpretation in Table 3.3 and the component matrix analysis in Table 3.4, it can be seen that principal component analysis was used to develop factor analysis for the 10 measurement items in the perceived superior trust scale. Among them, one common factor with an eigenvalue greater than 1 was extracted, which is consistent with the characteristics of the unidimensional scale of perceived superior trust developed by Gillespie (2003). Its cumulative variance explained 51.738% of this result. This indicates that the measurement items of the perceived superior trust scale have good validity.

(2) Validity test of self-efficacy scale

Table 3.5 KMO and Bartlett's Test

KMO Sampling suitability quantity		0.946
Bartlett's sphericity test	χ^2	2019.645
	df	45
	sig	0.000

According to Table 3.5 KMO and Bartlett's test analysis, the KMO value of employee self-efficacy scale is 0.946, the chi-square value in Bartlett's spherical test is 2019.645, the degree of freedom is 45, and the significance is 0.000. Thus, it is clear that the KMO value of employee self-efficacy is close to 1 and Bartlett's spherical test reaches the significance level, and the next step of conditions for exploratory factor analysis.

Table 3.6 Total Variance Explained

Ingredients	Initial Eigenvalue			Extraction of the sum of squares of loads		
	Total	Percentage	Cumulative %	Total	Percentage	Cumulative %
1	5.628	56.279	56.279	5.628	56.279	56.279
2	0.674	6.743	63.022			
3	0.605	6.048	69.070			
4	0.563	5.629	74.699			
5	0.533	5.333	80.032			
6	0.462	4.622	84.655			
7	0.429	4.286	88.941			
8	0.394	3.939	92.880			
9	0.361	3.613	96.493			
10	0.351	3.507	100.000			

Extraction method: principal component analysis.

Table 3.7 Self-Efficacy Matrix

	Ingredients
	1
B1 If I do my best, I can always solve the problem	0.762
B2 Even if others oppose me, I still have the means to get what I want	0.762
B3 It's easy for me to stick to my ideals and reach my goals	0.756
B4 I am confident that I can deal effectively with anything that comes up unexpectedly	0.723
B5 With my talent, I can handle the unexpected	0.720
B6 If I put in the necessary effort, I will be able to solve most of the problems	0.785
B7 I can face difficulties calmly because I trust myself to handle problems	0.778
B8 When faced with a difficult problem, I can usually find several solutions	0.716
B9 When there is trouble, I can usually think of some ways to deal with it	0.752
B10 No matter what happens to me, I can handle it easily	0.744

Extraction method: principal component analysis.

a. 1 component was extracted.

Based on the results of the total variance interpretation of Table 3.6 Self-efficacy and the results of the component matrix analysis in Table 3.7, it can be seen that the principal component analysis was used to conduct factor analysis on the 10 measurement items of the employee self-efficacy scale. Among them, one common factor with an eigenvalue greater than 1 was extracted, which is consistent with the characteristics of the unidimensional scale of self-efficacy developed by Schwarzer (1997). Its cumulative variance explained 56.279% of this result. This indicates that the measurement items in the employee self-efficacy scale have good validity.

(3) Validity test of the voice behavior scale

Table 3.8 KMO and Bartlett's Test

KMO Sampling suitability quantity		0.967
Bartlett's sphericity test	χ^2	3246.331
	df	45
	sig	0.000

According to Table 3.8 KMO and Bartlett's test analysis results show that the KMO value of the voice behavior scale is 0.967, the chi-square value in Bartlett's spherical test is 3246.331, the degree of freedom is 45, and the significance is 0.000. It is thus clear that the KMO value of employee voice behavior is close to 1 and Bartlett's spherical test reaches the significance level, and the next exploratory conditions for factor analysis.

Table 3.9 Total Variance Explained

Ingredients	Initial Eigenvalue			Extraction of the sum of squares of loads		
	Total	Percentage	Cumulative %	Total	Percentage	Cumulative %
1	6.963	69.627	69.627	6.963	69.627	69.627
2	0.453	4.528	74.156			
3	0.409	4.089	78.245			
4	0.382	3.824	82.069			
5	0.346	3.465	85.534			
6	0.337	3.370	88.904			
7	0.325	3.251	92.155			
8	0.293	2.931	95.086			
9	0.265	2.650	97.736			
10	0.226	2.264	100.000			

Extraction method: principal component analysis.

Table 3.10 Voice Behavior Matrix

	Ingredients
	1
C1 Think and make their own suggestions about problems that may arise in the unit	0.836
C2 Proactively propose new programs that will benefit the unit	0.838
C3 Proactively make suggestions for improving unit work procedures	0.818
C4 Proactively make rationalized suggestions to help the unit achieve its goals	0.828
C5 Suggested constructive ideas that could improve unit operations	0.814
C6 Promptly discourage other employees in the unit from misbehaving in a way that affects efficiency	0.843
C7 On serious issues that may cause losses to the unit, be honest, even if others have different opinions	0.873
C8 Actively expresses opinions on phenomena that affect the efficiency of the unit and is not afraid to embarrass people	0.840
C9 will be able to point out when there is a problem in the work of the unit, not afraid to offend	0.812
C10 Actively reflect inconsistencies and problems that arise in the workplace to unit leaders	0.842
Extraction method: principal component analysis.	
a. 1 component was extracted.	

Based on the total variance interpretation of the voice behavior in Table 3.9 and the results of the component matrix analysis in Table 3.10, it can be seen that the principal component analysis was used to develop factor analysis for the 10 measured question items in the employee voice behavior scale. Among them, one common factor with an eigenvalue greater than 1 was extracted, which is consistent with the characteristics of the unidimensional scale of voice behavior developed by Liang (2012). Its cumulative variance explained 69.627% of this result. This indicates that the measurement questions in the employee self-efficacy scale have good validity.

Chapter 4 Findings

4.1 Introduction

This study used the SPSS to test the hypotheses presented. The main elements include testing for common method bias in each variable and testing for multicollinearity in the data using both variance inflation factor (VIF) and tolerance, and both passed the test, thus indicating that the multicollinearity among the variables in this paper is not serious and is still within an acceptable range. The variability of the respondents' personal traits in this paper was tested by independent sample t-test and one-way ANOVA; the degree of association between the variables was tested by Pearson correlation analysis, and the results showed that perceived superior trust and self-efficacy had a significant positive contribution to employees' voice behavior; finally, regression analysis was used to further. Finally, the quantitative relationship between the degree of interdependence among the three variables of perceived superior trust, self-efficacy and voice behavior was further examined through regression analysis, and the research hypothesis of this paper was verified based on the results of the study.

