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ORIGINAL RESEARCH

Research on Employee Voice Intention: Conceptualization, Scale Development, and Validation Among Enterprises in China

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Purpose: Expressing opinions and ideas in the workplace is an important aspect of organizational development and employee well-being. However, employee voice intention, which refers to an employee's willingness to share their opinions or ideas, is an area that has received limited attention in research. Therefore, the aim of this study was to develop and validate a reliable measurement tool for employee voice intention.

Methods: The study followed a three-stage process. First, in-depth interviews were conducted with managers and employees from Chinese companies, resulting in 38 qualitative data points. Second, the employee voice intention scale was developed and validated through two surveys. Exploratory factor analysis (N=264) and confirmatory factor analysis (N=260) were performed, respectively. Third, the predictive validity of the scale was assessed by collecting 366 valid responses across three rounds of questionnaires, using voice efficacy and employee voice behavior as correlational calibration criteria.

Results: The study employed grounded theory methodology to analyze the qualitative data collected, resulting in the development of a robust conceptual framework of employee voice intention. This framework is composed of two dimensions: perceived desirability and perceived feasibility, which together capture the key factors that influence whether an employee will express their opinions or ideas within an organizational context. A corresponding measurement scale was developed, consisting of nine measurement items that underwent rigorous testing to ensure their reliability and validity. Furthermore, the results of the empirical study showed that employee voice intention mediated the positive effect of voice efficacy on voice behavior, supporting the scale's predictive validity.

Conclusion: This study provides valuable insights into the dimensions of employee voice intention and contributes significantly to the existing literature on this topic by introducing a reliable and valid measurement tool. Furthermore, it advances our understanding of the underlying dimensions associated with this construct.

Keywords: employee voice intention, grounded theory, scale development, voice efficacy, voice behavior

Introduction

The term "voice" first appeared in 1970 in Hirschman's "Exit, Voice and Loyalty" model, and it was considered an alternative to quitting by challenging an unfavorable status quo.[1] Dyne and Lepine further defined employee voice behavior from a developmental perspective as an extra-role interpersonal communication behavior in which employees spontaneously make suggestions with the purpose of improving their work or the current situation of the organization,[2] and this definition has been widely accepted and cited. Subsequently, a large number of scholars have conducted in-depth discussions on the conceptual constructs, scale development, antecedents, and role outcomes of employee voice behavior, making it a hot topic of continuous attention in related research fields. Employee voice is essential for the healthy functioning of any organization. For individual employees, voice behavior can satisfy their need for self-actualization, increase their sense of control over their work, and have a positive impact on their physical and mental health.[3] Despite the many benefits of speaking up, employees often hesitate to voice their constructive suggestions.[4]

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The occurrence of voice behavior is based on rational analysis, evaluation, and judgment,[3] and the theory of planned behavior provides an analytical framework for individual reasoned behavior. The theory states that behavioral attitudes, subjective norms, and perceived behavioral control influence the formation of individual behavior intention, and behavior intention further determine the specific implementation of behavior.[5] However, it is not the case that sufficiently strong intentions trigger corresponding behaviors; studies have shown that the relationship between behavior intentions and behaviors is stable but only moderately strong,[6] meaning that individuals may have strong behavior intentions but do not necessarily translate them into actual behaviors.[7] In fact, a large number of studies have provided evidence of the "disconnect" between individual behavior intentions and behaviors. For example, He and Zhang argued that there are different states between entrepreneurial intention and entrepreneurial behavior;[8] Yu et al suggested that farmers' willingness to adopt green technology is a prerequisite for adoption behavior, but the two show a high degree of paradox.[9]

Regarding employee voice behavior, on the one hand, assuming that employees have a strong motivation and intention to engage in voice behavior, but it may be difficult for them to perform the act if they lack a feasible action plan or satisfy their current life-work situation; on the other hand, the unknown risks associated with the uncertainty of the voice situation and the inaccessibility of the voice channel are also obstacles to the implementation of voice behavior. It is not difficult to speculate that employee voice intention, as an attitudinal variable reflecting an individual's commitment to adopting a voice behavior and moving toward that goal,[10] also deviates from the voice behavior. However, relevant studies have focused more on voice behavior to explore its antecedents and consequences, and few studies have focused on the "disconnect" between intention and behavior. The theory of planned behavior suggests that intention is the best variable for predicting behavior. Any behavior has the possibility of being driven by a certain intention before it occurs, and people build beliefs and attitudes through action and learning, which in turn influence the execution of actual behavior.[11] The study of individual behavior along the longitudinal process from the formation of intention to the transformation of intention into behavior has become the internal logic of a large number of related studies. However, the existing research on employee voice intention is still lacking, and the structure and measurement of employee voice intention are still poorly understood, which limits the depiction of the psychological process that generates employee voice behavior. To this end, this study uses grounded theory to explore the connotation and extension of the concept of employee voice behavior based on the theory of planned behavior, and then follows the scale development procedure to develop a corresponding measurement scale and test its validity in order to promote the improvement of the theoretical framework of employee voice behavior.

Literature Review

Concept and Measurement of Behavioral Intentions

The concept of behavior intention is commonly used in the theory of planned behavior, and individual behavior intention refers to the willingness to perform a specific action in a given situation and get the expected performance, which reflects the psychological expectation of those who decide whether they have the will or plan to perform a specific behavior, and reveals the strength of the individual's will to complete a specific behavior.[12] With the wide application of the theory of planned behavior in many disciplines such as psychology, management and marketing, behavior intention has also received more and more attention. Different scholars have defined the connotation of the concept of individual behavioral intention according to different research objects. For example, Xin and Dai defined employee innovative behavior in knowledge-intensive service enterprises as the psychological state of employees' willingness to devote personal time and energy to engage in innovative behavior to achieve service innovation, and it is the subjective tendency and attitude of organizational members to carry out creative and innovative activities.[13] He and Zhang defined entrepreneurial intention as an individual's willingness to establish a business or self-employment, which reflects an individual's commitment to establish a business and his or her attitude toward this goal.[8] Regarding knowledge sharing intention, from the perspective of knowledge sources, some studies define knowledge sharing intention as the degree of subjective inclination of individuals to share the knowledge they have acquired or created.[14] In addition, some scholars have explored employee whistle-blowing intention, for example, Wen et al focused on employees' internal whistle-blowing intention and regarded it as the behavioral attitudes and tendencies formed by potential whistleblowers after analyzing and

evaluating the benefits and costs of whistle-blowing before making behavioral decisions;[15] Li et al defined employee error reporting intention as employees' attempts to achieve the goal of reporting error-related information to their superiors through verbal or formal error reporting systems.[16] In general, for different individual behaviors, scholars' definitions of behavioral intentions are described in terms of behavioral characteristics, and the definition of the essence of behavioral intentions varies slightly, but most studies inherit the definition of behavioral intentions from the theory of planned behavior, that is, individual behavioral intentions are an attitude and commitment held by an individual to perform a specific behavior, reflecting the individual's stable behavioral tendencies.

