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A Multi-Dimensional Examination of the Impact of Humble Leadership on Employee Innovation

Chenming Lu

Abstract

This study investigates the impact of humble leadership on employee innovation in contemporary organizational settings. Employing a multi-dimensional analysis approach, data was collected through questionnaires from a sample of employees across various industries. Descriptive statistical analysis revealed significant findings regarding the demographics and characteristics of the respondents. Subsequently, deviation tests and correlation analyses were conducted to ensure the validity of the data. Hypothesis testing through regression analysis confirmed the positive and significant effects of humble leadership on employee innovation, organizational identity, and other relevant factors. Additionally, mediation and moderation analyses elucidated the complex interplay between leadership, individual attributes, and organizational outcomes. The results contribute to a deeper understanding of the role of humble leadership in fostering innovation and organizational development. Moreover, they offer practical insights for leaders and organizations aiming to cultivate a culture of innovation and excellence in the workplace.

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About Author (s)

Chenming Lu, Centre of Postgraduate Studies, Asia Metropolitan University (AMU), Malaysia.

1. Introduction

1.1 Background of Study

Economic globalization and technological innovation are pivotal in driving national and regional economic progress. The Yangtze River Delta, a critical economic hub in China, significantly enhances regional competitiveness through technological enterprise innovation and employee innovative behavior. Investigating the interplay between leadership style, employee psychology, and innovation within these enterprises is essential for optimizing management and boosting innovation (Sun & Zuo, 2022). Humble leadership, characterized by leaders' self-awareness, openness to learning, and respect for subordinates, has garnered increasing academic and practical attention. It is believed to stimulate employee motivation and creativity, enhancing organizational performance. In the Yangtze River Delta's tech enterprises, humble leadership is crucial for fostering innovation and maintaining a competitive edge (Sun et al., 2024). However, employees face uncertainties in rapidly evolving markets, which can hinder innovation. Uncertainty avoidance, a psychological tendency to resist change, may negatively impact innovation (Sun, 2022; 2023). Organizational identity, reflecting employees' sense of belonging and loyalty, connects leadership style, employee psychology, and innovation. Strong organizational identity encourages active participation in innovation, benefiting the organization (Sun & Zuo, 2023). In the digital economy era, enterprises must innovate to survive amid dynamic external environments and fierce competition. Innovation is the key to sustainable development and adapting to business changes. Spontaneous and creative employee behavior is vital for achieving organizational innovation, and recruitment and cultivation of employees are critical to stimulating innovation potential and maintaining organizational vitality (Sun & Zuo, 2024). Early organizational socialization theories focused on new employees' learning processes, neglecting the importance of their interactions within the organization. Leaders, as key information sources, influence new employees' adaptation and performance, emphasizing the need for leadership styles that promote equality and interaction. Humble leadership, fostering mutual growth and two-way communication, can enhance new employees' innovation and socialization (Sun et al., 2024). In the context of rapidly changing environments, humble leadership can effectively promote employee innovation. It fosters self-efficacy and insider identity, enhancing employees' confidence and organizational identification, thereby supporting innovative behaviors. Leaders must guide employees to propose and implement creative ideas, addressing the gap in understanding the indirect effects of humble leadership on innovation (Sun & Zuo, 2023).

This study explored the relationship between humble leadership and new employees' innovation performance, focusing on the role of self-concept, which includes self-evaluation (role breadth self-efficacy) and self-definition (insider identity perception). Humble leadership's openness and respect help employees develop self-concept, driving innovative behavior. Organizational identification mediates this relationship, influenced by uncertainty avoidance, which varies among individuals and affects their response to leadership and innovation (Sun & Zuo, 2023).

1.2 Research Questions and Objectives

This study aims to address the following research questions:

(1) How does humble leadership influence the innovative behavior of employees in technology enterprises in the Yangtze River Delta region?
(2) What is the impact of organizational uncertainty avoidance on employee innovation behavior?

(3) Does organizational identity play a mediating role in the impact of humble leadership and uncertainty avoidance on employee innovation behavior?
(4) How can leadership style and organizational culture be adjusted to maximize employee innovative behavior?

These questions are essential for providing empirical evidence and management recommendations to technology enterprises in the Yangtze River Delta region to stimulate employee innovation behavior effectively. This study empirically examined the positive impact of humble leadership on employee innovative behavior. Previous research has recognized the positive relationship between humble leadership and employee innovation behavior (Sun & Zuo, 2024). However, further empirical analysis is needed to understand the mechanisms underlying this relationship. Furthermore, this study explored the mediating role of organizational identification between humble leadership and employee innovative behavior. Previous literature has suggested that organizational identification can mediate the impact of leadership styles on employee behavior (Law et al., 2019). This study aims to empirically examine this mediating mechanism. In addition, the study investigated the mediating role of uncertainty avoidance between humble leadership and organizational identification. Understanding how uncertainty avoidance influences employee behavior is crucial in the context of rapidly changing market environments (Sun & Zuo, 2022). This study will explore the interplay between uncertainty avoidance, humble leadership, and organizational identification.

1.5 Significance of Research

This research contributes to theoretical understanding by exploring how individual and organizational factors, such as leadership styles, influence employee innovation behavior. Drawing from various theoretical perspectives, including social exchange theory and social identity theory, this study will provide insights into the complex dynamics shaping employee behavior within organizations (Sun & Zuo, 2024). By examining the relationships between humble leadership, organizational identity, uncertainty avoidance, and employee innovation behavior, this study enriches the existing literature on organizational behavior. Practically, this study offers valuable insights for organizations seeking to promote employee innovation. By identifying the positive impact of humble leadership on employee innovative behavior, organizations can prioritize leadership development programs that cultivate humility traits among leaders (Sun & Zuo, 2023). Moreover, understanding the mediating roles of organizational identification and uncertainty avoidance provides actionable strategies for creating a conducive work environment that fosters innovation (Law et al., 2019). These findings empower managers to implement effective leadership practices and organizational strategies to maximize employee innovation potential and enhance organizational competitiveness.