4.2 Description of Statistical Variables

Table 4.1 Descriptive Analysis of Variables

	Mean	Skewness	Kurtosis		Mean	Skewness	Kurtosis
Perceive the trust of superiors				Self-efficacy			
A1	3.9341	-0.788	-0.134	B1	4.1951	-1.296	1.469
A2	4.0220	-0.931	0.372	B2	4.2585	-1.457	2.211
A3	4.0366	-0.925	0.500	B3	4.2024	-1.364	1.734
A4	3.8488	-0.703	-0.118	B4	4.0707	-1.167	1.306
A5	3.8049	-0.768	0.253	B5	4.1122	-1.166	1.154
A6	4.1561	-0.945	0.417	B6	4.3146	-1.540	2.454
A7	4.1268	-0.882	0.105	B7	4.2878	-1.572	2.832
A8	3.8659	-0.681	-0.283	B8	4.1146	-1.085	1.011
A9	3.7878	-0.753	0.201	B9	4.0512	-1.052	0.738
A10	4.0659	-0.836	0.266	B10	4.3073	-1.559	2.617
Voice Behavior							
C1	4.0683	-1.167	0.652				
C2	4.1171	-1.316	1.294				

C3	4.0512	-1.142	0.589				
C4	3.9878	-1.103	0.477				
C5	3.9415	-1.052	0.401				
C6	4.1805	-1.348	1.158				
C7	4.1707	-1.316	1.105				
C8	3.9805	-1.091	0.459				
C9	3.9390	-1.018	0.234				
C10	4.1195	-1.232	0.881				

Table 4.2 Analysis of Variables by Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	164	40.0	40.0	40.0
	Female	246	60.0	60.0	100.0
	Total	410	100.0	100.0	

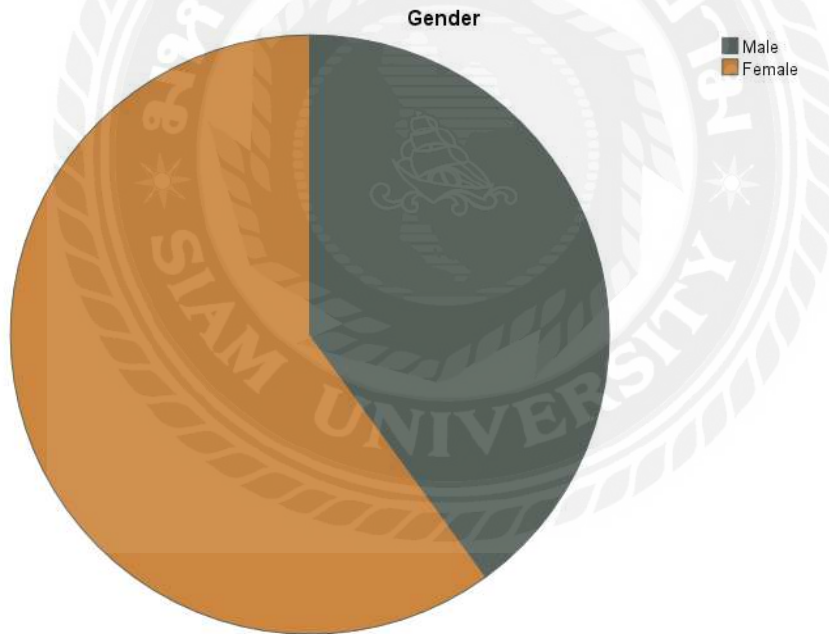


Figure 4.1 Pie Chart by Gender

As can be understood from the results of the analysis of variables by gender in Table 4.2 and Figure 4.1, the majority of respondents were 246 women, accounting for 60.0% of the total number of respondents, while men appeared less frequently, accounting for 40% of the total number of respondents.

Table 4.3 Analysis of Variables by Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 25 years old	220	53.7	53.7	53.7
	26-35 years old	164	40.0	40.0	93.7
	36-45 years old	15	3.7	3.7	97.3
	Over 45 years old	11	2.7	2.7	100.0
	Total	410	100.0	100.0	

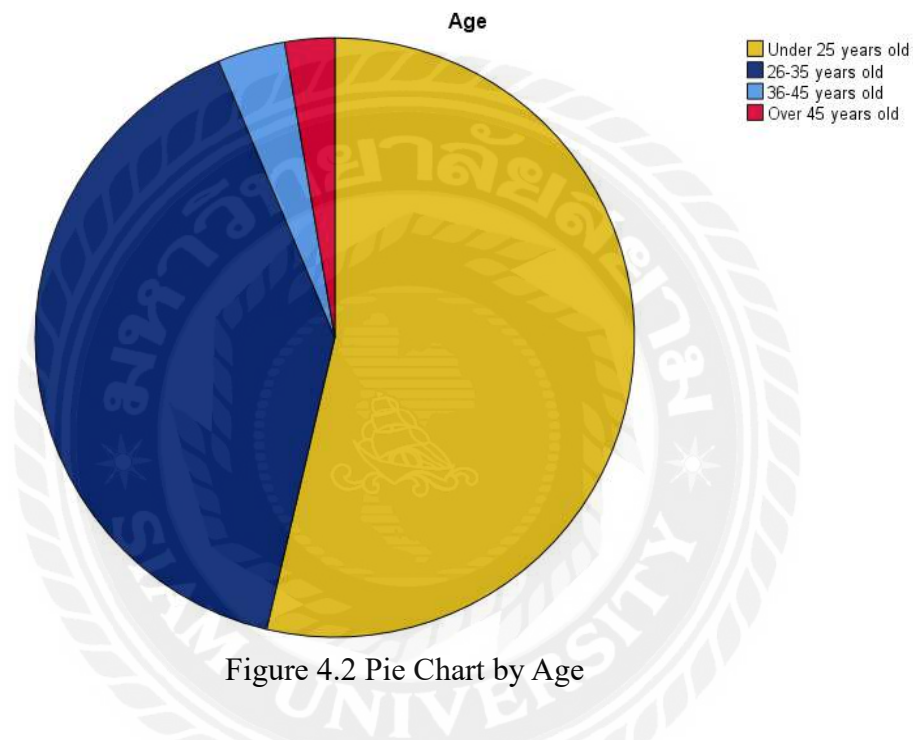


Figure 4.2 Pie Chart by Age

Based on the results of the analysis of variables by age in Table 4.3 and Figure 4.2 above, the majority of the 410 respondents were under the age of 25, with 220 employees, accounting for 53.7% of the total number of respondents; followed by 164 respondents aged 26-35, accounting for 40.0% of the total number of respondents; and the least number of respondents aged 36-45 and 45+, with 15 and 11 respondent, respectively, accounting for 3.7% and 2.7% of the total number of respondents. The least number of respondents are those aged 36-45 and 45+, with 15 and 11 respondents respectively, accounting for 3.7% and 2.7% of the total number of respondents. Based on the above analysis, it can be seen that there are more female respondents in the home appliance industry in Hebei Province, China and most of them are younger than 25 years old. There are significantly fewer respondents between the ages of 36-45 or over 45.