As for the measurement of behavior intention, the existing related studies can be broadly classified into three ways: (1) A small amount of literature considers behavior intention as a definite category variable and classifies it as both yes and no when measured.[17] (2) Some literature considers behavior intention as the intention to perform a specific behavior and measures it from a pure-intention perspective.[8,15] (3) More literature considers behavior intention as a complex construct and measures it from the perspective of multiple dimensions. For example, Hu constructed the concept of knowledge-based employee innovate intention based on the Chinese organizational context and measured it from three dimensions: innovation attitude, subjective norms, and perceived behavioral control.[18] In an empirical study of entrepreneurship among college students, Fang and Zhang measured entrepreneurial intentions in terms of perceived entrepreneurial hopefulness and entrepreneurial feasibility.[19] Xin and Dai measured employee innovative intention in terms of two stages reflecting their motivation and plan formation,[13] etc.

Employee Voice Intention

The existing literature has made significant advancements in understanding the concept, dimensions, measurement, influencing factors, formation mechanisms, and outcomes of employee voice behavior.[20] In particular, extensive research has been conducted to explore the factors that impact employee voice, including individual, leadership, and organizational factors. Individual variables primarily encompass demographic characteristics, personality traits, trust, and job satisfaction.[3,21] At the leadership level, various leadership styles such as empowering, transformational, ethical, paternalistic, and inclusive leadership, as well as leader-member exchange relationships, have been found to influence employee voice behavior.[22–25] Organizational-level research mainly focuses on human resource management systems, organizational culture, and organizational climate. Organizational structures and practices play a crucial role in either enabling or impeding employee voice behavior. Approaches such as implementing suggestion boxes, conducting regular employee surveys, adopting open-door policies, and establishing employee involvement programs can significantly facilitate the expression of employee voice within the organization. For instance, Mowbray et al conducted a study on how high-performance work systems promote employee voice behavior,[26] while Wang and Yen found that an organization's ethical climate positively influences employee voice behavior across different levels.[27]

Despite ongoing research on the antecedents of employee voice behavior, the factors identified as influencing employee voice behavior may also play a critical role in the formation of employee voice intention. However, the "black box" of the psychological decision-making process at the forefront of employee voice behavior remains largely unexplored, and there has been relatively limited attention in the relevant research regarding the formation of employee voice intention. Some scholars have divided voice behavior into several stages of information gathering, pre-evaluation, and constructive decision, etc., from a process perspective,[3] while the process of generating voice behavior in individuals still needs to be explored in more depth and detail.

In addition, due to the context-dependent nature and decision complexity of voice behavior, individuals' voice motivations are often complex and multiple,[28,29] but most of the existing studies assume constructive intentions for voice behavior, and although a few studies have attempted to explore the decision-making process of employees' voice behavior from the perspective of instrumental motivation,[30] the instrumental intentions of voice have not been explicitly addressed due to the limitations of the motivation research paradigm. Therefore, this study introduces the construct of voice intention from an implicit perspective based on the theory of planned behavior. Previous studies have paid less attention to voice intention, and some of them have even blurred the boundaries of the concept of voice behavior and confused its use with voice intention, which is not conducive to improving the theoretical framework of voice behavior. Therefore, this study conducts in-depth interviews with both managers and employees, uses grounded theory, digs into the deeper purpose and overall motivation of

employees' voice, refines the conceptual structure of employees' voice intention, and completes the complete connotation definition and scale development of employees' voice intention, so as to investigate the behavioral triggering mechanism of employees' voice from the formation of intention to the performance of behavior.

Exploration of the Structural Dimension of Employee Voice Intention

Method

Grounded theory, as a method of theory construction, emphasizes the systematic collection of primary materials about a phenomenon, starting from the research environment and the research object, and constructing a theory through inductive analysis.[31] Grounded theory is suitable for exploratory research in relatively new fields. Therefore, this study uses grounded theory to conduct a procedural coding analysis, deeply depict qualitative information, and uncover the connotation and conceptual structure of employee voice intention to construct a theory through a dialogue between empirical information and theoretical research.

Sample Selection

In order to build a conceptual structure of employee voice intention in terms of attributes and dimensions, this study used a theoretical sampling method to select the research sample and identified interviewees based on the requirements of conceptual development and along the analytical framework. In selecting the respondents, the main considerations include: (1) the interviewees should have worked in their current jobs for at least one year, be integrated into the workplace and understand the organization's culture, systems, and management practices, be familiar with the work processes of their jobs, and have some understanding of voice at work; (2) the interviewees should be broadly distributed in terms of personal characteristics such as age, gender, and rank, and should also take into account the diversity and representativeness of the field, industry, and type and size of the organization.

Based on the principle of sample accessibility, we carefully selected a total of 38 working employees as respondents for our study. These participants were drawn from a diverse range of enterprises located in Nanjing, Zhenjiang, Suzhou, Changzhou, Wuhan, Shenzhen, Xi'an, Beijing, and Qingdao in China. To ensure a representative sample, we leveraged the social resources of our research group to access employees from various industries and organizational sizes. The respondents consisted of 9 senior executives, who held key leadership positions within their respective organizations. Additionally, 12 mid-level executives, who occupied managerial roles with significant responsibilities, were included in the sample. The remaining 17 participants were general staff members, representing the broader employee population. By including individuals from different levels of the organizational hierarchy, our study aimed to capture a comprehensive perspective on employee voice intention within Chinese enterprises. This diverse sample allowed us to explore the various factors that influence employee voice behavior across different job roles and organizational positions. The selection of participants from multiple cities across China further enhanced the generalizability of our findings. Overall, our sample composition reflects a broad representation of working employees in Chinese enterprises, encompassing senior executives, mid-level managers, and general staff from various industries and geographical locations. This diversity in the sample enhances the validity and applicability of our research findings to the broader Chinese business context.

Data Collection

There can be multiple sources of information for the analysis of grounded theory, and the researcher can obtain primary information through in-depth interviews with the selected research sample, or collect secondary information such as relevant reports, web materials, literature, and writings.[32] Therefore, this study combines in-depth interviews, objective information from companies and literature to form a triangular chain of evidence to achieve mutual verification of data and improve the credibility and scientific validity of the study. The data was collected from November 2021 to January 2022.

