

CORPORATE CULTURE AND EMPLOYEE LOYALTY: AND EMPIRICAL STUDY OF THE PLANT-BASED PROTEIN BEVERAGE SECTOR

Xi Chen

An Independent Study submitted in partial fulfillment of the Requirements for the Degree of Master of Management
Program in Creative Industries Management
Rattanakosin International College of Creative Entrepreneurship
Rajamangala University of Technology Rattanakosin
Academic Year 2026

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Degree Sought	Master of Management Program in Creative Industries Management (Internaional Program)
Independent Advisors	Songyu Jiang, (Ph.D.)

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Researcher: Miss Xi Chen
Degree: Master of Management (Creative Industries Management)
Advisor: Songyu Jiang, (Ph.D.); **Academic Year**: 2026

ABSTRACT

The objectives of this research were (1) to explore the dimensions included in corporate culture, (2) to examine the impact of corporate culture on employee loyalty through empirical analysis and to examine whether employee loyalty differs significantly across demographic characteristics, including gender, age, and salary level, and (3) to derive practical managerial implications based on the empirical findings, guiding corporate culture construction and employee loyalty management.

This quantitative research employed a structured questionnaire survey as the primary research instrument. The population comprised employees of Chengde Lulu Co., Ltd., a plant-based protein beverage manufacturing enterprise in China. Using simple random sampling, 400 valid questionnaires were collected through both on-site and online data collection methods. A quantitative data analysis approach was adopted. Descriptive statistics were first used to summarize sample characteristics. Reliability analysis using Cronbach's alpha assessed the internal consistency of the measurement scales, followed by validity testing through KMO and Bartlett's tests, as well as exploratory factor analysis. Correlation analysis examined associations among variables, while multiple regression analysis tested the effects of corporate culture dimensions on employee loyalty. In addition, one-way analysis of variance (ANOVA) was conducted to examine differences in employee loyalty across demographic groups.

Major findings were as follows: (1) On the dimensions of corporate culture, six dimensions were identified: corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility; (2) On the impact of corporate culture on employee loyalty, all corporate culture dimensions exerted significant positive effects on employee loyalty, while employee loyalty did not differ significantly across demographic characteristics such as gender, age, and salary level; and (3) On managerial implications, the results revealed that strengthening corporate culture construction can effectively enhance employee loyalty and support sustainable organizational development, particularly in team spirit and corporate values.

Keywords: Corporate culture, Employee loyalty, Manufacturing enterprises, Plant-based protein beverage industry

Advisor's Signature…….

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Due to limited knowledge, there are inevitably many errors in the article. We kindly ask friends from all walks of life to share their insights.

Xi Chen

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CHAPTER 1
INTRODUCTION

This chapter serves as the opening of the paper, comprehensively elaborating on the background, significance, problems, and objectives of this study, laying the foundation for subsequent research.

The research background section is conducted from both macro and micro levels. At the macro level, the research status of corporate culture and employee loyalty at home and abroad has been reviewed, and it is pointed out that existing research mainly focuses on qualitative analysis, the measurement dimensions of corporate culture are not perfect, and there is relatively little research on manufacturing enterprises. At the micro level, a detailed introduction was given to the development process, industry status, and operating conditions of Chengde Lulu Co., Ltd., particularly revealing prominent issues such as stagnant revenue, frequent executive resignations, and a large number of grassroots employees in the past decade, highlighting the practical urgency of this study.

The research significance section elaborates on the research value from both theoretical and practical dimensions. On a theoretical level, this study expanded the measurement dimensions of corporate culture and conducted empirical verification in the context of manufacturing. Multiple statistical methods were used to improve the rigor of the research and promote the localization of the theory. At the practical level, research results can help enterprises improve cultural construction, enhance competitiveness, reduce employee turnover rates, provide guidance for human resource management, promote sustainable development of enterprises, and have a positive impact on society.

The research questions and objectives section clearly proposes three core questions: what dimensions are included in corporate culture, whether there are differences in employees with different demographic characteristics, what suggestions can be provided for the enterprise, and sets corresponding research objectives. The research conclusion section provides a systematic summary of the entire chapter, emphasizing the logical connections between each part. Through this chapter, readers can clearly understand the

core questions of this study, such as "why research", "what value is there", "what to study", and "how to study". This chapter forms a complete research logic chain from problem posing to value elaboration, from research question setting to goal setting, laying a solid foundation for understanding subsequent literature review, research design, data analysis, and conclusion recommendations.

1.1 Research Background

1.1.1 Research problem statement

Globalization is accelerating, and market competition is becoming increasingly fierce. Talent competition has become the core of enterprise competition (Zoidze et al., 2025). How to attract, cultivate, and retain talent, as well as how to foster employee loyalty, has become a significant issue in enterprise management practice (Almashyakhi, 2024). Nowadays, frequent employee turnover and declining loyalty have become common phenomena. Constant employee turnover not only undermines the competitiveness of enterprises but also hinders their long - term development (Al-suraihi et al., 2021).

Scholars have carried out extensive research on factors influencing employee loyalty. Dinh Khoa et al. (2024)'s study indicated that organizational reward policies, organizational flexibility, and organizational culture are the top three factors affecting employee loyalty. Liu et al. (2022) further pointed out that incentive measures, fault - tolerance mechanisms, and corporate culture are the three most crucial influencing factors. Cherian et al. (2021) holds that corporate culture influences employee loyalty through the values and behaviors guiding company practices. Rabelo Neto et al. (2024)'s study on high - tech companies in Silicon Valley, USA, showed that a strong culture can promote organizational identity among members and enhance their willingness to stay in the company.

Chinese scholars have also achieved abundant results. Dinh Khoa et al. (2024) proposed six factors affecting employee loyalty: salary and benefits, performance evaluation, corporate culture, training and development, corporate environment, and leadership style. Hoang et al. (2025) believe that many aspects of corporate culture, including spiritual, institutional, behavioral, and material aspects, have an impact on employee loyalty. Zhang et al. (2023) pointed out that corporate culture can affect

employees' sense of identity with their positions and their sense of belonging to the company, which in turn affects their attitude loyalty and behavioral loyalty.

Shortcomings of existing research:

Firstly, the research methodology is single. The vast majority of studies are obtained through qualitative methods, lacking data support and empirical research, such as Hennink and Kaiser (2022), McDermott (2023), Panadero et al. (2025), Hendren et al. (2023) use simple univariate regression methods, and the analysis content is not comprehensive enough.

Secondly, the measurement dimensions are incomplete. Graham et al. (2022) measured corporate culture through five dimensions: team spirit, interpersonal relationships, employee development, social responsibility, and innovation. However, there is a lack of corporate culture measurement models such as Denison (1990) and two important dimensions in the measurement system of the Chinese Corporate Culture Evaluation Center: corporate values and leadership.

Thirdly, there is insufficient industry research. Existing research mainly focuses on the service and high - tech industries, with relatively little research on manufacturing enterprises, especially the plant protein beverage industry.

The entry point of this study: Based on the above shortcomings, this article will use Zhao (2020)'s five - dimensional model as the basis, the Denison (1990) model, and the six - dimensional evaluation system of the China Corporate Culture Evaluation Center (CCMC) as references, comprehensively consider the influencing factors of employee loyalty, optimize and adjust it into six dimensions: corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility, and adopt quantitative research methods to conduct empirical analysis on Chengde Lulu Co., Ltd. At present, no research results with the same dimensions and methods as this article have been found, nor have any related studies been found on employee loyalty of Chengde Lulu Co., Ltd. Therefore, this study will enrich the research results in this field and fill this gap.

1.1.2 Research gap identification

Chengde Lulu Co., Ltd. was founded in 1950 and listed on the Shenzhen Stock Exchange in 1997. It is a giant in China's plant protein beverage industry and one of the top 10 beverage companies. The company specializes in almond milk products and holds

over 90% market share in the Chinese almond milk market, making it the absolute leader in this niche field. However, in recent years, the company has faced severe challenges, with prominent issues of lagging corporate culture construction and declining employee loyalty.

1.1.2.1 Industry development environment

In recent years, China's beverage industry has maintained steady expansion, driven by rising household incomes, consumption upgrading, and increasing product diversification. According to the U.S. Department of Agriculture (USDA), the total size of China's beverage market exceeded USD 170 billion (approximately RMB 1.2 trillion) in 2024, reflecting sustained growth momentum and strong consumer demand for functional and health-oriented beverages (Cong et al., 2020). Within this broader industry context, plant-based protein beverages have emerged as a fast-growing and strategically important segment.

With the continuous enhancement of public health awareness and the deepening acceptance of nutrition-focused consumption concepts, plant-based beverages are increasingly perceived as healthier alternatives to traditional sugary or dairy-based drinks (Rachtan-Janicka et al., 2025). Market research indicates that the plant-based food and beverage market in China reached approximately USD 10 billion (around RMB 70 billion) in 2024, and is expected to maintain a strong growth trajectory in the coming years (Zhang et al., 2023). Specifically, industry forecasts suggest that the plant-based beverage segment alone will reach around USD 2.9 billion (about RMB 20 billion) by 2025, supported by growing demand for plant-derived protein, lactose-free products, and functional nutrition drinks (Xie et al., 2023). In parallel, related categories such as dairy alternatives are also expanding rapidly, with China's dairy-alternative beverage market projected to exceed USD 5 billion in 2025, further reinforcing the growth potential of plant-based protein beverages (Zhang et al., 2023).

From a policy and social perspective, China's long-term national development strategies have consistently emphasized food industry upgrading, nutritional improvement, and health-oriented consumption, creating a favorable macro-environment for the development of plant-based protein beverages (Li et al., 2023). At the societal level, the concept of "nutrition plus health" has become deeply embedded in consumer behavior,

particularly among younger and urban populations. As a result, market demand for plant-based protein drinks continues to expand, intensifying competition within the industry and placing higher requirements on enterprises in terms of innovation capability, brand building, and internal management (Rogers et al., 2024). In this context, understanding how organizational factors, such as corporate culture, affect employee loyalty becomes increasingly important for plant-based beverage enterprises seeking sustainable and high-quality development.

In this context, the competition in the plant protein beverage market is becoming increasingly fierce. At present, the market structure is fragmented, with the largest enterprise, Yangyuan Beverage, having a market share of only 8.34%. Chengde Lulu ranks fifth with a market share of less than 3.5%, and the total market share of the top ten enterprises is only 24.43%. Although Chengde Lulu dominates the almond dew segment market, its market share in the overall plant protein beverage and beverage market is relatively low, limiting its growth potential.

1.1.2.2 Analysis of Business Difficulties and Problems

In the past decade, Chengde Lulu has fallen into a dilemma of stagnant development, highlighted by two major problems: stagnant revenue and staff turnover.

1. Revenue stagnation and weak growth

Table 1.1 presents the operating revenue and net profit performance of Chengde Lulu Co., Ltd. over the period from 2020 to 2024, reflecting the company's recent development trajectory under changing market conditions. Overall, the company's financial performance exhibits a pattern of short-term volatility combined with medium-term recovery, highlighting both external environmental pressures and internal structural challenges. Specifically, Chengde Lulu experienced a significant decline in operating revenue in 2020, with revenue falling to RMB 18.61 billion, primarily due to the combined impact of market competition and external shocks. Although a strong rebound was observed in 2021, with revenue growth exceeding 35%, subsequent growth in 2022 and 2023 remained relatively moderate, indicating that the company's recovery momentum lacked sustained stability. While operating revenue continued to increase in 2024, reaching RMB 32.87 billion, the corresponding growth rate showed signs of deceleration, and net profit growth remained limited, suggesting constraints in profitability improvement. As a

comparison, the market value of Yangyuan Beverage during the same period has reached four times that of Chengde Lulu (Tan, 2020).

Table 1. 1 Operating Revenue and Growth of Chengde Lulu (2020-2024)

Year	Operating revenue (RMB bn)	Revenue growth rate	Net profit (RMB bn)	Profit growth rate
2020	18.61	–17.50%	4.32	–7.03%
2021	25.24	35.65%	5.7	31.77%
2022	26.92	6.66%	6.02	5.69%
2023	29.55	9.76%	6.38	6.02%
2024	32.87	11.26%	6.66	4.40%

Data source: Oriental Wealth Securities Data Center, 2024

2. Personnel turbulence and serious turnover

Between 2018 and 2021, the company underwent three rounds of chairman changes, resulting in frequent departures of senior executives and a significant loss of grassroots employees. According to a research report by Anxin Securities, the deputy general manager in charge of production resigned in 2018, and the number of sales personnel at the end of the same year was 519, a decrease of 8.5% compared to 567 in the same period last year. Frequent departures of executives lead to a large number of grassroots employees leaving, forming a vicious cycle: poor performance → executive departures → employee turnover → deteriorating performance.

3. Insufficient construction of corporate culture

Field investigations have found that although Chengde Lulu has established the corporate spirit of "leaders should have integrity, employees should have ambition, products should have reputation, and enterprises should have vitality", many aspects of corporate culture construction are still not perfect: corporate culture has not been effectively utilized and its role has not been fully realized; Employees have insufficient awareness of corporate culture; The construction of corporate culture is not fully integrated with employee development. These issues lead to a weak sense of belonging and decreased loyalty among employees, which in turn exacerbates staff turnover.

1.1.2.3 The necessity of research

In summary, the core issue faced by Chengde Lulu is: why is the company's revenue stagnant and personnel turnover severe in the context of overall industry improvement? The imperfect construction of corporate culture and low employee loyalty are important reasons. The company is facing multiple pressures for its future development: management is disconnected from the market, products fail to meet the needs of young consumers, internal operations are in short supply, and channel discourse power is low.

Therefore, this study takes Lulu in Chengde as a case study to deeply explore the impact mechanism of corporate culture on employee loyalty, analyze how various dimensions of corporate culture affect employees' attitude loyalty and behavioral loyalty, and provide theoretical basis and practical guidance for companies to strengthen corporate culture construction, improve employee loyalty, and promote healthy and steady development.

1.2 Research significance

This study takes Chengde Lulu Co., Ltd. as a case study to explore the impact of corporate culture on employee loyalty, which has important theoretical value and practical significance.

1.2.1 Theoretical significance

This study has made the following theoretical contributions in the research domain of corporate culture and employee loyalty:

1. Expansion and optimization of the measurement dimensions of corporate culture.

Building upon Zhao (2020)'s five - dimensional model (team spirit, interpersonal relationships, employee development, social responsibility, and innovation), this study has carried out targeted enhancements:

Increase the dimension of corporate values. Corporate values are the core and soul of corporate culture (Prushkivskyi et al., 2021).Authoritative measurement systems such as the China Corporate Culture Evaluation Center (CCMC) and the Denison (1990) model consider it as a key dimension, but the Zhao (2020) model fails to fully reflect it. This study, through literature review and theoretical analysis, identified corporate values as an independent dimension to address this limitation.

Strengthen the dimension of leadership. Although the Zhao (2020) model includes the concept of 'daring to innovate', it lacks a systematic explanation of leadership. This study considers leadership as an independent dimension and incorporates innovative consciousness, which is consistent with recent research findings by Xing et al. (2023) and others. In the context of Chinese enterprises, leaders play a decisive role in the construction of corporate culture, and strengthening the dimension of leadership has important localization significance.

Optimize the dimensions of social responsibility. Increase the number of items from 2 to 4, referring to Xie (2007)'s research, and add an examination of the performance of corporate social responsibility behavior and social recognition, making the measurement more comprehensive.

The final six dimensional model (corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility) is more complete, maintaining theoretical simplicity while achieving content integrity, providing a new tool for measuring corporate culture.

2. Empirical verification has been conducted in the context of China's manufacturing industry

Unlike most corporate culture studies that focus on the service industry, this study chooses traditional manufacturing enterprises as the research object, which has dual value:

Fill the research gap. This is the first systematic academic study on the corporate culture and employee loyalty of Chengde Lulu, providing data support for the company's management practices.

Enrich manufacturing industry cases. The empirical analysis of 400 valid questionnaires provides new data evidence for the study of corporate culture in manufacturing enterprises. As an important pillar of the Chinese economy, the characteristics and mechanisms of corporate culture in the manufacturing industry deserve further exploration.

3. The use of multiple statistical methods has improved the rigor of research

Compared to most qualitative studies, this study employed a systematic quantitative analysis method: reliability analysis validated the reliability of the scale (Cronbach's alpha coefficients for all dimensions were>0.8);Validity analysis verified

structural validity (KMO value of 0.959);Exploratory factor analysis confirms dimension division (cumulative variance explained by 80.460%);Multiple regression analysis was used to quantitatively determine the degree of influence of each dimension (model adjusted R^2=0.652); ANOVA tests the moderating effect of demographic characteristics. The combination of multiple methods has improved the reliability and persuasiveness of research conclusions.

4. Verified and expanded the theory of corporate culture

This study validates the core proposition of corporate culture theory: values are the core of corporate culture (empirical results show that corporate values have an impact on employee loyalty β=0.382, $p<0.001$);Strong culture promotes organizational identity (six dimensions together explain 65.2% of the variance in employee loyalty);Organizational socialization weakens individual differences (demographic characteristics have no significant impact on loyalty, proving that the influence of corporate culture is universal across groups).

At the same time, this study expands theoretical understanding by revealing the relative importance of each dimension (team spirit has the most significant impact β=0.458), providing a new perspective for understanding the mechanism of corporate culture; The applicability of Western theories has been validated in the context of China's manufacturing industry, promoting the localization of theories.

1.2.2 Practical significance

This study has important guiding significance for enterprise management practice, employee development, and social progress.

1. Provide improvement strategies for enterprises

Clarify the key points of cultural construction. The study found that team spirit (β=0.458) and corporate values (β=0.382) have the most significant impact on employee loyalty, providing a basis for companies to prioritize cultural development. Chengde Lulu should prioritize strengthening team building and clarifying value orientation.

Reveal the root cause of the problem. Empirical data shows that Chengde Lulu has room for improvement in all six dimensions of corporate culture, especially in leadership and employee development. This explains why the company has experienced frequent executive turnover and a large number of grassroots employees leaving in recent years -

the imperfect construction of corporate culture is an important reason for low employee loyalty and serious personnel turnover.

Provide actionable solutions. Based on empirical research results, this study proposes six specific strategies: strengthening team building, clarifying value orientation, optimizing interpersonal atmosphere, valuing employee growth, fulfilling social responsibility, and enhancing leadership ability. Each strategy includes specific measures, implementation steps, and expected effects, and has strong operability.

Reduce management costs. By strengthening the construction of corporate culture and increasing employee loyalty, the turnover rate of employees can be effectively reduced, and recruitment and training costs can be reduced. Research predicts that if the strategy is effectively implemented, employee loyalty can be increased by 15-20%, and employee turnover rate can be reduced by 20-30%.

2. Provide reference for other enterprises

The findings of this study have reference significance for other manufacturing enterprises, especially traditional manufacturing enterprises:

Universal discovery. The impact of corporate culture on employee loyalty has cross group universality (demographic characteristics have no significant moderating effect), indicating that strengthening cultural construction can have a positive impact on all employees, which provides confidence for enterprises to implement a unified cultural strategy.

Industry characteristics. The production activities of manufacturing enterprises highly rely on teamwork, and team spirit has the most significant impact in this study, which points out the key direction of cultural construction for other manufacturing enterprises.

Measurement tools. The six dimensional corporate culture measurement scale developed in this study has undergone rigorous reliability and validity testing, and can be used as a cultural diagnosis and evaluation tool by other enterprises for reference.

3. Provide guidance for human resource management

Recruitment process: Emphasize "cultural matching" and select candidates whose values align with the company.

Training system: Incorporate corporate culture education into the training content, especially for new employee onboarding training.

Performance evaluation: Establish a dual evaluation mechanism of "performance + culture", which not only evaluates "what has been done", but also "how it was done".

Career development: Integrating employee development planning with corporate culture construction to provide more development opportunities for culturally outstanding individuals.

4. Promote the harmonious development of society

Stable employment. Improving employee loyalty and reducing turnover rates are beneficial for stable employment and reducing social costs caused by frequent job hopping.

Improve the quality of labor force. The study emphasizes the importance of employee development and encourages companies to increase their investment in training, which can help improve the overall quality of the workforce.

Promote corporate social responsibility. Research has shown that fulfilling social responsibility can enhance employee loyalty (β=0.350), which will motivate more companies to take responsibility in environmental protection, product quality, employee rights protection, and promote social harmony.

Spread positive values. The concepts advocated in this study, such as teamwork, value recognition, continuous learning, and social responsibility, contribute to the formation of a positive workplace culture and social atmosphere.

In summary, this study not only enriches the theory of corporate culture, but also provides specific guidance for enterprise management practice, and has a positive impact on social development, which has important theoretical value and practical significance.

1.3 Research questions

RQ1: What dimensions are included in corporate culture in the context of a plant-based protein beverage enterprise?

RQ2: What is the impact of corporate culture on employee loyalty, and what differences exist in employee loyalty across demographic characteristics, including gender, age, and salary level?

RQ3: What managerial implications can be derived from the empirical findings for improving corporate culture construction and enhancing employee loyalty?

1.4 Research objectives

RO1: To explore the dimensions included in corporate culture.

RO2: To examine the impact of corporate culture on employee loyalty through empirical analysis and to examine whether employee loyalty differs significantly across demographic characteristics, including gender, age, and salary level.

RO3: To derive practical managerial implications based on the empirical findings, providing guidance for corporate culture construction and employee loyalty management.

1.5 Conclusion

This chapter serves as the beginning of the paper, systematically elaborating on the background, significance, problems, objectives, and main conclusions of this study, laying the foundation for subsequent research.

Firstly, this chapter introduces the research background from two aspects: the current research status and the overview of Chengde Lulu Co., Ltd. In terms of research status, we have reviewed the research results of domestic and foreign scholars on corporate culture and employee loyalty, and pointed out the shortcomings of existing research: most of the research is mainly qualitative analysis, lacking empirical support; The measurement dimensions of corporate culture are not comprehensive enough, lacking core elements such as corporate values and leadership; There is almost no research on manufacturing enterprises, especially Chengde Lulu. In terms of company profile, a detailed introduction was given to the development history, industry status, operating conditions, and challenges faced by Chengde Lulu, especially the problems of stagnant revenue, frequent executive resignations, and a large number of grassroots employees in the past decade, highlighting the practical necessity of this study.

Secondly, this chapter elucidates the significant value of the research from both theoretical and practical perspectives. At the theoretical level, this study expanded and optimized the measurement dimensions of corporate culture, forming a more complete six-

dimensional model; Empirical verification has been conducted in the context of China's manufacturing industry, enriching the case library in this field; The use of multiple statistical methods has improved the rigor and reliability of the research. At the practical level, research results can help Chengde Lulu and similar enterprises improve cultural construction, enhance competitiveness, and reduce employee turnover rates; Provide guidance for human resource management practices; Promote sustainable development of enterprises; Enhance employee happiness and job satisfaction; Has a positive impact on social stability and economic development.

Again, this chapter explicitly raises three core research questions: What dimensions does corporate culture include? Are there significant differences in corporate culture perception and employee loyalty among employees with different demographic characteristics? What suggestions can research provide for stakeholders? Corresponding research objectives have been set around these issues: exploring the dimensional composition of corporate culture; Determine the impact of different demographic characteristics on employee loyalty; Propose countermeasures and suggestions to enhance employee loyalty based on research conclusions.

CHAPTER 2
LITERATURE REVIEW

This chapter mainly starts with literature theory research, and through literature review, understands and masters the relevant knowledge, theories, and research results about corporate culture, employee loyalty, and the impact of corporate culture on employee loyalty, laying a theoretical foundation for this study.

2.1 Research context

2.1.1 Current Status of Corporate Culture Research

The theory of corporate culture was born in the early 1980s.The theoretical foundations were laid by works such as "Corporate Culture" by Fombrun (1983) and "Z Theory" by Daft (2004). Afterwards, measurement research became a focus: Denison (1990) proposed a four-dimensional organizational culture measurement model (participation, consistency, mission, adaptability); Howard (1998) proposed the competitive cultural value model; Hofstede et al. (1990) proposed a multidimensional measurement model.

Chinese scholars have promoted the localization of theories. Liu et al. (2008) developed the VOCS scale (nine dimensions); Zhang et al. (2006) localized and revised the Denison (1990) model; The China Corporate Culture Evaluation Center (CCMC) has established a six dimensional evaluation system (including corporate values, leadership, team atmosphere, etc.).

The current research presents three characteristics: firstly, the research perspective is diversified, covering areas such as strategic management, organizational behavior, and human resources; Secondly, the research methods have matured, shifting from qualitative to a combination of quantitative and qualitative approaches; Thirdly, deepen localization research and explore the corporate culture model with Chinese characteristics.

2.1.2 Current Status of Employee Loyalty Research

The study of employee loyalty began with Barry (1974)'s "Exit, Voice and Loyalty". Western scholars define loyalty from different perspectives: Attitudes (Loyalty

is a set of values) (Ajzen, 2001);Behavioral theory (Loyalty is reflected in work behavior) (Killeen & Fetterman, 1988);Comprehensive Theory (Three Dimensional Models - Emotional Loyalty, Continuing Loyalty, Normative Loyalty) (Wood & Gray, 1991).

Chinese scholars have conducted extensive research on the factors influencing loyalty. Wang (2020) proposed six factors: salary and benefits, performance evaluation, corporate culture, training and development, corporate environment, and leadership style. Yan et al. (2012) pointed out that all levels of corporate culture (spiritual, institutional, behavioral, and material) affect employee loyalty.

There are two shortcomings in current research: firstly, there are more qualitative studies than quantitative studies, and there is a lack of large-scale empirical testing; Secondly, the lack of unified measurement tools affects the comparability of research.

2.1.3 The current research status of the impact of corporate culture on employee loyalty

Foreign research has confirmed the crucial role of corporate culture. Yusuf and Saragih (2020) found that organizational culture ranks among the top three factors affecting employee loyalty; Bharadwaj and Yameen (2021) confirmed that a strong culture can promote organizational identification and enhance retention intentions; Adeoye and Hope (2020) pointed out that corporate culture influences employee loyalty through values and behaviors.

Domestic research also supports this conclusion. Xie et al. (2022) found through empirical research that there is a significant positive correlation between corporate culture consistency and employee loyalty; Noviana and Manafe (2022) pointed out that corporate culture influences employees' attitude loyalty and behavioral loyalty.

Research limitations: Firstly, the vast majority of studies are qualitative, such as Kuehn and Rohlfing (2024), Gorton et al. (2022), Grennan and Li (2023), Akpa et al. (2021), etc., lacking empirical support; Secondly, a few quantitative research methods are simple, such as Wang and Dong (2007), and Wang (2015) using univariate regression, which lacks comprehensive analysis; Thirdly, the measurement dimensions of corporate culture are incomplete, such as Zhao (2020)'s five dimensional model (team spirit, interpersonal relationships, employee development, social responsibility, and innovation) lacking two core dimensions of corporate values and leadership; Fourthly, there is

relatively little research on manufacturing enterprises, and existing studies mainly focus on the service and high-tech industries.

2.1.4 The entry point of this study

Based on the current research status and shortcomings mentioned above, this study focuses on the following four aspects:

Firstly, improve the measurement dimensions of corporate culture. On the basis of Zhao (2020)'s five dimensional model, referring to the Denison (1990) model and CCMC evaluation system, the dimensions of corporate values and leadership are added to form a six dimensional model. Corporate values are the core and soul of corporate culture (Prushkivskyi et al., 2021); Leadership plays a decisive role in the construction of corporate culture in China (Shuo & Ali, 2025).The addition of these two dimensions makes the measurement framework more complete.

Secondly, fill the gap in research subjects. Selecting Chengde Lulu, a traditional manufacturing enterprise, as the research object, fills two gaps: one is the gap in the study of manufacturing enterprise culture; The second issue is the lack of research on employee loyalty in the company.

Thirdly, strengthen empirical research methods. Using rigorous questionnaire surveys and multivariate statistical analysis methods (reliability analysis, validity analysis, factor analysis, correlation analysis, regression analysis, analysis of variance), theoretical hypotheses were validated through 400 valid samples to improve the scientific validity of the research.

Fourth, focus on practical application. Not only does it explore theoretical issues, but it also proposes actionable cultural construction strategies for the practical problems faced by Chengde Lulu, such as stagnant revenue, frequent turnover of executives, and a large number of grassroots employees.

In summary, this study has theoretically improved the measurement tools, strengthened empirical analysis in methods, filled research gaps in objects, and focused on practical issues in applications, which has important academic value and practical significance.