Table 4.4 Analysis of Variables by Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school/junior high school and below	45	11.0	11.0	11.0
	College	73	17.8	17.8	28.8
	Undergraduate	253	61.7	61.7	90.5
	Master and above	39	9.5	9.5	100.0
	Total	410	100.0	100.0	

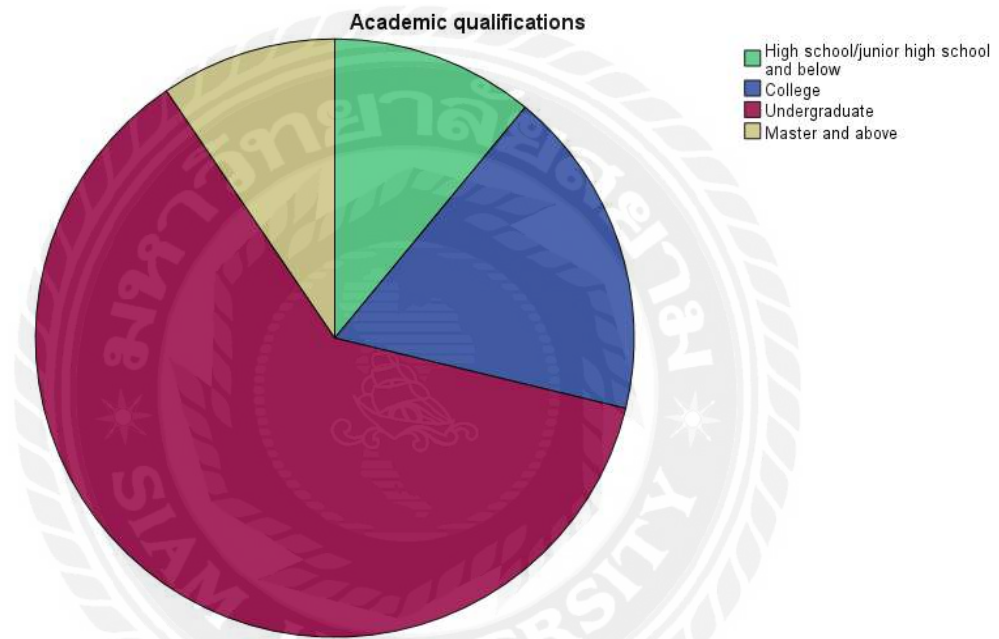


Figure 4.3 Pie Chart by Education

According to the results of the analysis of variables by education in Table 4.4 and Figure 4.3, it can be seen that in terms of education level, the majority of the 410 respondents' education is concentrated in bachelor's degree, with 253 people, accounting for 61.7% of the total number of respondents, followed by high school/junior college and below and college education, with 45 and 73 people, accounting for 11.0% and 17.8% of the total number of respondents, respectively. The lowest number is master's degree or above, with only 39 people, accounting for 9.5% of the total number. Based on the results of the above analysis, it is clear that the education level of respondents in the home appliance sales industry in the region is at a medium level.

Table 4.5 Analysis of Variables by Job

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	General Staff	328	80.0	80.0	80.0
	Grassroots managers	26	6.3	6.3	86.3
	Middle Management	7	1.7	1.7	88.0
	Senior Management	1	0.3	0.3	88.3
	Other	48	11.7	11.7	100.0
	Total	410	100.0	100.0	

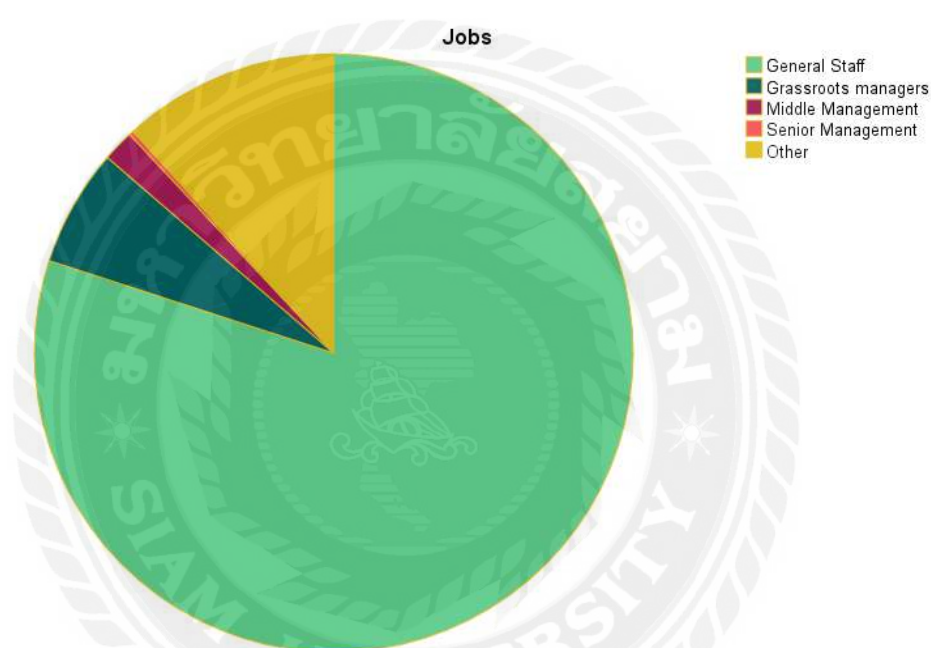


Figure 4.4 Pie Chart by Job

According to the results of the analysis of variables for each position in Table 4.5 and Figure 4.4, it can be seen that among the 410 respondents in different job positions, the largest number of general respondents was 328, accounting for 80.0% of the total number of respondents; the second largest number of respondents whose positions belonged to other categories was 48, accounting for 11.7 of the total number of respondents; the number of junior managers and middle managers was 26 and 7, respectively, accounting for 6.3% and 1.7% of the total number of respondents; the smallest number of senior managers was 1, accounting for 0.3 of the total number of respondents. The number of senior managers was 1, accounting for 0.3 percent of the total number of respondents.

Table 4.6 Analysis of Variables by Years of Work Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within 1 year	174	42.4	42.4	42.4
	1-3 years	167	40.7	40.7	83.2
	4-6 years	28	6.8	6.8	90.0
	7-10 years	25	6.1	6.1	96.1
	More than 10 years	16	3.9	3.9	100.0
	Total	410	100.0	100.0	