1. In-depth interviews. Semi-structured in-depth interviews focused on the research questions were conducted. The interview outline was designed according to the principle of step-by-step depth, taking employee voice intention as the core of the topic, and guiding the interviewees to express their true views step by step, recalling the internal management system arrangements and events about employee voice, expressing their own experiences and feelings about voice, and introducing the activities and cases related to voice that they personally experienced. After determining the objectives and key questions of the interviews, three Ph.D. students in related research fields were invited to brainstorm a preliminary interview outline. Then, we invited three staff members to participate in the preliminary interview, explained our research intention to them and invited them to provide suggestions and comments on the interview outline, and optimized the interview outline based on their feedback to form the formal interview outline. During the interview process, the interviewees were encouraged to express their own opinions and ideas and to actively share examples without commenting on the content of the interviewees. Due to the impact of COVID-19 and geographical factors, some of the interviews were conducted by telephone. Interviews with 38 respondents ranged from 20 to 90 minutes, and all interviews were conducted in Mandarin Chinese, resulting in a compilation of approximately 49,000 words of interview data.
2. Objective information of the enterprise. After communicating and contacting the respondent's enterprise and obtaining the enterprise's consent, we obtained objective qualitative information, such as cultural concepts, rules and regulations, WeChat articles, meeting records, and recognition records in the enterprise regarding employee voice.
3. Literature. In the databases such as China National Knowledge Infrastructure (CNK) and Web of Science, we searched the relevant literature by combining key words such as "employee voice", "intention", "intent", "will", "willingness", "propensity", etc., and finally obtained 8 pieces of literature related to employee voice under the index of CNKI and 21 pieces of literature related under the index of SSCI. After screening, 14 papers were selected as qualitative information.

Data Analysis Process

This study followed the steps of open coding, axial coding, and selective coding for data analysis by referring to Dou et al.[33]

Open Coding

Open coding is the process of extracting concepts from qualitative data through analysis and comparison. By coding, labeling, and summarizing a large amount of qualitative data sentence by sentence, the essence represented by the original data is explored, and the corresponding concepts are refined and categorized. The textual data were processed by manual coding, and after repeated sorting and discussion by the coding team members, the steps of labeling, conceptualizing, and categorizing were completed, and finally 46 initial concepts were extracted from 34 qualitative data, and 17 initial categories were formed after categorizing the 46 initial concepts according to the principle of similarity of meaning. Considering the limited space, only the original corpus of open coding is listed in this study, as shown in Table 1.

Axical Coding

Axical coding is the process of discovering and establishing conceptual class relationships. Through the process of deduction and induction, similar concepts are linked together, the connotations of concepts are determined, the conceptual class relations are categorized, and initial categories, subcategories, and major categories are distinguished so that the relationships among the concepts extracted from the qualitative data are clearly represented and the hierarchy of conceptual relationships is clarified. The 46 initial concepts and 17 initial categories extracted from the original qualitative data were further organized and summarized through axial coding, and the six subcategories of material orientation, normative orientation, achievement orientation, personal control, expected capabilities, and responsibility awareness were finally extracted by combining the research goals and contexts. The specific content and connotation of the categories are shown in Table 2.

Table 1 The Results of Open Coding

Typical statement (example)	Initial concept (example)	Initial category
P1: In our company, as long as employees make suggestions, their monthly evaluation will increase by 1 point, and if the suggestion is adopted, it will increase by another 5 to 10 points. 1 point is equivalent to 50 to 100 yuan of income, this bonus is still quite attractive.	Bonus for voice endorsement	Get the bonus
P4: In the process of product production, I will sum up something by myself, such as improving the tooling, that is, how can I change it quickly and well, after this matter is raised, the company agrees to my process improvement, the effect is good, then my salary will also follow to improve.	Improve the process through voice	Increase in salary income
Z1: After his suggestion was accepted by the company, the company rewarded him and his family, like a trip abroad or something, which is still very attractive.	Other awards	Get awards
G1: Our group attaches great importance to voice, the group will delegate indicators, secondary companies will also do publicity in the long-term scope, launch staff voice. In this way, our group can basically receive 400 to 500 suggestions every month, the number has been relatively stable.	Release employee voice indicators	Institutional requirements
G7: The company must form an open atmosphere, if there is no such atmosphere, then the employees simply will not form the idea of building a voice.	An open atmosphere	Environmental guidance
P11: Through activities such as the evaluation of outstanding employees to drive everyone's enthusiasm, to encourage us to dare to actively show ourselves and express ideas.	Active self-expression	Value embodiment
Z8: The "Best Suggestion Award" is given to employees who make good suggestions.	Best suggestion award	Sense of honor
P13: If I keep actively suggesting things, my boss will definitely notice me.	Managers' concern and attention	Sense of being noticed
Z7: In terms of personality, this employee is highly enthusiastic and has a tendency to interfere. He is vocal about his dislikes and is direct in expressing his ideas.	Passionate character	Habit of expression
G2: If an employee comes across any unreasonable or unsatisfactory situations at work that do not meet their personal needs, they may raise their concerns and request the company to address the issue.	Improvement of dissatisfaction	Satisfaction of personal demands
Z5: Even if an employee lacks specific ideas or interest in providing suggestions, they may become more willing to do so if the environment sends a signal that encourages them to speak up. In other words, environmental signals may spark their intention to provide suggestions.	Environmental Signals	Tendency to exercise rights
Z8: The real innovation of the company actually comes from the employees, because they understand the work better, they are more professional, only master and understand the work, then they are likely to think whether I can suggest some improvements.	Competent work skills	Job expertise
Z5: Our technical department, we need to have the perception of new processes and technologies, so that we can generate some ideas to voice on how to expand suppliers, keep costs down, develop new products, add some new processes, etc.	Awareness of new processes and technologies	Change sensitivity
P14: Employees are worried that leaders will say something about their voice, then they may need to find ways to do psychological construction and overcome this psychological fear.	Overcoming psychological fears	Psychological resilience
Z6: Employees are more ideologically aware, they think they have professional ability and skills, and at the same time they want to make the company develop better, so they will go to voice.	High ideological consciousness	Responsibility

(*Continued*)

Table 1 (Continued).

Typical statement (example)	Initial concept (example)	Initial category
P3: Employees have this sense of mission, they may be used to working in the company, treating the company as indispensable, and very often want to make some suggestions from the heart.	Sense of mission	Loyalty to the organization
Z9: Employees may be motivated to voice out of concern for or enthusiasm for the organization.	Enthusiasm for the organization	Sense of ownership

Notes: The number before each statement corresponds to the number of the sample interviewed, eg, P1 represents the record of the first respondent from the general staff, Z8 represents the record of the eighth respondent from the mid-level executives, G3 represents the record of the third respondent from the senior executives, and so on. Due to space limitations, only one example is presented for each initial category.