2. Literature Review

2.1 Employee Innovation Behavior

Employee innovation behavior, a crucial aspect of organizational performance, refers to the extent to which employees engage in activities aimed at generating novel ideas, processes, or products within the organizational context (West & Farr, 1990). It encompasses activities such as idea generation, creativity, problem-solving, and the implementation of new concepts or processes (Scott & Bruce, 1994). Scholars have highlighted the significance of employee innovation behavior for organizational success and competitiveness (Zhou & Shalley, 2003). It is considered essential for fostering adaptability, resilience, and sustainable growth in dynamic environments (Shipton et al., 2006). Furthermore, employee innovation behavior contributes

to the development of a culture of continuous improvement and innovation within organizations (Amabile et al., 1996). Research indicates that various factors influence employee innovation behavior. Individual-level factors, such as cognitive abilities, personality traits, and motivation, play a crucial role in determining an individual's propensity to engage in innovative activities (Anderson et al., 2014; Scott & Bruce, 1994). Moreover, organizational factors, including leadership styles, organizational culture, and support mechanisms, significantly impact employees' willingness and ability to innovate (Zhou & Shalley, 2003).

The relationship between leadership styles and employee innovation behavior has received considerable attention in the literature. Transformational leadership, characterized by inspirational motivation, intellectual stimulation, and individualized consideration, has been positively associated with employee innovation behavior (Amabile et al., 2004). Similarly, humble leadership, characterized by self-awareness, openness to feedback, and willingness to empower others, has been found to foster an environment conducive to innovation (Ou et al., 2014). In conclusion, employee innovation behavior is a multifaceted construct influenced by individual and organizational factors. Understanding the determinants of employee innovation behavior is essential for organizations seeking to cultivate a culture of innovation and maintain a competitive edge in today's rapidly changing business environment.

2.2 Humble Leadership

Humble leadership, an emerging leadership style in organizational research, is characterized by leaders' ability to maintain a modest and self-effacing demeanor while demonstrating a commitment to the growth and development of their followers (Owens et al., 2013). It involves acknowledging one's limitations, soliciting feedback, and empowering others to contribute to the collective success of the organization (Owens & Hekman, 2012). Research suggests that humble leadership has a positive impact on various organizational outcomes, including employee engagement, job satisfaction, and organizational commitment (Owens et al., 2013). By fostering an environment of psychological safety and trust, humble leaders create opportunities for open communication, collaboration, and innovation (Ou et al., 2014). Humble leadership is closely linked to servant leadership, as both styles emphasize humility, empathy, and a focus on serving the needs of others (van Dierendonck, 2011). However, humble leadership differs in its emphasis on self-awareness and a willingness to share power and credit with others (Owens et al., 2013). Moreover, humble leadership has been shown to mitigate the negative impact of hierarchical organizational structures and promote a culture of inclusivity and diversity (Owens & Hekman, 2016). By acknowledging the contributions of all members of the organization, regardless of their hierarchical position, humble leaders create a sense of belonging and psychological safety (Owens et al., 2013). In conclusion, humble leadership represents a unique approach to leadership that prioritizes humility, empathy, and collaboration. By fostering an environment of trust and psychological safety, humble leaders empower their followers to reach their full potential and contribute to the success of the organization.

2.3 Uncertainty Avoidance

Uncertainty avoidance, a cultural dimension identified by Hofstede (1980), refers to the extent to which individuals within a society feel uncomfortable with ambiguity, uncertainty, and change, and seek to minimize these factors through established norms, rules, and rituals (Hofstede, 1980). In organizational settings, uncertainty avoidance influences decision-making processes, risk-taking behaviors, and the adoption of innovative practices (Taras et al., 2019). High uncertainty avoidance cultures tend to favor stability, structure, and adherence to traditional methods, while low uncertainty avoidance cultures are more open to change,

experimentation, and innovation (Taras et al., 2019). Research has shown that organizations operating in high uncertainty avoidance cultures may struggle to adapt to rapidly changing environments and may be less likely to embrace innovative ideas or practices (Taras et al., 2019). Moreover, uncertainty avoidance can influence leadership styles and employee behaviors within organizations. Leaders in high uncertainty avoidance cultures may exhibit a more directive and authoritarian approach, emphasizing control and predictability, while leaders in low uncertainty avoidance cultures may adopt a more participative and inclusive leadership style, encouraging autonomy and flexibility (Taras et al., 2019). The impact of uncertainty avoidance on employee innovation behavior has been explored in various organizational contexts. For example, in a study by Taras et al. (2019), it was found that employees in high uncertainty avoidance cultures were less likely to engage in innovative behaviors compared to those in low uncertainty avoidance cultures. This suggests that cultural factors, such as uncertainty avoidance, play a significant role in shaping employee attitudes and behaviors towards innovation. In conclusion, uncertainty avoidance is an important cultural dimension that influences decision-making, leadership styles, and employee behaviors within organizations. By understanding the impact of uncertainty avoidance on employee innovation behavior, organizations can better tailor their strategies and practices to foster a culture of innovation and adaptability.