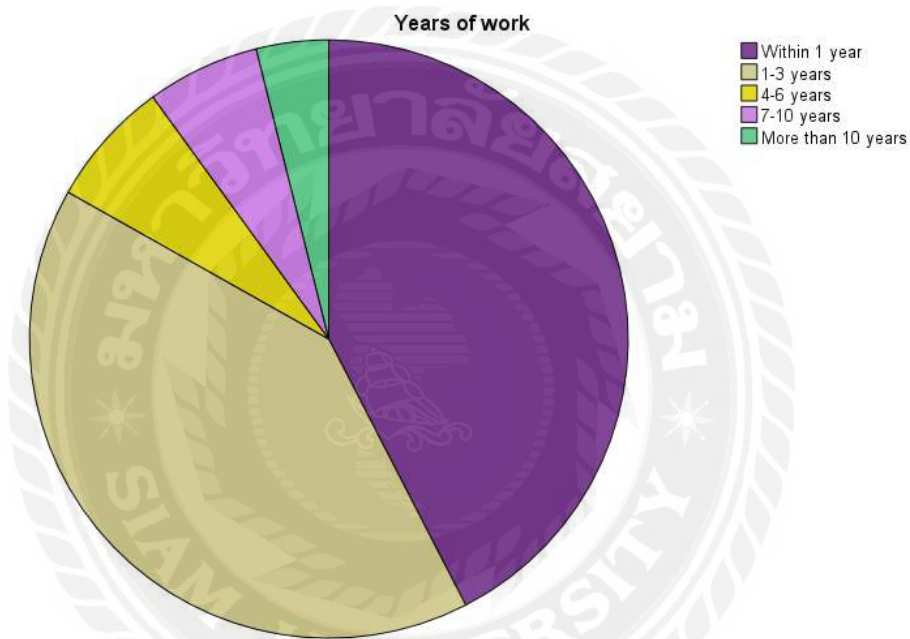


Figure 4.5 Pie Chart by Years of Experience

According to Table 4.6 and Figure 4.5, the results of the analysis of variables by years of work show that the largest number of the 410 respondents, 174 or 42.4% of the total number of respondents, had worked for less than 1 year, followed by 167 or 40.7% of the total number of respondents, who had worked for 1-3 years, 4-6 years and 7-10 years, respectively. The number of employees with 4-6 years of experience and 7-10 years of experience are 28 and 25 respectively, accounting for 6.8% and 6.1% of the total number of respondents, respectively. The minimum number of respondents with more than 10 years of experience was 16, accounting for 3.9% of the total number of respondents.

4.3 Results of the Study

4.3.1 Independent Samples t-test

To test the research hypotheses in this study, we will examine the variability of different personal traits of 410 respondents on three components of variables: perceived superior trust, self-efficacy, and voice behavior. Due to the needs of the study, the sensitivity of respondents' basic information on each variable will be tested in this paper. Therefore, the independent samples t-test was used to test only two variables, and the one-way ANOVA was used to test two or more multiple variables. In this paper, the variables with variability will be further analyzed by unfolding the LSD two-way comparison method in the one-way ANOVA, and due to the large number of variables involved in the two-way comparison, only the two groups with significant differences between the Due to the number of variables involved in the two-way comparison, only the data between the two groups with significant differences were collated. The independent sample t-test for gender is shown in Table 4.7.

Table 4.7 Independent sample t-test on gender

	Gender	N	Mean	t	Sig. (2-tailed)
Perceived Superior Trust	Male	164	39.6768	0.065	0.948
	Female	246	39.6301		
Self-efficacy	Male	164	42.4939	1.356	0.176
	Female	246	41.5285		
Voice Behavior	Male	164	42.5366	3.668	0.000
	Female	246	39.2358		

According to the results of the independent sample t-test on gender in Table 4.7, it can be seen that the t-values of the respondents in each variable are 0.065, 1.356 and 3.668; their p-values are 0.948, 0.176 and 0.000; at the 0.05 level of significance, it can be seen that there is a significant difference between genders in the voice behavior variable (i.e., $p < 0.05$). In terms of voice behavior, the mean value for males is 42.5366 and for females is 39.2358. Based on the results of the above analysis, it can be seen that the mean value for male employees is slightly greater than that for females in the comparison of means, indicating that the perceived level of voice behavior of employees is higher for male employees than for female employees.

4.3.2 One-way ANOVA

Table 4.8 One-way ANOVA on Age

	Age	N	Mean	F	Sig. (2-tailed)
Perceived Superior Trust	Under 25 years old	220	39.6227	0.591	0.621
	26-35 years old	164	39.8963		
	36-45 years old	15	39.2667		
	Over 45 years old	11	37.0000		
Self-efficacy	Under 25 years old	220	41.7045	3.107	0.026
	26-35 years old	164	42.7622		
	36-45 years old	15	38.4667		
	Over 45 years old	11	38.1818		
Voice Behavior	Under 25 years old	220	39.3000	6.619	0.000
	26-35 years old	164	42.8232		
	36-45 years old	15	37.7333		
	Over 45 years old	11	35.7273		

Table 4.9 LSD Multiple Comparison Analysis between Age Groups

Dependent variable	(I) Age	(J) Age	Mean Difference (I-J)	Standard Error	Sig.
Self-efficacy	26-35 years old	36-45 years old	4.29553*	1.89321	0.024
		Over 45 years old	4.58038*	2.18595	0.037
	36-45 years old	26-35 years old	-4.29553*	1.89321	0.024
	Over 45 years old	26-35 years old	-4.58038*	2.18595	0.037
Voice Behavior	Under 25 years old	26-35 years old	-3.52317*	.91617	0.000
	26-35 years old	Under 25 years old	3.52317*	.91617	0.000
		36-45 years old	5.08984*	2.39553	0.034
		Over 45 years old	7.09590*	2.76594	0.011
	36-45 years old	26-35 years old	-5.08984*	2.39553	0.034
Over 45 years old	26-35 years old	-7.09590*	2.76594	0.011	

*. The significance level of the difference of the means is 0.05.

The results of the one-way ANOVA on age in Table 4.8 show that employees' self-efficacy and voice behavior differed significantly across ages. Their F-values were 3.107 and 6.619, respectively, with p-values of 0.026 and 0.000, respectively, with p-

values less than 0.05 significance level. In self-efficacy the mean value of employees under 25 years old is 41.7045, between 26-35 years old is 42.7622, between 36-45 years old is 38.4667, and over 45 years old is 38.1818. In voice behavior the mean value of employees under 25 years old is 39.3000, between 26-35 years old is 42.8232, the mean value of employees between 36-45 years old is 37.7333, and the mean value of employees over 45 years old is 35.7273.

From the LSD multiple comparison analysis in Table 4.9, it is clear that employees between the ages of 26-35 have significantly higher perceived levels of self-efficacy than employees in other age groups. In voice behavior also the perceived level of employees between the ages of 26-35 is significantly higher than that of employees in other age groups. This may be due to the fact that employees between the ages of 26-35 have certain professional knowledge and work experience, and have a relatively mature and objective evaluation of themselves, so that they can propose improvement plans or measures based on their own experience in the face of unreasonable phenomena in the company.