Table 2 The Results of Axial Coding

Main category	Sub-category	Initial category	Category connotation
Perceived desirability	Material orientation	Get the bonus Increase in salary income Get awards	Material orientation means that employees are attracted to financial benefits, which leads to the idea of making suggestions. Such financial benefits include some bonuses, prizes, and other material rewards that employees may receive for the act of making suggestions, as well as the expected increase in labor income that employees may receive after improving their efficiency and work status by making suggestions.
	Normative orientation	Institutional requirements Environmental guidance	Normative orientation means that employees develop a tendency to voice in order to better conform to organizational norms. On the one hand, in an organization that institutionalizes the collection of suggestions, employees can help the team to better achieve performance goals by assuming the role of voicers in the team, and on the other hand, if the organization encourages employees to be more proactive in voicing through an open atmosphere and guiding policies, voicing behavior becomes a widely accepted standard of behavior among group members in the organizational context, and employees actively voicing becomes a positive response to the organizational system. Under both types of organizational norms, employees will develop a positive voice intention in order to create a better self-image in the team and to improve their status and influence in the team.
	Achievement orientation	Value embodiment Sense of honor Sense of being noticed	Achievement orientation means that employees have a tendency to voice out of a desire to achieve self-actualization goals. The essence of voice is self-expression. Through voice in the organization, employees feel that they can show their talents and participate in the operation and management of the organization, and gain a sense of job satisfaction and meaning, which is a manifestation of their self-worth; at the same time, active voice behaviors will bring a sense of honor, followed by recognition and attention from the company, leaders and colleagues. Motivated by the expected achievements, employees will develop a stable tendency to voice.
Perceived feasibility	Personal control	Habit of expression Satisfaction of personal demands Tendency to exercise rights	Personal control refers to the characteristic tendencies of employees to control the execution of voice behavior. For example, the habit of making voices, the desire for self-expression, and the exercise of voice rights. Habit of making voices is a kind of unconstrained trait expression behavior of individuals, which emphasizes employees' behavioral choice habits that are not influenced by the external environment; desire for self-expression represents employees' needs and instincts in revealing their true thoughts; and exercise of voicing rights emphasizes employees' sensitivity in achieving goals according to the agreed conditions and realizing the benefits embodied in voicing rights.

(*Continued*)

Table 2 (Continued).

Main category	Sub-category	Initial category	Category connotation
	Expected capabilities	Job expertise Change sensitivity Psychological resilience	Expected capability refers to the self-perceived ability of employees to provide constructive and feasible suggestions. Expected capability includes job expertise in determining whether employees can improve work efficiency and processes, change sensitivity in determining whether employees can identify problems and develop opportunities, and the acceptance and tolerance of a range of potential outcomes of the voice behavior.
	Responsibility awareness	Responsibility Loyalty to the organization Sense of ownership	Responsibility awareness refers to the self-awareness of employees to provide constructive suggestions based on their personal character and emotional attachment to the company. Upon joining the company, employees become closely involved in the growth and development of the organization. As employees assume the role of "masters" in the company, motivated by a sense of mission, they are likely to generate a conscious desire to offer suggestions. Furthermore, in their job roles, when employees identify problems or conceive of new ideas that would benefit the organization, a sense of justice and responsibility would stimulate them to develop an intention to voice.

Selective Coding

Selective coding is the process of further regrouping, organizing, and merging the categories developed from the axial coding. The original qualitative data and the results of the open coding were re-examined in relation to the purpose of the study, and links were established between the core categories, and the core categories that could be generalized and covered all the categories were uncovered, and the relationship between the core categories and the main categories was clarified, and a new theoretical framework was established. The core category "employee voice intention", which was identified during the design phase of the study, was used as the core category, and consisted of two main categories: perceived desirability and perceived feasibility.

Theoretical Saturation Test

When semantic analysis and conceptual refinement of the new qualitative data did not produce new categories and no new relationships between categories emerged, the results of the grounded theory could be considered to have reached theoretical saturation. After open coding, axial coding, and selective coding of the 34 qualitative data, and thus constructing a two-dimensional theoretical conceptual structure of employee voice intention, the coding team repeated the coding analysis on the remaining 4 original qualitative data, and by repeatedly comparing the initial concepts and initial categories, it was found that no new categories emerged and no changes occurred in the relationships among the categories; therefore, it can be considered that employees the theoretical model of the structural dimension of employee voice intention is theoretically saturated.

Coding Results

Combining the qualitative information obtained from interviews, public systems, policies, publicity materials within the interviewees' companies, and relevant literature, a two-dimensional structure of employee voice intention was constructed by following the structured grounded theory analysis process, which were the perceived desirability and perceived feasibility, and each of the two dimensions included three subcategories. By clarifying the relationship between the constructs, dimensions and subcategories, a conceptual structure model of employee voice intention was established, as shown in Figure 1.

Development and Testing of the Employee Voice Intention Measurement Scale

Initial Scale Development

The previous section described the construction of the conceptual framework of employee voice intention using grounded theory methodology. This section aims to develop a comprehensive and valid measurement tool for assessing employee

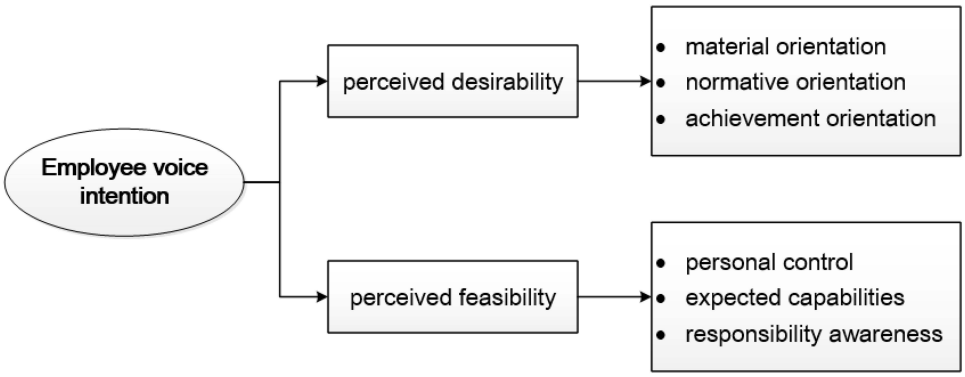

Figure 1 Conceptual structure of employee voice intention.

voice intention. Firstly, the relevant material statements were extracted from the dimensions of the conceptual framework by analyzing the connotations and indicator descriptions of each dimension. Secondly, existing literature and scales, such as the Organizational Citizenship Behavior Motivation Scale, Innovative Intention Scale, Impression Management Motivation Scale, Regulatory Focus Scale, Whistleblowing Intention Scale, Willingness to Take Risks Scale, and Employee Voice Behavior Scale,[34–41] were incorporated to design a preliminary set of 27 scale items. This approach seeks to provide a rigorous and reliable means of assessing employee voice intention, thus contributing to a deeper understanding of this important construct in organizational research.

To ensure the content validity of the scale, four scholars in the field of organizational behavior and human resource management were invited to discuss the initial items and evaluate whether they corresponded to the dimensions of employee voice intention, whether they covered the conceptual boundaries of employee voice intention, whether they could be reliably observed and evaluated, and whether their wording was clear and appropriate. Additionally, following the suggestion of Armitage and Conner,[6] the factors of self-prediction, desire, and behavioral tendencies involved in the concept of behavior intentions were expressed and described using phrases such as "how likely it is that.", "I want to.", and "I intend to.". Based on this advice, the item descriptions were further discussed and modified through repeated categorization, merging, and deletion. Afterward, 10 working employees were invited to read and fill out the measurement items to evaluate their accuracy and readability. After continuous revision and improvement, a preliminary measurement scale of employee voice intention consisting of 13 items was finalized, as shown in Table 3.