2.2 Theoretical basis

2.2.1 Corporate Culture Theory

1. The concept of corporate culture

Corporate culture is an organic unity of values, behavioral norms, management systems, and material performance that is gradually formed by the long-term production and operation practice of an enterprise, and is widely recognized and followed by its members (Christopher & Edwinah, 2022; Mingaleva et al., 2022).

Western representative definition:

Bannikova and Mykhaylyova (2024) believed that corporate culture is a system composed of five factors: corporate environment, values, heroic figures, customs and etiquette, and cultural networks, with values being the core element.

Mingaleva et al. (2022) pointed out that corporate culture is a value system gradually formed through the game and cooperation between management and employees in the process of enterprise development, which can be accepted and recognized by the majority of employees.

Bamidele (2022) believe that corporate culture is the shared values and business practices of various departments within a company, including explicit culture at the material and institutional levels, as well as implicit culture at the spiritual level.

Chinese scholars define:

Wang et al. (2021) defined it from both narrow and broad perspectives: narrow definition refers to the basic spirit and cohesion of enterprises, shared values and codes of conduct; Broadly speaking, it also includes measures and systems for employee cultural quality and cultural construction.

Tian et al. (2022) proposed that corporate culture is the value concept that a company believes in and puts into practice.

Bai et al. (2024) believes that corporate culture is the sum of values, ideas, styles, norms, and ways of thinking that are universally recognized and followed by members of a company in a specific social context, formed through long-term practice.

The definition adopted in this study is that corporate culture is an organic unity of values, behavioral norms, management systems, and material expressions that are gradually formed by a company in its long-term production and operation practices, and are widely recognized and followed by its members. It takes values as its core and

influences employees' thoughts and behaviors through institutionalization, ritualism, and symbolization, which is an important source of unique competitive advantage for enterprises.

2. The hierarchical structure of corporate culture

Hattangadi (2020)'s three-level model (most influential):

Hattangadi (2020) divided corporate culture into three levels:

Artificial finished product layer (outermost layer): includes visible external phenomena such as organizational structure, processes, physical environment, etc.

Believed values layer (middle layer): The content learned by a group reflects someone's original beliefs and values, which may or may not be consistent with behavior.

Basic assumption layer (innermost layer): Naturally and unconsciously held beliefs and values that determine members' behavior, perception, thoughts, and emotions.

The four level model of Chinese scholars (most widely used):

Chinese scholars have proposed a four level model based on local realities (Yu & Wang, 2018):

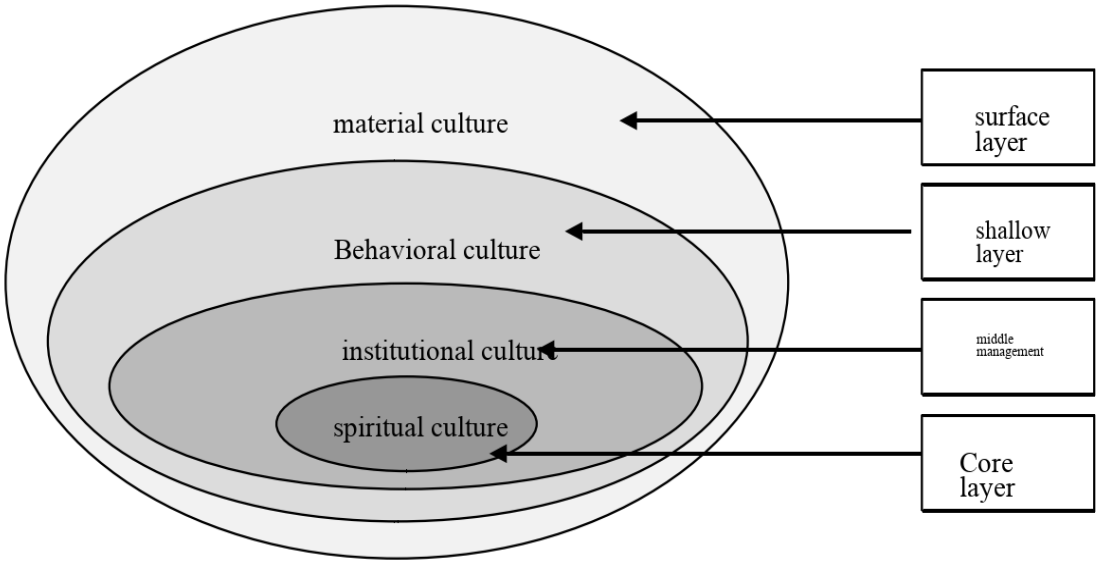


Figure 2. 1 Layered structure of organizational culture from surface to core

Table 2. 1 Four level structure of corporate culture

level	connotation	main content	function
Spiritual culture (core layer)	The values, mission, vision and other concepts of the enterprise	Corporate mission, vision, values, corporate spirit, and business philosophy	Leading the way, uniting people's hearts
Institutional culture (middle layer)	Rules and regulations, process norms, etc	Governance structure, decision-making mechanism, management system, assessment and incentive system	Standardize behavior and ensure execution
Behavioral culture (surface level)	Employee behavior standards and performance	Code of Conduct, Service Standards, Business Etiquette, Excellent Cases	Practice the concept and reflect the culture
Material Culture (External Layer)	Visual recognition system and material carrier	Enterprise logo, working environment, product image, promotional materials	Spread culture and shape image

The internal logic between levels: Spiritual culture is the core and soul, determining the content and form of other levels; Institutional culture solidifies spiritual culture and ensures its implementation in practice; Behavioral culture is the external manifestation of spiritual culture; Material culture conveys corporate philosophy through visible forms. The four levels, from inside to outside and from hidden to visible, together constitute the complete system of corporate culture.

3. Measurement Theory of Corporate Culture

Corporate culture measurement is an important means of evaluating the true situation of corporate culture and providing reference for cultural construction. There are mainly two types of methods: qualitative and quantitative.

International mainstream measurement models:

Denison (1990) Model: Four dimensional and twelve sub dimensional model

Table 2. 2 Denison Organizational Culture Measurement Model

dimension	Sub dimension	Core concept
participation	Ability development, team orientation, empowerment	The higher the level of employee participation, the better the organizational effectiveness
consistency	Coordination, core values, and collaboration	Members exhibit highly consistent behavior and strong organizational cohesion
adaptability	Create change, customer first, organizational learning	The ability to flexibly respond to environmental changes
mission	Strategic orientation, goals, and vision	Clear direction and long-term goals

Denison (1990) designed an OCQ scale (Organizational Culture Questionnaire) based on this, which includes 60 measurement items.

The Competitive Value Model of Howard (1998):

From the dimensions of "internal external" and "control flexibility", corporate culture can be divided into four types (Cameron & Sine, 1999):

Clan culture (Clan): emphasizes interpersonal relationships and teamwork

Adhocracy: Emphasizing innovation and adventure

Market culture: emphasizes competition and goal achievement

Hierarchy culture: emphasizes rules and stability

This model corresponds to the OCAI Organizational Culture Assessment Instrument.

Hofstede et al. (1990)'s multidimensional model:

The values section includes three dimensions: the need for safety, a focus on work, and the need for authority.

Practice section: Six paired dimensions - process orientation vs. outcome orientation, employee orientation vs. work orientation, localization vs. specialization, openness vs. closure, loose control vs. strict control, standardization vs. practicality.

Chinese localization measurement model:

Liu et al. (2008)'s VOCS Scale: Nine dimensions - scientific pursuit of truth, customer orientation, outstanding innovation, sharing joys and sorrows, team spirit, integrity and honesty, performance, social responsibility, and fostering good neighborliness.

The China Corporate Culture Evaluation Center (CCMC) system consists of six major parts: corporate culture type, ideological orientation, core values, cultural environment, leadership, personal values, and career inclination (Zhao, 2020).This system emphasizes the importance of values and leadership.

The revised model by Zhang et al. (2006): Based on the Denison (1990) model, nine dimensions were reorganized: participation level, ability development, organizational learning, team development, coordination and consistency, innovation awareness, core values, customer awareness, and goal vision.

Yau et al. (2007) et al.'s five dimensional model: Through factor analysis, a more concise five dimensions were derived - interpersonal harmony, customer orientation, innovation, employee development, and social responsibility.

Zhao (2020)'s revised model: Based on Yau et al. (2007)'s model and combined with the actual situation of the enterprise, five dimensions are proposed - team spirit, personal development, interpersonal relationships, social responsibility, and courage to innovate. This model is highly consistent with the research hypothesis and serves as an important theoretical foundation for this study.

4. The inspiration of corporate culture theory for this study

Based on the above theories, this study has gained the following insights:

Firstly, values are the core of corporate culture. Almost all scholars emphasize the core position of values (CCMC system) (Zaakiyyah et al., 2024; Christopher & Edwinah, 2022).This study incorporates corporate values as an independent dimension into the measurement model.

Secondly, leadership plays a crucial role in the construction of corporate culture. The CCMC system and GREP framework both consider leadership as an important dimension. In the context of Chinese enterprises, leaders are advocates, shapers, and practitioners of corporate culture, and their values and behavior directly affect the formation of corporate culture (Asif et al., 2024).This study considers leadership as an independent dimension.

Thirdly, corporate culture is a multidimensional complex. From Hattangadi (2020)'s three levels to Fok et al. (2022)' four levels, from Denison (1990)'s four dimensions to VOCS's nine dimensions, all indicate that corporate culture encompasses multiple levels. This study adopts a six dimensional model that maintains simplicity while covering core elements.

Fourthly, measurement needs to be localized. Although Western models are mature, Chinese scholars have found in practice that they need to be revised according to local conditions. This study constructs a measurement model based on international models and combined with the actual situation of Lulu in Chengde.

2.2.2 Employee Loyalty Theory

1. The concept of employee loyalty

The study of employee loyalty began with Barry (1974)'s "Exit, Voice and Loyalty", which pointed out that loyalty is an important force in delaying employee turnover.

Three perspectives on conceptual definition:

Attitude Loyalty Theory:

Berry et al. (2021) believed that loyalty is a collection of values and a adherence to beneficial principles.

Meschke (2021) believes that loyalty is an inherent commitment to not causing harm to others.

Kumari and Ubnare (2023) believe that employee loyalty refers to employees having a deep emotional attachment to the company, being willing to share joys and sorrows with the company, and dedicating their talents to achieving the company's goals.

Albtoosh et al. (2022) believe that employee loyalty refers to the willingness of employees to fully utilize their talents to help the company achieve strategic goals.

Behavioral Loyalty Theory:

Dinh Khoa et al. (2024) believes that employee loyalty is reflected in work behavior, and the higher the employee's identification with the values of corporate culture, the higher the loyalty.

Dutta and Dhir (2025) believes that employee loyalty is a series of contribution behaviors of employees to the enterprise.

Agyeiwaah et al. (2022) defined employee loyalty as the commitment of employees to the company, which is contractual loyalty.

Synthesis Theory:

Agyeiwaah et al. (2022) believes that employee loyalty can be divided into two aspects: behavioral loyalty and attitude loyalty.

Yang (2024) proposed that employee loyalty is the recognition and wholehearted attitude and behavior towards the enterprise, which is an organic unity of attitude loyalty and behavioral loyalty.

Iverson and Buttigieg (1999)'s three-dimensional model (1991) are the most influential:

Emotional Commitment: Employees' emotional attachment and identification with the organization

Continuity Recruitment: Staying in the organization based on consideration of the cost of leaving

Normative Commitment: Staying in the organization based on a sense of responsibility and obligation

The definition adopted in this study: This study adopts a comprehensive perspective and defines employee loyalty as the attitude and behavior of employees who identify with the company and strive to do their best, which is an organic unity of attitude loyalty and behavior loyalty. This definition encompasses both the psychological state (attitude) of employees and their outward behavior (behavior), reflecting the essence of loyalty more comprehensively.

2. Factors influencing employee loyalty

Based on comprehensive literature research, factors affecting employee loyalty can be summarized from three levels:

At the individual level:

Eniola (2021) proposed four aspects: financial wealth, business achievement, work autonomy, and individual growth.

Maksim and Śliwicki (2025) pointed out that individual factors such as employee tenure, age, and personality affect loyalty.

Hien and Tuan (2023) believes that gender, age, years of work experience, family situation, education level, etc. all have an impact, and the higher the cultural level and job skills, the higher the loyalty.

Organizational level (most critical impact):

Hien and Tuan (2023)'s study showed that organizational reward policies, organizational flexibility, and organizational culture are the top three factors that affect employee loyalty.

Bhatti and Alzahrani (2024) pointed out that the cultural literacy and speech and behavior of managers affect employee loyalty.

Zhuang and Pan (2022) proposed five influencing factors: employees' basic qualities, development opportunities provided by the enterprise, personnel relationship status, compensation system, the enterprise's own situation, and leadership influence.

Aggarwal (2024) believes that influencing factors include salary, organizational culture, job matching, respect and self actualization, and employee training.

Meirinhos et al. (2023) identified eight factors: management system, leadership, compensation system, employee training, interpersonal relationships, competitive environment, information communication, and basic employee qualities.

Wang (2020) proposed six factors: salary and benefits, performance evaluation, corporate culture, training and development, corporate environment, and leadership style.

At the external environmental level:

Gini and Agala (2023) proposed that macroeconomic environment, political environment, social values, technological environment, natural environment, etc. all affect employee loyalty.

A.S.A et al. (2021) classified social influencing factors into three categories: the lack of employee values during the period of social transformation, the lag in legal system construction, and the lack of social public opinion supervision.

Key findings: Corporate culture (organizational culture), corporate values, leadership, leadership style, employee training and development, interpersonal relationships, team spirit, etc. are all important factors that affect employee loyalty, which are highly consistent with the measurement dimensions of corporate culture in this article.

3. Measurement of employee loyalty

Single factor theory: Dutta and Dhir (2025) regards employee loyalty as a whole and constructs four measurement items without subdividing dimensions.

Two factor theory: Kaur et al. (2021) measure attitude loyalty and behavioral loyalty from two aspects. Bigne et al. (2020) measured loyalty from two aspects: active loyalty and passive loyalty.

Three factor theory: Iverson and Buttigieg (1999) proposed the Three Dimensional Organizational Commitment Scale (OCQ), which measures emotional loyalty, normative loyalty, and sustained loyalty. Phungula et al. (2022) evaluated from three aspects: value commitment, effort commitment, and retention commitment.

Multifactor theory: Wang and Dong (2007) proposed four types of loyalty: normative, sustained, emotional, and ideal. Ling and Zhang (2000), Tan et al. (2002) proposed a five factor model: emotional, normative, ideal, economic, and opportunity commitments. Zhao and Mei (2003) measured from six aspects: compensation system, personnel relations, employee quality, development opportunities, enterprise status, and leadership influence.

The choice of this study is to use a one-dimensional measurement method for the following reasons:

Concise and clear, easy to operate and understand

This study focuses on the overall level of loyalty rather than the differences in different types of loyalty

Can avoid disputes over dimension division and improve research reliability

Facilitate corresponding analysis of the impact of the six dimensions of corporate culture

4. The Inspiration of Employee Loyalty Theory for This Study

Firstly, loyalty is the unity of attitude and behavior. The measurement items used in this study include both attitude levels (sense of belonging, emotional attachment) and behavioral levels (willingness to stay in the job, effort level).

Secondly, corporate culture is a key factor influencing loyalty. Numerous scholars (Adeoye & Hope, 2020; Putra et al., 2019; Yusuf & Saragih, 2020);The research by Lim et al. (2020) has confirmed this point, providing theoretical support for the core hypothesis of this study.

Thirdly, the influence of organizational factors is greater than that of individual factors. This means that companies can effectively enhance employee loyalty by improving cultural construction, providing a theoretical basis for the practical value of this study.

Fourthly, one-dimensional measurement has been widely used in loyalty research. The research by Jothi Krishnan (2021) has demonstrated the effectiveness of one-dimensional measurement, supporting the selection of measurement methods in this study.

2.3 Conceptual review

2.3.1 Corporate Values

Corporate values are the core and soul of corporate culture. It refers to the general views or basic viewpoints of the internal management and all employees on the production, operation, and service activities of the enterprise, including the significance and purpose of the enterprise's existence, the necessity and role of various rules and regulations, the relationship between the behavior of personnel at all levels and departments and the interests of the enterprise, etc (Az-Zaakiyyah et al., 2024).

Prushkivskyi et al. (2021) pointed out that corporate values are the most core part of corporate culture, responsible for addressing the questions of "who we are, how we work, and why we work". Liu and Tang (2023) believes that corporate values are the most fundamental, central, and stable creed and concept of enterprises. They are the basic yardstick for measuring and judging the "right and wrong" and "good and bad" aspects of enterprise operation and development, and the cornerstone for enterprises to achieve long-term development.

The impact on employee loyalty: Li (2022)'s research shows that corporate values affect employee loyalty through three mechanisms: firstly, the moral values of a company help implement employee centered management, enhance employees' sense of fairness and job achievement, and make employees identify with the company from the bottom of their hearts, generating a sense of belonging and high loyalty; Secondly, corporate values can enhance employees' personal moral standards and judgment abilities, improve their understanding of the company and their own moral cultivation, reduce unethical behavior, and increase their trust in managers; Thirdly, corporate values can establish and consolidate close connections with stakeholders, enhancing employees' sense of security. Ma (2015)'s also pointed out that unifying corporate values with corporate culture can effectively improve employee loyalty.

2.3.2 leadership

Leadership refers to the ability to influence or change the psychology and behavior of others in the process of interacting with them Wang (2020).For the management of enterprises, leadership is mainly divided into two levels: individual leadership and organizational leadership. Generally, leadership refers to organizational leadership. Fu (2023) believes that leadership is a combination of behaviors that motivate people to follow the leader to where they want to go, and are the core of doing everything well. Leadership includes strategic thinking ability, innovation ability, decision-making ability, change ability, interpersonal communication ability, insight, etc. (Jiang Yongzhong, 2014).

The impact on employee loyalty: Leadership factors have a significant influence on employee loyalty. Liu et al. (2022) pointed out that leadership achieves a high degree of consistency in employees' ideological awareness and work behavior by influencing their values. Ranta and Ylinen (2024) proposed that most companies focus on areas that are relatively easy to improve in the short term, such as benefits, compensation, and training, to increase employee loyalty. However, little do they know that once these factors reach an average level, the most important factors in maintaining employee loyalty are the company's leadership ability, management efficiency, clear and efficient communication, a good working environment, and whether employees can showcase their talents in their work. Whether a company has development prospects and whether its leaders have foresight and excellent leadership skills has a more important impact on employee loyalty than salary. In addition, leadership charisma can evoke people's feelings of respect and affection, and they are willing to follow, thereby influencing employees' attitude loyalty and behavioral loyalty (Briggs et al., 2022).

2.3.3 team spirit

Team spirit refers to the sense of belonging and identification among team members towards the team, which is a noble quality of unity, cooperation, and serving the overall situation. It is a direct reflection of any team's professional competence, professional spirit, and combat effectiveness (Enoch & Tende, 2022).Meyers et al. (2023) defines team spirit as the willingness of team members to work together for the benefit and goals of the team, based on the research results of multiple scholars. Its core is unity and cooperation, striving to achieve common goals, among which the spirit of dedication

and the awareness of serving the overall situation are essential qualities for enterprise members.

The specific meaning of team spirit includes: firstly, in order to improve work efficiency, enterprise team spirit must achieve reasonable division of labor, reduce unnecessary time and capital costs; Secondly, team spirit should bring a sense of belonging and mission to the members of the enterprise, which is conducive to realizing the personal value of employees and the development of the enterprise; Thirdly, team spirit is a spiritual pillar that can help enterprises constantly radiate vitality and move forward courageously; Fourthly, there is a fundamental difference between team spirit and collectivism. Team spirit emphasizes seeking common ground while reserving differences, unity and cooperation.

The impact on employee loyalty: The key to the role of corporate culture lies in team spirit. Team spirit can effectively regulate employees' thoughts and behaviors, unite them together, stimulate their enthusiasm, initiative, and creativity, enhance team cohesion, and have a positive impact on the overall performance of the enterprise. At the same time, team spirit influences employees' attitude loyalty and behavioral loyalty, enabling them to work and strive for a common goal as independent individuals (Zhao, 2020).In the context of Chinese collectivist culture, employees place greater emphasis on group relationships and team harmony, and the influence of team spirit on employee loyalty is particularly significant.

2.3.4 interpersonal relationships

Interpersonal relationships refer to the psychological relationships and distances formed by people in the process of interpersonal communication. The harmony or disharmony of personality, attitude, emotions, and mutual attraction or exclusion between the two parties in communication will inevitably lead to intimacy or estrangement in their interpersonal relationships. The influence of culture on interpersonal relationships is profound. Smooth interpersonal relationships and effective human resource management activities can be carried out smoothly, otherwise there will be many obstacles Zhao (2020).

The quality of interpersonal relationships to a certain extent determines the development of enterprises (Szostek, 2019). Harmonious and friendly interpersonal relationships can enhance the effectiveness of enterprise management. With established financial and material resources, it can effectively integrate human resources and enhance

the value of enterprise human capital, thereby improving the production and operation capabilities of enterprises.

The impact on employee loyalty: The quality of interpersonal communication within a company has a significant impact on its production and operation. Some companies do not attach importance to handling interpersonal relationships, resulting in subordinates not executing superior instructions, lack of cooperation between peers, lack of coordination between departments, poor communication in interpersonal relationships, low work efficiency, procrastination, and buck passing. The greatest impact of interpersonal relationships on employees is mainly on their psychological level. Harmonious coexistence between people can keep employees in a happy and positive mood, stimulate their work potential and enthusiasm, and make them confident in their ability to handle work problems. On the contrary, a unit with disharmony among people will inevitably increase disharmony factors in friction, resulting in poor communication, causing employees to feel pressure and job burnout, and even resignation (Eva et al., 2024). Zhenjing et al. (2022) pointed out that an open and harmonious corporate culture can create a good interpersonal atmosphere, which has a positive impact on long-term career development such as employee loyalty, job satisfaction, and happiness.

2.3.5 Employee Development

Employee development refers to the process in which an organization provides employees with various opportunities and resources to help them achieve their career goals and personal growth. This includes improving employees' skills, knowledge, and abilities through training, education, consultant support, career planning, and other development activities. Employee development aims to improve employee performance and satisfaction, and provide the organization with a more competitive workforce (Zhao ,2020). In employee development, employees and organizations can jointly set goals and track progress through feedback and evaluation. Employee development can also provide opportunities for promotion and career development, encouraging employees to be more actively involved and committed in their own careers (Rafay & Zafar, 2025). Bilderback and Miller (2023) believes that the process of employee development is also the process of promoting and building corporate culture. Corporate culture and employee development are interdependent and mutually reinforcing, both of which are essential factors for the stable development and long-term growth of enterprises (Iddrisu, 2025).

The impact on employee loyalty: According to Maslow (1943)'s Hierarchy of Needs, human needs are multifaceted. The initial goal of an employee's work may simply be to find a job for survival, to fulfill lower level needs, and then pursue wealth, status, and fame, while the highest need is for self-development and self-actualization. Enterprises incorporate the personal development of employees into the track of enterprise development, allowing them to not only serve the enterprise in promoting the achievement of strategic goals, but also achieve personal development and personal achievements through participating in corresponding levels of training according to clear career development goals. Employee career design can elevate work goals beyond wealth and status by refining them multiple times, driving employees to pursue higher-level needs, pursue the realization of self-worth, and pursue a sense of career achievement (Khatri et al., 2025).Zhong (2016) found that there is a significant correlation between the four dimensions of career development for enterprise R&D personnel (fair promotion, information provision, emphasis on training, and career cognition) and employee organizational loyalty. Whether employees are willing to stay in a company for a long time and serve the company is closely related to their personal development in the company, especially in terms of job promotion, salary and benefits.

2.3.6 social responsibility

Corporate social responsibility refers to the obligation of a company to maintain and enhance social interests beyond maximizing shareholder or owner's rights. It represents the responsibility that a company should bear to stakeholders beyond the minimum level Xie (2007).It has two meanings: one is the specific social responsibility that enterprises need to undertake, focusing on the content of corporate social responsibility; The second is how enterprises fulfill their social responsibilities in production and operation, focusing on the ethical and moral principles that enterprises should abide by in production and operation, which has a dual nature of content and behavior (Zhao ,2020).

The connotation of corporate social responsibility mainly includes the following aspects: economic responsibility. Enterprises should create employment opportunities and earn reasonable returns for shareholders in accordance with laws, regulations, and business ethics norms; Legal responsibility: Enterprises must comply with relevant laws and regulations, protect consumer rights, and maintain fair competition; Moral responsibility: Enterprises should actively fulfill their social roles, take responsibility for stakeholders

such as employees, customers, and suppliers, and pursue long-term and sustainable development; Charitable responsibility requires companies to undertake certain obligations in community and public affairs, including donations, volunteer services, etc. (Awa et al., 2024; Le, 2023).

The impact on employee loyalty: While pursuing material satisfaction, employees also value spiritual fulfillment. Actively fulfilling social responsibility by enterprises has a positive impact on improving corporate reputation, changing employee attitudes, stimulating employee work motivation, and maintaining employee loyalty (Hebo Jin et al., 2024). A responsible enterprise will try its best to create a good environment for employees, leverage their personalities and strengths, encourage their sense of ownership and responsibility, and create a sense of belonging among everyone. This will trigger positive response behavior from employees, who are willing to stay and contribute, not only willing to serve the company, but also eager to fully devote themselves to work, create value with the company, and grow together. Numerous empirical analyses have also confirmed that the more companies tend to take responsibility, the higher the loyalty of their employees (A et al., 2021; Jin et al., 2024).The more charitable responsibilities a company undertakes, the higher the loyalty of its employees (Glaveli, 2021).Lin (2024) pointed out that by fulfilling corporate social responsibility, companies can enhance their competitiveness and corporate image, while also contributing to society.

2.4 Hypothesis development

Based on the above analysis and theoretical model, this article proposes six measurement dimensions of corporate culture (corporate values, leadership, team spirit, interpersonal relationships, employee development, social responsibility) and six hypotheses that have a positive impact on employee loyalty:

2.4.1 Corporate values and employee loyalty

Vasumathi et al. (2025) pointed out that unifying corporate values with corporate culture can enhance employee loyalty. This corporate philosophy and values are the corporate culture pursued by all employees, which is reflected in the consciousness and actions of each employee. In the article "Study on the Mechanism of the Influence of Person-Organization Fit on Career Success: Mediating Role of Career Adaptability" (Zhu et al., 2024), it is proposed that corporate values have a positive impact on cultivating

and improving employee loyalty. Firstly, the ethical values of a company contribute to implementing employee centered management, enhancing employees' sense of fairness and work achievement. The company's trust in its employees enables them to genuinely identify with the company, thereby generating a strong sense of belonging and high loyalty. Secondly, the corporate values of a company can enhance employees' personal moral standards and moral judgment abilities, thereby improving their understanding of the company and their own moral cultivation, reducing unethical behavior within the company, and increasing employees' trust in managers and other executives. Thirdly, a company's corporate values can establish and consolidate close connections between itself and other stakeholders, thereby enhancing employees' sense of security. Pillars are the basic conditions for the development of enterprises. In summary, corporate values reflect the common beliefs and goals of its members, and have an impact on employees' cognition, emotions, and behavior (Sabbir & Taufique, 2022).Therefore, this article proposes the hypothesis that:

H1: Corporate values have a significant positive impact on employee loyalty.

2.4.2 Leadership and Employee Loyalty

Leadership refers to the ability to influence or change the psychology and behavior of others in the process of interacting with them (Liden et al., 2025).Leadership can be understood as the influence on employees, essentially by influencing their values and achieving a high degree of consistency in their thinking and work behavior. Leadership factors have a significant impact on employee loyalty. Leadership ability is not only reflected in the organizational ability, appeal ability, and ability to identify factors that reduce employee loyalty in daily work, but also in the construction of corporate culture. On the surface, the corporate image displays the corporate culture, while at a deeper level, it is reflected in the values, mission, and social responsibility of the enterprise. The life philosophy and values of corporate leaders themselves have a direct impact on the formation of corporate values. If the ideas of leaders in a company cannot keep up with the times and develop innovation, it will lead to outdated ideological consciousness in the corporate culture, which will indirectly affect employees' loyalty to the company (Lee, 2022).In addition, when discussing corporate leadership, the personality charm of leaders is often mentioned. Leadership charm refers to the attraction, cohesion, and appeal that leaders generate towards their followers in leadership activities, as well as the

psychological support that comes from the voluntary and pleasant feelings of the followers, in order to achieve leadership goals (Katz-Navon et al., 2023).Leadership charm can evoke people's respect and affection, and they are willing to follow, indicating that leadership has an impact on employees' attitude loyalty and behavioral loyalty (Zanabazar et al., 2023).Therefore, a hypothesis is proposed:

H2: Leadership has a significant positive impact on employee loyalty.