Table 4.10 One-way ANOVA on Education

	Academic qualifications	N	Mean	F	Sig. (2-tailed)
Perceived Superior Trust	High school/junior high school and below	45	37.5556	1.669	0.173
	College	73	39.8904		
	Undergraduate	253	40.0356		
	Master and above	39	39.1026		
Self-efficacy	High school/junior high school and below	45	40.6000	0.982	0.401
	College	73	41.4384		
	Undergraduate	253	42.1265		
	Master and above	39	42.9487		
Voice Behavior	High school/junior high school and below	45	38.2667	1.273	0.283
	College	73	40.5890		
	Undergraduate	253	40.7510		
	Master and above	39	41.8718		

From the results of the one-way ANOVA on education in Table 4.10, it can be seen that the F-values of the three variables of perceived superior trust, self-efficacy and voice behavior on employees' different educational backgrounds are 1.669, 0.982 and 1.273, respectively, and their P-values are 0.173, 0.401 and 0.283, respectively, and all P-values are greater than the 0.05 significance level. Thus, it can be stated that perceived

superior trust, self-efficacy and voice behavior do not differ significantly across employees' educational backgrounds.

Table 4.11 One-way ANOVA on Jobs

	Jobs	N	Mean	F	Sig. (2-tailed)
Perceived Superior Trust	General Staff	328	39.5945	0.640	0.634
	Grassroots managers	26	39.2308		
	Middle Management	7	42.4286		
	Senior Management	1	48.0000		
	Other	48	39.6667		
Self-efficacy	General Staff	328	42.4024	2.834	0.024
	Grassroots managers	26	41.5769		
	Middle Management	7	36.5714		
	Senior Management	1	43.0000		
	Other	48	39.5208		
Voice Behavior	General Staff	328	40.9299	0.984	0.416
	Grassroots managers	26	39.8846		
	Middle Management	7	39.8571		
	Senior Management	1	46.0000		
	Other	48	38.3542		

From the results of the one-way ANOVA on current positions in Table 4.11, it can be seen that the F-values for the three variables of perceived superior trust, self-efficacy and voice behavior in different positions of employees are 0.640, 2.834 and 0.984, respectively, and their P-values are 0.634, 0.024 and 0.416, respectively. it can be seen that the P-value for self-efficacy is less than the 0.05 level of significance, and in The comparison of the mean value of self-efficacy is 42.4024 for general employees, 41.5769 for basic managers, 36.5714 for middle managers, 43.0000 for top managers, and 39.5208 for other job categories. thus, it shows that there is a significant difference in the variable of self-efficacy among employees in different job categories.

Table 4.12 One-way ANOVA on Years of Work Experience

	Years of work	N	Mean	F	Sig. (2-tailed)
Perceived Superior Trust	Within 1 year	174	39.8276	2.881	0.022
	1-3 years	167	39.6347		
	4-6 years	28	40.1429		
	7-10 years	25	41.4400		
	More than 10 years	16	34.1875		
Self-efficacy	Within 1 year	174	42.7471	6.624	0.000
	1-3 years	167	41.5808		
	4-6 years	28	42.7143		

	7-10 years	25	42.7200		
	More than 10 years	16	33.6875		
Voice Behavior	Within 1 year	174	40.9655	6.628	0.000
	1-3 years	167	40.1377		
	4-6 years	28	41.4643		
	7-10 years	25	45.4400		
	More than 10 years	16	31.2500		

The results of the one-way ANOVA on years of service in Table 4.12 show that employees' perceived superior trust, self-efficacy, and voice behavior are significantly different across employees' years of service. Their F-values were 2.881, 6.624, and 6.628, respectively, and their P-values were 0.022, 0.000, and 0.000, respectively, and their P-values were less than 0.05 significance level. In the comparison of the means of employees' perceived superior trust, the mean value of up to 1 year was 39.8276, 39.6347 for 1-3 years, 40.1429 for 4-6 years, 41.4400 for 7-10 years, and 34.1875 for more than 10 years. in the comparison of the means of self-efficacy, the mean value of up to 1 year was 42.7471, 1 In the comparison of means for voice behavior, the means were 40.9655 for up to 1 year, 40.1377 for 1-3 years, 41.4643 for 4-6 years, and 33.6875 for 7-10 years. The mean value is 45.4400, and the mean value for more than 10 years is 31.2500.

Table 4.13 LSD Multiple Comparison Analysis between Groups of working years

Dependent variable	(I) Years of work	(J) Years of work	Mean Difference (I-J)	Standard Error	Sig.	
Perceived Superior Trust	1-3 years	More than 10 years	5.64009*	1.83699	0.002	
	4-6 years	More than 10 years	5.95536*	2.20370	0.007	
	7-10 years	More than 10 years	7.25250*	2.25127	0.001	
	More than 10 years	Within 1 year		-5.64009*	1.83699	0.002
		1-3 years		-5.44723*	1.84023	0.003
		4-6 years		-5.95536*	2.20370	0.007
		7-10 years		-7.25250*	2.25127	0.001
Self-efficacy	Within 1 year	More than 10 years	9.05963*	1.79881	0.000	
	1-3 years	More than 10 years	7.89334*	1.80198	0.000	
	4-6 years	More than 10 years	9.02679*	2.15789	0.000	
	7-10 years	More than 10 years	9.03250*	2.20447	0.000	
	More than 10 years	Within 1 year		-9.05963*	1.79881	0.000
		1-3 years		-7.89334*	1.80198	0.000
		4-6 years		-9.02679*	2.15789	0.000
7-10 years			-9.03250*	2.20447	0.000	

Voice Behavior	Within 1 year	7-10 years	-4.47448*	1.88695	0.018
		More than 10 years	9.71552*	2.30473	0.000
	1-3 years	7-10 years	-5.30228*	1.89191	0.005
		More than 10 years	8.88772*	2.30879	0.000
	4-6 years	More than 10 years	10.21429*	2.76481	0.000
	7-10 years	Within 1 year	4.47448*	1.88695	0.018
		1-3 years	5.30228*	1.89191	0.005
		More than 10 years	14.19000*	2.82449	0.000
	More than 10 years	Within 1 year	-9.71552*	2.30473	0.000
		1-3 years	-8.88772*	2.30879	0.000
		4-6 years	-10.2142*	2.76481	0.000
		7-10 years	-14.1900*	2.82449	0.000

*. The significance level of the difference of the means is 0.05.

From the LSD multiple comparison analysis between groups in Table 4.13, it is clear that employees with more than 10 years of experience are less sensitive to these three variables in terms of perceived superior trust, self-efficacy and voice behavior. This may be due to the fact that employees with more than 10 years of experience have been working in the organization for a longer period of time and are used to the existence of irrational phenomena within the organization, and they are relatively more aware of the situation of their supervisors and the organization and consider that there are reasons for their decisions or initiatives. Therefore employees who have worked for more than 10 years have lower sensitivity on these three variables.

4.3.3 Correlation analysis

Correlation analysis is used to examine the degree of linearity and correlation between variables. In correlation analysis, international scholars usually use Pearson's correlation coefficient analysis to explore the correlation between the data of each variable. Usually, the Pearson correlation coefficient takes a value between 1 and -1, which means that the greater the absolute value of the correlation coefficient between variables, the greater the degree of closeness of the relationship. In this paper, the Pearson correlation coefficient between variables is tested to determine the correlation between variables. For example, Table 4.14 shows the results of correlation coefficient analysis among the main variables in this study.