Table 3 Original Measurement Items of the Employee Voice Intention Scale

Dimension	Secondary indicators	Number	Item
Perceived desirability	Material orientation	S1	I believe that voicing my opinions in the workplace can lead to additional material rewards for me.
	Normative orientation	S2	I believe that voicing my opinions in the workplace will help me conform to organizational norms and thus improve my image and status in the company.
		S3	I believe that voicing my opinions in the workplace will help me conform to organizational norms and thus demonstrate my skills and values.
	Achievement orientation	S4	I think that voicing my opinions in the workplace can help me achieve my self-worth.
		S5	I believe that voicing my opinions in the workplace can make my work performance more outstanding.
		S6	I believe that voicing my opinions in the workplace can make my work more meaningful.

(*Continued*)

Table 3 (Continued).

Dimension	Secondary indicators	Number	Item
Perceived feasibility	Personal control	S7	If given the opportunity to freely express opinions and suggestions, I will not hesitate to express myself.
		S8	If the organization has an internal voice system/platform, I intend to use it.
	Expected capabilities	S9	I believe that I have the ability to voice opinions that are beneficial to the organization in the workplace.
		S10	I am willing to take some risks in order to voice my opinions in the workplace.
	Responsibility awareness	S11	If I find problems in the organization's work, I intend to point them out.
		S12	If there are suggestions and ideas that may be beneficial to the organization's future development, I intend to put them forward.
		S13	I want to provide my own suggestions and ideas for new plans or reforms in the workplace.

Scale Validity Assessment

Pilot Study and Scale Revision

1. Questionnaire collection and sample recruitment

The pre-survey questionnaire consists of two parts. The first part is the demographic information of the respondent, including gender, age, education level, company nature, and work experience. The second part is the initial measurement items of employee voice intention, consisting of 6 items for perceived desirability and 7 items for perceived feasibility. A 5-point Likert scale is used, in which respondents rate their voice intention level based on the degree of agreement between the item description and their own situation, with "completely disagree" counted as 1 point and "completely agree" counted as 5 points.

In order to improve the generalizability of the research results, this study did not make a clear distinction among the research objects, but only positioned them as salaried employees. When selecting samples, efforts were made to consider employees from different industries, regions, and company natures. During March 2022, a total of 300 questionnaires were distributed using the widely used Wenjuanxing platform through random sampling. A total of 284 questionnaires were collected, and after excluding questionnaires, 264 valid samples were obtained for the exploratory factor analysis of the employee voice intention measurement scale. The samples were widely distributed in various regions such as Jiangsu, Zhejiang, Sichuan in China. The male-to-female ratio in the sample was relatively balanced, with 114 males (43.2%) and slightly more females, with 150 females (56.8%). The age distribution tended to be younger, mainly in the 21–35 age range, with 150 people (56.8%) in the 26–30 age group. The education level was relatively high, with 221 people (83.7%) having a bachelor's degree. Private enterprises (172 people, 65.2%) and state-owned enterprises (69 people, 26.1%) were the main types of companies in the sample, and the work experience in the current company showed a gradual increase from less than 1 year to more than 5 years. Overall, the sample distribution was basically in line with the actual situation of the companies and was consistent with the research expectations.

2. Reliability testing and item purification

Based on the recommendation of Bearden et al,[42] this study first examined the corrected item-total correlation (CITC) and initial reliability of the items in the employee voice intention scale before conducting exploratory factor analysis. Items with CITC values lower than 0.5 and those that could be removed to improve the overall reliability of the scale were excluded to refine and purify the scale. The Cronbach's alpha coefficients for the perceived desirability and

perceived feasibility dimensions were found to be 0.823 and 0.816, respectively. Of the 13 items in both dimensions, those with Cronbach's alpha coefficients exceeding 0.6 and CITC values greater than 0.5 were retained. Items S10 and S13 in the perceived feasibility dimension were excluded from the scale after careful consideration, as they did not meet empirical standards for CITC values.

3. Exploratory factor analysis

First, the suitability of the sample data for factor analysis was tested by calculating the Kaiser-Meyer-Olkin (KMO) value and conducting Bartlett's sphericity test. The results indicated that the KMO value was 0.900 and the chi-square value of Bartlett's sphericity test was 1128.137 ($p < 0.001$), meeting the requirements for factor analysis. Second, principal component analysis was conducted with maximum variance orthogonal rotation and factors were extracted with eigenvalues greater than 1. It was found that the content of item S3 did not match that of the other items in Factor 1, and item S6 had high cross-loading on both Factor 1 and Factor 2. After comprehensive consideration, items S3 and S6 were removed. The subsequent factor analysis yielded two factors, consistent with the two-dimensional conceptual structure of employee voice intention previously proposed, with a cumulative variance contribution rate of 60.769%. All item loadings were above 0.6 and the distribution of items on factors was consistent with expectations, indicating that the two proposed common factors could explain the measurement variables well. The KMO value was 0.873 and the chi-square value of Bartlett's sphericity test was 869.652 ($p < 0.001$), as shown in Table 4.

Formal Study and Scale Testing

1. Questionnaire collection and sample recruitment

Through the process of item purification and exploratory factor analysis, this study was able to preliminarily identify a two-factor structure and 9 effective measurement items to measure employee voice intention. A second survey, targeting employees, was conducted to further verify the results through confirmatory factor analysis. A total of 300 survey questionnaires were randomly distributed through the Wenjuanxing platform during May 2022, from which 282 valid responses were received. Following a screening process, a final sample size of 260 was obtained for analysis. To ensure sample diversity and data quality, the same questionnaire link was used as in the pre-survey, but with some measurement items deleted or modified. The questionnaire link was set to allow only one response per IP address, effectively ensuring that the data collected from this survey were not from the same source as those from the pre-survey. The sample was widely distributed across many regions, including Zhejiang, Shanghai, Jiangsu, Guangdong, Hunan, Sichuan, Shandong, Hubei, Beijing, Fujian, and Hebei in China. The sample had a relatively balanced gender distribution, with 117 males (45.0%) and 143 females (55.0%). The age distribution was skewed towards youth, with the most common age group being 26–30 years old, accounting for 118 people (45.4%). The sample had

Table 4 The Results of Exploratory Factor Analysis

Dimension	Number	Factor 1	Factor 2
Perceived desirability	S1	0.824	0.135
	S4	0.795	0.283
	S2	0.774	0.193
	S5	0.644	0.361
Perceived feasibility	S12	0.169	0.778
	S9	0.177	0.768
	S8	0.281	0.733
	S11	0.227	0.678
	S7	0.217	0.670
Cumulative variance contribution rate		32.200%	60.769%

a relatively high educational level, and was primarily composed of employees from private companies (177 people, 68.1%) and state-owned enterprises (53 people, 20.4%). The length of service in the company ranged from less than 1 year to more than 5 years, with an increasing trend. The sample distribution in this survey was consistent with that of the pre-survey, and the sample distribution was in line with the actual situation of the company and met the research expectations.