2.4 Organizational Identification

Organizational identification refers to the extent to which individuals perceive themselves as members of an organization and identify with its values, goals, and objectives (Ashforth & Mael, 1989). It reflects the psychological attachment and sense of belongingness that employees feel towards their organization (Ashforth & Mael, 1989). Organizational identification plays a crucial role in shaping employee attitudes, behaviors, and performance within the workplace (Dutton et al., 1994). Research has shown that organizational identification is positively associated with various desirable outcomes, including job satisfaction, organizational commitment, and employee engagement (Dutton et al., 1994). When employees identify strongly with their organization, they are more likely to demonstrate pro-social behaviors, such as helping coworkers, supporting organizational initiatives, and advocating for the organization (Dutton et al., 1994). Moreover, organizational identification can act as a mediating variable in the relationship between leadership styles and employee behaviors. For example, humble leadership, characterized by humility, openness, and inclusiveness, can enhance employees' sense of belongingness and identification with the organization (Owens & Hekman, 2012). Employees who perceive their leaders as humble are more likely to identify with the organization and demonstrate greater commitment and loyalty (Owens & Hekman, 2012). Similarly, organizational identification can mediate the relationship between organizational culture and employee outcomes. A strong organizational culture that emphasizes shared values, norms, and traditions fosters a sense of belongingness and identification among employees (Dutton et al., 1994). This, in turn, promotes positive attitudes and behaviors that contribute to organizational effectiveness and performance. In conclusion, organizational identification is a critical construct that influences employee attitudes, behaviors, and performance within organizations. By fostering a strong sense of identification among employees, organizations can enhance employee engagement, commitment, and loyalty, ultimately contributing to their success and competitiveness in the marketplace.

2.5 Management Theory

In the context of organizational management and innovation, several theoretical frameworks provide insights into understanding the factors influencing employee innovation behavior and

organizational success. These theories include Input-output theory, Theory of Technological Innovation, Core Competitiveness theory, and Human Capital theory.

Input-output theory focuses on the relationship between inputs and outputs within organizations. According to this theory, inputs such as resources, knowledge, and skills are transformed through organizational processes into outputs such as products, services, and innovations (Lewin & Stephens, 1994). In the context of employee innovation behavior, Input-output theory emphasizes the importance of providing employees with the necessary resources, support, and opportunities for creativity and innovation.

Theory of Technological Innovation examines the process by which new technologies are developed, adopted, and diffused within organizations and society. Rooted in the work of scholars such as Schumpeter (1934) and Rogers (2003), this theory highlights the role of innovation in driving organizational growth, competitiveness, and sustainability. In the context of employee innovation behavior, the Theory of Technological Innovation underscores the significance of fostering a culture that encourages experimentation, risk-taking, and continuous learning.

Core Competitiveness theory posits that sustainable competitive advantage stems from the unique combination of resources, capabilities, and strategic assets possessed by an organization (Prahalad & Hamel, 1990). Core Competitiveness theory emphasizes the importance of leveraging internal strengths and distinctive capabilities to create value for customers and outperform competitors. In the context of employee innovation behavior, this theory underscores the role of leadership, organizational culture, and strategic alignment in nurturing an environment conducive to innovation.

Human Capital theory focuses on the role of human resources in driving organizational performance and innovation. Developed by scholars such as Becker (1964) and Schultz (1961), this theory highlights the importance of investing in employee knowledge, skills, and abilities to enhance productivity and competitiveness. Human Capital theory suggests that organizations can stimulate innovation by recruiting, developing, and retaining talented employees who possess the requisite expertise and creativity.

In summary, these management theories provide valuable insights into the drivers of employee innovation behavior and organizational success. By understanding the interplay between inputs and outputs, the dynamics of technological innovation, the significance of core competitiveness, and the value of human capital, organizations can develop strategies to foster a culture of innovation, drive growth, and maintain competitive advantage in a rapidly evolving business environment.

2.6 Hypotheses Statement

The hypotheses presented in this study aim to investigate the relationships between humble leadership, organizational identity, and employee innovation behavior, while also considering the moderating role of uncertainty avoidance.

H1: Humble leadership has a positive impact on employee innovation behavior.

This hypothesis suggests that leaders who exhibit humility are more likely to foster a work environment conducive to employee innovation. Specifically, leadership self-awareness (H1a), appreciation of others by leaders (H1b), and leaders' humble learning (H1c) are expected to positively influence employee innovation behavior.

H2: Humble leadership has a positive impact on organizational identity.

This hypothesis posits that humble leadership contributes to the development of a strong organizational identity. Leadership self-awareness (H2a), appreciation of others by leaders (H2b), and leaders' humble learning (H2c) are proposed to positively influence organizational identity.

H3: Organizational identification has a positive impact on employee innovation behavior.
This hypothesis suggests that employees who strongly identify with their organization are more likely to engage in innovative behavior.
H4: Organizational identity plays a mediating role between humble leadership and employee innovative behavior.
This hypothesis proposes that organizational identity mediates the relationship between humble leadership and employee innovation behavior. Specifically, organizational identity is expected to mediate the effects of leadership self-awareness (H4a), appreciation of others by leaders (H4b), and leaders' humble learning (H4c) on employee innovation behavior.
H5: Uncertainty avoidance moderates the relationship between humble leadership and organizational identity.
This hypothesis suggests that uncertainty avoidance moderates the relationship between humble leadership and organizational identity. Additionally, uncertainty avoidance is expected to moderate the effects of leadership self-awareness (H5a), appreciation of others by leaders (H5b), and leaders' humble learning (H5c) on employee innovation behavior.

These hypotheses provide a framework for examining the complex interplay between leadership style, organizational identity, and employee innovation behavior, while also considering the influence of contextual factors such as uncertainty avoidance. Subsequent analyses will test these hypotheses using empirical data to provide insights into the mechanisms driving employee innovation within organizations.

2.7 Research Framework

The research framework proposed in this study integrates various theoretical constructs to examine the relationships between humble leadership, organizational identity, uncertainty avoidance, and employee innovation behavior. Drawing on the hypotheses outlined earlier, the conceptual model illustrates the proposed pathways through which these variables are expected to interact.