Table 4.14 Correlation analysis of the study variables

	Perception of superiors Trust	Self-efficacy	Voice Behavior
Gender	-.003	-0.067	-0.179**
Age	-.029	-0.044	0.050

Academic qualifications	0.065	0.085	0.087
Jobs	0.015	-0.143**	-0.090
Years of work	-0.063	-0.159**	-0.065
Perceived Superior Trust	1	0.205**	0.404**
Self-efficacy	0.205**	1	0.554**
Voice Behavior	0.404**	0.554**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Source: collated from SPSS27.0.1 software analysis

The results of the correlation analysis between the main study variables in Table 4.14 show that employees' perceived superior trust is significantly positively correlated with self-efficacy ($r = 0.205^{**}$, $p < 0.01$) and with voice behavior ($r = 0.404^{**}$, $p < 0.01$). In self-efficacy was significantly positively related to voice behavior ($r = 0.554^{**}$, $p < 0.01$), significantly negatively related to employees' current position ($r = -0.143^{**}$, $p < 0.01$), and significantly negatively related to individual employees' years of experience ($r = -0.159^{**}$, $p < 0.01$). Among employee voice behaviors, there was a significant negative correlation between constructive behavior and different genders of individual employees ($r = -0.179^{**}$, $p < 0.01$). The results of the above correlation analysis expected a significant relationship between the variables, and the next step of regression analysis can be developed to further test the hypotheses of this paper.

4.3.4 Regression analysis

(1) Multicollinearity test

Several variable factors are involved in this paper, considering that the problem of multicollinearity among the explanatory variables is first considered when regression analysis of the variables is performed. In empirical studies in management, the two commonly used methods to test for multicollinearity among variables are tolerance and variance inflation factor. The tolerance is also called tolerance, and the value of tolerance fluctuates between 0 and 1, which can be interpreted as the higher the probability of multicollinearity among variables when the value is close to 0. The variance inflation factor is the inverse of the tolerance, and generally when the value of VIF is greater than 10, it can indicate the existence of multicollinearity among variables. From the results of the covariance test in Table 4.15, it can be seen that the variance inflation factor value is much less than 10 and the tolerance is much greater than 0. Thus, it can be judged that there is no multicollinearity among the variables in this study.

Table 4.15 Multicollinearity test results (N=410)

Variables	Covariance statistics	
	tolerances	VIF
Gender	0.958	1.044

Age	0.770	1.298
Academic qualifications	0.911	1.098
Jobs	0.910	1.099
Years of work	0.761	1.314
Perceived Superior Trust	0.951	1.051
Self-efficacy	0.908	1.102
Voice Behavior	0.958	1.044

Note: Dependent variable: constructive behavior

Source: Statistical analysis according to SPSS27.0.1 software

(2) Regression analysis and research hypothesis testing

Using SPSS27.0.1 statistical analysis software, multiple linear regression analysis was used for perceived superior trust, self-efficacy and voice behavior to test the hypotheses presented in this study one by one. The specific analysis and operation steps are as follows: the first step, testing the effect of perceived superior trust on employees' voice behavior in this paper's research hypothesis H1; the second step, testing the effect of perceived superior trust on employees' self-efficacy in research hypothesis H2; the third step, testing the effect of self-efficacy on employees' voice behavior in research hypothesis H3; the fourth step, testing the research hypothesis H4 self-efficacy in perceived superior trust and the mediating role between voice behavior.

In the regression analysis of this study, the mediation effect will be tested by drawing on the analysis of the cascade regression in Baron and Kenny (1986). The test steps for the mediating effect are as follows: first, the regression analysis between the independent variable (X) and the dependent variable (Y), and the effect of X on Y is significant in the test; second, the regression analysis between the independent variable (X) and the mediating variable (M), and the effect of X on M is significant in the test; the regression analysis between the mediating variable (M) and the dependent variable (Y), and the effect of M on Y is significant in the test; If all the above three parts of the regression analysis are satisfied, the subsequent analysis can be further developed; finally, the independent variable (X) and the mediating variable (M) are jointly regressed on the dependent variable, and in the test results, if the regression coefficient of the mediating variable (M) is significant and the effect of the independent variable (X) is not significant, it can indicate that M plays a fully mediating role between X and Y ; if the regression coefficient of the mediating variable (M) is significant and the effect of the independent variable (X) is also significant, but the effect of the independent variable (X) becomes smaller or weaker compared to the effect in the previous step of the regression analysis, it means that M plays a partially mediating role between X and Y (Sun, 2018).

Table 4.16 Analytical Results of Hierarchical Regression and Mediated Effects Test

Variables	Self-efficacy (M)		Voice Behavior (Y)			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Gender	-0.091	-0.088	-0.200**	-0.193**	-0.150**	-0.151**
Age	0.016	0.014	0.084	0.080	0.075	0.073
Academic qualifications	0.080	0.065	0.115*	0.084	0.072	0.053
Jobs	-0.119*	-0.126*	-0.061	-0.075	0.003	-0.015
Years of work	-0.164*	-0.150**	-0.108*	-0.079	-0.020	-0.008
Perceived Superior Trust		0.193**		0.396**		0.304**
Self-efficacy					0.539**	0.477**
F-value	4.733**	6.833**	5.366**	18.707**	34.053**	42.349**
R ²	0.055	0.092	0.062	0.218	0.336	0.424
ΔR ²	0.044	0.079	0.051	0.206	0.327	0.414

Note: **p<0.01, *p<0.05, two-tailed test

Source: compiled from SPSS27.0.1 analysis

The test results of using cascade regression in this paper are shown in Table 4.16, Model 1 and Model 3 are the regression results after adding control variables with self-efficacy and voice behavior as dependent variables, and Model 4 is the regression results based on the analysis of adding independent variables to control variables, from the analysis results, it can be seen that: perceived superior trust significantly positively affects voice behavior ($\beta=0.396^{**}$, $P<0.01$), which can indicate that the higher the degree of perceived superior trust of members in the organization, the more their voice behavior occurs, and hypothesis 1 is supported.

For the test of mediating effect in this paper, it is mainly based on the test of mediating effect proposed in Baron and Kenny (1986). First, the independent variable significantly influenced the dependent variable, and hypothesis 1 was verified. Secondly, the independent variable significantly acts as a mediating variable, model 2 is based on model 1 by adding this paper's independent variable (X) perceived superior trust, and the results of this test show that employees' perceived superior trust significantly and positively affects employees' self-efficacy ($\beta= 0.193^{**}$, $p<0.01$). This can indicate that the higher the level of employees' perceived superior trust, the higher their self-efficacy follows, and hypothesis 2 is supported.