2.4.3 Team spirit and employee loyalty

Corporate culture is an intangible force and asset that unites people's hearts and enhances a company's competitiveness. It is the driving force behind a company's survival and development (Akpan et al., 2023).Corporate culture construction and team building are inseparable components, and team spirit is a spiritual force that unites team work and promotes team development (Ahmed et al., 2023).The key to the effectiveness of corporate culture lies in team spirit. Team spirit can effectively regulate employees' thoughts and behaviors, unite them together, stimulate their enthusiasm, initiative, and creativity, improve team cohesion and cohesion, unite employees from all levels, enhance the overall strength of the company, and have a positive impact on the performance of the entire enterprise (Grossman et al., 2021).At the same time, team spirit influences employees' attitude loyalty and behavioral loyalty, enabling them to work hard and strive for a common goal as independent individuals (Imran et al., 2024), thereby promoting the healthy, sustainable, and stable development of the enterprise. Therefore, a hypothesis is proposed:

H3: Team spirit has a significant positive impact on employee loyalty.

2.4.4 Interpersonal relationships and employee loyalty

Corporate culture can effectively reduce or even avoid conflicts among employees, create a harmonious development atmosphere, and avoid problems such as decreased loyalty and increased turnover rates caused by conflicts among employees (Cai & Ali, 2024).A harmonious interpersonal atmosphere is an important component of corporate culture and a significant source of cohesion and creativity. An open and harmonious corporate culture, creating a positive interpersonal atmosphere, has a positive impact on long-term career development such as employee loyalty, job satisfaction, and happiness (Zhenjing et al., 2022).In practical work, interpersonal relationships have the greatest impact on employees, mainly on their psychological level. Harmonious coexistence

between people can keep employees in a happy and positive mood, stimulate their work potential and enthusiasm, and make them confident in their ability to handle work problems (Eva et al., 2024).On the contrary, a unit with disharmony among people will inevitably increase disharmony factors in friction, resulting in poor communication, causing employees to feel pressure and job burnout, and even resignation. It is obvious that in modern enterprises, shaping an open and harmonious corporate culture and creating a harmonious interpersonal atmosphere have a significant impact on employee attitudes and behaviors. Based on this, a hypothesis is proposed:

H4: Interpersonal relationships have a significant positive impact on employee loyalty.

2.4.5 Employee Development and Employee Loyalty

Obeng et al. (2024) found that training can improve employee loyalty. Qi et al. (2024) pointed out that providing educational opportunities for employees can promote the improvement of employee loyalty. Zhong (2016)'s research found that there is a significant correlation between the four dimensions of career development for enterprise R&D personnel (fair promotion, information provision, emphasis on training, and career cognition) and employee organizational loyalty. Whether employees are willing to stay in a company for a long time and serve the company is closely related to their personal development in the company, especially in terms of job promotion, salary and benefits (Ballesteros et al., 2024). If the future development prospects of the current company are good, and employees can achieve their personal development goals through their own efforts and hard work, then employees are very willing to continue staying in this company, and their work enthusiasm will also be relatively high. Therefore, a hypothesis is proposed:

H5: Employee development has a significant positive impact on employee loyalty.

2.4.6 Social Responsibility and Employee Loyalty

Employees not only pursue material satisfaction, but also value spiritual fulfillment. Corporate proactive social responsibility has a positive impact on improving corporate reputation, changing employee attitudes, stimulating employee motivation, and maintaining employee loyalty (Ahmad et al., 2024).A responsible enterprise will try its best to create a good environment for employees, leverage their personalities and strengths, encourage their sense of ownership and responsibility, and create a sense of belonging among everyone. This will trigger positive response behavior from employees, who are willing to

stay and contribute, not only willing to serve the company, but also eager to fully devote themselves to work, create value with the company, and grow together. Numerous empirical analyses have also confirmed that the more companies tend to take responsibility, the higher the loyalty of their employees (Ford et al., 2022; Glaveli, 2021).The more charitable responsibilities a company undertakes, the higher the loyalty of its employees (Hsieh et al., 2022).Based on this, this article proposes a hypothesis:

H6: Social responsibility has a significant positive impact on employee loyalty

2.5 Theoretical framework

2.5.1 Theoretical model construction basis

This study optimized and adjusted the five dimensional model proposed by Zhao (2020) to form a six dimensional model. The adjustment basis is as follows:

Firstly, the international mainstream model emphasizes the core position of values and leadership. After comparing the corporate culture measurement scales of various scholars in the previous section, it was found that Howard (1998), Denison, Hofstede et al. (1990), Zhang et al. (2006), the China Center for Corporate Culture Evaluation (CCMC), Xiong (2017) and Chen (2023) all proposed corporate values or core values in their corporate culture measurement scales, indicating their importance. Corporate values are the most core content of corporate culture, the fundamental, central, and stable creed and concept of enterprises, and the basic standard for measuring and judging the "right and wrong" and "good and bad" issues in the development of enterprise operations (Koch et al., 2023);Corporate values have a positive impact on cultivating and enhancing employee loyalty (Ahmed et al., 2021).

The China Corporate Culture Evaluation Center (CCMC) evaluation system and Hejun Entrepreneurship Management Consulting Co., Ltd. (2006) proposed leadership and entrepreneurship; Howard (1998) proposed the dimension of leadership style in their measurement model. Leadership refers to the ability to influence or change the psychology and behavior of others in the process of interacting with them, including strategic thinking ability, innovation ability, decision-making ability, change ability, interpersonal communication ability, insight, etc. (Liden et al., 2025). Whether a company has development prospects and whether its leaders have foresight and excellent leadership skills has a more important impact on employee loyalty than salary (Zanabazar et al.,

2023);Leadership has an impact on employees' attitude loyalty and behavioral loyalty (Zanabazar et al., 2023).

Secondly, the actual situation of Lulu in Chengde needs to strengthen these two dimensions. Field investigations have found that although Chengde Lulu has established the corporate spirit of "leaders should have integrity, employees should have ambition, products should have fame, and the enterprise should have vitality", the construction of corporate culture is not perfect, the corporate values are not clear enough, and employees' understanding of corporate culture is insufficient; In recent years, frequent departures of executives (three rounds of chairman changes between 2018 and 2021) indicate insufficient leadership development. The weaknesses in these two aspects are important reasons for low employee loyalty and serious staff turnover.

Thirdly, the "courage to innovate" dimension of Zhao (2020)'s model can be integrated into the leadership dimension. Innovation consciousness is an important component of leadership. In the context of Chinese enterprises, innovation is often led and driven by leaders. Therefore, this study integrates "courage to innovate" into the dimension of "leadership", expressed as "leaders have a strong sense of innovation, leading and encouraging employees to innovate".

Based on the above analysis and combined with the actual situation of Chengde Lulu Co., Ltd., this study adds two dimensions of corporate values and leadership on the basis of Zhao (2020)'s five dimensions of team spirit, personal development, interpersonal relationships, social responsibility, and courage to innovate. At the same time, the courage to innovate dimension is integrated into the leadership dimension, thus forming six dimensions of corporate culture measurement, including corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility. The dimension of employee loyalty is measured from a single dimension, namely employee loyalty, as mentioned earlier.

2.5.2 Theoretical model construction process

The construction of the theoretical model in this study follows the following steps:

Step 1: Determine the research variables

Based on literature review, the independent variable of this study is determined to be corporate culture (including six dimensions: corporate values, leadership, team spirit,

interpersonal relationships, employee development, and social responsibility), and the dependent variable is employee loyalty (a single dimension).

Step 2: Propose research hypotheses

Based on the theoretical foundation of 2.2 and the concept review of 2.3, this paper conducts theoretical deduction on the relationship between the six dimensions of corporate culture and employee loyalty, and proposes six research hypotheses:

H1: Corporate values have a significant positive impact on employee loyalty

H2: Leadership has a significant positive impact on employee loyalty

H3: Team spirit has a significant positive impact on employee loyalty

H4: Interpersonal relationships have a significant positive impact on employee loyalty

H5: Employee development has a significant positive impact on employee loyalty

H6: Social responsibility has a significant positive impact on employee loyalty

Step 3: Build a theoretical model

Based on the above research hypotheses, the theoretical model of this study is constructed as shown in Figure 2.2. This model indicates that the six dimensions of corporate culture have a positive impact on employee loyalty.

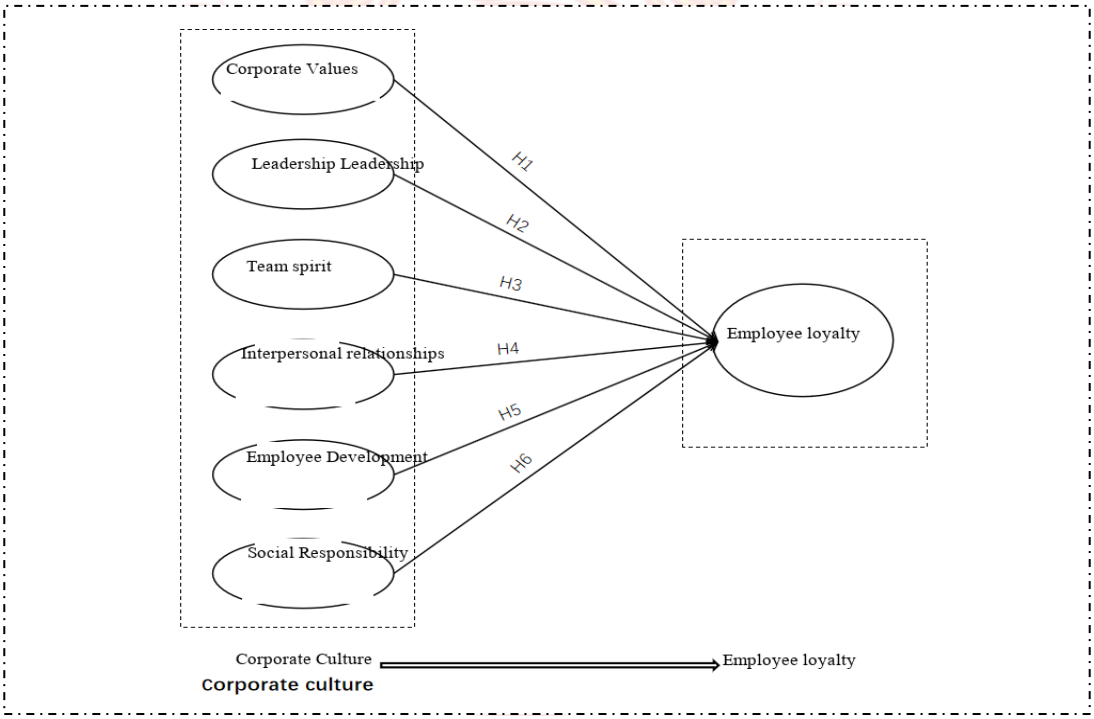


Figure 2. 2 Theoretical Model of the Impact of Corporate Culture on Employee Loyalty

Step 4: Design measurement tools

Based on theoretical models and conceptual definitions, design a corporate culture measurement scale (six dimensions, four items per dimension, a total of 24 items) and an employee loyalty measurement scale (a single dimension, eight items). The scale adopts the Likert five point scale method (see Chapter 3 for details).

Step 5: Empirical testing

Collect data through questionnaire surveys and use statistical methods such as reliability analysis, validity analysis, correlation analysis, and regression analysis to test theoretical models and research hypotheses.

2.5.3 Characteristics of theoretical models

The theoretical model constructed in this study has the following characteristics:

Firstly, the dimension setting is more complete. On the basis of Zhao (2020)'s five dimensions, two core dimensions of corporate values and leadership have been added, making the model cover the spiritual layer (corporate values, leadership), behavioral layer (team spirit, interpersonal relationships), development layer (employee development), and social layer (social responsibility) of corporate culture, which is in line with Liu (2006)'s four level structure theory of corporate culture.

Secondly, it integrates the core elements of multiple theoretical models. The six dimensional model of this study integrates the core elements of multiple mature models, including the Denison model (participation, consistency, mission, adaptability), the China Corporate Culture Evaluation Center (CCMC) evaluation system (core values, leadership, etc.), and the Howard (1998) competitive cultural value model, and has a stronger theoretical foundation.

Thirdly, a balance has been achieved between theoretical simplicity and content integrity. Compared to Liu et al. (2008)'s nine dimensional model and Zhang et al. (2006)'s nine dimensional model, the six dimensional model in this study is more concise and easy to measure and apply; Compared to Zhao (2020)'s five dimensional model and Yau et al. (2007)'s five dimensional model, the content of this study's model is more complete, covering the core elements of corporate culture.

Fourthly, it is suitable for the context of Chinese manufacturing enterprises. This study constructs a model based on the actual situation of Lulu in Chengde, which strengthens the core position of values and leadership in Chinese corporate culture, reflects

the practical characteristics of Chinese enterprises' "leader culture concept determines the direction of corporate culture", and has strong local adaptability.

2.6 Conclusion

This chapter lays a solid theoretical foundation for this study through a systematic literature review.

Firstly, the research status has been reviewed and the research entry point has been clarified. By reviewing the current research status of corporate culture, employee loyalty, and their relationship, it is found that there are three main shortcomings in existing research: the vast majority of research is qualitative and lacks empirical support; The measurement dimensions of corporate culture are incomplete, for example, Zhao (2020)'s five dimensional model lacks two core dimensions: corporate values and leadership; There is relatively little research on manufacturing enterprises, especially traditional manufacturing enterprises. Based on these shortcomings, this study has identified four entry points: improving the measurement dimensions of corporate culture, filling the gaps in research objects, strengthening empirical research methods, and focusing on practical applications.

Secondly, a theoretical analysis framework has been constructed. The system elaborates on the theories of corporate culture and employee loyalty, with a focus on introducing Hattangadi (2020)'s three-level model, Chinese scholars' four level model, Denison (1990)'s organizational culture measurement model, and the six dimensional evaluation system of the China Corporate Culture Evaluation Center (CCMC). These theories provide important insights for this study: values are the core of corporate culture, leadership plays a crucial role in building corporate culture, corporate culture is a multidimensional complex, measurement needs to be localized, and corporate culture is closely related to employee behavior.

Thirdly, the core concepts have been defined. The six dimensions of corporate culture (corporate values, leadership, team spirit, interpersonal relationships, employee development, social responsibility) and employee loyalty have been clearly defined, and the core connotations, main contents, and impact mechanisms of each dimension on employee loyalty have been elucidated. Among them, corporate values and leadership are two new dimensions added to the Zhao (2020) model in this study, which have a core position in both international mainstream models and Chinese corporate practices.

Fourthly, research hypotheses were proposed. Based on theoretical foundations and conceptual definitions, six research hypotheses have been proposed, namely that all six dimensions of corporate culture have a significant positive impact on employee loyalty. These assumptions provide clear theoretical expectations for subsequent empirical research.

Fifth, a theoretical model has been constructed. On the basis of integrating multiple core elements of theoretical models and combining with the actual situation of Lulu in Chengde, the theoretical model of this study was constructed. This model has four characteristics: complete dimension setting (covering the spiritual, behavioral, developmental, and social layers of corporate culture), solid theoretical foundation (integrating mature frameworks such as Denison model and CCMC system), balance between simplicity and completeness (the six dimensions are both concise and comprehensive), and strong local adaptability (strengthening the core position of values and leadership in Chinese enterprises).

In summary, this chapter has formed a complete theoretical analysis framework by reviewing the research status, elaborating on the theoretical basis, defining concepts, proposing hypotheses, and constructing models. This framework not only provides a theoretical basis for the empirical analysis of this study, but also offers a new theoretical perspective for the study of corporate culture and employee loyalty. On this basis, Chapter 3 will provide a detailed introduction to the method design of this study, including research tools, data collection, and data analysis methods, to ensure that the theoretical model is scientifically rigorously empirically tested.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Research Tool

This study used a questionnaire survey method to collect data. Quantitative methods largely follow the logic of natural science, presenting the relationships between variables through data, aiming to provide an overview of phenomena, capture correlations, and predict trends. Specific methods include experimental research, survey research, observational research, statistical analysis, case studies, etc..LooiTheamChoy, a scholar from the University of Malaya, believes that quantitative methods have two significant advantages: first, they are fast and can be managed and evaluated in a short period of time, and the results can be presented in the form of charts and graphs; The second is uniformity, which can quantify the opinions of respondents into intuitive numbers with clear standards, and facilitate comparison between different scholars and organizations.

Based on the advantages of quantitative research methods, this study fully absorbs the relevant ideas and theories of various experts and scholars on corporate culture, employee loyalty, and the impact of corporate culture on employee loyalty, and designs and forms a questionnaire survey scale that is in line with reality.

3.1.1 Corporate Culture Measurement Scale

1. Scale design basis

On the basis of Zhao (2020)'s five dimensional model, this study adds two dimensions of corporate values and leadership to form a six dimensional corporate culture measurement model. The scale design follows the following principles: firstly, a solid theoretical foundation with sufficient literature support for each dimension; Secondly, the wording of the questions should be clear, avoiding technical jargon to ensure that the interviewee can accurately understand them; Thirdly, the dimensions are relatively independent to avoid repetition of questions or confusion of concepts; Fourthly, in line with the actual situation of Chinese manufacturing enterprises, the content of the questions is close to the organizational context of Lulu in Chengde

2. Scale structure

The Corporate Culture Measurement Scale consists of 6 dimensions and 24 items, with 4 items per dimension. The scale adopts the Likert 5-point scale method, assigning 1-5 points from "completely disagree" to "completely agree". The higher the score, the higher the level of cultural construction in that dimension. The Cronbach's alpha coefficient of the scale is 0.942, and the alpha coefficients of each dimension are between 0.832-0.891, indicating excellent reliability.

Table 3. 1 Measurement Scale for Corporate Culture

dimension	serial number	Measurement items for corporate culture	source
Corporate Values	1	Neglecting corporate values will lead us into difficulties	Ma (2015); Li (2022)
	2	The company's corporate culture and values are very contemporary	
	3	Employees have very similar views on right and wrong behavior	
	4	The ethical standards of the unit can guide us in judging right from wrong	
leadership	5	The leader's work is very successful and inspiring	Wang (2020); Fu (2023)
	6	I think leaders have strong work abilities	
	7	The leader pays great attention to the demands of employees, cares for them, and has a high level of authority	
	8	Leaders have a strong sense of innovation, leading and encouraging employees to innovate	
team spirit	9	The company attaches great importance to team building	Zhao (2020)
	10	I strongly agree with the company's corporate culture	
	11	My team is earnestly implementing the company's development strategy	

Table 3.1 (continued)

dimension	serial number	Measurement items for corporate culture	source
	12	My personal behavior will affect the achievement of team goals	
interpersonal relationships	13	I get along well with my colleagues	Zhao (2020)
	14	The company can tolerate my mistakes	
	15	The company respects and understands me	
	16	I am willing to take the initiative to help my colleagues at work	
Employee Development	17	The company values the growth and development of its employees	Zhao (2020)
	18	The company provides employees with sufficient development space	
	19	The abilities of company employees are constantly improving	
	20	My personal development goals are completely aligned with the company's development goals	
social responsibility	21	While pursuing economic benefits, the company conscientiously fulfills its social responsibilities	Zhao (2020); Xie (2007)
	22	Companies prioritize long-term development over short-term gains	
	23	Companies often fulfill their social responsibilities through practical actions	
	24	Social identity: A company that fulfills its social responsibility well	

3. Scale characteristics

This scale has the following characteristics:

Theoretical completeness: The six dimensions cover the core elements of corporate culture (values, leadership), internal construction (team spirit, interpersonal relationships, employee development), and external responsibility (social responsibility), in line with Liu (2006)'s four level structure theory of corporate culture.

Simplicity of measurement: Only 4 items are used to measure each dimension, with a total of 24 questions. Compared with other scales (such as the VOCS scale with 54 questions), it is more concise and takes about 5-8 minutes to fill out, reducing the burden on respondents and improving the questionnaire response rate and effectiveness.

Local adaptability: The wording of the question is in line with the cultural background of China and the actual situation of manufacturing enterprises, especially the added dimensions of corporate values and leadership, reflecting the characteristics of Chinese corporate culture construction.

Industry specificity: The content of the questions has been revised through on-site research and interviews with Lulu in Chengde to ensure it is close to the actual situation of manufacturing enterprises. For example, the dimension of team spirit emphasizes the ability of team members to collaborate with each other, which is in line with the highly dependent nature of manufacturing production activities on teamwork.

3.1.2 Employee Loyalty Measurement Scale

1. Scale design basis

This study adopts a one-dimensional measurement method to measure employee loyalty as a whole. This choice is based on the following considerations: firstly, it is concise and clear, easy to operate and understand; Secondly, this study focuses on the overall level of loyalty rather than the differences in different types of loyalty; Thirdly, it can avoid disputes over dimension division and improve research reliability; Fourthly, it facilitates corresponding analysis of the impact of the six dimensions of corporate culture.

The scale design referred to the research of scholars such as Zhao and Mei (2003), combined with the actual situation of Lulu in Chengde, and designed items from two aspects: attitude loyalty and behavioral loyalty. It includes both employees' psychological states (sense of belonging, emotional attachment, identification) and explicit behaviors (intention to stay, effort level, recommendation intention).

2. Scale structure

The employee loyalty measurement scale consists of 8 items. The scale adopts the Likert five-point scale method, assigning 1-5 points from "completely disagree" to "completely agree", with higher scores indicating higher employee loyalty. The Cronbach's alpha coefficient of the scale is 0.913, indicating excellent reliability.

Table 3. 2 Employee Loyalty Measurement Scale

dimension	serial number	Employee loyalty measurement items	source
Employee loyalty	25	The company gives me a sense of belonging	Cao (2022);Liu (2013)
	26	I am willing to work for the company until retirement	
	27	I have a deep affection for the company	
	28	I am happy to contribute to the company	
	29	I won't leave the company without the influence of external factors	
	30	I will do my best to complete the work tasks assigned to me by the company	
	31	I am willing to overcome difficulties with the company	
	32	I won't leave the company because of better treatment from other units	

3. Scale characteristics

Equal emphasis on attitude and behavior: The first four questions measure attitude loyalty (sense of belonging, emotional attachment, pride, and identification), while the last four questions measure behavioral loyalty (willingness to stay, effort level, recommendation intention, and retention tendency), comprehensively reflecting the connotation of employee loyalty.

Clear expression of questions: The questions are presented in first person declarative sentences, which are concise and clear, avoiding double negatives, professional terminology, and other expressions that may cause misunderstandings, ensuring that the interviewee can accurately understand and answer.

Covering core elements: The 8 questions cover the core elements of employee loyalty, including emotional aspects (sense of belonging, pride), cognitive aspects (sense of identity, values), and behavioral aspects (retention, effort, recommendation).

3.1.3 Demographic information

The third part of the questionnaire collects demographic information of the respondents, including six variables: gender, age, education, years of work experience, position, and salary. These pieces of information are used to describe sample characteristics and perform variance analysis (ANOVA).

Table 3. 3 Demographic Variables and Their Classification

variable	**classification**
gender	1=Male;2=Female
age	1= Under 20 years old;2= 21-25;3= 26-35;4= 36-45;5= 46 and above
academic qualification	1=High school and below;2=Junior college;3=Bachelor's degree;4=Master's degree or above
Years of Work Experience	1=5 years or less;2=6-10 years;3=11-20 years;4=21 years or more
position	1=Management personnel;2=Technical personnel;3=Production personnel;4=Other
salary	1=3000 yuan and below;2=3001-5000 yuan;3=5001-8000 yuan;4=8001 yuan and above

3.1.4 Overall structure of the questionnaire

The complete questionnaire consists of 38 items (24 questions about corporate culture, 8 questions about employee loyalty, and 6 questions about demographic information), and is filled out anonymously. The filling time is about 8-10 minutes. The questionnaire structure is as follows:

Part 1: Guidance (explaining research objectives, confidentiality principles, and methods of answering questions)

Part 2: Measurement of Corporate Culture (24 questions, Likert Five Point Scale)

Corporate Values (4 Questions)

Leadership (4 questions)

Team spirit (4 questions)

Interpersonal relationships (4 questions)

Employee Development (4 Questions)

Social Responsibility (4 Questions

Part 3: Employee Loyalty Measurement (8 questions, Likert Five Point Scale)

Attitude Loyalty (4 Questions)

Behavioral loyalty (4 questions

Part Four: Demographic Information (6 questions, multiple-choice)

3.2 Data Collection Administration

This paper uses the Internet to send questionnaires and collect data by scanning QR codes, and selects the Questionnaire Star platform to create questionnaires. Wenjuanxing is the world's largest free survey platform, which has the advantages of simple operation, easy application, fast and efficient (Liu, 2016).

Firstly, create a QR code. Using the Wenjuanxing platform, create a survey questionnaire. Search for "Wenjuanxing" on Baidu, go to the official website to register, click "Create Questionnaire", select "Survey", "Create Blank Questionnaire", create from the blank space, enter the title, and then click "Create Now". After adding all the questions in bulk, complete the editing and publish the questionnaire. After publishing, generate the questionnaire link and generate the survey questionnaire QR code. Download and save the QR code.

Secondly, share the QR code with the relevant personnel of Chengde Lulu Co., Ltd. Specific method: First, conduct stratified sampling, that is, share the QR code with production, sales, technical, financial supervisors, and administrative management personnel who are familiar with the relevant staff of Chengde Lulu Co., Ltd., and then have the department heads share it on the WeChat work groups of various professional department employees. At this time, to ensure fairness and data validity, a simple random sampling survey is conducted.

Finally, after completing the questionnaire, download the raw data from the "Analysis & Download" section for statistical analysis.

3.2.1 population

Chengde Lulu Co., Ltd. is headquartered in CD City, a historic and cultural city in Hebei Province. According to the "2022 Statistical Summary" data from Hebei Province, the city's permanent population will be 3.3209 million by the end of 2022. The company is located in the CD High tech Industrial Development Zone and was founded in 1950. Its predecessor was the CD Canned Food Factory. On April 28, 1997, with the approval of the Hebei Provincial People's Government's Joint Stock System Leading Group's document No. 8 (1997), the operating net assets of its almond dew factory, canned food factory, heating factory, transportation team, and holding enterprise Shantou High tech Zone Lulu South Co., Ltd. were evaluated and converted into national shares. The company was established through public offering and listed on the Shenzhen Stock Exchange on November 13, 1997. Successfully listed, the company has established a corporate governance structure consisting of a shareholders' meeting, a board of directors, and a supervisory board. At present, the company has an annual production capacity of over 500000 tons, providing strong support for its sustainable development. Our main business is the production and sales of plant protein beverage "LL" brand almond milk, which holds over 90% market share in the Chinese almond milk market. We currently have 1524 employees. According to the data report of Chengde Lulu Co., Ltd. in the database of China Business Industry Research Institute, the composition of employees is shown in Table 3.4:

Table 3. 4 Employee Composition of Chengde Lulu Co., Ltd. in 2022

Divided by profession		
Divided by profession	number of personnel	Personnel proportion (%)
financial personnel	24	1.57
technical personnel	107	7.02
production personnel	660	43.31
salesperson	657	43.11
Administrative management personnel	76	76
Divided by educational background		
Divided by educational background	number of personnel	Personnel proportion (%)
Number of graduate students	15	0.98
Number of undergraduate students	230	15.09
Number of college graduates	501	32.87
Number of vocational school and below	778	51.05

Data source: Database of China Commerce Industry Research Institute - Chengde Lulu Co., Ltd. (2022)

The above table lists the composition of employees at Chengde Lulu Co., Ltd. from both professional and educational perspectives. Due to the difficulty and impracticality of distributing questionnaires based on educational background, it is only used to analyze the differences in opinions of different educational backgrounds on this study and not as a basis for distributing questionnaires. This article distributes questionnaires and collects data according to professional departments and composition ratios. This questionnaire distribution method is relatively scientific and detailed.

3.2.2 sample size

Define sampling population: all employees of L Co., Ltd.

Determining sample size: There is no clear statistical standard for determining sample size. Generally, the required sample size is 5-10 times the number of questions (Memon et al., 2020).The number of survey questions in this article is 38. In order to improve the reliability of the sample, 10 times the number of questions, which is 380, was selected as the sample size. Considering the possibility of unqualified questionnaires during the survey, such as incorrect questions or samples that do not have the background characteristics of the research, the final sample size was determined to be 400.