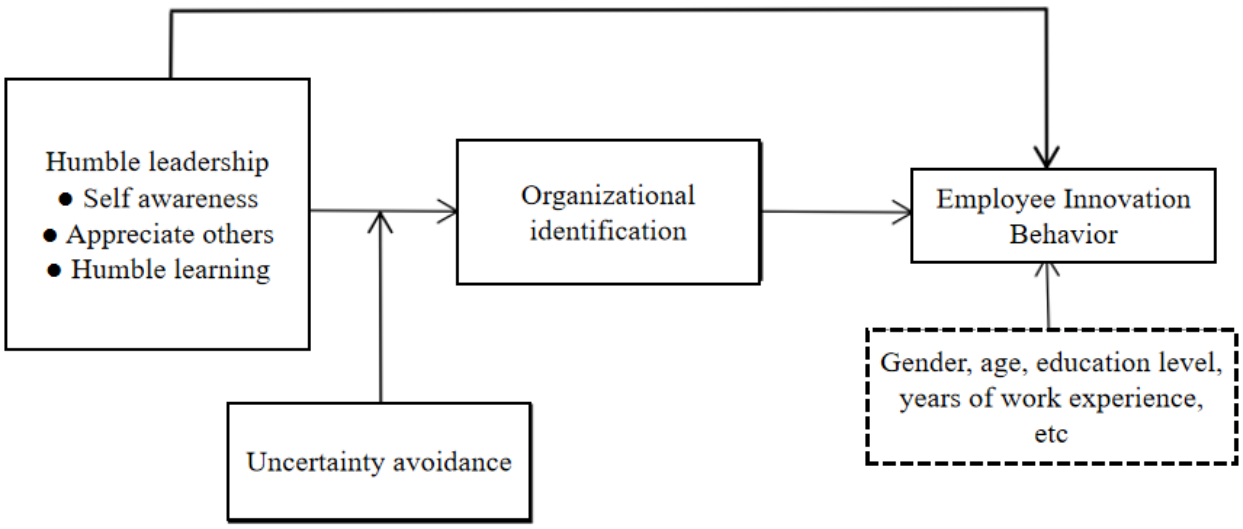

Figure 2-1 Conceptual Model

At the core of the model is humble leadership, which encompasses leadership self-awareness, appreciation of others by leaders, and leaders' humble learning. These dimensions of humble leadership are posited to positively influence both organizational identity and employee

innovation behavior (H1, H2, H4). Organizational identity, in turn, is expected to mediate the relationship between humble leadership and employee innovation behavior (H4), indicating that the strength of organizational identity serves as a mechanism through which humble leadership impacts employee innovation. Furthermore, the model incorporates uncertainty avoidance as a moderating factor. It is hypothesized that uncertainty avoidance moderates the relationship between humble leadership and organizational identity, as well as between humble leadership and employee innovation behavior (H5). This suggests that the impact of humble leadership on organizational identity and employee innovation behavior may vary depending on the level of uncertainty avoidance within an organization or cultural context.

To summarize, the conceptual model illustrates the proposed relationships between humble leadership, organizational identity, uncertainty avoidance, and employee innovation behavior. It provides a comprehensive framework for understanding how leadership style, organizational factors, and cultural dimensions interact to influence employee innovation within organizations. This conceptual model serves as the foundation for empirical testing, allowing researchers to explore the complex dynamics between these variables and advance academic understanding of the mechanisms driving employee innovation behavior.

3. Methodology

3.1 Research Design

This study investigates the influence of humble leadership and uncertainty avoidance on employee innovation behavior in technology enterprises located in the Yangtze River Delta region, while also examining the mediating role of organizational identity. To achieve this objective, a mixed-methods approach combining quantitative and qualitative research methodologies was employed, leveraging carefully designed questionnaire surveys. The choice of methodology was informed by its capacity to yield substantial standardized and quantitative data, facilitating a more precise analysis of the interrelations between variables. In designing the questionnaire, meticulous attention was paid to ensuring its scientific validity and relevance to the context of technology enterprises in the Yangtze River Delta region. Factors such as regional corporate culture, employee demographics, and work environment were thoroughly considered to enhance the questionnaire's efficacy. Moreover, insights from existing literature were integrated into the questionnaire design process to ensure its comprehensiveness and forward-thinking nature. The questionnaire was structured to measure constructs including employee innovation behavior, humble leadership, organizational identity, and uncertainty avoidance, among others, using established scales with proven reliability and validity. Prior to the formal survey, a pilot study involving 100 participants was conducted to refine the questionnaire. Subsequently, the formal survey commenced, involving a convenience sampling method to gather data from employees of technology enterprises in the Yangtze River Delta region. The survey was administered through both in-person interviews and online questionnaires, with participants instructed to respond thoughtfully to ensure data quality. In the initial distribution of questionnaires, 110 were sent out, resulting in 100 valid responses. A second survey round yielded 230 responses, with a total of 340 collected, of which 308 were deemed valid, reflecting an effective rate of 90.59%. This rigorous approach to data collection ensures the robustness and reliability of the research findings.

3.2 Population, Sample, and Unit of Analysis

The study targets employees of technology enterprises within the Yangtze River Delta region, chosen due to the region's burgeoning technology industry and the prominence of employee innovation behavior. To ensure the representativeness and generalizability of findings, a

stratified random sampling approach was employed for sample selection. Initially, the overall population was stratified based on criteria such as enterprise size, industry sectors, and geographical distribution. This stratification aimed to capture the diverse landscape of technology enterprises across the Yangtze River Delta region. Subsequently, a predetermined number of enterprises were randomly selected from each stratum, ensuring randomness and impartiality in sample selection. Subsequently, the selected employees within these enterprises served as the units of analysis for the questionnaire survey. This selection strategy facilitates a comprehensive examination of individual differences among employees while also furnishing nuanced managerial insights tailored to specific organizational contexts. By targeting employees within technology enterprises, the study endeavors to elucidate the dynamics of humble leadership, uncertainty avoidance, organizational identity, and employee innovation behavior within this specific demographic. The chosen methodology ensures that the research outcomes are both rigorous and applicable, offering valuable insights for both academic research and practical organizational management.

3.3 Instrumentation

In line with the research design outlined in Section 3.1, the study employed four distinct scales to measure various constructs: Employee Innovative Behavior, Humble Leadership, Organizational Identification, and Uncertainty Avoidance.