2. Confirmatory factor analysis

In this study, a Confirmatory Factor Analysis (CFA) was conducted using AMOS 21.0 on 260 valid samples to examine the two-factor structural equation model of employee voice intention. The two dimensions, "perceived desirability" and "perceived feasibility", were represented by 9 items. The standardized factor loading values of these items ranged from 0.62 to 0.82, with all standardized factor loading values of each item exceeding 0.5. Therefore, it can be inferred that each measurement item (observed variable) in the scale has a good explanatory power for its corresponding dimension (latent variable).

As the correlation coefficient between the "perceived desirability" and "perceived feasibility" dimensions was high, at 0.54, a one-factor structural model was constructed as a competing model. As shown in Table 5, the fit of the one-factor model was poor, as all fit indicators failed to meet the empirical standards. However, the fit of the two-factor model was good: $\chi 2/df=1.846$, RMSEA=0.058, GFI=0.958, NFI=0.950, TLI=0.967, CFI=0.976, and PGFI=0.058. Overall, the two-factor model was significantly better than the one-factor model, indicating that the "perceived desirability" and "perceived feasibility" dimensions had good discriminant validity and that the two-factor conceptual structure of employee voice intention was more scientific and reasonable.

Testing Reliability and Validity

To further examine the reliability of the Employee Voice intention scale, a total of 260 valid samples were collected for reliability and validity testing. In terms of reliability, the internal consistency of the scale was evaluated by calculating Cronbach's α coefficient, as shown in Table 6. The results revealed that the "perceived desirability" dimension was 0.816,

Table 5 The Results of the Fit Indicators for the Confirmatory Factor Analysis

Model	χ^2	df	χ^2/df	RMSEA	GFI	PGFI	NFI	TLI	CFI
Standards	–	–	≤3	≤0.08	≥0.90	≥0.50	≥0.90	≥0.90	≥0.90
Single factor	253.159	27	9.376	0.180	0.776	0.466	0.738	0.676	0.757
Two-factor	48.459	26	1.846	0.058	0.958	0.554	0.950	0.967	0.976

Table 6 The Results of Reliability and Validity Tests of Employee Voice Intention Scale

Factor	Number	Standardized load	Standard error	T-value	Cronbach's α	CR	AVE
Perceived desirability	S1	0.710	-	-	0.813	0.816	0.527
	S2	0.675	0.077	9.482***			
	S4	0.789	0.096	10.679***			
	S5	0.725	0.087	10.068***			
Perceived feasibility	S7	0.624	-	-	0.849	0.855	0.542
	S8	0.725	0.119	9.335***			
	S9	0.824	0.112	10.180***			
	S11	0.744	0.108	9.534***			
	S12	0.750	0.113	9.583***			

Note: ***$p < 0.001$.

while that of the "perceived feasibility" dimension was 0.849, and the overall Cronbach's α coefficient of the scale was 0.850. Both the overall and dimension-specific reliability coefficients exceeded the empirical standard of 0.7, indicating that the Employee Voice intention scale developed in this study has good reliability.

In terms of validity, this study mainly examined the convergent and discriminant validity of the measures. Convergent validity refers to the consistency of results obtained from different methods of measuring the same concept, usually measured by calculating two indicators: the average variance extracted (AVE) and composite reliability (CR). These two indicators were calculated based on the standardized loadings of each item on its corresponding factor, as shown in Table 6. The AVE values for the dimensions of perceived desirability and perceived feasibility were 0.527 and 0.542, respectively, and the CR values were 0.816 and 0.855, respectively. Both AVE values were higher than the critical value of 0.5, and both CR values were higher than the critical value of 0.7, indicating good convergent validity for the two dimensions of employee suggestion willingness.

Discriminant validity refers to the distinctiveness of results obtained from different methods of measuring different concepts. To test for discriminant validity, the correlations between dimensions and the square root of AVE for each dimension were compared. The correlation coefficient between perceived desirability and perceived feasibility dimensions was 0.54, which was far below the empirical standard of 0.85, indicating no serious issue of multicollinearity between the two dimensions. Moreover, the square roots of AVE for perceived desirability and perceived feasibility dimensions were 0.726 and 0.736, respectively, both of which were higher than the correlation coefficient between the two dimensions, indicating good discriminant validity for the two dimensions of employee voice intention.

The Test of Predictive Validity of the Employee Voice Intention Scale

Selecting Criterion-Related Validation Measures

To test the predictive validity of the Employee Voice Intention Scale, criterion-related validation measures are needed to examine whether variables theoretically related to the scale exhibit significant effects. Voice efficacy is the specific application of general self-efficacy in the domain of voice, referring to employees' belief in their ability to perform the role of a voice and achieve positive outcomes from their voice behaviors.[43] Employees with higher voice efficacy have a higher evaluation of their ability to overcome difficulties and challenges to complete voice activities and achieve voice goals. They often firmly believe that they can find opportunities to propose constructive suggestions that benefit the organization in terms of quality improvement and efficiency enhancement. At the same time, they have a strong sense of control over the voice process, confidence in achieving good results from their voice behaviors, and are more likely to perceive the feasibility of voice behavior, generate voice intentions, and form positive voice attitudes. Therefore, in this study, employee voice efficacy was selected as one of the criterion-related validation measures, and the hypothesis was proposed:

H1: voice efficacy has a significant positive effect on employee voice intention.

Based on the theory of planned behavior, behavioral intention is considered as an individual's inclination and degree of effort to perform a specific behavior, which serves as a direct determinant of their behavior. It has been established by prior research that behavioral intention also signifies the strength of one's motivation to engage in a specific behavior, and it is regarded as a vital motivational element that affects behavior. In the context of the present study, employee voice intention refers to an individual employee's attitude and commitment towards expressing their opinions and ideas, which reflects their assessment of the potential benefits of voice activities and the probability of engaging in such activities in the future. When employees positively evaluate the benefits of voice activities, it boosts their commitment towards their voice goals and strengthens their determination to achieve them, which in turn increases the likelihood of voice behavior.[44] Notably, the higher an employee's voice intention, the greater their willingness to invest effort in voice activities, resulting in a higher level of voice behavior. Consequently, this study recognizes employee voice behavior as a closely linked construct and puts forth the following hypothesis:

H2: Employee voice intention has a significant positive effect on voice behavior.

Voice efficacy, which refers to an individual's implicit perception and belief, is an essential manifestation of perceived behavioral control in the context of employee voice.[45] According to the theory of planned behavior, perceived behavioral control can influence behavior by affecting an individual's behavioral intention. Employees with high levels of voice efficacy believe in their ability to handle external factors during the voice process, resulting in a greater sense of perceived behavioral control and more stable employee voice intention. Intention is the most effective predictor of behavior and a key driver of individual behavior.[46] Therefore, it can be inferred that employees' voice efficacy has a positive effect on their employee voice behavior by enhancing their voice intention. Based on hypotheses H1 and H2, this study proposes the following hypothesis:

H3: Employee voice intention can mediate the positive effect of voice efficacy on voice behavior.