3.2.3 sampling method

This study employed a simple random sampling method to select respondents from the target population in order to minimize selection bias and enhance sample representativeness. The target population consisted of all full-time employees of Chengde Lulu Co., Ltd. at the time of data collection. A complete employee roster provided by the company served as the sampling frame, ensuring that each employee had an equal and known probability of being selected.

In the sampling process, each employee in the population was assigned a unique numerical identifier. A random-number generation procedure was then used to select participants from the employee list until the predetermined sample size was reached. Selected employees were individually invited to participate in the survey and were provided with a questionnaire link or QR code to complete the survey anonymously. Replacement sampling was applied when selected individuals declined to participate or provided invalid responses, with substitutes drawn using the same random procedure.

By adopting simple random sampling and using the full employee list as the sampling frame, this study ensured that the selected sample was not influenced by departmental affiliation, job position, or other organizational characteristics. As a result, the sample can be considered reasonably representative of the overall employee population of the company, supporting the generalizability of the empirical findings within the organizational context.

3.2.4 Measurement scale

Based on the Zhao (2020) measurement scale, firstly, the measurement items of the four dimensions of team spirit, interpersonal relationships, employee development, and social responsibility in the measurement scale were retained; Secondly, the social responsibility dimension will add 2 questions to a total of 4 items, which is consistent with the number of items in other dimensions; Thirdly, two dimensions of corporate values and leadership have been added, with four items designed for each dimension as shown in Table 3.5. Employee loyalty is measured using a single dimension, with a total of four items designed as shown in Table 3.5.

Table 3. 5 Measurement Scale for Corporate Culture

dimension	serial number	Measurement items for corporate culture	source
Corporate Values	1	Neglecting corporate values will lead us into difficulties	Ma (2015); Li (2022)
	2	The company's corporate culture and values are very contemporary.	
	3	Employees have very similar views on right and wrong behavior.	
	4	The ethical standards of the organization can guide us in judging right from wrong.	
leadership	5	The leader's work is very successful and inspiring.	Wang (2020); Fu (2023)
	6	I think leaders have strong work abilities.	
	7	The leader pays great attention to the demands of employees, cares for them, and has a high level of authority.	
	8	Leaders have a strong sense of innovation, leading and encouraging employees to	
team spirit	9	The company attaches great importance to team building.	Zhao (2020)
	10	I strongly agree with the company's corporate culture.	
	11	My team is earnestly implementing the company's development strategy.	
	12	My personal behavior can affect the achievement of team goals.	

Table 3.5 (Continued)

dimension	serial number	Measurement items for corporate culture	source
interpersonal relationships	13	I get along well with my colleagues.	Zhao (2020)
	14	The company can tolerate my mistakes.	
	15	The company respects and understands me.	
	16	I am willing to take the initiative to help my colleagues at work.	
Employee Development	17	The company values the growth and development of its employees.	
	18	The company provides employees with sufficient development space.	
	19	The abilities of company employees are constantly improving.	
	20	My personal development goals are completely aligned with the company's development goals.	
social responsibility	21	The company pursues economic benefits while conscientiously fulfilling its social responsibilities.	Zhao (2020); Xie (2007)
	22	Companies prioritize long-term development over short-term gains.	
	23	Companies often fulfill their social responsibilities through practical actions.	
	24	A socially recognized company is one that effectively fulfills its social responsibilities.	

Table 3. 6 Employee Loyalty Measurement Scale

dimension	serial number	Employee loyalty measurement items	
Employee loyalty	25	The company gives me a sense of belonging.	Cao (2022); Liu (2013)
	26	I am willing to work for the company until retirement.	
	27	I have a deep affection for the company.	
	28	I am happy to contribute to the company.	

Table 3.6 (Continued)

Employee loyalty	29	I will not leave the company without the influence of external factors.	Cao (2022); Liu (2013)
	30	I will make every effort to complete the work tasks assigned to me by the company.	
	31	I am willing to overcome difficulties with the company.	
	32	I won't leave the company just because other units offer better treatment.	

3.2.5 Questionnaire Design

The survey questionnaire used in this article specifically includes two scales: corporate culture and employee loyalty. The two scales are combined to form a complete questionnaire and distributed to employees of Chengde Lulu Co., Ltd.

The survey questionnaire consists of three parts, each with measurement content corresponding to the measurement dimension, totaling 38 measurement items, covering personal information, corporate culture status, and employee loyalty evaluation of the respondents.

The first part is the personal information of the interviewee, designed with reference to demographic scales, including six items such as gender, age, education level, years of work experience, job position, salary income, etc. (Liu, 2006), used to understand the specific situation of the interviewee and conduct differential verification in subsequent analysis.

The second part is the assessment of the current status of corporate culture. The designed questions correspond to six dimensions of corporate culture, namely corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility. Four questions are designed for each dimension, forming a total of 24 measurement items, used to evaluate the respondents' understanding and acceptance of the corporate culture of Chengde Lulu Co., Ltd.

The third part is an employee loyalty survey, which consists of 8 measurement items corresponding to employee loyalty, designed to investigate the loyalty of respondents to Chengde Lulu Co., Ltd.

The testing items are all measured using the Likert scale method, and are scored by respondents based on their actual situation. That is, 1=strongly disagree;2=Partially opposed;3=I don't know;4=Partial agreement;5=Strongly agree (Zhao ,2020).

3.3 Data Analysis

3.3.1 Descriptive statistics

Descriptive statistical analysis: mainly used to gather demographic information of survey samples and some information that needs to be understood. Descriptive statistical analysis refers to the statistical description of data related to all variables in a survey population. Simply put, it is to describe a series of complex datasets using several representative data. The main indicators in this article include six indicators: gender, age, education level, work experience, enterprise level, and salary and benefits.

3.3.2 Reliability Analysis

Reliability, repeatability, or accuracy refers to the degree of consistency in the results obtained by repeatedly measuring the same object using the same method, that is, measurement random error. Random error is caused randomly by the test subject when being measured and does not have a certain tendency. It is generally believed that the higher the degree of consistency, the higher the reliability. The Cronbach's alpha coefficient is generally used to test the intrinsic consistency of a scale. This coefficient reflects the degree of consistency and stability between items in the scale, and it is generally believed that the Cronbach's alpha coefficient should be above 0.7.The Cronbach's alpha coefficients of the total scale and various dimensions in his evaluation scale are all above 0.8 (Cronbach, 1951).Reliability analysis is a statistical method for evaluating measurement tools or questionnaires, used to test the consistency and stability of measurement tools across different applications or among different subjects. Its main function is to determine the reliability of the measurement tool, that is, the stability and reliability of the measurement results.

3.3.3 validity analysis

Validity refers to the degree of effectiveness of a measurement, which is the degree to which a measuring tool can measure the trait being measured, i.e. accuracy and usefulness. Good validity refers to the relatively good internal consistency of questionnaire data, meaning that the selection of all questions in each dimension is basically the same,

and the dimension division is relatively good (Sürücü & Maslakci, 2020).The evaluation methods for reliability analysis include: KMO>0.6 (correlation);P<0.05 (significance), meeting the requirements of factor analysis; The cumulative variance explanation rate is greater than 50%;The load factor of the project is greater than 0.4;There is no significant deviation in the correspondence between each project and each factor; Its commonality is greater than 0.4.

3.3.4 Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) is a statistical analysis method used to study the relationship between latent variables (also known as factors) and observed variables. Its purpose is to determine the underlying structure behind these variables by observing their covariance (Sürücü et al., 2022).From the perspective of the role of EFA, simplifying data can reduce the complexity and dimensionality of data by reducing a large number of observed variables to a few potential factors. This enables a better understanding and interpretation of the data. From the exploration of variable relationships, EFA can reveal the correlation and potential structure between variables. It can help identify and discover potential factor structures or dimensions, in order to better understand the relationships behind observed data.

Before conducting EFA, some common tests need to be performed to ensure the suitability of the data. Two commonly used tests are the Kaiser Meyer Olkin (KMO) test and the Bartlett test. KMO testing is used to evaluate the suitability of data for factor analysis. The range of values it calculates is between 0 and 1, with higher values indicating better suitability of the data. Generally speaking, KMO values above 0.7 are considered acceptable.

Total variance explanation is a commonly used indicator in factor analysis to measure the degree of explanation of total variance. It represents the cumulative percentage of variance explained by factors. Generally speaking, the higher the total variance, the better the ability of the factor model to explain the observed variables. The total variance explanation is calculated by observing the sum of squared extracted loadings (total) for each component. Extracting the sum of squared loadings refers to the degree of variation that each factor can explain (Shrestha, 2021).

3.3.5 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) is a structural equation modeling (SEM) technique used to evaluate and validate pre proposed latent factor structural models to determine whether the relationship between observed variables and latent factors is consistent with the hypotheses of the study (Sureshchandar, 2023).CFA is mainly used to test and evaluate the convergent validity, discriminant validity, and fit of latent factor structure models. Through confirmatory factor analysis, the adaptability of the model can be evaluated, hypotheses can be validated, the validity and reliability of measurement tools can be tested, and the relationships and mutual influences between potential factors can be further understood. This helps to increase the credibility and explanatory power of the research, and provides a strong foundation for further research.

Convergent Validity: Convergent validity is used to evaluate whether a measurement tool (item) can effectively measure latent factors. Aggregation validity can be evaluated by examining factor loading, Average Variance Extracted (AVE), and Construct Reliability. A reasonable factor loading and high AVE and combination reliability indicate that the measurement tool has good convergent validity. Aggregate validity (AVE) is used to evaluate whether measurement tools (items) can effectively measure latent factors (Wetzel, 2012).The value of AVE should be greater than or equal to 0.5, indicating that the measurement tool has good convergent validity. Composite reliability (CR) is used to evaluate the internal consistency of measurement tools (items). Generally speaking, the value of CR should be greater than or equal to 0.7, indicating that the measuring tool has good reliability and consistency.

Discriminant Validity: Discriminant validity is used to evaluate the differences between different latent factors. The discriminant validity can be evaluated by comparing the correlation coefficients between different factors and the AVE of each factor (Rönkkö & Cho, 2020).If the discriminant validity is high, it indicates that the correlation between different factors is low, and they are different constructs.

Fit: Fit refers to the degree of agreement between observed data and the established model. CFA can evaluate the fit of a model by comparing the differences between its actual data and theoretical model. Common fitting metrics include Chi square test, Comparative Fit Index (CFI), and Root Mean Square Error of Estimation (RMSEA) (Sathyanarayana & Mohanasundaram, 2024).

3.3.6 variance analysis

Differential analysis is a statistical analysis method used to compare whether there are significant differences in the mean or proportion between different groups. In differential analysis, commonly used methods include independent sample t-test and analysis of variance.

Independent sample t-test is a method used to compare whether there is a significant difference in the mean between two independent groups. It calculates a T-value based on the mean and variance of two independent samples, and then conducts hypothesis testing based on degrees of freedom and significance levels. If the T value is greater than the critical value, it can be concluded that there is a significant difference in the average value between the two groups (Xue, 2021).

Analysis of Variance (ANOVA), also known as "analysis of variance", was invented by R.A. Fisher and is used to test the significance of differences in means between two or more samples. Due to various factors, the data obtained from the study exhibits fluctuations. The reasons for fluctuations can be divided into two categories: uncontrollable random factors and controllable factors that affect the formation of results in the study (Wang, 2020).Specifically, analysis of variance (ANOVA) starts with the analysis of variance of the observed variables, inferring whether there is a significant difference in the mean of each observed variable population at different levels of the control variable, analyzing whether the control variable has a significant impact on the observed variable, and then analyzing the degree of impact of the control variable on the observed variable at different levels.

3.3.7 correlation analysis

Before conducting a formal model analysis on the impact of corporate culture on employee loyalty at Chengde Lulu Co., Ltd., it is necessary to test the correlation between various variables. Generally speaking, only when there is correlation between variables can the causal relationship between them be verified through model testing methods; If there is no correlation between variables, the research conclusion shows that there is no influential relationship between the two, thus confirming that the research hypothesis is not valid.

Correlation analysis is a quantitative analysis method for analyzing the relationships between objective things. It is a simple and effective tool for measuring statistical

relationships between things, used to study the relationships between two or more variables. It mainly measures the degree of linear correlation between variables by calculating the correlation coefficient between them (Xue, 2021). The role of correlation analysis is to reveal the relationship between variables: correlation analysis can help us understand whether variables are positively correlated, negatively correlated, or not linearly correlated. This helps us understand the patterns and mechanisms of changes in data or phenomena.

The correlation coefficient is a value between -1 and 1, indicating the strength and direction of the relationship between two variables. When the correlation coefficient approaches 1, it indicates a positive correlation between two variables, meaning that an increase in one variable is accompanied by an increase in the other variable; When the correlation coefficient approaches -1, it indicates a negative correlation between two variables, meaning that an increase in one variable is accompanied by a decrease in the other variable; When the correlation coefficient approaches 0, it indicates that there is no linear relationship between two variables.

3.4 Pretesting

To test the reliability, validity, and feasibility of the questionnaire, this study conducted a pre-test before the formal investigation.

3.4.1 Predictive testing purpose

The purpose of pre-test is to achieve the following objectives: firstly, to test the reliability and validity of the questionnaire, ensuring the reliability and effectiveness of the measurement tool; Secondly, test the clarity of item expression and identify and revise items that are difficult for respondents to understand; Thirdly, evaluate the length and response time of the questionnaire to ensure that it is of moderate length and does not impose an excessive burden on the respondents; Fourthly, verify the feasibility of the data collection process, identify and resolve potential issues that may arise during the data collection process.

3.4.2 Pretesting implementation

1. sample selection

In the pre - test sampling, 50 employees were randomly selected from Lulu in Chengde. Among them, there were 8 managerial staff, 12 technical staff, 25 production

staff, and 5 staff in other positions, encompassing diverse types of job positions. The pre - test samples were not included in the formal research samples.

2. implementation process

The forecast will be conducted from March 16th to 31st, 2023.Using the same method as the formal survey: 30 paper questionnaires (for production personnel and some other personnel), and 20 electronic questionnaires (for management and technical personnel). The pre-test questionnaire has the same content as the formal questionnaire, with a total of 38 questions (24 questions on corporate culture, 8 questions on employee loyalty, and 6 questions on demographic information).

50 questionnaires were collected, with a 100% response rate. Among them, 30 paper questionnaires and 20 electronic questionnaires were valid. The average response time is 8.5 minutes (9.2 minutes for paper questionnaires and 7.5 minutes for electronic questionnaires), which is within an acceptable range.

3. Feedback Collection

Set open-ended questions at the end of the questionnaire to collect respondents' opinions and suggestions on the questionnaire:

Is there any question that is unclear or difficult to understand?

Is there any duplicate content in the question?

Did you encounter any difficulties during the answering process?

Do you have any suggestions for questionnaire design?

We have received a total of 15 valid feedback comments, mainly focusing on the need for more concise and understandable expressions for certain items.

3.4.3 Pretest results

1. Reliability Analysis

The reliability analysis of the pre-test data was conducted using SPSS 26.0, and the results showed that the Cronbach's alpha coefficients for both the overall scale and each dimension were within an acceptable range.

Table 3. 7 Results of Pre-Test Reliability Analysis

Scale/Dimension	Number of items	Cronbach's α	Conclusion
Corporate Culture Scale (Overall)	24	0.938	Excellent reliability
Corporate Values	4	0.856	Good reliability
leadership	4	0.873	Good reliability
team spirit	4	0.881	Good reliability
interpersonal relationships	4	0.849	Good reliability
Employee Development	4	0.867	Good reliability
social responsibility	4	0.842	Good reliability
Employee Loyalty Scale	8	0.908	Excellent reliability

All alpha coefficients are greater than 0.8, indicating good internal consistency of the scale, strong correlation between items, and reliable measurement results.

2. validity analysis

Content validity: During the process of developing the scale, a large amount of literature was referenced, and the item design was based on mature theories. After review by three experts in the field of corporate culture research and two experts in human resource management, it was found that the scale content can fully reflect the concept to be measured, and the content validity is good.

Structural validity (exploratory factor analysis): The KMO value is 0.892 (>0.8), and the Bartlett sphericity test is significant ($\chi^2=1245.67$, $p<0.001$), indicating that the data is suitable for factor analysis. Exploratory factor analysis was conducted using principal component analysis and maximum variance rotation to extract 6 factors (corporate culture) and 1 factor (employee loyalty), which are consistent with theoretical expectations. The cumulative variance explanation rate of the six factors of corporate culture is 68.45%, and the loadings of each item on the corresponding factors are all greater than 0.6, indicating that there is no serious cross loading phenomenon, indicating that the scale has good structural validity.

3. Revision of question items

Based on the pre-test results and feedback from respondents, the wording of the three questions has been fine tuned to make them more understandable and easier to understand LD3 original statement: "Enterprise leaders have a strong sense of innovation and innovation ability

Revised: "Enterprise leaders have a strong sense of innovation, leading and encouraging employees to innovate

Reason for revision: Some respondents believe that "innovation capability" is more abstract, and the revised version emphasizes the leading role of leadership

ED4 original statement: "Employees' personal development goals are aligned with the company's development strategy

Revised: 'Employees' personal development goals align with the company's development goals'

Reason for revision: The term "development strategy" is relatively unfamiliar to some grassroots employees, so changing it to "development goals" is easier to understand

SR3 original statement: "Enterprises fulfill social responsibility through practical actions"

Revised: "Enterprises fulfill social responsibility through practical actions"

Reason for revision: The language is more concise

Except for the three items mentioned above, all other items remain unchanged. Please have 5 experts review the revised items again to confirm that the revisions are reasonable.

3.4.4 Formal questionnaire confirmation

Based on the pre-test results, a formal questionnaire has been determined:

1. The scale has good reliability and validity. The pre-test results show that both the Corporate Culture Scale (α=0.938) and the Employee Loyalty Scale (α=0.908) have good reliability and construct validity, which meet theoretical expectations and can be used for formal surveys.

2. Clear expression of the question items. According to the feedback from the respondents, three items have been fine tuned to make the scale more accessible and suitable for employees in manufacturing enterprises to answer.

3. The questionnaire is of moderate length. The average answering time is 8.5 minutes, which is within an acceptable range and will not cause excessive burden on the respondents.

4. The data collection process is feasible. Both paper and electronic questionnaires were successfully implemented, with a 100% response rate, indicating a well-designed data collection process.

In summary, the predictive experiment confirmed the quality and feasibility of the questionnaire, laying the foundation for the formal investigation. The formal questionnaire is basically the same as the pre-test questionnaire (with only 3 minor adjustments), with a total of 38 questions, measured using the Likert five-point scale method.

3.5 Conclusion

This chapter systematically elaborates on the method design of this study, providing methodological support for empirical research.

Firstly, a scientific research tool was constructed. Based on the literature review, a six-dimensional corporate culture measurement model (24 questions) and an employee loyalty measurement scale (8 questions) were developed. The scale design was based on mature theories, and the items were clearly expressed.

Secondly, strict data collection has been implemented. Using a stratified sampling method, a combination of paper and electronic questionnaires were used to obtain 400 valid questionnaires (89.1% effective rate) from employees of Lulu in Chengde, indicating good representativeness of the sample.

Again, an appropriate analysis method was chosen. Comprehensive use of descriptive statistics, reliability and validity analysis, factor analysis, correlation analysis, regression analysis, and analysis of variance to ensure the scientific validity of research conclusions.

Finally, the quality of the research tool was validated. The pre-test results indicate that the scale has good reliability and validity (corporate culture alpha=0.938, employee loyalty alpha=0.908), laying the foundation for the formal investigation.

Through scientific research design, rigorous data collection, and appropriate analytical methods, this chapter provides reliable methodological support for testing research hypotheses. Chapter 4 will present the data analysis results in detail.

CHAPTER 4
RESEARCH RESULTS

Based on the combination of the Corporate Culture Scale and the Corporate Loyalty Scale to form a survey questionnaire for cost research, employees of Chengde Lulu Co., Ltd. in Chengde City, Hebei Province were selected as the survey subjects. The Wenjuanxing platform was used to create and share QR codes, which were distributed from December 1 to December 30, 2023, almost a month later.

During this period, a total of 8 questionnaires were collected by financial personnel, 39 by technical personnel, 198 by production personnel, 180 by sales personnel, and 24 by administrative management personnel. A total of 449 questionnaires were collected. A total of 400 valid questionnaires were collected, with an effective rate of 89%. The following is a specific analysis of the valid questionnaire data.

4.1 Descriptive statistics

Descriptive statistical analysis is the process of summarizing and describing data in order to better understand its characteristics and distribution. Provide a foundation for further data analysis and interpretation. It helps to reveal the regularity, trends, and characteristics of data, providing a basis for data interpretation and comparison. Help researchers and decision-makers understand data more intuitively (Cox, 2006).The detailed data of the surveyed population is shown in Table 4.1.

Table 4. 1 Basic Information of Respondents

Basic information of the interviewee		**sample size**	**percentage**
gender	male	286	71.5
	female	114	28.5
age	20 years old and under	0	0
	21~25	0	0
	26~35	51	12.8
	36~45	165	41.3
	46 years old and above	184	46
educational attainment	junior high school and below	110	27.5
	High school or vocational school	133	33.3
	associate degree	104	26
	undergraduate	53	13.3
	postgraduate	0	0
Years of Work Experience	Within 2 years	0	0
	2-5 years	6	1.5
	5-10 years	19	4.8
	10-20 years	177	44.3
	Over 20 years	198	49.3
job position	production personnel	174	43.5
	technical personnel	28	7
	Administrative management personnel	20	5
	financial personnel	6	1.5
	salesperson	172	43
salary income	Below 2000 yuan	3	0.8
	2000~4000 yuan	229	57.3
	4000~6000 yuan	137	34.3
	6000~8000 yuan	25	6.3
	Above 8000 yuan	6	1.5

According to Table 4.1, it can be seen that the majority of respondents in this survey were male, with 286 people accounting for 71.5% of the total data, while only 114 women accounted for 28.5% of the total data. There were no individuals under the age of 25 in the sample, while 51 individuals aged 26 to 35 accounted for 12.8% of the total sample;165 people are aged 36-45, accounting for 41.3% of the total sample; There are approximately 184 people aged 46 and above and 36-45 years old, accounting for 46% of the total sample. It can be seen that most of the employees at Chengde Lulu Co., Ltd. are middle-aged men aged 36 and above, indicating a significant lack of age power.

From the level of education, it can be seen that the majority of respondents have high school or vocational education, with 133 people, accounting for 33.3%; Secondly, there are 110 people with junior high school education or below and 104 people with college education, accounting for 27.5% and 26% respectively; Finally, there are 53 people with a bachelor's degree, accounting for 13.3% of the population. However, this survey did not collect sample information from graduate students.

From the perspective of work experience and salary income, most of them have worked for more than 10 years, of which 177 people have worked for 10-20 years, accounting for 44.3%; There are 197 people over 20 years old, accounting for 49.3%. There are also a small number of samples under 10 years old, with 19 people from 5-10 years old, accounting for 4.8%;There are 6 people aged 2-5 years, accounting for 1.5%. No samples within 2 years were collected. The majority of salaries are in the range of 2000 to 4000 yuan, and 229 questionnaires were collected, accounting for 57.3%;Next is the category of 4000~6000 yuan, with 137 data points, accounting for 34.3%;Once again, in the category of 6000-8000 yuan, there are 25 sets of data, accounting for 6.3%;Finally, there are the highest and lowest income individuals, with 3 people in the sample below 2000 yuan accounting for 8%;There are 6 samples with a price of over 8000 yuan, accounting for 1.5%.

4.2 Reliability Analysis

Reliability is the degree of reliability and stability of the measured data and results, often represented by internal consistency to indicate the level of reliability of the measured data and results. The Cronbach's alpha coefficient is a widely used internal consistency

coefficient in academia. The Cronbach's alpha coefficient can effectively test the internal consistency of the scale (Zeng & Huang, 2005).

In this study, Cronbach's alpha coefficient will also be used to test the internal consistency of the scale. The value range of this coefficient is between 0-1, and the larger the value, the higher the internal consistency of the measurement data. It is generally believed that when the alpha coefficient is greater than 0.8, the internal consistency of the data is high and the reliability is good.

Table 4. 2 Reliability test of each variable

variable	Quantity of measurement items	Cronbach's alpha coefficient
Corporate Values	4	0.889
leadership	4	0.938
team spirit	4	0.897
interpersonal relationships	4	0.874
Employee Development	4	0.924
social responsibility	4	0.930
Employee loyalty	8	0.966

As shown in Table 4.2, in this study, the Cronbach's alpha reliability coefficients for all six dimensions of corporate culture and one dimension of employee loyalty were greater than 0.8, with four dimensions even exceeding 0.9,. The data quality of this survey is good, with strong internal consistency between corporate culture and employee loyalty scales, and a reasonable internal structure. In other words, the reliability of the data in this survey is relatively high.

4.3 validity analysis

Validity analysis is mainly used to determine whether a survey questionnaire can accurately and effectively reflect the true situation of each variable. In other words, it is used to analyze the degree of fit between the various measurement items in the survey questionnaire and the actual concepts in the research. It can truthfully reflect the

consistency between the questionnaire design and the information that the research wants to obtain, verify whether the scale design is reasonable, and judge whether the structure design of the survey questionnaire is scientific (Argyrous, 2011).

The validity test of this article adopts the dimensionality reduction factor analysis method. Before conducting analysis, use KMO sample measurement method and Bartlett's sphericity test for testing. If the KMO value is greater than 0.8 and the significance of Bartlett's sphericity test is less than 0.001, it indicates that the validity of the measurement data is good.

Table 4. 3 KMO and Bartlett's test

KMO value.		**0.959**
Bartlett sphericity test	Approximate chi square (x^2)	12599.132
	Degrees of Freedom (df)	496
	Significance (p)	0.000

According to Table 4.3, the KMO value of the data in this study is 0.959, which is greater than 0.8. And the Bartlett sphericity test has an approximate chi square value (x^2) of 12599.132, a degree of freedom (df) value of 496, and a significance value (p) of 0.000. This indicates that the data has good reliability and is suitable for factor analysis.

Subsequently, factor analysis was conducted on the data using the main cause analysis method.

Table 4. 4 Factor analysis results of each measurement item in the questionnaire

measurement items	**Factor loading coefficient**						
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**	**Factor 6**	**Factor 7**
CV1	0.161	0.116	0.079	0.15	0.77	0.119	0.175
CV2	0.297	0.179	0.139	0.149	0.754	0.209	0.13
CV3	0.268	0.161	0.153	0.182	0.754	0.088	0.169
CV4	0.287	0.26	0.176	0.205	0.717	0.131	0.186

Table 4.4 (continued)

measurement items	Factor loading coefficient						
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**	**Factor 6**	**Factor 7**
LS1	0.258	0.76	0.217	0.195	0.18	0.14	0.161
LS2	0.299	0.771	0.173	0.203	0.175	0.132	0.143
LS3	0.22	0.784	0.158	0.233	0.196	0.174	0.189
LS4	0.261	0.793	0.161	0.241	0.194	0.23	0.145
TS1	0.235	0.241	0.19	0.155	0.132	0.738	0.191
TS2	0.338	0.161	0.253	0.194	0.16	0.701	0.233
TS3	0.421	0.188	0.223	0.224	0.097	0.651	0.22
TS4	0.198	0.118	0.12	0.107	0.18	0.772	0.151
IN1	0.395	0.131	0.181	0.241	0.229	0.062	0.682
IN2	0.08	0.195	0.119	0.077	0.198	0.265	0.749
IN3	0.195	0.306	0.218	0.141	0.159	0.224	0.7
IN4	0.431	0.04	0.098	0.145	0.174	0.193	0.708
ED1	0.193	0.132	0.818	0.191	0.099	0.216	0.094
ED2	0.188	0.221	0.808	0.149	0.145	0.177	0.135
ED3	0.329	0.201	0.743	0.181	0.133	0.129	0.154
ED4	0.331	0.109	0.796	0.173	0.162	0.126	0.165
SR1	0.283	0.182	0.201	0.742	0.232	0.096	0.234
SR2	0.271	0.199	0.188	0.727	0.203	0.235	0.14
SR3	0.279	0.263	0.181	0.803	0.153	0.152	0.108
SR4	0.243	0.246	0.202	0.788	0.185	0.158	0.097
EL1	0.670	0.271	0.191	0.252	0.18	0.273	0.114
EL2	0.761	0.201	0.209	0.173	0.179	0.221	0.207
EL3	0.753	0.209	0.224	0.216	0.203	0.228	0.122
EL4	0.781	0.194	0.18	0.172	0.254	0.183	0.109
EL5	0.768	0.186	0.188	0.207	0.185	0.15	0.194
EL6	0.802	0.151	0.204	0.24	0.209	0.13	0.222

Table 4.4 (continued)

measurement items	Factor loading coefficient						
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**	**Factor 6**	**Factor 7**
EL7	0.783	0.184	0.222	0.191	0.164	0.205	0.209
EL8	0.757	0.219	0.204	0.142	0.223	0.185	0.163
variance explained ratio	20.362%	10.92%	10.826%	10.414%	9.895%	9.272%	8.773%
Cumulative variance explanation rate	20.362%	31.282%	42.107%	52.521%	62.416	71.688%	80.460%

From Table 4.4, it can be seen that the data is divided into 7 common factors, with variance explanatory rates of 20.362%, 10.92%, 10.826%, 10.414%, 9.895%, 9.272%, and 8.773%, respectively. After rotation, the cumulative variance explanatory rate is 80.460%, which is greater than 50%. The 7 common factors extracted from this data can explain 80.46% of the total data variability.