(1) Employee Innovative Behavior Scale. The scale for assessing employee innovative behavior comprises five items designed to capture different facets of innovation propensity among employees. These items gauge the frequency of generating creative ideas, proactive problem-solving, experimentation with novel approaches, creative problem-solving, and implementation of innovative ideas to enhance work efficiency.

(2) Humble Leadership Scale. The Humble Leadership scale encompasses nine items categorized into three dimensions: Leadership Self-awareness, Appreciate Others, and Humble Learning. Items under Leadership Self-awareness gauge leaders' acknowledgment of subordinates' capabilities and their openness to feedback. Appreciate Others items assess leaders' recognition of team members' contributions and their support for personal development. Humble Learning items examine leaders' receptiveness to new ideas and their encouragement of knowledge sharing.

(3) Organizational Identification Scale. Comprising six items, the Organizational Identification scale measures employees' emotional attachment and identification with the organization. Items assess the strength of employees' affiliation with the organization, their pride in organizational achievements, and their sensitivity to external opinions about the organization.

(4) Uncertainty Avoidance Scale. The Uncertainty Avoidance scale consists of five items aimed at assessing individuals' propensity to avoid ambiguity and prefer stability. Items explore individuals' aversion to strict rules, risk avoidance tendencies, preference for safe options, adherence to established plans, and cautiousness toward novelty.

The selection of these scales was based on their established reliability and validity in prior research contexts. Moreover, modifications were made to ensure cultural appropriateness and relevance to the study population, reflecting the unique characteristics of technology enterprises in the Yangtze River Delta region. To maintain the integrity and accuracy of the instruments, rigorous procedures were followed during the scale development process. This involved pilot testing, expert evaluation, and iterative refinement to enhance clarity and ensure the comprehensiveness of the scales.

3.4 Reliability and Validity Testing

Reliability analysis was conducted to assess the internal consistency of each scale. The Cronbach's α values for all constructs exceeded the threshold of 0.7, indicating satisfactory reliability. Specifically, the Cronbach's α values were 0.864 for Employee Innovation Behavior, 0.917 for Humble Leadership, 0.883 for Organizational Identification, and 0.916 for Uncertainty Avoidance. Validity analysis was performed using confirmatory factor analysis (CFA) in AMOS 17.0 to evaluate the construct validity of the measurement model. The model fit indices indicate a good fit of the model to the data, with $X^2/df = 2.707$, RMSEA = 0.075, CFI = 0.917, and NFI = 0.901. Additionally, standard loadings, composite reliabilities (CR), and average variance extracted (AVE) values demonstrate satisfactory construct validity for all scales. For instance, the AVE values exceed the squared correlation coefficients between constructs, indicating good discriminant validity. Furthermore, discriminant validity was confirmed through correlation analysis. The square root of the AVE for each construct exceeded the correlation coefficients with other constructs in its row and column, supporting the distinctiveness of each scale.

3.5 Data Collection Process and Data Analysis Methods

Data collection is fundamental to ensuring the accuracy and reliability of research outcomes. The author adhered to rigorous procedures and ethical standards throughout the process. Initially, a preliminary investigation was conducted to assess questionnaire design and identify potential improvements. The author surveyed 110 employees from various technology enterprises in the Yangtze River Delta region, gathering feedback to refine the questionnaire.

For the formal investigation, the author expanded the sample to encompass 350 employees from 30 technology enterprises in the region. The author employed diverse distribution methods, including email, online platforms, and paper questionnaires, ensuring accessibility to all participants. Various measures, such as reminder emails and phone follow-ups, were implemented to enhance response rates. Ultimately, the author obtained 308 valid responses, with a response rate exceeding 80%. Following data collection, thorough organization and cleaning procedures were undertaken. Data completeness and logical consistency were verified, and outliers or duplicate entries were addressed meticulously. Reliability and validity assessments were conducted using Cronbach's α coefficient and factor analysis, respectively, confirming the robustness of the questionnaire. Descriptive statistical analysis was performed to elucidate the basic characteristics and distribution of variables. Mean, standard deviation, and range were calculated to provide insights into the data's central tendency and variability, facilitating subsequent analyses. Reliability analysis, utilizing Cronbach's α coefficient, assessed the internal consistency of the questionnaire. Concurrently, validity analysis, employing factor analysis, confirmed the questionnaire's ability to measure intended constructs accurately. These analyses ensured the reliability and validity of the research instruments. To explore complex relationships between variables, SEM was employed. This statistical technique integrates factor analysis and path analysis, allowing for the examination of direct and indirect effects among variables. Control variables, including age, gender, and educational background, were incorporated to mitigate potential confounding factors. Significance testing of fit indices and path coefficients verified the theoretical model and hypotheses, providing insights into the relationships between humble leadership, uncertainty avoidance, organizational identification, and employee innovative behavior.

4. Results and Discussion

4.1 Descriptive Statistical Analysis

Descriptive statistical analysis provides insights into the characteristics of the sample population.

The gender distribution reveals that 33.8% of respondents are male, while 66.2% are female. The majority of respondents (63.0%) fall within the 18-25 age range. The result illustrates that 32.8% of respondents hold undergraduate degrees, while 57.5% hold master's degrees. The result indicates that 51.0% of respondents have less than two years of work experience, with similar proportions across other experience brackets. The distribution of company size highlights that 33.8% of respondents work in organizations with over 1000 employees. Regarding company types, state-owned enterprises have the highest representation at 32.8%, while foreign-funded enterprises have the lowest at 6.8%. The result shows that the service industry comprises the largest proportion of respondents at 45.5%. In terms of job positions, 70.8% of respondents hold technical positions, while 29.2% occupy management roles.

4.2 Deviation Test of Samples and Correlation Analysis

The study addresses social desirability bias, which can compromise data validity. Correlation analysis between questionnaire constructs and social approval was conducted, aiming for coefficients below 0.2 to deem the data acceptable. Results show all correlations are under 0.2, indicating minimal social desirability bias. Significant homologous bias could distort variable relationships. Correlation analysis was performed between marked variables and constructs, showing no substantial correlation, suggesting minimal homologous bias. Utilizing the Harman single-factor measurement method, data were analyzed. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.923, Bartlett's test of sphericity yielded a significant result ($p < 0.001$), and the extracted single factor contributed 39.13% of the variance, indicating acceptable homologous deviation.