Measurements

1. Voice efficacy was assessed using a single-dimensional measurement scale developed by Duan and Wei based on the Chinese organizational context.[43] The scale consisted of seven items, such as "I can seize various opportunities to present my ideas to leaders". The Cronbach's α coefficient of the scale in this study was 0.864.
2. Employee voice intention was assessed using a two-dimensional measurement scale developed in this study. The scale consisted of nine measurement items, and the Cronbach's α coefficient was 0.850.
3. Employee voice behavior was assessed using the classic employee voice behavior scale developed by Dyne and Lepine.[2] The scale consisted of six items, such as "This employee communicates his/her opinions about work issues even if others disagree". The Cronbach's α coefficient of the scale in this study was 0.906.

A Likert 5-point scoring system was used for all scales, with scores ranging from 1 to 5, where higher scores indicated higher levels of voice efficacy, voice intention, or voice behavior. Demographic variables, including gender, age, education level, company nature, and work experience, were included in the questionnaire, following the approach of related studies, to fully consider their potential influences.

Data Collection

During the period from July to September 2022, the present study obtained sample data through three waves of tracking surveys. The electronic questionnaire was designed using the Wenjuanxing platform, and a random sampling approach was applied to select participants from participating companies. The link to the electronic questionnaire was then distributed to voluntary participants. Following established research protocols, each survey was conducted at two-week intervals. In each of the three phases, participants were asked to complete a scale that measures the perceived efficacy of suggestion-making, a scale that measures willingness to make suggestions, and a scale that measures suggestion-making behavior. Demographic information such as age, gender, educational level, and length of work experience was also collected. The questionnaires from each of the three phases were matched using identification numbers, and the resulting sample data were screened for data quality, leading to a total of 366 valid responses. The gender distribution of the valid sample data was relatively balanced, with 172 male participants (47.0%) and 194 female participants (53.0%). The majority of participants were between the ages of 26 and 35 (83.9%), and most had completed junior college or undergraduate degrees. The length of work experience at the current company ranged from less than one year to over five years, and the majority of the companies were state-owned or private enterprises.

Data Analysis and Results

To test the hypotheses, a stepwise regression analysis was conducted and the results are presented in Table 7. Specifically, in Model 2, the results showed that voice efficacy had a positive effect on employee voice intention ($r=0.621$, $p<0.001$), providing support for H1. In Model 5, employee voice intention was found to significantly and positively predict voice behavior ($r=0.511$, $p<0.001$), supporting H2. Regarding the mediating effect, the direct effect of voice efficacy on voice behavior was found to be significant ($r=0.280$, $p<0.001$) in Model 4. However, when both the independent and mediating variables were simultaneously entered into the model (Model 6), employee voice intention was found to significantly and

Table 7 The Results of Multiple Linear Regression Analysis (N=366)

Variable		Employee voice intention		Employee voice behavior			
		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Control variables	Gender	−0.089	−0.061	0.041	0.053	0.086	0.087
	Age	−0.176*	−0.174***	0.025	0.026	0.115*	0.122*
	Educational level	−0.001	0.001	0.004	0.005	0.004	0.004
	Company nature	0.000	−0.020	0.043	0.034	0.043	0.045
	Working years	0.192**	0.128**	0.063	0.035	−0.035	−0.036
Independent variable	Voice efficacy		0.621***		0.280***		−0.062
Mediator	Employee voice intention					0.511***	0.551***
R^2		0.043	0.423	0.008	0.086	0.258	0.261
ΔR^2		0.043	0.380	0.008	0.078	0.250	0.252
F		3.255**	43.950***	0.601	5.614***	20.858***	18.040***

Note: ***p < 0.001, **p < 0.01, *p < 0.05.

positively predict voice behavior (r=0.551, p<0.001), while the direct effect of voice efficacy on voice behavior was no longer significant. These findings suggest that employee voice intention fully mediates the positive effect of voice efficacy on voice behavior, supporting hypothesis H4.

To examine the robustness of the mediating effect of voice intention, we utilized the Bootstrap method with 5000 repeated samples. The results demonstrated that the direct effect of voice efficacy on employee voice behavior was no longer statistically significant, while the indirect effect of voice efficacy on voice behavior through employee voice intention was significant (indirect effect = 0.331, p<0.001, 95% CI = [0.237, 0.439]). In summary, the empirical results verify the relationships among voice efficacy, employee voice intention, and voice behavior, as well as the mediating effect of employee voice intention, which are consistent with theoretical hypotheses. This indicates that the employee voice intention scale developed in this study has good predictive validity.

Discussion

Theoretical Implications

The theoretical significance of this study lies in the following two aspects:

Firstly, this study makes significant theoretical contributions by utilizing qualitative analysis to propose a comprehensive two-dimensional conceptual model of employee voice intention and defining its conceptual content. This model establishes a solid theoretical foundation that paves the way for further research on employee voice behavior. The encouragement of employee voice behavior is of paramount importance in fostering breakthroughs in key core technologies and attaining high-quality development within enterprises. Despite the extensive literature exploring the driving factors and mechanisms of employee voice behavior, limited attention has been given to the individual decision-making process of employees' voice behavior under the influence of external environmental factors. While some studies have delved into the concept of voice habits from the perspective of unconscious processes,[47] the rational process of transforming voice ideas and intentions into actual voice behavior remains unclear. Furthermore, scholars like Lu et al have advocated for transcending the research paradigm of motivation and effectively capturing and measuring the constructive and instrumental intentions underlying employee voice.[48] In response to this gap, the present study analyzes the construct of employee voice intention based on the theory of planned behavior. It incorporates perceptions of the advantages of both material and spiritual aspects and judgments regarding the feasibility and desirability of engaging in

voice activities into the conceptual category of employee voice intention. By doing so, the study expands the application scope of the classic entrepreneurial event model proposed by Shapero and Sokol,[49] while also contributing to the research on the individual decision-making process of voice behavior and providing valuable insights into the instrumental intention behind it.

Second, Secondly, this study employs a combination of qualitative data analysis and literature review to develop a robust two-dimensional measurement scale for assessing employee voice intention based on the Theory of Planned Behavior. Through the administration of two surveys, this scale serves as a valuable tool for empirical research on employee voice intention. In comparison to the voice intention scale revised and utilized by King et al,[50] which primarily focuses on employees' future inclination to express suggestions and doubts, the measurement scale formulated in this study captures various dimensions of employees' intentions regarding voice behavior. It provides a more comprehensive understanding of the concept of employee voice intention, encompassing factors such as perceptual ability, behavioral control, responsibility awareness, and more. Furthermore, this study distinguishes itself from previous research on voice intention due to its unique and scientific approach concerning theoretical foundations, item context, and formation methods. In contrast to the limited number of studies that have explored voice intention, this research contributes significantly by offering a nine-item scale with high reliability and validity, effectively measuring employee voice intention. Additionally, the study conducts an empirical analysis that confirms the predictive validity of the employee voice intention scale. The findings reveal that employees' belief in their ability to voice their opinions, known as voice efficacy, positively influences their actual voice behavior by enhancing their voice intention. By applying the Theory of Planned Behavior to the context of employee voice behavior, this study extends the theoretical scope of the theory and promotes further empirical research on voice intention. It serves as a foundational work that opens avenues for exploring diverse phenomena and providing explanations regarding the link between employee voice intention and behavior. Consequently, this research significantly contributes to the advancement of knowledge in this field of study, offering valuable insights for organizations aiming to cultivate and leverage employee voice for improved organizational outcomes.