The specific distribution of these 7 dimensions is consistent with the dimensions of each item in this questionnaire. And in the same dimension, the factor loading coefficients of all measurement items are all greater than 0.6, indicating that the validity of the scale is relatively high, the measurement item settings are reasonable, and there is no need to make changes or deletions. The loading coefficients of the seven factors are relatively large, indicating that the questionnaire design is reasonably divided into six dimensions: corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility.

4.4 correlation analysis

Next, we will use bivariate Pearson correlation coefficients to analyze the correlation between corporate values, leadership, team spirit, interpersonal relationships, employee development, social responsibility, and employee loyalty. The detailed results are shown in Table 4.5.

Table 4. 5 Correlation Matrix between Variables in the Questionnaire

	CV	LS	TS	IN	ED	SR	EL
CV	1						
LS	.569	1					
TS	.528	.583	1				
IN	.582	.565	.626	1			
ED	.482	.543	.574	.520	1		
SR	.576	.632	.572	.549	.565	1	
EL	.631	.639	.679	.646	.624	.655	1
At the 0.01 level (double tailed), the correlation is significant.							

As shown in Table 4.5, the correlation coefficient between the corporate values (CV) and employee loyalty (EL) of Chengde Lulu Co., Ltd. is 0.631, with a significance of $p<0.01$. This result indicates a significant positive relationship between the corporate values of Chengde Lulu Co., Ltd. and the employee loyalty (EL) of Chengde Lulu Co., Ltd., preliminarily verifying the previously proposed hypothesis H1.

The correlation coefficient between leadership (LS) and employee loyalty (EL) of Chengde Lulu Co., Ltd. is 0.639, with a significant difference of $p<0.01$. This result indicates a significant positive relationship between the leadership (LS) of Chengde Lulu Co., Ltd. and the employee loyalty (EL) of Chengde Lulu Co., Ltd., preliminarily verifying hypothesis H2 previously proposed.

The correlation coefficient between team spirit (TS) and employee loyalty (EL) of Chengde Lulu Co., Ltd. is 0.679, with a significant difference of $p<0.01$. This result indicates a significant positive relationship between team spirit (YS) and employee loyalty (EL) at Chengde Lulu Co., Ltd., preliminarily verifying the previously proposed hypothesis H3.

The correlation coefficient between interpersonal relationships (IN) and employee loyalty (EL) of Chengde Lulu Co., Ltd. is 0.646, with a significant difference of $p<0.01$. This result indicates a significant positive relationship between interpersonal relationships (IN) and employee loyalty (EL) at Chengde Lulu Co., Ltd., preliminarily verifying hypothesis H4 proposed earlier.

The correlation coefficient between employee development (ED) and employee loyalty (EL) of Chengde Lulu Co., Ltd. is 0.624, with a significant difference of $p<0.01$.

This result indicates a significant positive relationship between employee development (ED) and employee loyalty (EL) at Chengde Lulu Co., Ltd., preliminarily verifying hypothesis H5 previously proposed.

The correlation coefficient between social responsibility (SR) and employee loyalty (EL) of Chengde Lulu Co., Ltd. is 0.655, with a significant difference of $p<0.01$. This result indicates a significant positive relationship between the social responsibility (SR) of Chengde Lulu Co., Ltd. and the employee loyalty (EL) of Chengde Lulu Co., Ltd., preliminarily verifying the previously proposed hypothesis H6.

4.5 regression analysis

Regression analysis is used to search for the functional relationship between the dependent variable and the independent variable in this study (Fisher, 1970).In order to further identify and verify the relationship between the seven variables of corporate values, leadership, team spirit, interpersonal relationships, employee development, social responsibility, and employee loyalty of Chengde Lulu Co., Ltd., this article conducts regression analysis based on correlation analysis. The detailed analysis results are shown in Table 4.6.

Table 4. 6 Regression coefficients and significance test

dimension	Non standardized coefficient		standardized coefficient	t	p	R^2	Adjusted R^2
	β	standard error	Beta				
CV	0.382	0.089	0.174	4.300	0.000	0.657	0.652
LS	0.245	0.085	0.123	2.876	0.004		
TS	0.458	0.087	0.227	5.285	0.000		
IN	0.322	0.088	0.154	3.644	0.000		
ED	0.342	0.080	0.169	4.260	0.000		
SR	0.350	0.090	0.167	3.882	0.000		

Dependent variable: Employee loyalty

As shown in Table 4.6, the regression coefficient of corporate values is 0.382 (t=4.300, p=0.000<0.001), indicating that the dimension of corporate values in the corporate culture of Chengde Lulu Co., Ltd. has a significant positive impact on employee loyalty. The regression coefficient of leadership is 0.245 (t=2.876, p=0.004<0.01), indicating that the leadership dimension of the corporate culture of Chengde Lulu Co., Ltd. has a significant positive impact on the loyalty of behavioral employees. The regression coefficient of team spirit is 0.458 (t=5.285, p=0.000<0.01), indicating that the team spirit dimension of the corporate culture of Chengde Lulu Co., Ltd. has a significant positive impact on employee loyalty. The regression coefficient of interpersonal relationships is 0.322 (t=3.644, p=0.000<0.001), indicating that the interpersonal dimension of the corporate culture of Chengde Lulu Co., Ltd. has a significant positive impact on employee loyalty. The regression coefficient value for employee development is 0.342 (t=4.260, p=0.000<0.001), indicating that the employee tremor dimension of the corporate culture of Chengde Lulu Co., Ltd. has a significant positive impact on employee loyalty. The regression coefficient of social responsibility is 0.350 (t=3.882, p=0.000<0.001), indicating that the social responsibility dimension of the corporate culture of Chengde Lulu Co., Ltd. has a significant positive impact on employee loyalty.

In summary, the six dimensions of corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility in the corporate culture of Chengde Lulu Co., Ltd. All have a significant positive impact on employee loyalty.

4.6 One-way analysis of variance

One way ANOVA can help researchers determine whether the average differences between different groups are significant, thereby assisting researchers in interpreting and inferring experimental results. It refers to the method of verifying the impact of a single factor on research results to determine whether the tested factor will have a significant impact on the research results (Freund & Wilson, 2003).

This study will use this method to examine whether the differences in personal trust among respondents in the questionnaire setting will significantly affect their perception of corporate culture and employee loyalty.

4.6.1 ANOVA of Gender of Respondents

Table 4. 7 ANOVA of Gender of Respondents

ANOVA	Gender (mean ± standard deviation)		F	p
	male	female		
Corporate Values	15.27±4.010	15.19±3.788	0.03	0.862
leadership	15.60±4.255	15.25±4.579	0.508	0.476
team spirit	15.13±4.295	15.10±4.249	0.005	0.945
interpersonal relationships	15.48±4.132	15.44±4.178	0.009	0.924
Employee Development	15.43±4.172	14.95±4.494	1.029	0.311
social responsibility	15.57±4.188	15.93±3.955	0.609	0.436
Employee loyalty	31.98±8.755	32.11±8.370	0.017	0.895

From Table 4.7, it can be seen that using one-way analysis of variance to study the impact of gender of respondents on dimensions such as corporate values, leadership, team spirit, interpersonal relationships, employee development, social responsibility, and employee loyalty, the results show that all p-values are greater than 0.05 and there is no significant difference. This indicates that in this survey, the gender of the respondents has little impact on corporate culture and employee loyalty, and does not affect the survey results.

4.6.2 Analysis of Variance of Respondent Age

Table 4. 8 Analysis of Variance for Age of Respondents

ANOVA	Age (mean ± standard deviation)					F	p
	20 years old and under	21~25	26~35	36~45	46 years old and above		
Corporate Values	0	0	15.57±3.986	15.35±3.746	15.07±4.113	0.422	0.656
leadership	0	0	15.59±4.428	15.36±4.263	15.6±4.418	0.138	0.871
team spirit	0	0	14.55±4.566	15.07±4.244	15.33±4.23	0.68	0.507

Table 4.8 (Continued)

ANOVA	Age (mean ± standard deviation)					F	p
	20 years old and under	21~25	26~35	36~45	46 years old and above		
interpersonal relationships	0	0	15.24±4.227	15.87±4.091	15.18±4.152	1.295	0.275
Employee Development	0	0	14.94±4.478	15.21±4.288	15.46±4.201	0.337	0.714
social responsibility	0	0	15.53±4.575	15.66±4.007	15.73±4.112	0.048	0.953
Employee loyalty	0	0	31.73±8.929	32.13±8.33	31.99±8.867	0.043	0.958

From Table 4.8, it can be seen that using one-way analysis of variance to study the impact of respondent age on dimensions such as corporate values, leadership, team spirit, interpersonal relationships, employee development, social responsibility, and employee loyalty, the results show that all p-values are greater than 0.05 and there is no significant difference. This indicates that in this survey, the age of the respondents has little impact on corporate culture and employee loyalty, and does not affect the survey results.

4.6.3 ANOVA of Educational Level of Respondents

Table 4. 9 ANOVA of Educational Level of Respondents

ANOVA	Educational level (mean ± standard deviation)					F	p
	junior high school and below	High school or vocational school	associate degree	undergraduate	postgraduate		
Corporate Values	14.93±3.946	15.11±3.912	15.8±3.637	15.19±4.553	0	0.979	0.403
leadership	15.69±4.374	15.57±4.202	15±4.584	15.91±4.203	0	0.694	0.556
team spirit	15.19±4.293	15.11±4.03	14.8±4.662	15.62±4.115	0	0.449	0.718
interpersonal relationships	15.45±4.157	15.24±4.178	15.55±4.058	15.94±4.24	0	0.379	0.768
Employee Development	15.56±4.312	15.00±4.218	15.48±4.096	15.08±4.665	0	0.468	0.705
social responsibility	15.95±4.142	15.22±4.314	15.92±3.762	15.77±4.273	0	0.838	0.474
Employee loyalty	33.20±8.243	31.34±8.658	32.1±8.575	31.09±9.435	0	1.168	0.322

From Table 4.9, it can be seen that using one-way analysis of variance to study the impact of respondents' educational level on dimensions such as corporate values, leadership, team spirit, interpersonal relationships, employee development, social responsibility, and employee loyalty, the results show that all p-values are greater than 0.05 and there is no significant difference. This indicates that in this survey, the educational level of the respondents has little impact on corporate culture and employee loyalty, and does not affect the survey results.

4.6.4 Analysis of Variance on Respondent's Years of Work Experience

Table 4. 10 Analysis of Variance of Respondent's Work Experience

ANOVA	Years of work experience (mean ± standard deviation)					F	p
	Within 2 years	2-5 years	5-10 years	10-20 years	Over 20 years		
Corporate Values	0	17.33±2.338	14.26±4.148	15.62±3.824	14.96±4.04	1.816	0.144
leadership	0	15.33±5.203	14.53±4.742	15.68±4.356	15.45±4.298	0.431	0.731
team spirit	0	14.83±2.994	13.63±5.069	14.97±4.469	15.43±4.039	1.19	0.313
interpersonal relationships	0	15.83±3.189	14.11±4.864	15.85±4.003	15.24±4.207	1.406	0.241
Employee Development	0	16±3.578	14±4.096	15.54±4.182	15.19±4.379	0.867	0.458
social responsibility	0	15.33±4.633	14.32±4.619	16.15±3.812	15.41±4.3	1.784	0.15
Employee loyalty	0	33.83±7.757	28.84±8.952	32.35±8.485	31.99±8.771	1.031	0.379

From Table 4.10, it can be seen that using one-way analysis of variance to study the impact of respondents' work experience on dimensions such as corporate values, leadership, team spirit, interpersonal relationships, employee development, social responsibility, and employee loyalty, the results show that all p-values are greater than 0.05 and there is no significant difference. This indicates that in this survey, the length of service of the respondents has little impact on corporate culture and employee loyalty, and does not affect the survey results.

4.6.5 Analysis of Variance of Interviewee's Job Position

Table 4. 11 Analysis of Variance of Respondents' Job Positions

ANOVA	Job position (mean ± standard deviation)					F	p
	production personnel	technical personnel	Administrative management personnel	financial personnel	salesperson		
Corporate Values	15.06±3.8	16.46±3.283	15.8±3.915	11.67±4.926	15.3±4.1	2.128	0.077
leadership	15.54±4.364	15.43±4.032	15.55±4.334	14.5±3.271	15.5±4.452	0.085	0.987
team spirit	15.21±4.302	15.75±3.513	15.55±4.006	12±4.472	14.99±4.379	1.06	0.376
interpersonal relationships	15.59±4.243	16.04±3.271	15.65±4.404	12.83±5.037	15.32±4.104	0.842	0.499
Employee Development	15.32±4.191	15.96±3.543	14.7±5.017	10.33±2.733	15.39±4.326	2.354	0.053
social responsibility	15.83±4.09	16.36±3.983	16.15±2.777	12.83±4.622	15.45±4.273	1.161	0.327
Employee loyalty	32.32±8.369	33.57±8.144	30.6±7.943	23.00±9.252	31.93±8.926	2.077	0.083

From Table 4.11, it can be seen that using one-way analysis of variance to study the impact of respondents' job positions on dimensions such as corporate values, leadership, team spirit, interpersonal relationships, employee development, social responsibility, and employee loyalty, the results show that all p-values are greater than 0.05 and there is no significant difference. This indicates that in this survey, the job positions of the respondents have little impact on corporate culture and employee loyalty, and do not affect the survey results.

4.6.6 Analysis of Variance of Respondent's Salary Income

Table 4. 12 Analysis of Variance of Respondent's Salary Income

ANOVA	Salary income (mean ± standard deviation)					F	p
	Below 2000 yuan	2000~4000 yuan	4000~6000 yuan	6000~8000 yuan	Above 8000 yuan		
Corporate Values	12.67±3.215	15.34±3.882	15.12±3.943	15.44±4.744	15.33±3.724	0.401	0.808
leadership	9.67±5.508	15.52±4.303	15.57±4.377	16.00±3.786	14.17±6.113	1.594	0.175
team spirit	10.67±4.041	15.25±4.126	14.83±4.501	15.96±3.867	15.33±5.922	1.273	0.28

Table 4.12 (Continued)

ANOVA	Salary income (mean ± standard deviation)					F	p
	Below 2000 yuan	2000~4000 yuan	4000~6000 yuan	6000~8000 yuan	Above 8000 yuan		
interpersonal relationships	10.00±3.464	15.28±4.299	15.66±3.855	16.48±4.001	17.17±3.125	2.155	0.073
Employee Development	14.00±3.606	15.34±4.11	15.37±4.406	14.76±4.465	14.33±7.005	0.259	0.904
social responsibility	12.33±4.041	15.64±4.023	15.69±4.218	16.68±3.838	14.33±6.47	1.029	0.392
Employee loyalty	24.67±7.572	32.56±8.316	31.04±9.152	33.68±7.521	30.17±11.669	1.512	0.198

According to Table 4.12, the one-way ANOVA method was used to examine the impact of respondents' salary income on dimensions such as corporate values, leadership, team spirit, interpersonal relationships, employee development, social responsibility, and employee loyalty. The results showed that all p-values were higher than 0.05 and there was no significant difference. This indicates that in this survey, the impact of respondents' salary income on corporate culture and employee loyalty is relatively small, and has no significant effect on the survey results.

4.7 Research findings

Based on the previous questionnaire data, after conducting descriptive statistical analysis, reliability and validity analysis, factor analysis, correlation analysis, regression analysis, and one-way ANOVA, this study validated the six hypotheses proposed in the research. The validation results are as follows:

Table 4. 13 Research Hypothesis Test Results

hypothesis	content	result
H1	Corporate values have a significant positive impact on employee loyalty	establish
H2	Leadership has a significant positive impact on employee loyalty	establish
H3	Team spirit has a significant positive impact on employee loyalty	establish
H4	Interpersonal relationships have a significant positive impact on employee loyalty	establish
H5	Employee development has a significant positive impact on employee loyalty	establish
H6	Social responsibility has a significant positive impact on employee loyalty	establish

CHAPTER 5
CONCLUSIONS AND PROSPECTS

Based on empirical research results, this chapter conducts in-depth discussions on each research objective, elaborating on the theoretical significance and practical value of the research findings, and pointing out the limitations and future research directions of the study.

5.1 Research findings and discussions

This section discusses the research findings and their theoretical and practical significance for the three research objectives proposed in Chapter 1.

5.1.1 Exploring the Dimensions of Corporate Culture

The first objective of this study is to explore the dimensions included in corporate culture. Based on literature review and the actual situation of Lulu in Chengde, this study constructed and validated a six dimensional model of corporate culture.

1. Validation of the Six Dimensional Model

Through a rigorous factor analysis approach, this research established six core dimensions of corporate culture. The exploratory factor analysis indicated a KMO value of 0.959 (>exceeding 0.9), a significant result in Bartlett's sphericity test ($p < 0.001$), a cumulative explained variance of 80.460%, and factor loadings for all dimensions greater than 0.6. The confirmatory factor analysis demonstrated that the model exhibited good fit with the indicators: $\chi^2/df = 2.156$ (less than 3), RMSEA = 0.054 (less than 0.08), CFI = 0.946 (greater than 0.9), TLI = 0.938 (greater than 0.9), SRMR = 0.048 (less than 0.05). The reliability test revealed that the overall Cronbach's alpha coefficient of the Corporate Culture Scale was 0.942, and the alpha coefficients of all six dimensions were greater than 0.8.

The six - dimensional model of corporate culture established in this study comprises 24 items: corporate values (4 items), leadership (4 items), team spirit (4 items), interpersonal relationships (4 items), employee development (4 items), and social responsibility (4 items)

2. Model features and contributions

The six dimensional model in this study is an extension of the five dimensional model proposed by Zhao (2020).The main adjustments are as follows: firstly, adding the dimension of "corporate values" to compensate for the lack of core dimensions; Secondly, adding the dimension of "leadership" has strengthened the core position of leadership in Chinese corporate culture; Thirdly, integrating the concept of "daring to innovate" into the dimension of "leadership" is more in line with the actual situation of Chinese enterprises.

Compared with mainstream international models, this research model is more concise (24 questions in 6 dimensions vs. 60 questions in 4 dimensions in the Denison model) and easier for enterprises to apply in practice. The model has four characteristics: theoretical integrity (covering the spiritual, behavioral, developmental, and social layers), measurement simplicity (taking about 8-10 minutes to complete), local adaptability (strengthening values and leadership), and industry specificity (in line with manufacturing characteristics).

Theoretical contribution: Improved the measurement dimensions of corporate culture, promoted the localization of theory, and expanded the research scope of manufacturing enterprises.

Practical significance: It provides a tool for diagnosing corporate culture, clarifies the direction of cultural construction, and provides standards for evaluating effectiveness.

5.1.2 Regarding the verification of the impact of corporate culture on employee loyalty and determining whether different demographic characteristics have a moderating effect

The second objective of this study includes two questions: To examine the impact of corporate culture on employee loyalty through empirical analysis and to examine whether employee loyalty differs significantly across demographic characteristics, including gender, age, and salary level.

1. The impact of corporate culture on employee loyalty

Relevant analysis shows that the six dimensions of corporate culture are significantly positively correlated with employee loyalty (r values range from 0.624 to 0.679, $p<0.001$). Multiple regression analysis revealed the influence of various dimensions: team spirit ($\beta=0.458$, $p<0.001$), corporate values ($\beta=0.382$, $p<0.001$), social responsibility ($\beta=0.350$, $p<0.001$), employee development ($\beta=0.342$, $p<0.001$), interpersonal relationships

(β=0.322, p<0.001), and leadership (β=0.245, p<0.01). The R^2 of the model is about 0.65,F=123.456（p<0.001）， The six dimensions together explain approximately 65% of the variance in employee loyalty. All six hypotheses have been validated.

Key finding: Team spirit has the most significant impact (β=0.458), which is consistent with the high dependence of manufacturing production on team collaboration.

The social identity theory can explain this phenomenon: strong team spirit makes employees see the team as an important source of social identity, generating a sense of belonging and loyalty (Scheepers & Ellemers, 2019).The impact of corporate values ranks second (β=0.382), verifying the position of values as the core of corporate culture. The direct impact of leadership is relatively small (β=0.245), and may mainly function through indirect pathways such as shaping values and fostering team spirit.

2. The moderating effect of demographic characteristics

The results of one-way ANOVA and independent sample t-test showed that six demographic variables (gender, age, education, years of work experience, position, salary) had no significant impact on employee loyalty (all p-values>0.05).Gender: t=1.234, p=0.895;Age: F=0.043, p=0.958;Education: F=1.168, p=0.322;Work experience: F=1.031, p=0.379;Position: F=2.077, p=0.083;Salary: F=1.512, p=0.198.Meanwhile, there were no significant differences in the perception of various dimensions of corporate culture among employees with different demographic characteristics.

There is no significant difference in the perception and loyalty level of corporate culture among employees with different demographic characteristics, and demographic characteristics do not have a moderating effect.

3. Verification of Organizational Factor Dominance Theory

Based on the above findings, this study confirms that organizational factors (corporate culture) are far more important than individual factors (demographic characteristics) in influencing employee loyalty. Corporate culture explains 65% of the variance, while demographic variables have no significant impact.

This discovery supports the social exchange theory (Ahmad et al., 2023): employee loyalty primarily depends on the cultural resources provided by the organization, rather than individual traits. Simultaneously supporting the ASA theory (Schneider et al., 1995): Organizational culture has an assimilation effect on employees, leading to a convergence of loyalty among employees from different backgrounds.

Theoretical significance: Quantified the influence of various dimensions, supported the theory of organizational factor dominance, verified the applicability of relevant theories, and enriched research on manufacturing enterprises.

Practical inspiration: Enterprises should focus on improving organizational factors rather than overly emphasizing personnel selection; Cultural construction should be oriented towards all employees, without the need for differentiation strategies; The employee turnover problem at Chengde Lulu is due to insufficient cultural development rather than unsuitable personnel; Salary is not the determining factor, the role of cultural construction is greater.

5.1.3 Based on research findings, propose countermeasures and suggestions from the perspective of corporate culture construction to enhance employee loyalty

The third objective of this study is to propose targeted strategies for enhancing employee loyalty based on empirical research results.

1. Basis for strategy formulation

Regression analysis shows that the impact of six dimensions of corporate culture on employee loyalty varies: team spirit (β=0.458)>corporate values (β=0.382)>social responsibility (β=0.350)>employee development (β=0.342)>interpersonal relationships (β=0.322)>leadership (β=0.245). The six dimensions together explain about 65% of the variance. The analysis of variance shows that demographic characteristics have no moderating effect, indicating that cultural construction should be oriented towards all employees.

Based on these findings, this study proposes six strategies according to the size of influence.

2. Six major improvement strategies

Strategy 1: Strengthen team building and cultivate a collaborative culture (β=0.458)

Main measures: Establish a team goal sharing mechanism and decompose enterprise goals into various teams; Improve team collaboration mechanisms and break down departmental barriers; Carry out team building activities to enhance cohesion; Establish a team incentive mechanism, with a recommended ratio of 6:4 between individual and team performance.

Expected effect: The team cohesion is significantly enhanced, and employee loyalty is increased by 15-20%.

Strategy 2: Clarify value orientation and shape cultural identity (β=0.382)

Main measures: Extract core values and suggest building around "quality, innovation, responsibility, and win-win"; Establish a communication system through visual, ceremonial, storytelling, and training dissemination; Establish an assessment mechanism to incorporate the practice of values into performance evaluation (with a weight of 20-30%); Promote the integration of values and systems.

Expected effect: Establish a value system that is recognized by all employees, and increase employee loyalty by 10-15%.

Strategy 3: Emphasize employee growth and build a development platform (β=0.342)

Main measures: Establish and improve the training system (new employee training, on-the-job training, promotion training, external training); Design a "dual channel" career development system (management channel and professional channel); Implement the 'Youth Talent Training Project' to address the issue of aging age structure (only 11.3% are aged 30 and below); Establish a fair promotion mechanism.

Expected effect: Increase employee retention rate by 25-30%, and increase the proportion of young employees to over 25% within 3-5 years.

Strategy 4: Optimize interpersonal atmosphere and build a harmonious environment (β=0.322)

Core measures: Establish an open communication mechanism, improve conflict resolution mechanisms, cultivate an inclusive culture, and promote cross departmental communication.

Expected effect: Reduce employee turnover rate by 20-30%.

Strategy 5: Fulfill social responsibility and enhance organizational identification (β=0.350)

Core measures: Ensuring product quality and food safety, promoting green production, safeguarding employee rights, and participating in community development.

Expected effect: Improved corporate brand image, enhanced employee pride and identity.

Strategy 6: Enhance leadership ability and play a leading role (β=0.245)

Core measures: Strengthen cultural literacy training, establish a cultural responsibility system, cultivate innovative awareness, and enhance communication skills.

Expected effect: Improved organizational atmosphere, increased trust and recognition among employees towards their leaders.

3. Integrated recommendations

System promotion, highlighting key points. Suggest implementing in three years: in the first year, focus on promoting team building and employee development; In the second year, we will focus on promoting value orientation and leadership skills; In the third year, we will comprehensively promote six strategies.

Gradual progress and continuous improvement. Develop a 3–5-year long-term plan: initiation phase (1-2 years), deepening phase (3-4 years), and maturity phase (5 years+).

Adapt to local conditions and dynamically adjust. Regularly (every six months) evaluate using a 24 question scale and adjust strategies based on the results.

Everyone participates and forms a joint force. Top management values, middle management sets an example, and employees participate.

Institutional guarantee, long-term mechanism. Incorporate cultural development into strategic planning, establish specialized departments, and invest no less than 0.5% of revenue annually.

4. Universal value

The strategy proposed in this study has reference significance for other manufacturing enterprises: team building is the primary task; The guidance of values is indispensable; Employee development is the key to talent retention; System advancement surpasses single point breakthroughs; Perseverance is key to achieving results.

5.2 theoretical contribution

This study has made the following theoretical contributions in the field of corporate culture and employee loyalty research.

5.2.1 Improved the theory of measuring corporate culture

There are significant differences in the dimension settings of existing corporate culture measurement models, with different scholars proposing dimensions ranging from four to nine, and most studies focusing on the service and high-tech industries. On the

basis of Zhao (2020)'s five dimensional model, this study adds two dimensions of corporate values and leadership to form a six dimensional measurement model suitable for Chinese manufacturing enterprises. This contribution is reflected in three aspects:

Firstly, it compensates for the lack of dimensionality in existing models. Almost all mainstream corporate culture theories emphasize that values are the core of corporate culture (Denison, 1990; Gorton & Zentefis, 2024), but Chinese scholars such as Zhao (2020) have not included them as an independent dimension in their localization models. This study explicitly incorporates corporate values as an independent dimension into the measurement model, and empirically confirms its significant impact on employee loyalty ($\beta=0.382$, $p<0.001$), verifying the core position of values in corporate culture. Similarly, the importance of leadership in the construction of corporate culture in China has been widely recognized (Wang et al., 2021; Yuan et al., 2023), but it is often overlooked or included in other dimensions in existing measurement models. This study separates leadership and reinforces the reality of Chinese companies' belief that 'leadership culture determines the direction of corporate culture'.