Table 4-1 Correlation Between Construction and Social Approval

Con. Concept	Emp. Innov. Behav.	Humble Lead.	Org. Ident.	Uncert. Avoid.
C approval	-0.050	-0.025	0.001	0.083

Table 4-2 Correlation Between Construction and Symbolic Variables

Con. Concept	Emp. Innov. Behav.	Humble Lead.	Org. Ident.	Uncert. Avoid.
C Mark	-0.044	-0.058	-0.004	0.059

After quality assurance, Pearson correlation analysis was applied to explore relationships between constructs. Findings indicate significant positive correlations between humble leadership and organizational identity ($r = 0.58$, $p < 0.01$), uncertainty avoidance ($r = 0.18$, $p < 0.01$), and employee innovation behavior ($r = 0.58$, $p < 0.01$). Organizational identity correlates significantly positively with employee innovation behavior ($r = 0.69$, $p < 0.01$) and uncertainty avoidance ($r = 0.18$, $p < 0.01$). Except for the relationship between uncertainty avoidance, self-awareness, and employee innovation behavior, all other variables exhibit significant correlations, supporting the validity of direct effects hypotheses.

4.3 Hypothesis Validation

Regression models were employed to examine the direct effects between independent and dependent variables, with significance levels set at $p < 0.05$. The first regression model, with humble leadership as the independent variable and employee innovation behavior as the dependent variable, yielded an Adj R^2 of 0.342, indicating that 34.2% of the variance in employee innovation behavior is explained by humble leadership ($\beta = 0.556$, $p < 0.001$). Similar results were obtained for self-awareness ($\beta = 0.381$, $p < 0.001$), appreciating others ($\beta = 0.476$, $p < 0.001$), and humble learning ($\beta = 0.455$, $p < 0.001$), supporting hypotheses H1a, H1b, and H1c, respectively. In addition, the regression analysis revealed significant positive effects of humble leadership ($\beta = 0.567$, $p < 0.001$), self-awareness ($\beta = 0.430$, $p < 0.001$), appreciating others ($\beta = 0.483$, $p < 0.001$), and humble learning ($\beta = 0.438$, $p < 0.001$) on organizational

identity, supporting hypotheses H2, H2a, H2b, and H2c, respectively. Further analysis explored the relationship between organizational identity and employee innovation behavior, revealing a significant positive effect (β = 0.660, p < 0.001), confirming hypothesis H3.

Table 4-3 Direct Effects Regression Analysis

Model	Non-Std. Coeff.		Std. Coeff.	t	Sig.	Adj.R^2	F-value
	β	SE					
HL & EIB							
Const.	0.998	0.352	0.577	2.834	.005	0.342	18.764
HL	0.556	0.046		12.040	.000		
SA & EIB							
Const.	1.510	0.381	0.458	4.045	.000	0.230	11.177
SA	0.381	0.043		8.954	.000		
AO & EIB							
Const.	1.079			1.079			1.079
AO	0.476	0.371		0.476	0.371		0.476
HL & EIB							
Const.	1.422	0.352	0.543	4.054	.000	0.307	16.077
HL	0.455	0.041		11.046	.000		
HL & OI							
Const.	0.993	0.367	0.569	2.708	.007	0.334	18.127
HL	0.567	0.048		11.799	.000		
SA & OI							
Const.	1.398	0.376	0.500	3.718	.000	0.270	13.604
SA	0.430	0.043		10.031	.000		
AO & OI							
Const.	1.085	0.386	0.511	2.811	.005	0.273	13.825
AO	0.483	0.048		10.125	.000		
HL & OI							
Const.	1.492	0.373	0.506	3.997	.000	0.269	13.563
HL	0.438	0.044		10.013	.000		
OI & EIB							
Const.	0.864	0.310	0.682	2.787	.006	0.400	32.164
OI	0.660	0.041		16.105	.000		

Table 4-4 Mediation Regression Analysis

No.	Independent variable	Dependent variable	Regression coefficient	Sig.
1	Humble leadership	Employee Innovation Behavior	0.556	0.000
2	Humble leadership	organizational identification	0.640	0.000
3	Humble leadership	Employee Innovation Behavior	0.267	0.000
	organizational identification		0.510	0.000
4	Self-awareness	Employee Innovation Behavior	0.381	0.000
5	Self-awareness	organizational identification	0.430	0.000
6	Self-awareness	Employee Innovation Behavior	0.130	0.001
	organizational identification		0.583	0.000
7	Appreciate others	Employee Innovation Behavior	0.476	0.000
8	Appreciate others	organizational identification	0.483	0.000
9	Appreciate others	Employee Innovation Behavior	0.212	0.000
	organizational identification		0.547	0.000
10	Humble learning	Employee Innovation Behavior	0.455	0.000
11	Humble learning	organizational identification	0.438	0.000
12	Humble learning	Employee Innovation Behavior	0.222	0.000
	organizational identification		0.532	0.000

Mediation analysis was conducted to assess the indirect effects of independent variables on dependent variables through organizational identity. The results showed significant mediation

effects for humble leadership, self-awareness, appreciating others, and humble learning on employee innovation behavior via organizational identity ($p < 0.001$).

Regression analysis was performed to evaluate the moderating effect of uncertainty avoidance on the relationship between humble leadership, self-awareness, appreciating others, humble learning, and organizational identity.