The mediating variable (M) significantly affects the dependent variable, Model 5 is the regression result based on the inclusion of self-efficacy (M) based on the control variables, this result shows that employees' self-efficacy significantly and positively affects employees' voice behavior ($\beta= 0.539^{**}$, $p<0.01$), further indicating that the

higher the degree of employees' self-efficacy, the more their voice behavior, hypothesis 3 is supported. Finally, the mediating effects of this study were tested. Model 6 is based on the regression test results of adding both the independent variable (X) perceived superior trust and the mediating variable (M) self-efficacy on the control variables, from which the results show that the regression coefficient of employee self-efficacy on voice behavior is significant ($\beta=0.477^{**}$, $p<0.01$), further indicating that this mediating effect exists. Meanwhile, the regression coefficient of the independent variable (X) perceived superior trust is significant ($\beta=0.304^{**}$, $p<0.01$) and the effect effect is weaker compared to model 4 ($\beta= 0.396^{**}$, $p<0.01$). Therefore, it can be concluded that employees' self-efficacy (M) plays a partial mediating effect between the independent variable (X) and the dependent variable (Y), and hypothesis 4 is supported.

This paper is based on the social exchange theory, the leader-member exchange theory, and the social cognitive theory. Based on the results of these tests, the study found that: Perceived superior trust has a significant positive effect on promoting employees' voice behavior; Perceived superior trust has a significant positive effect on promoting employees' self-efficacy; Employee self-efficacy has a positive effect on promoting voice behavior; Employees' self-efficacy has a mediating role between perceived superior trust and voice behavior; The significant differences in perceived superior trust, self-efficacy, and voice behavior of employees in the above appliance industry were partially verified on demographic variables.

Chapter 5 Conclusion and Recommendation

5.1 Introduction

This chapter focuses on summarizing the results of the analysis in the previous chapter, and organizing and summarizing the results of the argumentation of the research hypotheses. And based on the findings this study, it proposes corresponding management suggestions and measures on how to promote employees' perceived trust from superiors, focus on their self-efficacy role, improve individual employee engagement and creativity development in the organization, and how to effectively create a good climate of suggestion and voice behavior within the organization to provide reference values for management practices in the organization.

5.2 Conclusion

Voice behavior is an innovative driving force for organizational development. In recent years, as scholars from various international parties have continued to study voice behavior, the factor of trust has been widely recognized by scholars as an important factor indispensable for influencing voice behavior. This study explores the relationship between perceived superior trust and voice behavior based on social exchange theory and the leader-member exchange theory, and takes the employee perspective as a starting point. Based on the social cognitive appraisal theory, a mediation model of self-efficacy is constructed based on the premise that perceived trust from others is necessary to effectively promote more organizational citizenship behaviors among individual members. The following conclusions can be drawn from the analysis of the questionnaire of 410 respondents, as shown in Table 5.1.

Table 5.1 Summary of Hypothesis Testing

Research Hypothesis		Is it established
H1	Perceived superior trust has a significant positive effect on promoting employee voice behavior.	Established
H2	Perceived superior trust has a significant positive effect on promoting employee self-efficacy.	Established
H3	Employee self-efficacy has a positive effect on promoting voice behavior.	Established
H4	Employee self-efficacy has a mediating role between perceived superior trust and voice behavior.	Established
H5	Perceived superior trust, self-efficacy, and voice behavior of employees in the home appliance industry differ significantly	Partially established

	in terms of demographic characteristics, namely, gender, education, position, years of work experience, and age.	
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Source: Data analysis and collation

5.3 Discussion

The main purpose of the research is to construct a theoretical model between perceived superior trust, self-efficacy and employee voice behavior and to formulate the research hypothesis of this paper. In the process of sample collection, only cross-sectional data of the respondents in this time period were collected due to the constraints of individual practice resources and financial ability, and the process of data fluctuation over time was not recorded, which to some extent affects the generality and objectivity of the research results. Secondly, since the perspective of this inquiry is based on employees' personal subjective perceptions, there may be certain deviations in the process of filling out this questionnaire due to employees' different levels of perception. In the process of verifying the valid data collected by using SPSS statistical analysis software, some of the data in the analysis were simply organized according to the research needs, so some of the data were not well reflected.

Second, for the mature scales used in this study, most of them were translated, modified, and rewritten after being introduced into the Chinese cultural context based on those developed by international scholars. However, this part of the scale is good in both reliability and validity and is its representativeness. Finally, the 410 respondents in this study were all from the home appliance sales industry in Hebei, China, which is somewhat regional in nature, and the generalizability of the results needs to be further tested.

In summary, the depth and breadth of this study on perceived superior trust, self-efficacy, and employee voice behavior need to be further examined.

5.4 Recommendation

The following management recommendations and initiatives are proposed in response to the findings in this study.

(1) Recommendations for good trust relationships between leaders and members of their subordinates. According to the research on perceived superior trust and employee voice behavior in this paper, it can be found that employees' perceived superior trust positively promotes employee voice behavior to a certain extent. This can show that the prerequisite for promoting employee voice building atmosphere in an organization is the trust relationship and atmosphere between superiors and

subordinates, and leaders should focus and pay attention to the establishment, cultivation and maintenance of trust relationship with subordinate members. In daily work life or in the process of task execution, it is recommended that leaders can give full trust and affirmation to employees, focusing on comprehensive and overall development instead of focusing on the details of various complicated tasks, so that employees can build a certain level of self-confidence in their work, which is also an important way for employees to perceive the trust of their superiors. In addition, leaders can often share their ideas or experiences with their subordinates, so that employees can perceive that leaders regard themselves as "insiders", further strengthening the perception of insider status, bringing them closer to each other, weakening subordinate employees' concerns about the risk of suggestions, and thus increasing subordinate employees' enthusiasm for suggestions.

(2) Focus on the healthy development of employees' mental state. Research has found that employees' self-efficacy plays a very important role in promoting vocal behavior. Therefore, leaders can give employees praise, appreciation, and affirmation in a timely manner, and provide them with appropriate material rewards, so as to enhance employees' affirmation and confidence in their self-efficacy, and weaken employees' fear of speaking their true thoughts for the development of the company due to their lack of ability and status. Thus, leaders should encourage and affirm the bold and innovative spirit of employees, and encourage them to express their opinions. Secondly, leaders should pay attention to the psychological and emotional care and attention to employees, which is also an effective way to close the trust relationship between the upper and lower levels.

(3) Improve employee engagement in the organization. The level of employee involvement in the organization usually influences individual employee behavior. In the enterprise, employees perceive that their superiors trust them partly from the affirmation of their work ability or expertise, and partly from the subordinates' perceived expectations and cultivation of their leaders or the organization. The more engaged employees are in an organizational work environment, the higher their perception of the company, and the more engaged employees can perceive their value to the organization. When subordinates perceive the trust and love from their superiors, they will give timely and positive feedback on the behavior and will be more willing to make voice behavior and propose improvement measures for the unreasonable phenomena in the organization. Therefore, improving employee engagement in the organization helps to promote more feedback from employees. To improve the sense of employee involvement in the organization, leaders can adopt decentralization or devolution to allow employees to fully integrate into the daily work management and improve the motivation of employees' suggestions.