Practical Implications

First, the development of voice intention plays a pivotal role in employees' decision-making process when considering engaging in voice behavior. It marks the initial stage where employees form their inclination to express their ideas and opinions. It is imperative for organizations to acknowledge and address the factors that stimulate voice intention right from the beginning. Although voice behavior is typically classified as an extra-role behavior driven by altruistic motives, the formation of voice intention is influenced by a combination of both material and psychological incentives. Organizations can enhance employees' perception of their voice intention by implementing various strategies. Providing economic benefits, such as competitive salaries, performance-based incentives, and other tangible rewards, can serve as motivating factors for employees to voice their ideas and suggestions. Additionally, recognizing and acknowledging employees' contributions through formal and informal methods, such as public appreciation and rewards, can significantly impact their perception of the importance and value of their voice. Fostering a positive organizational image is also crucial in shaping employees' voice intention. Creating a work environment that is supportive, inclusive, and encourages open communication channels can make employees feel safe and empowered to express their opinions without fear of negative consequences. When employees perceive that their voices are valued and respected, they are more likely to develop a stronger intention to voice their ideas. Furthermore, organizations should invest in enhancing employees' professionalism, job competence, and adaptability to change. By providing training and development opportunities, organizations can equip employees with the necessary skills and knowledge to effectively communicate their thoughts. Cultivating a sense of responsibility among employees, emphasizing the impact of their voice on the organization's success, can further reinforce their commitment to express their opinions.

Second, in order to foster innovation and development in an accurate and scientific manner, it is crucial for companies to not only encourage employee voice behavior but also address the potential inconsistency between employees' voice intentions and their actual behavior. To effectively tackle this issue, the utilization of the employee voice intention scale developed in this study can prove beneficial. This scale enables companies to assess the level of employees' voice intention and differentiate between those who "should but are unwilling to speak" and those who "are willing but unable to speak". By accurately identifying these distinct categories, companies can then implement targeted interventions to address the specific barriers hindering employees from expressing their opinions. These interventions can be designed to

stimulate employees' willingness to voice their ideas or rectify the discrepancy between their voice intention and behavior. For instance, providing additional training, creating a supportive work environment, or establishing feedback mechanisms can be effective measures to bridge the gap and encourage employees to speak up. Implementing such measures not only facilitates the emergence of employee voice behavior but also enables companies to adapt more effectively to the complex and ever-changing external environment. By harnessing the diverse perspectives and insights of their employees, organizations can tap into new ideas, identify potential problems, and seize opportunities for improvement. This ultimately contributes to achieving high-quality development and ensuring the long-term success of the company.

Limitations and Future Research Directions

There are several limitations of this study that warrant acknowledgement. First, while the study followed standard procedures for developing a measurement scale of employee voice intention and tested the predictive validity using perceived voice efficacy and voice behavior as related criteria, it should be noted that the factors influencing employee voice intention are complex and varied, encompassing elements such as human resource management practices, leadership styles, organizational culture, and individual values. To enhance the construct validity and criterion validity of the measurement scale, future research should examine the relationship between these variables and employee voice intention from multiple levels and perspectives.

Second, despite the concerted efforts made during the interview and survey phase to sample from a diverse range of enterprises across various industries, nature, and size, the representativeness of the sample was unavoidably limited by the constraints of the research conditions. Therefore, it is recommended that future research should give priority to empirical studies on employee voice intention, along with testing and refining the measurement scale, to establish a stable and reliable tool for measuring employee voice intention. Such an effort would enhance the accuracy and consistency of the measurements used in subsequent research.

Third, taking into account the possible variations in employee voice across different industries and organizational types, for instance, the increased likelihood of employee voice in innovation-oriented internet companies, future research could concentrate on examining the voice intention and behavior within specific professional groups. This would contribute to validating and broadening the applicability of employee voice intention scales, as well as exploring the practical contexts where the related research findings can be applied.

Finally, the present study has only confirmed the significant predictive effect of employee voice intention on voice behavior. Further investigations are required to explore whether complex pathways and boundary conditions exist in the process of translating voice intention into voice behavior. For instance, based on the proactive motivation model, it is worth investigating whether there are motivational factors related to ability and energy that facilitate the transformation of employee voice intention into actual voice behavior. Future research may consider conducting longitudinal tracking surveys to explore the causal relationship and conditional effects between employee voice intention and behavior more comprehensively. Such an approach would provide a more comprehensive understanding of the underlying mechanisms involved in the relationship between employee voice intention and behavior.

Overall, while this study has made important contributions to the field of employee voice intention, there remains much work to be done to fully understand the complexity of this construct and its antecedents. Future research should aim to address the limitations of this study, in order to advance our understanding of employee voice intention and inform effective management practices.

Conclusion

This study employed grounded theory to identify two key dimensions of employee voice intention: perceived desirability and perceived feasibility. A reliable and valid nine-item measurement scale for employee voice intention was developed based on these dimensions. The empirical analysis focused on two related criterion variables: voice efficacy and employee voice behavior. The empirical results revealed that voice efficacy has a positive impact on employee voice intention, employee voice intention significantly predicts voice behavior, and employee voice intention mediates the positive effect of voice efficacy on

voice behavior. These results provide support for the predictive validity of the developed measurement scale for employee voice intention. By incorporating both subjective perceptions and behavioral outcomes, this study contributes to the understanding of employee voice intention and its implications for organizations. Overall, this research enhances our comprehension of the factors influencing employee voice intention, provides a reliable measurement scale for assessing it, and demonstrates its significance in predicting employee voice behavior. These findings have implications for organizations seeking to promote a culture of voice and encourage employee participation in decision-making processes.

Ethics Statement

In carrying out this research work, the Ethical Code of Conduct of American Psychological Association (APA) was complied with. A cover letter suggesting the willingness of respondents' participation and confidentiality of their responses were given to respondents after we had taken permission from the board of directors. Participation was voluntary and respondents were free to quit at any point in time. Informed consent was obtained from all respondents. Also, we have followed the exact course of actions concerning dealing with humans in research and fulfilled the Helsinki Declaration on informed consent and human rights. This research work was supervised by a professor from Jiangsu University and the study was approved by the Institutional Review Board of Jiangsu University.

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Disclosure

The authors report no conflicts of interest in this work.

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