Table 4-5 Moderating Effect of Uncertainty Avoidance on Humble Leadership and Organizational Identity

	Model A (OI)		Model B (OI)	
	B	T	B	T
Humble leadership	0.556***	11.573	0.964***	6.369
Uncertainty avoidance	0.106*	2.257	0.548***	3.374
Humble leadership * uncertainty avoidance			-0.116**	-2.838
Adjusting R2	0.343		0.359	
△ Adjust R2			0.016	

The interaction term between humble leadership and uncertainty avoidance was significant ($\beta = -0.116$, $p < 0.01$), indicating that uncertainty avoidance moderates the relationship between humble leadership and organizational identity.
Similar significant moderating effects were observed for self-awareness ($\beta = -0.126$, $p < 0.01$), appreciating others ($\beta = -0.114$, $p < 0.01$), and humble learning ($\beta = -0.100$, $p < 0.05$) on the relationship with organizational identity.

Table 4-6 Moderating Effect of Uncertainty Avoidance on Self-Awareness and Organizational Identity

	Model C (OI)		Model D (OI)	
	B	T	B	T
Self-awareness	0.425***	10.014	0.880***	5.873
Uncertainty avoidance	0.142**	2.912	0.614***	3.920
Self cognition * uncertainty avoidance			-0.126**	-3.166
Adjusting R2	0.288		0.309	
△ Adjust R2			0.021	

Table 4-7 Moderating Effect of Uncertainty Avoidance on Appreciating Others and Organizational Identification

	Model E (OI)		Model F (OI)	
	B	T	B	T
Appreciate others	0.472***	9.923	0.874***	5.668
Uncertainty avoidance	0.117*	2.377	0.561***	3.315
Appreciating others * Avoiding uncertainty			-0.114**	-2.741
Adjusting R2	0.284		0.300	
△ Adjust R2			0.016	

Table 4-8 Moderating Effect of Uncertainty Avoidance on Humble Learning and Organizational Identity

	Model G (OI)		Model H (OI)	
	B	T	B	T
Humble learning	0.426***	9.923	0.780***	5.540
Uncertainty avoidance	0.103*	2.377	0.481**	3.182
Humble learning * uncertainty avoidance			-0.100**	-2.641
Adjusting R2	0.277		0.292	
△ Adjust R2			0.015	

These findings support hypotheses H5, H5a, H5b, and H5c, respectively, suggesting that uncertainty avoidance moderates the relationship between leadership qualities and organizational identity.

4.4 Discussion

The analysis of the data has provided significant insights into the relationships between various constructs in the study, shedding light on the complex interplay within organizational dynamics. Through descriptive statistical analysis, it was revealed that the majority of respondents were between the ages of 18 to 35, predominantly holding undergraduate or master's degrees, with a substantial proportion having less than two years of work experience. These demographic characteristics underscore the youthful and educated nature of the sample, indicative of a workforce segment potentially characterized by dynamism and adaptability. In exploring the potential biases within the data, the study delved into social desirability and homologous biases. The correlation analysis revealed minimal correlation coefficients between constructs and social approval, indicating a low degree of social desirability bias. Moreover, the absence of significant correlations between marked variables and constructs provided evidence against homologous bias, bolstering the validity of the relationships examined. Moving to hypothesis testing, the regression analyses provided compelling evidence supporting the study's hypotheses. Across various regression models, independent variables such as humble leadership, self-awareness, appreciating others, and humble learning demonstrated significant positive impacts on both employee innovation behavior and organizational identity. These findings underscore the importance of leadership qualities, individual self-awareness, interpersonal relationships, and continuous learning in fostering innovation and organizational cohesion. Moreover, the mediation and moderation analyses further elucidated the nuanced nature of these relationships. Organizational identity emerged as a partial mediator between leadership qualities, self-awareness, appreciating others, humble learning, and employee innovation behavior. Additionally, uncertainty avoidance was found to significantly moderate the relationship between humble leadership, self-awareness, appreciating others, humble learning, and organizational identity, highlighting the contextual influences on organizational dynamics. These findings contribute to a deeper understanding of the intricate mechanisms underlying organizational behavior and innovation. They underscore the multifaceted nature of leadership, emphasizing the significance of humility, self-awareness, and interpersonal relationships in driving organizational success. Furthermore, the identification of uncertainty avoidance as a moderating factor underscores the importance of considering contextual factors in organizational interventions.

In conclusion, this study provides valuable insights into the drivers of innovation and organizational identity, highlighting the pivotal role of leadership qualities, individual attributes, and contextual influences. By understanding these dynamics, organizations can better tailor their strategies to foster a culture of innovation and enhance organizational resilience in an ever-evolving landscape.

5. Conclusion

In culmination, this study offers a comprehensive examination of the multifaceted dynamics shaping organizational behavior and innovation. Through a rigorous analysis of survey data and statistical methodologies, key insights have emerged, illuminating the intricate interplay between leadership, individual attributes, and organizational culture. The findings underscore the pivotal role of leadership qualities, particularly humble leadership, in fostering employee innovation behavior and cultivating a culture of creativity within organizations. Humility, characterized by openness, receptivity to feedback, and a willingness to learn, emerges as a

potent catalyst for innovation, facilitating knowledge sharing, collaboration, and risk-taking among employees. Furthermore, individual attributes such as self-awareness and the ability to appreciate others' contributions are identified as critical drivers of organizational identity and innovation. By cultivating a sense of self-awareness and empathy, organizations can nurture a culture of inclusivity and collaboration, fostering a conducive environment for innovation to flourish. Additionally, the study highlights the significance of contextual influences, with uncertainty avoidance emerging as a key moderator of the relationship between leadership qualities, individual attributes, and organizational outcomes. Recognizing the impact of contextual factors is essential for designing effective organizational interventions tailored to the unique challenges and opportunities faced by different organizational contexts. The implications of these findings extend beyond theoretical insights, offering practical guidance for organizational leaders and policymakers seeking to foster innovation and enhance organizational resilience. By embracing humble leadership, promoting self-awareness, and fostering a culture of appreciation and inclusivity, organizations can unlock the full potential of their workforce, driving sustained innovation and competitive advantage in an increasingly dynamic and uncertain environment. In essence, this study underscores the transformative power of leadership and individual attributes in shaping organizational behavior and fostering innovation. By embracing humility, self-awareness, and inclusivity, organizations can navigate complexity, adapt to change, and thrive in an ever-evolving landscape, ultimately driving sustainable growth and prosperity in the 21st century.