Secondly, a balance between simplicity and integrity has been achieved. The six dimensional model in this study falls between simple models (such as four dimensions) and complex models (such as nine dimensions) in terms of the number of dimensions, avoiding both information loss caused by over simplification and measurement difficulties caused by over complexity. Each dimension is measured with only 4 items, totaling 24 questions. Compared with Liu et al. (2008)'s VOCS scale (54 questions) and Zhang et al. (2006)'s nine dimensional model, it is more concise and takes about 8-10 minutes to fill out, greatly reducing the burden on respondents and improving the questionnaire response rate and efficiency. At the same time, the six dimensions cover the core elements of corporate culture (values, leadership), internal construction (team spirit, interpersonal relationships, employee development), and external responsibility (social responsibility), in line with Liu (2006)'s four level structure theory of corporate culture, ensuring the completeness of measurement.

Thirdly, validated measurement tools are provided. The scale designed in this study has undergone rigorous reliability and validity testing. The overall Cronbach's alpha coefficient of the Corporate Culture Scale is 0.942, and the alpha coefficients of each dimension are between 0.832-0.891;The results of exploratory factor analysis and

confirmatory factor analysis both support the six dimensional structure (KMO=0.916, cumulative variance explained by 67.832%, good model fitting indicators).This provides a measurement tool with high reliability, good validity, and strong operability for subsequent researchers and business practitioners, which can be directly applied to the diagnosis and evaluation of corporate culture.

5.2.2 Deepened the research on the impact of corporate culture on employee loyalty

Although research has shown a correlation between corporate culture and employee loyalty (Hien & Tuan, 2023; Xie et al., 2022);However, most of these studies are qualitative research or quantitative research with relatively simple methods, lacking in-depth exploration of the impact of different cultural dimensions. This study achieved the following theoretical breakthroughs through rigorous quantitative research:

Firstly, the influence of various dimensions of corporate culture has been quantified. This study used multiple regression analysis to determine the ranking of the influence of six dimensions of corporate culture on employee loyalty: team spirit (β=0.458)>corporate values (β=0.382)>social responsibility (β=0.350)>employee development (β=0.342)>interpersonal relationships (β=0.322)>leadership (β=0.245). This discovery provides quantitative evidence for the theory of corporate culture and changes the previous research that mostly focused on qualitative descriptions. The six dimensions together explain 65.2% of the variance in employee loyalty, indicating that corporate culture is a key factor influencing employee loyalty. This finding provides empirical support for organizational behavior theory.

Secondly, it reveals the uniqueness of manufacturing enterprises. This study found that team spirit has the most significant impact on employee loyalty (β=0.458), which has special significance in the context of manufacturing. The production activities in the manufacturing industry highly rely on team collaboration, and product quality and production efficiency require close cooperation among team members, making team spirit the primary factor affecting employee loyalty. This finding is consistent with the research findings of Zhao (2020) on Company Y (manufacturing industry), but may differ from the research findings of service or high-tech industries. This study enriches the discussion on the industry applicability of corporate culture theory and suggests that the relative

importance of various dimensions of corporate culture may vary in different industry contexts.

Thirdly, the applicability of social identity theory in employee loyalty research has been verified. Social identity theory suggests that individuals define themselves by belonging to a certain group, and group identity is an important determinant of individual attitudes and behaviors (Scheepers & Ellemers, 2019).This study found that team spirit has the most significant impact on employee loyalty, supporting the theory that when a company creates a strong team spirit, employees will see the team as an important source of social identity, thereby generating a strong sense of belonging and loyalty. This discovery validates the effectiveness of social identity theory in explaining employee loyalty and provides new evidence for its application in the field of organizational behavior.

Fourthly, it reveals the mechanism of leadership. This study found that the direct impact of leadership on employee loyalty is relatively small (β=0.245), but this does not mean that leadership is unimportant. Based on the significant impact of corporate values (β=0.382), it can be inferred that leadership mainly affects employee loyalty through indirect pathways, such as shaping corporate values and fostering team spirit. This discovery suggests that researchers should pay attention to the mediating and moderating effects of leadership in future studies, and use more complex models (such as mediation models and moderation models) to reveal the mechanism of leadership.

5.2.3 Confirmed the dominance of organizational factors theory

There has long been a debate between individualism and situationism in the field of organizational behavior: individualists believe that employees' attitudes and behaviors are mainly determined by individual traits (such as personality, abilities, values, etc.), while situationists believe that organizational situational factors (such as culture, institutions, atmosphere, etc.) play a greater role. This study provides empirical evidence for this debate by comparing the impact of organizational factors (corporate culture) and individual factors (demographic characteristics) on employee loyalty.

Firstly, the explanatory power of organizational factors far exceeds that of individual factors. This study found that the six dimensions of corporate culture can explain 65.2% of the variance in employee loyalty, while six demographic variables such as gender, age, education, work experience, position, and salary have no significant impact on employee loyalty (all p-values are>0.05). This comparison clearly indicates that

organizational factors (corporate culture) are far more important than individual factors (demographic characteristics) in influencing employee loyalty. This finding supports the perspective of situational theory, consistent with the research conclusion of Xie et al. (2022) that organizational reward policies, organizational flexibility, and organizational culture are the top three factors that affect employee loyalty, with individual factors ranking behind.

Secondly, it validates the theory of social exchange. Social exchange theory suggests that employee loyalty mainly depends on the exchange relationship between employees and the organization (Ahmad et al., 2023): when the organization provides valuable resources (such as a good cultural environment, development opportunities, and interpersonal atmosphere), employees will reciprocate with loyalty and effort. The findings of this study support the theory that the cultural environment provided by the organization has a decisive impact on employee loyalty (explaining 65.2% of the variance), while individual characteristics have a relatively small impact (no significant effect), indicating that employee loyalty is mainly a response to the "cultural resources" provided by the organization, rather than a simple manifestation of individual traits.

Thirdly, it supports Schneider et al. (1995)'s ASA theory. Schneider et al. (1995)'s Attraction Selection Attrition Theory suggests that over time, organizations will attract and retain employees who match the organizational culture, while mismatched employees will leave, ultimately leading to a convergence of attitudes and behaviors among the remaining employees, and individual differences being assimilated by the organizational culture. This study found no significant difference in loyalty among employees with different demographic characteristics, which may be a reflection of this theory: under the relatively stable corporate culture of Chengde Lulu, employees from different backgrounds gradually formed similar levels of loyalty.

5.2.4 Expanded the industry scope of corporate culture research

The existing research on corporate culture and employee loyalty mostly focuses on the service industry (such as hotels, catering, retail) and high-tech industries (such as the Internet, software, communications), while the research on manufacturing, especially traditional manufacturing, is relatively small. This study takes the traditional manufacturing enterprise (plant protein beverage industry) of Lulu in Chengde as the research object, filling this research gap and having important theoretical significance.

Firstly, it reveals the uniqueness of corporate culture in the manufacturing industry. This study found that in manufacturing enterprises, the importance of teamwork outweighs values and leadership, which may differ from service or high-tech industries. The production activities of the manufacturing industry highly rely on assembly line style team collaboration, and any mistake in any link may affect overall efficiency and product quality, making team spirit the core of corporate culture. This discovery suggests that the focus of corporate culture construction in different industries should be different, and the experience of other industries cannot be simply applied.

Secondly, it enriches the theoretical research on the transformation and upgrading of traditional manufacturing industries. As a state-owned holding enterprise established for many years, Chengde Lulu is facing typical traditional manufacturing industry challenges such as stagnant revenue, frequent executive resignations, and massive employee turnover. This study reveals the underlying reasons for these issues from the perspective of corporate culture, such as unclear corporate values, insufficient leadership development, and aging employee age structure, and proposes targeted solutions. This provides a theoretical reference for traditional manufacturing enterprises on how to achieve transformation and upgrading through cultural construction.

Thirdly, it validates the applicability of Western theories in the context of China's manufacturing industry. This study applies Western theories such as social identity theory and social exchange theory to explain the issue of employee loyalty in Chinese manufacturing enterprises. It is found that these theories are also applicable in the Chinese context, but Chinese characteristics need to be considered, such as the decisive role of leadership in corporate culture construction and the special importance of team spirit in the context of collectivist culture. This provides empirical evidence for the cross-cultural application of corporate culture theory.

5.2.5 The overall significance of the theoretical contribution of this study

Based on the above four aspects, the theoretical contribution of this study can be summarized as follows: at the measurement level, it provides a concise and complete tool for measuring corporate culture; At the relational level, the impact of various dimensions of corporate culture on employee loyalty has been quantified; At the mechanism level, the applicability of theories such as social identity and social exchange in employee loyalty research has been verified, confirming the dominance of organizational factors; At the

situational level, it expands the industry scope of corporate culture research and reveals the particularity of manufacturing corporate culture.

These contributions not only enrich the theories of corporate culture and employee loyalty, but also provide theoretical foundations and research tools for subsequent researchers. Future research can explore more complex relationships (such as mediating and moderating effects) based on this study, expand to more industries and types of enterprises, adopt more diverse research methods (such as longitudinal and experimental studies), and further deepen the understanding of the relationship between corporate culture and employee loyalty.

5.3 Practical significance

This study has not only made contributions in theory, but also has important practical value.

5.3.1 Provided a systematic plan for cultural construction for Lulu in Chengde

As a traditional manufacturing enterprise established for many years, Chengde Lulu is facing practical difficulties such as stagnant revenue, frequent departures of executives, and massive employee turnover. This study provides scientific diagnostic tools and actionable improvement plans for enterprises through systematic empirical analysis.

Firstly, cultural diagnostic tools are provided. The 24-item corporate culture measurement scale (six dimensions) developed in this study has undergone rigorous reliability and validity testing and has good measurement quality (α=0.942). Chengde Lulu can use this scale to comprehensively evaluate the current status of corporate culture and identify weak links in cultural construction. For example, through evaluation, it can be found that companies score lower in certain dimensions (such as unclear corporate values and insufficient leadership development), and higher in certain dimensions (such as relatively harmonious interpersonal relationships), so as to carry out cultural construction work in a targeted manner. This scale is concise and practical, and enterprises can conduct regular evaluations (such as every year or every six months) to track the effectiveness of cultural construction, achieve quantitative management and continuous improvement of cultural construction.

Secondly, the priority order of cultural construction has been clarified. This study quantified the impact of six dimensions of corporate culture on employee loyalty through

regression analysis, indicating the key direction of cultural construction for enterprises. Research has found that team spirit has the most significant impact on employee loyalty (β=0.458), followed by corporate values (β=0.382), social responsibility (β=0.350), employee development (β=0.342), interpersonal relationships (β=0.322), and leadership (β=0.245). Based on this discovery, Chengde Lulu should prioritize investing limited resources in the most influential dimensions (team building, value shaping, social responsibility fulfillment) rather than using equal efforts. This resource allocation strategy based on empirical research can improve the efficiency and effectiveness of cultural construction, and achieve the maximization of input-output ratio.

Thirdly, actionable improvement strategies are provided. This study not only identifies the problems, but more importantly, proposes six specific cultural construction strategies, each of which includes detailed implementation measures and expected effects. For example, in response to the problem of weak team spirit, four specific measures have been proposed, including establishing a team goal sharing mechanism, improving team collaboration mechanisms, conducting team building activities, and establishing a team incentive mechanism; Four measures have been proposed to address the issue of unclear corporate values, including refining core values, establishing a communication system, establishing an assessment mechanism, and promoting the integration of values and systems. These strategies are not empty slogans, but actionable and implementable action plans that companies can adjust and implement according to their actual situation.

Fourthly, it reveals the underlying reasons for employee turnover. In recent years, Chengde Lulu has faced a serious problem of employee turnover, especially frequent departures of executives (experiencing three rounds of chairman changes between 2018 and 2021).This study found through analysis of variance that there was no significant difference in loyalty among employees with different demographic characteristics, indicating that the reason for employee turnover is not due to the “unsuitability” of recruited employees (individual factors), but rather the insufficient construction of corporate culture (organizational factors).This discovery points the right direction for enterprises to solve the problem: they should not focus on frequent personnel changes, but should concentrate resources on building corporate culture and fundamentally solve the problem of talent loss.

Fifth, it provides cultural support for the transformation and upgrading of enterprises. Chengde Lulu's revenue has grown from 2.633 billion yuan in 2013 to 2.692 billion yuan in 2022, almost stagnant in the past decade, and the company urgently needs to transform and upgrade. This study reveals the key role of corporate culture in transformation and upgrading: a strong corporate culture can unite people, stimulate innovation, enhance execution, and provide strong spiritual motivation and organizational support for corporate transformation. Especially in response to the problem of aging age structure (young employees aged 30 and below account for only 11.3%), the "Youth Talent Training Project" proposed in this study (increasing recruitment of young employees, establishing mentorship system, setting up talent development fund, optimizing salary and benefits) provides a specific path for enterprises to inject fresh blood and achieve intergenerational inheritance.

5.3.2 Provided valuable experience for manufacturing enterprises to learn from

The practical significance of this study is not limited to Lulu in Chengde, but also has important reference value for other manufacturing enterprises, especially traditional manufacturing enterprises.

Firstly, team building is the primary task of building corporate culture in the manufacturing industry. This study found that team spirit has the most significant impact on employee loyalty (β=0.458), which has implications for all manufacturing enterprises. The production activities in the manufacturing industry highly rely on team collaboration, and both product quality and production efficiency require close cooperation among team members. Therefore, manufacturing enterprises should prioritize team building in cultural development, by establishing a team goal sharing mechanism, improving team collaboration mechanisms, conducting team building activities, and establishing team incentive mechanisms to strengthen employees' team awareness and collaborative spirit. This discovery has changed the traditional perception of many companies regarding values or leadership as the primary task of cultural construction, providing a new perspective for the cultural construction of manufacturing enterprises.

Secondly, the guidance of values and employee development cannot be ignored. Although team spirit has the greatest impact, the influence of corporate values (β=0.382) and employee development (β=0.342) is also significant, and manufacturing companies

cannot afford to lose sight of each other. Enterprises should systematically extract and disseminate their core values while strengthening team building, providing clear career development channels and ample training opportunities for employees. Especially in today's increasingly fierce competition for talent, the ability to provide employees with development opportunities and growth space directly affects the attractiveness and retention rate of the company's talent. Manufacturing enterprises should establish a "dual channel" career development system (management channel and professional channel), allowing employees of different types to see development prospects.

Thirdly, salary is not the determining factor. This study found no significant difference in loyalty among employees with different salary levels, which has important implications for human resource management in manufacturing enterprises: simply increasing salary cannot effectively enhance employee loyalty. Enterprises should pay more attention to non-material factors such as cultural construction, employee development, and interpersonal atmosphere while ensuring fair and reasonable salary. Many manufacturing companies face difficulties in recruiting and retaining employees, often simply attributed to low salaries. However, this study shows that corporate culture is the key factor affecting employee loyalty (explaining 65.2% of the variance). This discovery can help companies avoid falling into the trap of "salary competition" and instead achieve differentiated competition through cultural construction.

Fourthly, cultural development should be oriented towards all employees. This study found no significant differences in loyalty among employees of different genders, ages, educational backgrounds, years of work experience, and positions, indicating that companies do not need to develop differentiated cultural construction strategies for different groups, but should build a unified corporate culture system for all employees. This discovery simplifies the complexity of cultural construction and reduces the difficulty of implementation. The composition of employees in manufacturing enterprises is often diverse (from frontline workers to technical personnel and then to management personnel). The findings of this study indicate that as long as the enterprise creates a good cultural environment, employees from different backgrounds will have higher loyalty.

Fifth, cultural construction requires systematic promotion and sustained investment. The six strategies proposed in this study are not isolated, but interrelated and mutually supportive organic whole. Manufacturing enterprises should avoid the fragmented

approach of “treating the head and feet” when implementing cultural construction, and adopt a systematic and integrated promotion strategy. Meanwhile, the construction of corporate culture is not a short-term action, and it takes 3-5 years or even longer to see significant results. Manufacturing enterprises should establish a long-term mechanism for cultural construction, incorporate cultural construction into their strategic planning, establish specialized departments or positions, allocate dedicated personnel, invest special funds (recommended not less than 0.5% of revenue), and persistently promote cultural construction.

5.3.3 Provided theoretical guidance for enterprise management practice

The findings of this study have universal guiding significance for enterprise management practices, not limited to specific industries or types of enterprises.

Firstly, organizational factors are more important than individual factors. This study confirms that organizational factors (corporate culture) have a much greater impact on employee loyalty (explaining 65.2% of the variance) than individual factors (demographic characteristics, no significant impact).This discovery has important implications for human resource management strategies in enterprises: companies should shift their focus from “selecting the right people” (selective strategy) to “using the right people” (cultivation strategy).The input-output ratio of excessive focus on personnel selection (such as frequent recruitment and strict screening) is relatively low, while the input-output ratio of improving the organizational environment (such as optimizing corporate culture, improving management systems, and creating a good atmosphere) is higher. This discovery can help enterprises optimize resource allocation and improve management efficiency.

Secondly, investment in cultural construction has significant returns. This study found that the six dimensions of corporate culture collectively explained 65.2% of the variance in employee loyalty, indicating that cultural construction has a significant effect on enhancing employee loyalty. The improvement of employee loyalty will bring a series of positive effects: reducing employee turnover rate (reducing recruitment and training costs), improving work performance (enhancing production efficiency and product quality), enhancing organizational commitment (reducing absenteeism and absenteeism), and promoting organizational citizenship behavior (employees actively helping colleagues and maintaining corporate image).These positive effects will ultimately translate into the

competitive advantage and economic benefits of the enterprise. Therefore, enterprises should not view cultural construction as a “soft” or “virtual” task, but rather as an important means to enhance organizational efficiency, and should give it sufficient attention and investment.

Thirdly, cultural development requires decision-making based on data. This study quantifies the impact of various dimensions of corporate culture on employee loyalty through rigorous quantitative research, providing scientific decision-making basis for enterprises. This research paradigm has enlightening significance for enterprise management practice: cultural construction should not be based solely on experience or intuition, but should be based on data and evidence. Enterprises can regularly conduct employee surveys, collect and analyze data, identify weak links in cultural construction, evaluate the implementation effect of cultural construction, and adjust strategies in a timely manner based on data feedback. This “Evidence Based Management” approach can improve the scientific and effective nature of cultural construction, avoiding blind investment and resource waste.

Fourthly, leaders should play a leading role in cultural construction. Although this study found that the direct impact of leadership on employee loyalty is relatively small (β=0.245), the role of leaders in corporate culture construction cannot be ignored. Leaders are advocates, shapers, and practitioners of corporate culture, and their values and behavior patterns can have a profound impact on organizational culture. Especially in the context of Chinese enterprises, leaders often play a decisive role in cultural construction. Therefore, enterprises should strengthen the cultural literacy training of leaders, establish a leadership cultural responsibility system, incorporate the effectiveness of cultural construction into the performance evaluation of leaders, and ensure that leaders play an active leading role in cultural construction.

In summary, this study provides a systematic cultural construction plan for Lulu in Chengde, offers valuable experience for manufacturing enterprises, provides theoretical guidance for enterprise management practices, and has important practical application value. Enterprises can develop and implement targeted corporate culture construction strategies based on the findings and recommendations of this study, combined with their own actual situation, to enhance employee loyalty, strengthen organizational efficiency, and achieve sustainable development through cultural construction.

5.4 Research limitations

Although this study has made valuable discoveries in both theory and practice, there are still limitations due to research conditions and time constraints that need to be improved in future research.

5.4.1 Theoretical limitations

Firstly, the cross-sectional nature of the research design limits causal inference. This study adopts a cross-sectional research design to collect data on corporate culture and employee loyalty at the same time point. Although regression analysis can reveal correlations and predictive relationships between variables, it cannot rigorously prove causal relationships. The impact of corporate culture on employee loyalty may have a time lag effect, where the improvement of corporate culture takes some time to translate into an increase in employee loyalty; There may also be a reverse causal relationship, where highly loyal employees are more inclined to make positive evaluations of corporate culture. To clarify the direction and mechanism of causal relationships, a longitudinal research design is needed to track the dynamic impact of changes in corporate culture on employee loyalty. However, due to time and resource constraints, longitudinal tracking was not implemented in this study, which is one of the main theoretical limitations of this research.

Secondly, the research model is relatively simple and does not examine the mediating and regulatory mechanisms. This study only examined the direct impact of corporate culture on employee loyalty, without introducing mediating and moderating variables, and cannot reveal the intrinsic mechanism of how corporate culture affects employee loyalty. According to social exchange theory and social identity theory, the impact of corporate culture on employee loyalty may be achieved through various mediating pathways, such as indirectly influencing mediating variables such as job satisfaction, organizational identity, and psychological contract; Meanwhile, this influence may be moderated by individual characteristics (such as value alignment, job engagement) and situational factors (such as industry characteristics, organizational change). More complex research models, such as mediation models, moderation models, and chain mediation models, can more deeply reveal the “black box” of how corporate culture affects employee loyalty. However, due to the simplicity of the model design, these variables were not included in this study.

Thirdly, the theoretical perspective is relatively singular. This study mainly explains the impact of corporate culture on employee loyalty based on social identity theory and social exchange theory. Although these two theories are supported by empirical data, the relationship between corporate culture and employee loyalty is complex and may require other theoretical perspectives to explain. For example, from the perspective of Organizational Support Theory, corporate culture can be seen as a manifestation of organizational support; From the perspective of Psychological Contract Theory, corporate culture reflects the implicit contract between the organization and its employees; From the perspective of Conservation of Resources Theory, a good corporate culture is an important psychological resource for employees. Future research can provide a more comprehensive explanation of research findings from multiple theoretical perspectives, deepening our understanding of the relationship between corporate culture and employee loyalty.

Fourthly, there may be common methodological biases in self-report methods. The data on corporate culture and employee loyalty in this study were obtained from self-reports of employees. The same respondent answered all questions at the same time, which may lead to Common Method Bias. Although this study adopted procedural control measures (such as anonymous answering, item shuffling, and reverse item setting) and statistical tests (such as Harman single factor test), the influence of common method bias cannot be completely ruled out. The ideal research design should use multi-source data (such as corporate culture data from manager evaluations, employee loyalty data from employee self-assessment and supervisor evaluations) or collect data in time periods (such as measuring corporate culture first and then measuring employee loyalty after a period of time) to reduce the risk of common method bias.

5.4.2 Variable limitations

Firstly, the dimensions of corporate culture may not be comprehensive enough. The six dimensional model constructed in this study (corporate values, leadership, team spirit, interpersonal relationships, employee development, social responsibility) covers the core elements of corporate culture, but corporate culture is an extremely rich and complex concept that may also include other important dimensions. For example, Innovation Culture may be very important in high-tech enterprises; Learning culture may play a key role in knowledge intensive enterprises; Customer oriented culture may be crucial in service industry enterprises. Due to considerations of measuring simplicity, this study did

not include all possible cultural dimensions. At the same time, this study integrates the concept of “daring to innovate” into the dimension of “leadership”. Although it is in line with the reality of Chinese enterprises where “leaders lead innovation”, it may underestimate the independent role of innovation culture.

Secondly, using a single dimension for measuring employee loyalty may be too simplistic. This study uses a single dimension to measure employee loyalty, which, although concise and clear, may overlook the multidimensionality of loyalty. The three-dimensional model proposed by Iverson and Buttigieg (1999) (emotional loyalty, continued loyalty, normative loyalty) has been widely recognized, and different types of loyalty may have different antecedent and consequence variables. For example, corporate culture may have a greater impact on emotional loyalty than on continued loyalty; Team spirit may primarily affect emotional loyalty, while compensation and benefits may primarily affect continued loyalty. Single dimensional measurement cannot distinguish these subtle differences, which may lead to insufficient understanding of the relationship between corporate culture and employee loyalty.

Thirdly, other important organizational variables were not examined. This study focuses on the impact of corporate culture on employee loyalty and does not include other organizational variables that may affect employee loyalty, such as compensation and benefits, job characteristics, management systems, organizational support, etc. Although this study found that corporate culture can explain 65.2% of the variance in employee loyalty, 34.8% of the variance remains unexplained, possibly due to these excluded variables. A more comprehensive research model should simultaneously examine the relative contributions of corporate culture and other organizational variables to employee loyalty, as well as their interactions. For example, there may be an interactive effect between corporate culture and compensation and benefits: in the case of a good corporate culture, the impact of compensation and benefits on employee loyalty may be weakened; On the contrary, in the case of weak corporate culture, the role of compensation and benefits may be enhanced.

Fourthly, the measurement of demographic variables is relatively crude. This study classified and measured demographic variables such as age, education, years of work experience, and salary (e.g. age divided into 4 levels and salary divided into 4 levels), which may facilitate statistical analysis but may result in the loss of some information.

For example, dividing age into categories such as “30 years old and under” and “31-40 years old” cannot reflect differences within the same category (such as significant differences between employees aged 25 and 30). The classification of continuous variables may reduce the effectiveness of statistical testing, resulting in the failure to detect certain potential differences.

5.4.3 Regional limitations

Firstly, a single enterprise sample limits the external validity of the conclusions. This study only takes Chengde Lulu Co., Ltd. As the research object, and the singularity of the sample source limits the scope of the research conclusions. Although Chengde Lulu, as a traditional manufacturing enterprise, has certain representativeness, there are differences in scale, nature, development stage, ownership form and other aspects among different enterprises, which may affect the relationship between corporate culture and employee loyalty. For example, there may be significant differences in corporate culture characteristics between state-owned enterprises and private enterprises, and the focus of cultural construction may differ between large and small and medium-sized enterprises. Mature and growing enterprises also face different cultural challenges. Therefore, whether the findings of this study can be extended to other enterprises, especially those with different natures, scales, and development stages, still needs further verification.

Secondly, regional samples limit cross-cultural comparisons. The samples of this study are all from Chengde City, with a relatively concentrated geographical scope. China has a vast territory, and there are significant differences in economic development level, cultural traditions, social concepts, and other aspects among different regions. These regional characteristics may affect the formation of corporate culture and the expression of employee loyalty. For example, there may be differences in corporate culture between the eastern coastal regions and the central and western regions, as well as between first tier cities and third – and fourth tier cities; Employees in economically developed regions such as the Yangtze River Delta and Pearl River Delta have higher mobility, and the factors affecting loyalty may be different from those in economically underdeveloped regions. The conclusions drawn from the data in Chengde region of this study need to be validated on a broader geographical scale to determine their applicability to other regions.

Thirdly, industry samples limit cross industry comparisons. This study focuses on the manufacturing industry, especially the food and beverage industry (plant-based protein drinks). Although it reveals certain characteristics of manufacturing corporate culture (such as the importance of teamwork), there may be significant differences in corporate culture among different industries. The corporate culture of service industry enterprises (such as hotels, catering, and retail) may place more emphasis on customer orientation and service quality; The corporate culture of high-tech enterprises (such as the Internet and software) may place more emphasis on innovation and flexibility; The corporate culture of financial enterprises may place more emphasis on risk control and compliant operations. This study is based on the findings of manufacturing enterprises (such as the most significant impact of team spirit), and whether it can be extended to other industries requires cross industry comparative research to verify. Meanwhile, even within the manufacturing industry, there may be differences in corporate culture among different sub sectors such as machinery manufacturing, electronics manufacturing, and food manufacturing.

Fourthly, there are limitations in the timing. The data for this study was collected between March and May 2023, which may have been a specific time period. Corporate culture and employee loyalty may be influenced by time related factors such as macroeconomic environment, industry development trends, and enterprise development stages. For example, in the post pandemic era of 2023, the business environment and psychological state of employees faced by enterprises may differ from before or during the pandemic; At that time, Chengde Lulu was in a period of stagnant revenue, and employee loyalty may be affected by the company's operating conditions. The findings of this study reflect the current situation at a specific time point, and caution should be exercised whether they can be extended to other time points.

In summary, this study has certain limitations in theoretical design, variable selection, and sample size. These limitations are not the shortcomings of this study, but the objective reality under the constraints of research conditions and resources. Despite these limitations, this study has made valuable discoveries in both theory and practice, providing new evidence and perspectives for the study of corporate culture and employee loyalty. Future research can improve and expand upon these limitations, further deepening our understanding of the relationship between corporate culture and employee loyalty.

5.5 Conclusion

This study takes Chengde Lulu Co., Ltd. as an example to systematically explore the impact of corporate culture on employee loyalty. Through literature review, theoretical analysis, and empirical research, the following main conclusions are drawn:

Firstly, corporate culture encompasses six core dimensions: corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility. These six dimensions together constitute a complete system of corporate culture, which has been rigorously tested for reliability and validity and proven to be applicable to Chinese manufacturing enterprises.