(4) Create a good environment and climate for voice-building. A good voice and voice environment is the foundation and guarantee of employees' voice behavior. Leaders should focus on how to provide a positive platform for subordinate employees, and create a fair, just, independent and equal environment and atmosphere for subordinate employees, which not only meets their own needs, but also guarantees the healthy development of the organization to a certain extent, enhances the trust relationship between subordinates and superiors in the organization, guides employees' innovative spirit and creative consciousness, and provides timely and effective feedback for the feedback from the company is timely and effective. Based on the above, it is recommended that leaders establish channels and feedback mechanisms for employee input in the organization.

First, to a certain extent, simplify the cumbersome communication procedures between the upper and lower levels, and try to maintain smooth communication between the two sides. Among other things, they can set up suggestion boxes, talk with employees regularly or use questionnaires to find out the suggestions and initiatives of the company's employees. At the same time, enterprises can also organize regular staff exchanges or dinners and other recreational activities to understand the recent work status and real needs of subordinate employees.

Secondly, before establishing a good suggestion atmosphere, the organization should first consider the trust relationship between upper and lower level employees, and give subordinate employees certain care based on trust, so that employees realize that they are an indispensable existence in the development process of the organization and their existence has certain value. Make employees fully aware that each member of the organization's voice has a certain rationality, and encourage employees to actively voice their opinions, and provide more promotion opportunities and material incentives for employees who are brave enough to speak up, and in this process the company will also give them the opportunity to make trial and error, which is not only conducive to the lasting development of the organization, but also related to the shaping of the human spirit of the organization.

Finally, business leaders should pay attention to the point that, for employees to take the initiative to put forward suggestions or measures, companies should give timely feedback to employees after understanding and evaluating, and the organization will consider the reasons for the adoption of the proposal or the reasons for not adopting the proposal in a timely manner to inform the proponents, and to encourage and affirm the proponents.

5.5 Further Study

The relationship between perceived superior trust, self-efficacy, and voice behavior is explored in this study based on the employee perspective. Interpersonal trust is the premise of this study and has been the focus of scholars in the field of management. Since trust is based on both the trustor and the trusted, both the inquiry from the leader's perspective and the inquiry based on the employee's perspective are relatively one-sided. In future research, in order to ensure the objectivity of the study, it is suggested that the two perspectives of the superior and the subordinate can be considered to jointly explore the two-way role in trust and the interaction between the two.

Secondly, in this study, due to limited personal resources and ability, the time effect was ignored in the process of data collection, and the scope of the research subjects was narrow, and the sample data was insufficient, etc. In future research, we can consider expanding the sample size, sampling the sample on a large national scale to ensure that the sample has certain universality and applicability.

Finally, future research can be extended to the study of the negative effects of perceived superior trust. A comparison of studies from different perspectives can provide further insight into the specific degree of influence of perceived superior trust on subordinate members' voice behavior.

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Appendix

Appendix A Questionnaire

Dear Sir/Madam:

First of all, thank you very much for your participation in this survey. This research is purely an academic research activity, and the questionnaire is conducted in an anonymous form. We hope that you can answer the questions in an objective and honest manner, and we will use the results of the survey as important reference data for this study. Once again, this survey is anonymous, the data filled out only for this academic research, not for other purposes, and there is no standard answer to each question, please answer according to your actual situation and true feelings. We sincerely thank you for your participation and support, and wish you good luck in your work and happy life. The first part: please fill in your personal information.

1. What is your gender?

Male Female

2. What is your age?

Under 25 years old 26-35 years old 36-45 years old Over 45 years old

3. What is your education?

High school/junior high school and below College Undergraduate

Master and above

4. What is your current position?

General Staff Grassroots managers Middle Management

Senior Management Other

5. What is your length of service?

Within 1 year 1-3 years 4-6 years 7-10 years More than 10 years

Part II: Perceived superior trust scale question items

Table A-1 Perceived Superior Trust Scale Question Items

A1 What my direct supervisor feels is important, he will set me up to participate and make an impact.	1	2	3	4	5
A2 My direct supervisor will not be watching my every move.	1	2	3	4	5
A3 My direct superior would be more than willing to leave critical tasks to me, even if he could not detect my movements.	1	2	3	4	5
A4 My direct supervisor will tell me about mistakes he has made on the job, even if they may damage his reputation.	1	2	3	4	5
A5 My direct supervisor will share his thoughts on some sensitive issues with me, even if his ideas are not very popular.	1	2	3	4	5
A6 My direct supervisor is not worried that I will do something against him at work.	1	2	3	4	5
A7 When I question something at work, my direct supervisor tells me without reservation.	1	2	3	4	5
A8 If someone questions my motives, my immediate superior will choose to believe me.	1	2	3	4	5
A9 When I make requests, my immediate superior responds readily and does not consider whether these responses are beneficial to him.	1	2	3	4	5
A10 My direct supervisor is willing to give me full responsibility for some projects that are important to him.	1	2	3	4	5

Part III: Self-efficacy scale question items

Table A-2 Self-efficacy scale question items

B1 If I do my best, I can always solve the problem	1	2	3	4	5
B2 Even if others oppose me, I still have the means to get what I want	1	2	3	4	5
B3 It's easy for me to stick to my ideals and reach my goals	1	2	3	4	5
B4 I am confident that I can deal effectively with anything that comes up unexpectedly	1	2	3	4	5
B5 With my talent, I can handle the unexpected	1	2	3	4	5
B6 If I put in the necessary effort, I will be able to solve most of the problems	1	2	3	4	5
B7 I can face difficulties calmly because I trust myself to handle problems	1	2	3	4	5
B8 When faced with a difficult problem, I can usually find several solutions	1	2	3	4	5
B9 When there is trouble, I can usually think of some ways to deal with it	1	2	3	4	5
B10 No matter what happens to me, I can handle it easily	1	2	3	4	5

Part IV: Suggestive behavior scale question items

Table A-3 Voice Behavior Scale Question Items

C1 Think and make their own suggestions about problems that may arise in the unit	1	2	3	4	5
C2 Proactively propose new programs that will benefit the unit	1	2	3	4	5
C3 Proactively make suggestions for improving unit work procedures	1	2	3	4	5
C4 Proactively make rationalized suggestions to help the unit achieve its goals	1	2	3	4	5
C5 Suggested constructive ideas that could improve unit operations	1	2	3	4	5
C6 Promptly discourage other employees in the unit from misbehaving in a way that affects efficiency	1	2	3	4	5
C7 On serious issues that may cause losses to the unit, be honest, even if others have different opinions	1	2	3	4	5
C8 Actively expresses opinions on phenomena that affect the efficiency of the unit and is not afraid to embarrass people	1	2	3	4	5
C9 will be able to point out when there is a problem in the work of the unit, not afraid to offend	1	2	3	4	5
C10 Actively reflect inconsistencies and problems that arise in the workplace to unit leaders	1	2	3	4	5