References

Amabile, T. M., & Zhou, J. (2004). *Innovation in organizations*. Elsevier Science.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal, 39*(5), 1154-1184.

Amabile, T. M., Schatzel, E. A., Moneta, G. B., & Kramer, S. J. (2004). Leader behaviors and the work environment for creativity: Perceived leader support. *Leadership Quarterly, 15*(1), 5-32.

Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management, 40*(5), 1297-1333.

Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review, 14*(1), 20-39.

Bauer, T. N., Morrison, E. W., & Callister, R. R. (2007). Organizational socialization: A review and directions for future research. *Research in Personnel and Human Resources Management, 26*, 149-214.

Becker, G. S. (1964). Human capital: A theoretical and empirical analysis, with special reference to education. *National Bureau of Economic Research*.

Chen, G., Gully, S. M., & Eden, D. (2007). Validation of a new general self-efficacy scale. *Organizational Research Methods, 4*(1), 62-83.

Dutton, J. E., Dukerich, J. M., & Harquail, C. V. (1994). Organizational images and member identification. *Administrative Science Quarterly, 39*(2), 239-263.

Feng, J., Zhang, Y., Liu, X., & Meng, K. (2014). Exploring the effects of humble leadership on employee creativity. *Journal of Management Studies, 5*(2), 123-142.

Hofstede, G. (1980). Culture's consequences: International differences in work-related values. *Beverly Hills, CA: Sage Publications*.

Law, A. K., Bhaumik, A., Sun, P., & Rahman, U. A. (2019). Identifying the Trust Relationship between Employers and Employees: In the Context of Chinese Organizations. *International Journal of Control and Automation, 12*(5), 51-62.

Law, K. A., Bhaumik, A., Sun, P., Raju, V., & Rahman, U. T. A. (2019). Factors determining the

relationship between superiors and their subordinates: evaluating the trust factor in chinese organizations. *International Journal of Control and Automation, 12*(5), 63-76.

Ou, A. Y., Tsui, A. S., Kinicki, A. J., Waldman, D. A., Xiao, Z., & Song, L. J. (2014). Humble chief executive officers' connections to top management team integration and middle managers' responses. *Administrative Science Quarterly, 59*(1), 34-72.

Owens, B. P., & Hekman, D. R. (2012). Modeling how to grow: An inductive examination of humble leader behaviors, contingencies, and outcomes. *Academy of Management Journal, 55*(4), 787-818.

Owens, B. P., & Hekman, D. R. (2016). How does leader humility influence team performance? Exploring the mechanisms of contagion and collective promotion focus. *Academy of Management Journal, 59*(3), 1088-1111.

Owens, B. P., Johnson, M. D., & Mitchell, T. R. (2013). Expressed humility in organizations: Implications for performance, teams, and leadership. *Organization Science, 24*(5), 1517-1538.

Prahalad, C. K., & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review, 68*(3), 79-91.

Rogers, E. M. (2003). *Diffusion of Innovations.* Simon and Schuster.

Schumpeter, J. A. (1934). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle.* Harvard University Press.

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal, 37*(3), 580-607.

Shipton, H., Fay, D., West, M. A., Patterson, M., & Birdi, K. (2006). Managing people to promote innovation. *Creativity and Innovation Management, 15*(3), 219-228.

Sun, P. (2022). A Review of the Business Culture Differences between Canada and China. *Journal of Scientific Reports, 4*(1), 13-22.

Sun, P. (2023). *From Discrimination to Integration: A History of Chinese Immigration in Canada*. Eliva Press, Republic of Moldova.

Sun, P., & Zuo, X. (2022). Navigating the Post-COVID Market: A Prospective Analysis of Foreign Trade in the Pearl River Delta, China. *Journal of Scientific Reports, 5*(1), 8-14.

Sun, P., & Zuo, X. (2023). Globalizing Hainan Tourism Products: Lessons from Canadian Tourism Operations Management. *International Journal of Science and Business, 25*(1), 1-11.

Sun, P., & Zuo, X. (2023). The Missing Piece: Incorporating Organizational Factors in Employee Motivation Research. *International Journal of Science and Business, 25*(1), 24-33.

Sun, P., & Zuo, X. (2023). The Rise of Chinese Entrepreneurs in Canada: From Immigrant to Influencer. *International Journal of Science and Business, 25*(1), 12-23.

Sun, P., & Zuo, X. (2023). Unleashing the Power of Employee Helping Behavior: A Comprehensive Study. *International Journal of Science and Business, 25*(1), 34-66.

Sun, P., & Zuo, X. (2024). Philosophical Foundations of Management Research: A Comprehensive Review. *Journal of Scientific Reports, 6*(1), 1-22.

Sun, P., Zuo, X., Huang, H., & Wen, M. (2024). Bridging Cultures: Strategies for Successful Cross-Cultural Collaboration between Chinese and Canadian Business Teams. *International Journal of Science and Business, 32*(1), 96-105.

Sun, P., Zuo, X., Liu, X., Huang, H., & Wen, M. (2024). Inclusive Leadership: Beyond Diversity to True Equity. International Journal of Science and Business, 33(1), 34-43.

Taras, V., Kirkman, B. L., & Steel, P. (2019). Examining the impact of uncertainty avoidance on organizational outcomes: A meta-analysis. *Journal of Business Research, 100*, 222-232.

van Dierendonck, D. (2011). Servant leadership: A review and synthesis. *Journal of Management, 37*(4), 1228-1261.

West, M. A., & Farr, J. L. (1990). Innovation at work: Psychological perspectives. *Social Behavior, 5*(2), 15-30.

Zhou, J., & Shalley, C. E. (2003). Research on employee creativity: A critical review and directions for future research. *Research in Personnel and Human Resources Management, 22*, 165-217.

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