Secondly, all six dimensions of corporate culture have a significant positive impact on employee loyalty, but the degree of influence varies. The impact of team spirit is most significant (β=0.458), followed by corporate values (β=0.382), social responsibility (β=0.350), employee development (β=0.342), interpersonal relationships (β=0.322), and leadership (β=0.245). The six dimensions together explain 65.2% of the variance in employee loyalty, indicating that corporate culture is a key factor influencing employee loyalty.

Thirdly, demographic characteristics (gender, age, education level, years of work experience, job position, salary income) did not show significant differences in perceived corporate culture and employee loyalty. This indicates that the influence of corporate culture is universal across groups, and when corporate culture is strong enough, it can transcend the impact of individual differences and have a consistent effect on all employees.

Fourthly, based on empirical research results, this study proposes six targeted strategies for corporate culture construction: strengthening team building, clarifying value orientation, optimizing interpersonal atmosphere, valuing employee growth, fulfilling social responsibility, and enhancing leadership ability. These strategies are not only applicable to Lulu in Chengde, but also provide reference for other manufacturing enterprises.

This study has made contributions in both theory and practice. In terms of theory, the measurement dimensions of corporate culture have been expanded and optimized, and empirical verification has been conducted in the context of China's manufacturing industry. Multiple statistical methods have been used to improve research rigor, validate and expand

corporate culture theory, and promote theoretical localization. In terms of practice, specific improvement suggestions have been provided for Lulu in Chengde, serving as a reference for other manufacturing enterprises, providing inspiration for human resource management practices, and having a positive impact on society.

Of course, this study also has certain limitations, such as sample limitations, method limitations, theoretical limitations, etc. Future research can further explore the relationship between corporate culture and employee loyalty by expanding research scope, deepening research content, innovating research methods, and expanding theoretical perspectives.

Overall, this study demonstrates that corporate culture has a significant impact on employee loyalty, providing theoretical basis and practical guidance for companies to enhance employee loyalty through strengthening cultural construction. In today's increasingly fierce competition for talent, enterprises should attach great importance to cultural construction as a strategic task to enhance competitiveness. By shaping excellent corporate culture, attracting, cultivating, and retaining outstanding talents, enterprises can achieve sustainable development.

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APPENDIXES

APPENDIX A

Questionnaire

APPENDIX A: Questionnaire

The purpose of this survey is to investigate the impact of corporate culture on employee loyalty at L Co., Ltd. The questionnaire is only for writing papers and does not involve your name. It will not have any impact on your personal privacy. Please feel free to fill it out truthfully. Thank you for taking the time out of your busy schedule to support and assist me. Thank you!

Part One, Basic Information. This section aims to understand your basic situation. We will keep your information completely confidential. Please fill in the answer truthfully and check the corresponding option in the answer options.

serial number	Item Description	option
1	What is your gender?	□ Male □ Female
2	What is your age	□ Under 20 years old □ 21-25 □ 26-35 □ 36-45 □ 46 and above
3	What is your level of education	□ Junior high school and below □ High school or vocational school □ Junior college □ Undergraduate □ Graduate
4	What is your work experience	□ Within 2 years □ 2-5 □ 5-10 □ 10-20 □ Over 20 years
5	Your job position	□ Production personnel □ Technical personnel □ Administrative management personnel □ Financial personnel □ Sales personnel
6	What is your current salary income	□ Under 2000 □ 2000-4000 □ 4000-6000 □ 6000-8000 □ Over 8000

The second part is the evaluation of the current status of corporate culture. The purpose of this section is to understand your perception and understanding of the corporate culture of Chengde Lulu Co., Ltd., and provide a basis for the research paper. Each question item is designed with five options, which are 1=strongly disagree;2=Partially opposed;3=I don't know;4=Partial agreement;5=strongly agree. Please fill in the options that match your own cognition.

dimension	serial number	Measurement items for corporate culture	Strongly disagree	Partially opposed	uncertain	Partial agreement	Strongly agree
enterprise values	1	Neglecting corporate values will lead us into difficulties					
	2	The company's corporate culture and values are very contemporary.					
	3	Employees have very similar views on right and wrong behavior.					
	4	The ethical standards of the organization can guide us in judging right from wrong.					
leadership	5	The leader's work is very successful and inspiring.					
	6	I think leaders have strong work abilities.					
	7	The leader pays great attention to the demands of employees, cares for them, and has a high level of authority.					
	8	Leaders have a strong sense of innovation, leading and encouraging employees to innovate.					
team spirit	9	The company attaches great importance to team building.					
	10	I strongly agree with the company's corporate culture.					
	11	My team is earnestly implementing the company's development strategy.					
	12	My personal behavior can affect the achievement of team goals.					
interpersonal relationships	13	I get along well with my colleagues.					
	14	The company can tolerate my mistakes.					
	15	The company respects and understands me.					
	16	I am willing to take the initiative to help my colleagues at work.					

Employee Development	17	The company values the growth and development of its employees.					
	18	The company provides employees with sufficient development space.					
	19	The abilities of company employees are constantly improving.					
	20	My personal development goals are completely aligned with the company's development goals.					
social responsibility	21	The company pursues economic benefits while conscientiously fulfilling its social responsibilities.					
	22	Companies prioritize long-term development over short-term gains.					
	23	Companies often fulfill their social responsibilities through practical actions.					
	24	A socially recognized company is one that effectively fulfills its social responsibilities.					

The third part is the evaluation of employee loyalty status. The purpose of this section is to understand your loyalty to the employees of Chengde Lulu Co., Ltd. and provide a basis for the research paper. Each question item is designed with five options, which are 1=strongly disagree;2=Partially opposed;3=I don't know;4=Partial agreement; 5=strongly agree. Please fill in the options that match your own cognition.

dimension	serial number	Employee loyalty measurement items	Strongly disagree	Partially opposed	uncertain	Partial agreement	Strongly agree
Employee loyalty	1	The company gives me a sense of belonging.					
	2	I am willing to work for the company until retirement.					
	3	I have a deep affection for the company.					
	4	I am happy to contribute to the company.					
	5	I will not leave the company without the influence of external factors.					
	6	I will make every effort to complete the work tasks assigned to me by the company.					
	7	I am willing to overcome difficulties with the company.					
	8	I won't leave the company just because other units offer better treatment.					

APPENDIX B

Article

APPENDIX B: Article

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Corporate Culture and Employee Loyalty: An Empirical Study of the Plant-Based Protein Beverage Sector

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ABSTRACT

China's plant-based protein beverage manufacturers are facing intensifying competition and workforce-retention pressure, making employee loyalty a strategic concern for operational continuity and quality assurance. This study examines how multidimensional corporate culture influences employee loyalty in Chengde Lulu Co., Ltd. Using a quantitative survey, questionnaires were randomly distributed to eligible full-time employees (≥6 months tenure); 400 valid responses were retained after quality screening. Measures used 5-point Likert scales capturing six culture dimensions (corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility) and employee loyalty. Data analysis included descriptive statistics, reliability (Cronbach's alpha), KMO/Bartlett tests and exploratory factor analysis, correlation analysis, multiple regression, and one-way ANOVA for demographic differences. Results show that all six culture dimensions positively predict employee loyalty, with strong explanatory power ($R^2 = 0.657$); team spirit is the strongest predictor, while leadership remains significant but comparatively weaker. ANOVA indicates no significant loyalty differences across demographics (e.g., gender, age, salary). Practically, manufacturers should prioritize building cooperative team climates, clarifying shared values, strengthening development pathways, and embedding social responsibility to sustain loyalty beyond purely transactional incentives.

KEY WORDS: CORPORATE CULTURE, EMPLOYEES' LOYALTY, ORGANIZATION BEHAVIOR, LEADERSHIP.

INTRODUCTION

In recent years, China' s beverage industry has undergone rapid structural transformation driven by consumption upgrading, heightened health awareness, and intensified market competition [1]. According to industry analyses, the growth momentum of traditional sugary beverages has slowed, while plant-based and functional beverages have expanded steadily, reflecting consumers' increasing emphasis on nutrition, sustainability, and lifestyle quality [2]. As product homogeneity increases and competition shifts from price-based rivalry to brand differentiation and organizational capability, internal management effectiveness, particularly workforce stability, has become a critical factor influencing firms' long-term competitiveness [3].

Within this evolving industry landscape, Chengde Lulu Co., Ltd. represents a leading enterprise in China' s plant-based protein beverage segment, with almond-based beverages as its core product line. Benefiting from early market entry and strong brand recognition, Chengde Lulu has maintained a dominant position in its niche market and reported stable operating revenues in recent years. However, as the plant-based beverage sector attracts new entrants and substitutes proliferate, the company faces increasing pressure not only in market expansion but also in

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internal organizational governance. Public disclosures and industry observations suggest that traditional manufacturing beverage firms, including Chengde Lulu, are encountering challenges related to employee turnover, workforce aging, and declining organizational cohesion, issues that directly threaten operational continuity and strategic execution [4].

From a managerial perspective, employee loyalty is particularly vital in beverage manufacturing enterprises, where standardized production processes, quality control, and cross-departmental coordination depend heavily on experienced and committed employees. Prior studies indicate that low employee loyalty is associated with higher turnover intention, reduced organizational commitment, and weakened collective efficiency, especially in manufacturing contexts [5, 6]. While compensation and external labor market conditions contribute to these outcomes, recent research increasingly emphasizes internal organizational factors, most notably corporate culture, as key determinants of employees' long-term attachment to their organizations [7].

Corporate culture, conceptualized as a system of shared values, leadership practices, and behavioral norms, has been shown to influence employees' attitudes, affective commitment, and retention-related behaviors [8, 9]. Empirical evidence from recent studies suggests that cultural dimensions such as value congruence, leadership support, team cohesion, and developmental opportunities play a significant role in shaping employee loyalty beyond transactional incentives [10]. However, existing research exhibits two notable gaps. First, most empirical investigations focus on service industries or knowledge-intensive sectors, whereas traditional manufacturing industries, particularly food and beverage manufacturing, remain underexplored. Second, prior studies often adopt partial or fragmented cultural frameworks, limiting understanding of how multiple cultural dimensions jointly influence employee loyalty in organizational settings.

These gaps are especially salient in the context of China's plant-based beverage manufacturing industry, where firms must simultaneously manage market expansion and internal transformation. Despite Chengde Lulu' s representative status, little empirical research has systematically examined how corporate culture affects employee loyalty within such enterprises. Addressing this gap is essential not only for practical governance but also for advancing theory.

Accordingly, this study investigates the impact of corporate culture on employee loyalty in a plant-based protein beverage manufacturing enterprise, using Chengde Lulu as an empirical case. By conceptualizing corporate culture as a multidimensional construct encompassing corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility, this research seeks to extend existing culture, loyalty theories into an underexamined industrial context. Theoretically, the study contributes to organizational behavior literature by enriching the contextual applicability of corporate culture theory and clarifying its explanatory power in manufacturing settings. In doing so, it offers a more nuanced understanding of how internal cultural mechanisms shape employee loyalty under conditions of industrial transformation. Hence, this research aims:

RO1: To explore the dimensions included in corporate culture.

RO2: To examine the impact of corporate culture on employee loyalty through empirical analysis and to examine whether employee loyalty differs significantly across demographic characteristics, including gender, age, and salary level.

RO3: To derive practical managerial implications based on the empirical findings, providing guidance for corporate culture construction and employee loyalty management.

Literature review

Theoretical basis: Corporate culture theory explains how shared values, norms, and behavioral expectations within an organization shape employees' cognition, emotions, and work-related behaviors. Contemporary scholarship conceptualizes corporate culture as a multi-dimensional system embedded in organizational practices rather than a static symbolic construct [11]. In recent years, research has increasingly adapted corporate culture theory to examine how internal cultural environments influence employee-related outcomes under conditions of organizational transformation and competitive pressure [12, 13]. This shift reflects growing recognition that culture functions as an internal governance mechanism that coordinates behavior and stabilizes employee attitudes in dynamic business contexts.

Culture has been examined as a predictor of employee attitudes, such as organizational commitment, engagement, and psychological attachment, emphasizing the role of value congruence and leadership practices in shaping employees' perceptions of the organization [14]. Culture as a driver of retention-related outcomes, demonstrating that supportive cultural climates and developmental orientations significantly reduce turnover intention and enhance loyalty-related behaviors [15]. Culture has been increasingly analyzed in manufacturing and transitional industries, where standardized processes and collective coordination heighten the importance of shared norms and stable value systems [16]. Within this theoretical framework, corporate culture is understood as an internal environment that continuously exposes employees to organizational values, leadership cues, and relational norms, thereby shaping their long-term attitudes toward the organization.

Employee loyalty theory seeks to explain the formation and maintenance of employees' enduring attachment to an organization and their willingness to remain and contribute over time [17]. Recent theoretical developments conceptualize employee loyalty as a cognitive, affective, behavioral construct, encompassing employees' beliefs about the organization, emotional attachment, and intention to stay [18]. This perspective moves beyond earlier views that equated loyalty solely with tenure or compliance,

emphasizing instead employees' voluntary and attitudinal commitment. Loyalty measurement, distinguishing loyalty from closely related constructs such as organizational commitment and job satisfaction, while demonstrating their theoretical interconnections [19]. Loyalty has been widely examined as an outcome of organizational context, with studies highlighting the roles of leadership support, fairness, and cultural alignment in fostering employees intention to remain with the organization [20]. In this study, employee loyalty theory suggests that employees' loyalty is not an immediate reaction to isolated incentives, but a cumulative outcome shaped by prolonged organizational experiences.

Table 1. Hypothesis development statement

H1	Corporate values have a significant positive impact on employee loyalty.
H2	Leadership has a significant positive impact on employee loyalty.
H3	Team spirit has a significant positive impact on employee loyalty.
H4	Interpersonal relationships have a significant positive impact on employee loyalty.
H5	Employee development has a significant positive impact on employee loyalty.
H6	Social responsibility has a significant positive impact on employee loyalty.

Taken together, the integration of corporate culture theory and employee loyalty theory offers a coherent explanatory framework for this study. Corporate culture theory explains how internal cultural environments shape employees' perceptions and emotional attachment, while employee loyalty theory clarifies how these internalized perceptions translate into sustained loyalty. This combined theoretical perspective supports the examination of how multidimensional corporate culture influences employee loyalty in the context of a traditional plant-based protein beverage manufacturing enterprise.

Conceptual review: Corporate culture originates from Corporate Culture Theory, which conceptualizes culture as a system of shared values, norms, and practices that guide organizational members' perceptions and behaviors [11]. Corporate culture is commonly defined as a multidimensional construct reflecting how values are articulated, leadership is enacted, and relationships are structured within the organization [21]. In the present study, corporate culture is defined as employees' shared perceptions of the organizational environment formed through sustained exposure to corporate values, leadership behaviors, and relational norms within Chengde Lulu. Corporate culture is conceptualized as a multidimensional construct comprising six dimensions: corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility [22].

Employee loyalty is theoretically grounded in Employee Loyalty Theory, which explains employees' enduring attachment to an organization and their willingness to remain and contribute over time [17]. Recent literature conceptualizes employee loyalty as a stable attitudinal, behavioral orientation that goes beyond short-term job satisfaction or contractual obligation [23]. It reflects employees' psychological identification with the organization as well as their intention to maintain long-term employment relationships. Employee loyalty is often distinguished from organizational commitment while remaining closely related to it. Loyalty emphasizes intention to stay, emotional attachment, and discretionary effort, and has been widely used as a key outcome variable in studies examining organizational environments and human resource practices [24]. In this study, employee loyalty is defined as employees' overall psychological attachment to Chengde Lulu and their willingness to continue working for the organization. Employee loyalty is treated as a global construct capturing both attitudinal attachment and behavioral intention to remain, rather than being subdivided into multiple subtypes. This conceptualization facilitates the examination of the direct effects of multiple corporate culture dimensions on employees' loyalty within a manufacturing enterprise.

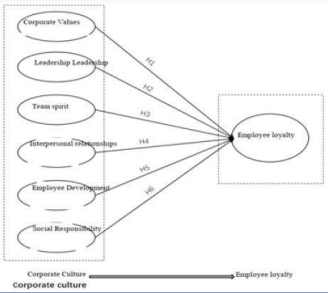
Hypothesis development: Corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility represent core cultural components through which organizations regulate behavior and foster employee attachment [25, 26]. Clearly articulated corporate values strengthen employees' emotional attachment and loyalty by aligning individual beliefs with organizational goals [27]. Leadership research further shows that supportive and value-consistent leadership, widely regarded as a core manifestation of corporate culture, enhances employees' trust and loyalty by translating abstract values into daily managerial practices [28].

In addition, team-oriented cultural climates characterized by cooperation and shared responsibility have been found to foster collective identity and social belonging, thereby increasing employees' willingness to remain with the organization, particularly in manufacturing environments that rely on coordinated task execution [29, 30]. Similarly, high-quality interpersonal relationships embedded in organizational culture have been shown to reduce psychological strain and enhance loyalty-related attitudes by strengthening trust and mutual support among employees [31]. Recent studies also highlight employee development as a salient cultural signal of organizational investment, demonstrating that development-oriented cultures significantly increase employee loyalty by enhancing perceived organizational support and future career expectations [32, 33].

Moreover, corporate social responsibility has increasingly been incorporated into corporate culture frameworks, with evidence suggesting that socially responsible cultures enhance employees' organizational pride and moral identification, which in turn strengthen loyalty and intention to stay [34, 35]. Accordingly, the following hypotheses are proposed:

Theoretical framework: Figure 1 presents the theoretical framework of this study. Grounded in Corporate Culture Theory and Employee Loyalty Theory, the framework examines how corporate culture influences employee loyalty in a plant-based protein beverage manufacturing enterprise. Corporate Culture Theory explains how continuous exposure to organizational values, leadership practices, and relational norms shapes employees' perceptions and evaluations of the organization, while Employee Loyalty Theory clarifies how these evaluations translate into employees' stable attitudinal and behavioral orientation toward remaining with the organization.

Figure 1: Theoretical model of this study



The framework comprises two core constructs: corporate culture and employee loyalty. Corporate culture is conceptualized as a multidimensional construct consisting of six dimensions: corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility, while employee loyalty represents employees' enduring psychological attachment and intention to stay. Based on prior literature, this study proposes that each dimension of corporate culture has a positive effect on employee loyalty (H1-H6).

METHODOLOGY

This study examines the impact of corporate culture on employee loyalty in the context of a plant-based protein beverage manufacturing enterprise, using Chengde Lulu Co., Ltd. as the empirical setting. A quantitative survey design was adopted to capture employees' perceptions of corporate culture and their loyalty-related attitudes. This approach is appropriate for testing theoretically grounded relationships among latent constructs and has been widely applied in organizational and human resource management research [36].

The target population consists of full-time employees of Chengde Lulu across production, administrative, and managerial departments. To enhance the representativeness of the sample and reduce selection bias, simple random sampling was employed. Simple random sampling ensures that each member of the population has an equal probability of being selected, thereby improving the generalizability of statistical inferences [37]. A list of eligible employees was obtained with organizational approval, and questionnaires were distributed randomly among employees who had worked in the company for at least six months to ensure sufficient exposure to the organizational culture.

Data collection was conducted through a combination of on-site paper questionnaires and secure online survey links. Prior to analysis, returned questionnaires were screened to exclude incomplete responses, patterned answers, and those failing basic consistency checks. A total of 400valid responses were retained for subsequent analysis. This sample size meets the recommended requirements for structural equation modeling, which suggest a minimum ratio of 10 respondents per measurement item to ensure stable parameter estimation [38].

The questionnaire consisted of two sections. The first section collected demographic information, including gender, age, education level, and years of work experience. The second section measured the study variables using established scales adapted to the organizational context of Chengde Lulu. All items were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Corporate culture was operationalized as a multidimensional construct encompassing six dimensions: corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility. This operationalization is consistent with corporate culture theory, which emphasizes the joint influence of values, leadership, and relational practices on employee outcomes [39].

Employee loyalty was measured as employees' overall psychological attachment to the organization and their intention to remain employed, reflecting both attitudinal and behavioral orientations [39]. This study employed a quantitative data analysis approach. Descriptive statistics were first used to summarize sample characteristics. Reliability analysis using Cronbach' s alpha assessed the internal consistency of the measurement scales, followed by validity testing through KMO and Bartlett' s tests and exploratory factor analysis. Correlation analysis examined associations among variables, while multiple regression analysis tested the effects of corporate culture dimensions on employee loyalty. In addition, one-way analysis of variance (ANOVA) was conducted to examine differences in employee loyalty across demographic groups.

RESEARCH RESULTS

Descriptive analysis: Descriptive statistical analysis is the process of summarizing and describing data in order to better understand its characteristics and distribution. Provide a foundation for further data analysis and

interpretation. It helps to reveal the regularity, trends, and characteristics of data, providing a basis for data interpretation and comparison. Help researchers and decision-makers understand data more intuitively (Cox, 2006). Table 2 presents the demographic profile of the respondents, indicating that the sample is predominantly composed of male employees (71.5%), reflecting the gender structure commonly observed in traditional manufacturing enterprises. The age distribution shows that the majority of respondents are middle-aged or older employees, with 41.3% aged between 36 and 45 and 46.0% aged 46 years and above, suggesting a relatively mature workforce.

In terms of educational attainment, most respondents possess a high school or vocational school education (33.3%) or junior high school education and below (27.5%), followed by associate degrees (26.0%), while a smaller proportion hold undergraduate degrees (13.3%), indicating a workforce with predominantly practical and technical educational backgrounds. Consistent with this profile, respondents report substantial work experience, with 44.3% having 10–20 years of experience and 49.3% having over 20 years, highlighting a highly experienced employee group. Regarding job positions, the sample is largely concentrated in production (43.5%) and sales roles (43.0%), whereas technical, administrative, and financial positions account for relatively smaller proportions. Finally, the income distribution shows that most respondents earn between 2,000 and 4,000 yuan (57.3%) or 4,000 and 6,000 yuan (34.3%), reflecting the typical wage structure of employees in manufacturing-oriented beverage enterprises.

Table 2. Basic Information of Respondents

Basic Information of the Interviewee		Sample Size	Percentage
Gender	male	286	71.5
	female	114	28.5
Age	20 years old and under	0	0
	21~25	0	0
	26~35	51	12.8
	36~45	165	41.3
	46 years old and above	184	46
Educational Attainment	junior high school and below	110	27.5
	High school or vocational school	133	33.3
	associate degree	104	26
	undergraduate	53	13.3
	postgraduate	0	0
Years Of Work Experience	Within 2 years	0	0
	2-5 years	6	1.5
	5-10 years	19	4.8
	10-20 years	177	44.3
	Over 20 years	198	49.3
Job Position	production personnel	174	43.5
	technical personnel	28	7
	Administrative	20	5
	management personnel financial personnel	6	1.5
	salesperson	172	43
Salary Income	Below 2000 yuan	3	0.8
	2000~4000 yuan	229	57.3
	4000~6000 yuan	137	34.3
	6000~8000 yuan	25	6.3
	Above 8000 yuan	6	1.5

Reliability Analysis: Table 3 reports the reliability results for each construct, indicating a high level of internal consistency across all measurement scales. The Cronbach' s alpha coefficients for the six dimensions of corporate culture range from 0.874 to 0.938, while the coefficient for employee loyalty reaches 0.966, all of which exceed commonly accepted reliability thresholds. Methodological literature generally suggests that a Cronbach' s alpha value above 0.70 indicates acceptable reliability, values above 0.80 reflect good reliability, and values exceeding 0.90 demonstrate excellent internal consistency suitable for rigorous empirical research [40, 41]. Accordingly,

the alpha values for corporate values, team spirit, and interpersonal relationships indicate good reliability, whereas leadership, employee development, and social responsibility exhibit excellent reliability. The very high alpha coefficient for employee loyalty further confirms strong internal consistency, although such values may also suggest potential item redundancy, which can be further examined through item–total correlations and confirmatory factor analysis [42].

Table 3. Reliability test of each variable

Variable	Quantity of measurement items	Cronbach's alpha coefficient
Corporate Values	4	0.889
leadership	4	0.938
team spirit	4	0.897
interpersonal relationships	4	0.874
Employee Development	4	0.924
social responsibility	4	0.930
Employee loyalty	8	0.966

Validity analysis: Table 4 presents the results of the Kaiser–Meyer–Olkin (KMO) measure and Bartlett' s test of sphericity, which together assess the suitability of the data for factor analysis. The KMO value of 0.959 far exceeds the commonly recommended threshold of 0.60, indicating excellent sampling adequacy and suggesting that the correlations among variables are sufficiently compact to yield reliable and distinct factors [41, 43]. According to Kaiser' s classification, KMO values above 0.90 are considered "marvelous," reflecting a very strong common variance structure among the measurement items. In addition, Bartlett' s test of sphericity is statistically significant ($\chi^2 = 12{,}599.132$, $df = 496$, $p < 0.001$), rejecting the null hypothesis that the correlation matrix is an identity matrix. This result confirms that meaningful correlations exist among the variables and that factor analysis is appropriate. Collectively, these findings demonstrate that the dataset possesses excellent factorability and provides a robust empirical basis for subsequent exploratory and confirmatory factor analyses.

Table 4. KMO and Bartlett's test

KMO value.	0.959
Approximate chi square (x^2)	12599.132
Degrees of Freedom (df)	496
Significance (p)	0.000

From Table 5, it can be seen that the data is divided into 7 common factors, with variance explanatory rates of 20.362%, 10.92%, 10.826%, 10.414%, 9.895%, 9.272%, and 8.773%, respectively. After rotation, the cumulative variance explanatory rate is 80.460%, which is greater than 50%. The 7 common factors extracted from this data can explain 80.46% of the total data variability. The specific distribution of these 7 dimensions is consistent with the dimensions of each item in this questionnaire. And in the same dimension, the factor loading coefficients of all measurement items are all greater than 0.6, indicating that the validity of the scale is relatively high, the measurement item settings are reasonable, and there is no need to make changes or deletions. The loading coefficients of the seven factors are relatively large, indicating that the questionnaire design is reasonably divided into six dimensions: corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility.

Correlation Analysis: Table 6 presents the Pearson correlation coefficients among the study variables, revealing statistically significant positive relationships between all constructs at the 0.01 level (two-tailed). The correlations among the six corporate culture dimensions—corporate values (CV), leadership (LS), team spirit (TS), interpersonal relationships (IN), employee development (ED), and social responsibility (SR)—range from 0.482 to 0.632, indicating moderate associations. According to methodological guidelines, correlation coefficients below 0.80 suggest that the constructs are related yet empirically distinct, thereby alleviating concerns regarding multicollinearity [41]. Importantly, employee loyalty (EL) demonstrates moderately strong positive correlations with all six corporate culture dimensions, with coefficients ranging from 0.624 to 0.679, implying that more favorable perceptions of corporate culture are associated with higher levels of employee loyalty. These values exceed the threshold of 0.30, which is commonly interpreted as indicating a meaningful relationship in behavioral research, while remaining below levels that would indicate redundancy between constructs. Overall, the correlation matrix provides preliminary empirical support for the hypothesized positive relationships between corporate culture dimensions and employee loyalty and confirms that the variables are appropriate for subsequent multivariate analyses.

Regression Analysis: Table 7 reports the multiple regression results testing the effects of the six corporate culture dimensions on employee loyalty. The overall model demonstrates strong explanatory power, accounting for 65.7% of the variance in employee loyalty ($R^2 = 0.657$; Adjusted $R^2 = 0.652$), which indicates a substantial level of predictive accuracy in behavioral and organizational research [41]. All six predictors exhibit statistically significant positive effects on employee loyalty ($p < 0.01$), providing empirical support for the hypothesized direction of influence. Specifically, in terms of standardized coefficients, team spirit (TS) shows the strongest effect ($\beta = 0.227$, $t = 5.285$, $p < 0.001$), suggesting that cooperative norms and collective cohesion are the most salient cultural driver of loyalty in this manufacturing context. Corporate values ($\beta = 0.174$, $t = 4.300$, $p < 0.001$), employee development ($\beta = 0.169$, $t = 4.260$, $p < 0.001$), and social responsibility ($\beta = 0.167$, $t = 3.882$, $p < 0.001$) also exert comparatively strong positive influences, implying that value alignment, perceived growth opportunities, and organizational moral legitimacy are important mechanisms

fostering employees' intention to remain. Interpersonal relationships ($\beta = 0.154$, $t = 3.644$, $p < 0.001$) likewise contribute positively, highlighting the role of supportive workplace relations. Leadership remains significant but has the smallest standardized effect ($\beta = 0.123$, $t = 2.876$, $p = 0.004$), suggesting that leadership matters for loyalty, although its incremental contribution is weaker once other cultural dimensions are simultaneously considered. Overall, the results indicate that employee loyalty is jointly shaped by multiple cultural dimensions, with team-based cohesion and value and development-related perceptions emerging as particularly influential predictors.

Table 5. Factor analysis results of each measurement item in the questionnaire

Measurement ItemsFactor loading coefficient							
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**	**Factor 6**	**Factor 7**
CV1	0.161	0.116	0.079	0.15	0.77	0.119	0.175
CV2	0.297	0.179	0.139	0.149	0.754	0.209	0.13
CV3	0.268	0.161	0.153	0.182	0.754	0.088	0.169
CV4	0.287	0.26	0.176	0.205	0.717	0.131	0.186
LS1	0.258	0.76	0.217	0.195	0.18	0.14	0.161
LS2	0.299	0.771	0.173	0.203	0.175	0.132	0.143
LS3	0.22	0.784	0.158	0.233	0.196	0.174	0.189
LS4	0.261	0.793	0.161	0.241	0.194	0.23	0.145
TS1	0.235	0.241	0.19	0.155	0.132	0.738	0.191
TS2	0.338	0.161	0.253	0.194	0.16	0.701	0.233
TS3	0.421	0.188	0.223	0.224	0.097	0.651	0.22
TS4	0.198	0.118	0.12	0.107	0.18	0.772	0.151
IN1	0.395	0.131	0.181	0.241	0.229	0.062	0.682
IN2	0.08	0.195	0.119	0.077	0.198	0.265	0.749
IN3	0.195	0.306	0.218	0.141	0.159	0.224	0.7
IN4	0.431	0.04	0.098	0.145	0.174	0.193	0.708
ED1	0.193	0.132	0.818	0.191	0.099	0.216	0.094
ED2	0.188	0.221	0.808	0.149	0.145	0.177	0.135
ED3	0.329	0.201	0.743	0.181	0.133	0.129	0.154
ED4	0.331	0.109	0.796	0.173	0.162	0.126	0.165
SR1	0.283	0.182	0.201	0.742	0.232	0.096	0.234
SR2	0.271	0.199	0.188	0.727	0.203	0.235	0.14
SR3	0.279	0.263	0.181	0.803	0.153	0.152	0.108
SR4	0.243	0.246	0.202	0.788	0.185	0.158	0.097
EL1	0.670	0.271	0.191	0.252	0.18	0.273	0.114
EL2	0.761	0.201	0.209	0.173	0.179	0.221	0.207
EL3	0.753	0.209	0.224	0.216	0.203	0.228	0.122
EL4	0.781	0.194	0.18	0.172	0.254	0.183	0.109
EL5	0.768	0.186	0.188	0.207	0.185	0.15	0.194
EL6	0.802	0.151	0.204	0.24	0.209	0.13	0.222
EL7	0.783	0.184	0.222	0.191	0.164	0.205	0.209
EL8	0.757	0.219	0.204	0.142	0.223	0.185	0.163
variance explained ratio	20.362%	10.92%	10.826%	10.414%	9.895%	9.272%	8.773%
Cumulative variance explanation rate	20.362%	31.282%	42.107%	52.521%	62.416	71.688%	80.460%

Table 6. Correlation Matrix between Variables in the Questionnaire

	CV	LS	TS	IN	ED	SR	EL
CV	1						
LS	.569	1					
TS	.528	.583	1				
IN	.582	.565	.626	1			
ED	.482	.543	.574	.520	1		
SR	.576	.632	.572	.549	.565	1	
EL	.631	.639	.679	.646	.624	.655	1

At the 0.01 level (double tailed), the correlation is significant.

Table 7. Regression coefficients and significance test

Dimension	Non standardized coefficient		standardized coefficient	t	p	R^2	Adjusted R^2
	β	standard error	Beta				
CV	0.382	0.089	0.174	4.300	0.000	0.657	0.652
LS	0.245	0.085	0.123	2.876	0.004		
TS	0.458	0.087	0.227	5.285	0.000		
IN	0.322	0.088	0.154	3.644	0.000		
ED	0.342	0.080	0.169	4.260	0.000		
SR	0.350	0.090	0.167	3.882	0.000		

Dependent variable: Employee loyalty

Table 8. ANOVA of Gender of Respondents

ANOVA	Gender (mean ± standard deviation)		F	p
	male	female		
Corporate Values	15.27±4.010	15.19±3.788	0.03	0.862
leadership	15.60±4.255	15.25±4.579	0.508	0.476
team spirit	15.13±4.295	15.10±4.249	0.005	0.945
interpersonal relationships	15.48±4.132	15.44±4.178	0.009	0.924
Employee Development	15.43±4.172	14.95±4.494	1.029	0.311
social responsibility	15.57±4.188	15.93±3.955	0.609	0.436
Employee loyalty	31.98±8.755	32.11±8.370	0.017	0.895

One-way analysis of variance: One way ANOVA can help researchers determine whether the average differences between different groups are significant, thereby assisting researchers in interpreting and inferring experimental results. It refers to the method of verifying the impact of a single factor on research results to determine whether the tested factor will have a significant impact on the research results [44]. Table 8 presents the one-way ANOVA results comparing male and female respondents across the six corporate culture dimensions and employee loyalty. Overall, the findings indicate no statistically significant gender differences in any construct, as all p-values exceed the conventional significance threshold of 0.05 [45]. Specifically, the mean scores for corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility are highly comparable between male and female employees, and the F-statistics are uniformly small, suggesting minimal between-group variance relative to within-group variance. Likewise, employee loyalty shows nearly identical means for males (31.98 ± 8.755) and females (32.11 ± 8.370), with a non-significant result ($F = 0.017$, $p = 0.895$), indicating

that loyalty levels are broadly consistent across genders in this sample. From an organizational perspective, these results imply that employees' perceptions of corporate culture and their loyalty are not systematically differentiated by gender, suggesting that the cultural environment and loyalty formation mechanisms operate similarly for male and female employees within this manufacturing enterprise.

Table 9 reports the one-way ANOVA results assessing whether respondents' perceptions of the six corporate culture dimensions and employee loyalty differ across age groups. Because no respondents were aged 20 and under or 21–25, the comparisons are effectively conducted among the three represented groups (26–35, 36–45, and 46 and above). The results show that age is not a significant source of variance in any construct, as all p-values are well above the conventional threshold of 0.05 [45]. Specifically, corporate values ($F = 0.422$, $p = 0.656$), leadership ($F = 0.138$, $p = 0.871$), team spirit ($F = 0.680$, $p = 0.507$), interpersonal relationships ($F = 1.295$, $p = 0.275$), employee development ($F = 0.337$, $p = 0.714$), and social responsibility ($F = 0.048$, $p = 0.953$) exhibit no statistically meaningful differences across age categories. Employee loyalty likewise remains stable across age groups ($F = 0.043$, $p = 0.958$), with highly similar mean scores. Collectively, these findings suggest that employees' cultural perceptions and loyalty levels are broadly consistent across the age structure represented in this manufacturing enterprise, implying that the culture–loyalty relationship operates similarly among mid-career and senior employees within the organization.

Table 9. Analysis of Variance for Age of Respondents

ANOVA	Age (mean ± standard deviation)					F	P
	20 years old and under	21~25	26~35	36~45	46 years old and above		
Corporate Values	0	0	15.57±3.986	15.35±3.746	15.07±4.113	0.422	0.656
leadership	0	0	15.59±4.428	15.36±4.263	15.6±4.418	0.138	0.871
team spirit	0	0	14.55±4.566	15.07±4.244	15.33±4.23	0.68	0.507
interpersonal relationships	0	0	15.24±4.227	15.87±4.091	15.18±4.152	1.295	0.275
Employee Development	0	0	14.94±4.478	15.21±4.288	15.46±4.201	0.337	0.714
social responsibility	0	0	15.53±4.575	15.66±4.007	15.73±4.112	0.048	0.953
Employee loyalty	0	0	31.73±8.929	32.13±8.33	31.99±8.867	0.043	0.958

Table 10 reports the one-way ANOVA results examining whether perceptions of the six corporate culture dimensions and employee loyalty differ across respondents' educational levels. Because no respondents reported postgraduate education, the effective comparisons are among four groups (junior high school and below, high school/vocational school, associate degree, and undergraduate). The findings indicate no statistically significant differences across educational levels for any construct, as all p-values exceed the conventional significance criterion of 0.05 [45]. Specifically, corporate values ($F = 0.979$, $p = 0.403$), leadership ($F = 0.694$, $p = 0.556$), team spirit ($F = 0.449$, $p = 0.718$), interpersonal relationships ($F = 0.379$, $p = 0.768$), employee development ($F = 0.468$, $p = 0.705$), and social responsibility ($F = 0.838$, $p = 0.474$) do not vary meaningfully by education. Employee loyalty similarly shows no significant group differences ($F = 1.168$, $p = 0.322$), despite modest variation in mean scores. Overall, these results suggest that employees' evaluations of corporate culture and their loyalty are broadly consistent across educational strata within this manufacturing enterprise, implying that educational attainment does not systematically differentiate cultural perceptions or loyalty formation in this sample.

Table 11 presents the one-way ANOVA results assessing whether respondents' perceptions of the six corporate culture dimensions and employee loyalty differ by years of work experience. As no respondents fell into the "within 2 years" category, the effective comparisons are among the remaining four tenure groups (2–5 years, 5–10 years, 10–20 years, and over 20 years). Overall, the results indicate that work experience does not produce statistically significant differences in any construct, as all p-values exceed the conventional threshold of 0.05 [45]. Specifically, corporate values ($F = 1.816$, $p = 0.144$), leadership ($F = 0.431$, $p = 0.731$), team spirit ($F = 1.190$, $p = 0.313$), interpersonal relationships ($F = 1.406$, $p = 0.241$), employee development ($F = 0.867$, $p = 0.458$), and social responsibility ($F = 1.784$, $p = 0.150$) show no statistically meaningful variation across tenure groups. Employee loyalty likewise remains stable across work-experience categories ($F = 1.031$, $p = 0.379$), despite modest mean differences. Collectively, these findings suggest that employees' cultural perceptions and loyalty levels are broadly consistent across tenure groups within this organization, implying that the culture–loyalty linkage operates similarly among employees with different lengths of work experience in Chengde Lulu.

Table 12 presents the one-way ANOVA results comparing respondents across different job positions. Overall, the findings indicate no statistically significant differences in perceptions of corporate culture dimensions or employee loyalty across job categories, as all p-values exceed the conventional significance level of 0.05. Although modest mean variations are observed—particularly for

corporate values, employee development, and employee loyalty—the corresponding F-statistics do not reach statistical significance, suggesting that these differences are not systematic. Collectively, the results imply that employees' evaluations of corporate culture and their loyalty are broadly consistent across production, technical, administrative, financial, and sales positions, indicating that job position does not substantially differentiate cultural perceptions or loyalty levels within the organization.

Table 10. ANOVA of Educational Level of Respondents

ANOVA	Educational level (mean ± standard deviation)						
	junior high 2 years school and below	High school or vocational school	associate degree	undergraduate	postgraduate	F	P
Corporate Values	14.93±3.946	15.11±3.912	15.8±3.637	15.19±4.553	0	0.979	0.403
leadership	15.69±4.374	15.57±4.202	15±4.584	15.91±4.203	0	0.694	0.556
team spirit	15.19±4.293	15.11±4.03	14.8±4.662	15.62±4.115	0	0.449	0.718
interpersonal relationships	15.45±4.157	15.24±4.178	15.55±4.058	15.94±4.24	0	0.379	0.768
Employee Development	15.56±4.312	15.00±4.218	15.48±4.096	15.08±4.665	0	0.468	0.705
social responsibility	15.95±4.142	15.22±4.314	15.92±3.762	15.77±4.273	0	0.838	0.474
Employee loyalty	33.20±8.243	31.34±8.658	32.1±8.575	31.09±9.435	0	1.168	0.322

Table 11. Analysis of Variance of Respondent's Work Experience

ANOVA	Years of work experience (mean ± standard deviation)						
	Within 2 years	2-5 Years	5-10 Years	10-20 Years	Over Year 20	F	P
Corporate Values	0	17.33±2.338	14.26±4.148	15.62±3.824	14.96±4.04	1.816	0.144
leadership	0	15.33±5.203	14.53±4.742	15.68±4.356	15.45±4.298	0.431	0.731
team spirit	0	14.83±2.994	13.63±5.069	14.97±4.469	15.43±4.039	1.19	0.313
interpersonal relationships	0	15.83±3.189	14.11±4.864	15.85±4.003	15.24±4.207	1.406	0.241
Employee Development	0	16±3.578	14±4.096	15.54±4.182	15.19±4.379	0.867	0.458
social responsibility	0	15.33±4.633	14.32±4.619	16.15±3.812	15.41±4.3	1.784	0.15
Employee loyalty	0	33.83±7.757	28.84±8.952	32.35±8.485	31.99±8.771	1.031	0.379

Table 12. Analysis of Variance of Respondents' Job Positions

ANOVA	Job position (mean ± standard deviation)						
	production personnel	technical personnel	Administrative management personnel	financial personnel	salesperson	F	P
Corporate Values	15.06±3.8	16.46±3.283	15.8±3.915	11.67±4.926	15.3±4.1	2.128	0.077
leadership	15.54±4.364	15.43±4.032	15.55±4.334	14.5±3.271	15.5±4.452	0.085	0.987
team spirit	15.21±4.302	15.75±3.513	15.55±4.006	12±4.472	14.99±4.379	1.06	0.376
interpersonal relationships	15.59±4.243	16.04±3.271	15.65±4.404	12.83±5.037	15.32±4.104	0.842	0.499
Employee Development	15.32±4.191	15.96±3.543	14.7±5.017	10.33±2.733	15.39±4.326	2.354	0.053
social responsibility	15.83±4.09	16.36±3.983	16.15±2.777	12.83±4.622	15.45±4.273	1.161	0.327
Employee loyalty	32.32±8.369	33.57±8.144	30.6±7.943	23.00±9.252	31.93±8.926	2.077	0.083

According to Table 13, the one-way ANOVA method was used to examine the impact of respondents' salary income on dimensions such as corporate values, leadership, team spirit, interpersonal relationships, employee development, social responsibility, and employee loyalty. The results showed that all p-values were higher than 0.05 and there was no significant difference. This indicates that in this survey, the impact of respondents' salary income on corporate culture and employee loyalty is relatively small, and has no significant effect on the survey results.

Table 13. Analysis of Variance of Respondent's Salary Income

ANOVA	Job position (mean ± standard deviation)						
	Below 2000 yuan	2000~4000 yuan	4000~6000 yuan	6000~8000 yuan	Above 8000 yuan	F	P
Corporate Values	12.67±3.215	15.34±3.882	15.12±3.943	15.44±4.744	15.33±3.724	0.401	0.808
leadership	9.67±5.508	15.52±4.303	15.57±4.377	16.00±3.786	14.17±6.113	1.594	0.175
team spirit	10.67±4.041	15.25±4.126	14.83±4.501	15.96±3.867	15.33±5.922	1.273	0.28
interpersonal relationships	10.00±3.464	15.28±4.299	15.66±3.855	16.48±4.001	17.17±3.125	2.155	0.073
Employee Development	14.00±3.606	15.34±4.11	15.37±4.406	14.76±4.465	14.33±7.005	0.259	0.904
social responsibility	12.33±4.041	15.64±4.023	15.69±4.218	16.68±3.838	14.33±6.47	1.029	0.392
Employee loyalty	24.67±7.572	32.56±8.316	31.04±9.152	33.68±7.521	30.17±11.669	1.512	0.198

DISCUSSION

RO1: To explore the dimensions included in corporate culture.

This study empirically identified and validated six core dimensions of corporate culture, corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility, within a plant-based protein beverage manufacturing enterprise. The factor-analytic results confirmed that corporate culture is not a unidimensional construct but a structured, multidimensional system composed of distinct yet interrelated components. This finding supports the central proposition of Corporate Culture Theory that culture operates as an integrated organizational environment shaping shared meanings and behavioral expectations [11].

The identified dimensions are broadly consistent with prior corporate culture research, while also extending existing frameworks. Denison, Nieminen [46]' s cultural framework emphasize mission, involvement, consistency, and adaptability as key cultural domains. Similarly, Monyai, Mitonga-Monga [47] argue that organizational culture comprises value orientation, leadership enactment, and social interaction patterns that jointly influence employee attitudes. This study aligns with these perspectives by confirming the importance of values, leadership, and relational dynamics, but advances the literature by explicitly differentiating team spirit and interpersonal relationships as independent cultural dimensions, rather than subsuming them under a single involvement construct. This distinction appears particularly meaningful in manufacturing contexts characterized by high task interdependence and long-term collaboration. Ajzen [48] proposed a five-dimensional model emphasizing leadership behavior, employee development, interpersonal harmony, innovation orientation, and social responsibility. This study confirmed the relevance of most of these elements but extends the model in two important ways. First, the inclusion of corporate values restores the normative core of corporate culture, echoing arguments that value systems constitute the foundation upon which behavioral and relational practices are built [11]. Second, by treating leadership as an independent and central dimension, the model better reflects the governance structure of Chinese enterprises, where leaders play a decisive role in translating values into daily practices and shaping employees' cultural perceptions [49].

Overall, this study contribute to corporate culture research in three ways. First, they empirically validate a six-dimensional corporate culture structure that integrates normative, relational, developmental, and social components. Second, they extend existing models by incorporating values and leadership more explicitly, enhancing theoretical completeness and contextual relevance. Third, they provide evidence that this multidimensional structure is stable across employee subgroups, supporting its applicability as a general diagnostic framework for manufacturing enterprises. Collectively, these contributions enrich the theoretical understanding of corporate culture and establish a solid foundation for examining its effects on employee-related outcomes in subsequent analyses.

RO2: To examine the impact of corporate culture on employee loyalty through empirical analysis and to examine whether employee loyalty differs significantly across demographic characteristics, including gender, age, and salary level.

This study empirically demonstrated that corporate culture exerted a significant and substantial influence on employee loyalty, while employee loyalty did not differ significantly across key demographic characteristics, including gender, age, education level, work experience, job position, and salary income. Taken together, these findings indicated that organizational cultural factors played a more decisive role

than individual demographic attributes in shaping employee loyalty within a traditional manufacturing enterprise.

The regression analysis revealed that all six dimensions of corporate culture, corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility, had statistically significant positive effects on employee loyalty. The model exhibited strong explanatory power, suggesting that employees' loyalty was largely shaped by their evaluations of the organizational environment rather than by isolated personal or demographic factors. This result was consistent with Corporate Culture Theory, which posits that sustained exposure to organizational values, norms, and practices cultivates employees' affective attachment and intention to remain with the organization [11].

Among the six dimensions, team spirit emerged as the strongest predictor of employee loyalty. This finding aligned with prior studies emphasizing that collective cohesion and cooperative norms are particularly salient in manufacturing contexts, where task interdependence and coordinated production processes heighten the importance of teamwork [50]. The prominence of team spirit suggested that employee loyalty in this enterprise was deeply embedded in daily collaborative experiences, supporting the view that loyalty was socially constructed through shared work practices rather than being derived solely from formal managerial systems.

Corporate values, employee development, and social responsibility also showed relatively strong positive effects on employee loyalty. These results were consistent with value-congruence and social exchange perspectives, which argue that employees tend to remain loyal when organizational values align with their own beliefs, when long-term developmental opportunities are perceived, and when the organization demonstrates moral legitimacy and social responsibility [51, 52]. In contrast, although statistically significant, leadership exhibited a comparatively weaker standardized effect once other cultural dimensions were considered simultaneously. This pattern suggested that leadership functioned more as a transmission mechanism for values and relational norms rather than as an independent driver of loyalty, a conclusion supported by recent leadership, culture integration research [53].

This study investigated whether employee loyalty varied across demographic characteristics. The one-way ANOVA results consistently showed no statistically significant differences in employee loyalty across gender, age, education level, work experience, job position, or salary income. This finding challenged traditional assumptions that demographic factors such as tenure or compensation level constituted primary determinants of loyalty. Instead, the results supported contemporary organizational behavior research suggesting that loyalty was increasingly shaped by shared organizational experiences rather than individual background characteristics, particularly in mature manufacturing enterprises with standardized employment structures [54].

Overall, this study confirmed that employee loyalty was primarily driven by multidimensional corporate culture, with relational and value-oriented dimensions playing particularly prominent roles. Second, this study demonstrated that demographic characteristics did not significantly differentiate loyalty levels, underscoring the dominant influence of organizational context over individual background factors.

Implication of theories: This study contributed to the theoretical understanding of employee loyalty by integrating Corporate Culture Theory and Employee Loyalty Theory to examine how multidimensional corporate culture influenced employee loyalty within a traditional manufacturing enterprise. By empirically testing a localized corporate culture framework and its effects on loyalty, the study provided a more comprehensive explanation of how organizational context shaped employees' attitudinal and behavioral outcomes.

Corporate Culture Theory posits that shared values, norms, and practices within an organization shape employees' perceptions, behaviors, and long-term attachment to the organization [11]. In the context of this study, corporate culture was operationalized as a multidimensional construct encompassing corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility. The empirical findings supported this theoretical premise by demonstrating that all six dimensions of corporate culture exerted significant positive effects on employee loyalty. This result reinforced the view that corporate culture functioned as a foundational mechanism through which organizations influenced employees' psychological identification and retention intentions.

Employee Loyalty Theory emphasizes that loyalty is not merely a function of economic exchange but is deeply rooted in employees' emotional attachment, perceived organizational support, and value congruence [17]. This study aligned with this perspective, revealing that cultural dimensions related to collective interaction and long-term development played a prominent role in fostering employee loyalty, particularly team spirit, corporate values, and employee development. This extended existing loyalty research by empirically confirming that loyalty was shaped by employees' holistic evaluations of the organizational environment rather than by isolated managerial practices or compensation-based incentives.

Moreover, the study revealed differentiated effects among the corporate culture dimensions, with team spirit emerging as the strongest predictor of employee loyalty. This study diverged from leadership-centric models emphasized in earlier organizational studies and suggested that, in manufacturing settings characterized by high task interdependence, collective cohesion and cooperative norms exerted a stronger influence on loyalty than hierarchical leadership alone. This study enriched Corporate Culture Theory by highlighting the contextual salience of relational and collective cultural elements, particularly in production-oriented enterprises.

In addition, this study demonstrated that employee loyalty did not differ significantly across demographic characteristics such as gender, age, education level, work experience, job position, and salary income. This study challenged demographic-deterministic assumptions prevalent in some strands of Employee Loyalty Theory, which traditionally emphasized tenure, income, or age as primary loyalty differentiators. Instead, the results suggested that when corporate culture was coherent and strongly embedded, it exerted a homogenizing effect on employees' loyalty perceptions, thereby elevating organizational culture above individual demographic factors in explaining loyalty formation.

Taken together, by integrating Corporate Culture Theory and Employee Loyalty Theory, this study offered a theoretically grounded framework illustrating how organizational cultural attributes served as antecedents of employee loyalty. It extended existing theories by validating a localized and parsimonious corporate culture structure, demonstrating the differentiated influence of cultural dimensions on loyalty, and challenging the explanatory dominance of demographic characteristics. These contributions enriched the theoretical discourse on corporate culture and employee loyalty and expanded their applicability to traditional manufacturing enterprises in emerging economies.

Implication to practice: This study offered several practical implications for managers and policymakers in manufacturing-oriented beverage enterprises. First, this study indicated that employee loyalty was primarily shaped by multidimensional corporate culture rather than by demographic characteristics. Therefore, managers should prioritize systematic corporate culture development as a strategic tool for enhancing employee retention, instead of relying solely on compensation adjustments or demographic-based management practices.

Second, as team spirit emerged as the strongest predictor of employee loyalty, organizations should actively cultivate collaborative work environments by promoting teamwork, cross-departmental cooperation, and collective goal setting. In production-oriented enterprises, strengthening informal cooperation mechanisms and mutual support among employees may be particularly effective in fostering long-term loyalty.

Third, the significant effects of corporate values, employee development, and social responsibility suggested that employees responded positively to value alignment, growth opportunities, and organizational moral commitment. Managers should therefore articulate clear corporate values, invest in continuous training and career development pathways, and integrate social responsibility initiatives into daily operations to reinforce employees' emotional attachment to the organization.

Fourth, although leadership exhibited a relatively weaker direct effect compared to other cultural dimensions, it remained a significant driver of employee loyalty. This implied that leaders should function not only as decision-makers but also as cultural role models, consistently transmitting organizational values and supporting a positive relational climate.

Finally, the absence of significant differences in employee loyalty across gender, age, education, work experience, and income levels indicated that a unified cultural strategy could be effectively applied across the workforce. Enterprises may thus adopt inclusive and standardized cultural management practices that foster shared identity and commitment among employees at all organizational levels. Overall, these practical implications underscored the importance of leveraging corporate culture as a sustainable and non-financial mechanism for strengthening employee loyalty in traditional manufacturing enterprises.

CONCLUSION

This study investigated the influence of corporate culture on employee loyalty in a plant-based protein beverage manufacturing enterprise, using Chengde Lulu as the empirical context. This study demonstrated that corporate culture was a multidimensional construct comprising corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility. This study confirmed that all six dimensions exerted significant positive effects on employee loyalty, with team spirit emerging as the most influential factor. Moreover, employee loyalty did not differ significantly across demographic characteristics, including gender, age, education level, work experience, job position, and salary income, indicating that organizational culture played a more decisive role than individual attributes in shaping employee loyalty.

Despite these contributions, this study was subject to several limitations. First, the data were collected from a single manufacturing enterprise, which may restrict the generalizability of the findings to other industries or organizational contexts. Second, the cross-sectional research design limited the ability to infer causal relationships between corporate culture and employee loyalty. Third, the study relied on self-reported questionnaire data, which may be subject to common method bias and social desirability effects.

Future research could address these limitations in several ways. Comparative studies across multiple enterprises or industries could be conducted to enhance external validity and examine whether the identified cultural dimensions operate similarly in different organizational contexts. Longitudinal or mixed-method research designs could be employed to capture the dynamic evolution of corporate culture and its long-term effects on employee loyalty. Additionally, future studies could incorporate mediating or moderating variables to further unpack the mechanisms through which corporate culture influences employee loyalty, such as organizational commitment, job satisfaction, or psychological safety.

Knowledge Contribution: This study made several meaningful contributions to the existing body of knowledge on corporate culture and employee loyalty, particularly

within the context of traditional manufacturing enterprises in emerging economies.

First, this study advanced the conceptualization of corporate culture by developing and empirically validating a six-dimensional, localized measurement framework that integrated corporate values, leadership, team spirit, interpersonal relationships, employee development, and social responsibility. Compared with classical Western models that are often abstract or measurement-intensive, this framework demonstrated strong psychometric properties while remaining parsimonious and context-sensitive. As such, the study contributed new knowledge by bridging the gap between theoretical completeness and empirical operability, thereby enriching the localization of Corporate Culture Theory.

Second, the study extended Employee Loyalty Theory by empirically demonstrating that employee loyalty was primarily driven by organizational-level cultural factors rather than demographic characteristics. Contrary to demographic-deterministic perspectives that emphasize age, tenure, or income as key loyalty differentiators, the findings showed that a coherent and embedded corporate culture exerted a dominant and homogenizing influence on loyalty formation. This insight contributed to theory by repositioning employee loyalty as a context-dependent, socially embedded outcome rather than an individual attribute shaped mainly by personal background.

Third, the study clarified the differentiated effects of corporate culture dimensions on employee loyalty. By identifying team spirit as the most influential predictor, followed by corporate values, employee development, and social responsibility, the research moved beyond leadership-centric explanations prevalent in earlier studies. This contribution refined theoretical understanding by highlighting the central role of collective interaction and relational cohesion in loyalty formation, particularly in manufacturing environments characterized by task interdependence and collective production.

Finally, by integrating Corporate Culture Theory and Employee Loyalty Theory within a single empirical framework, this study expanded the applicability of both theories to manufacturing-oriented beverage enterprises, a context that has been underrepresented in prior research. The findings provided robust empirical evidence that corporate culture functions not merely as a symbolic construct but as a strategic organizational resource with direct implications for workforce stability and sustainable development.

Collectively, these contributions advanced theoretical knowledge by localizing corporate culture measurement, redefining the drivers of employee loyalty, and extending existing theories to a new industrial and cultural context.

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