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Analyzing the Relationship between Platform Leadership and Employee Innovative Behavior in Electrical Systems Industries



Abstract: Employees' innovative behaviors are a pivotal factor in organizational development. For organizational employees, the influence of leaders' styles on behaviors is profound, making the stimulation of employees' innovative behaviors a crucial aspect of contemporary leadership. Since the concept of platform leadership was proposed in China's academic circles, its relationship with employees' individual innovative behaviors has been a focal point for scholars. This study selects employees' innovative behaviors as the research object. Building on a review of existing literature, it systematically explores the relationship between the emerging leadership style of platform leadership and employees' innovative behaviors. Additionally, through interviews with 24 employees from platform enterprises in Guangxi and employing text mining technology, this study confirms that platform leadership positively promotes employees' innovative behaviors, providing both theoretical and practical support to further validate the impact of platform leadership on employees' innovative behaviors.

Key words: Platform Leadership Employee Innovative Behavior Text Mining

In the Platform economy era, enterprises must transform for high-quality development, raising internal employee innovation standards. However, with weakening traditional employment relationships and rising employee values, employees seek co-creation platforms rather than company dependence. Often ignored, this expectation stifles potential and creativity, making active innovation guidance crucial in human resource management. Platform leadership, a new style, addresses this by fostering positive interactions with subordinates, enabling self-improvement through shared platforms, and achieving mutual growth (Hao, 2016; Xin et al., 2020).

1. RESEARCH ON PLATFORM LEADERSHIP

1.1 The Concept of Platform Leadership

Platform leadership was first proposed by Hao Xuguang in year 2014. Starting from the perspective of humanism, he compared and analyzed the similarities and differences between platform-based leadership and traditional leadership types such as transformational leadership, and proposed the concept of platform-based leadership. He believes that leaders should respect subordinates and have a holistic understanding of the organizational system (Hao, 2014), and the theoretical basis for platform-based leadership is the third wave of Maslow's humanistic psychology, which emphasizes "people-oriented". In 2016, Hao Xuguang further deepened the definition of the concept of platform leadership, which he believed is centered on equal sharing, organizing resource sharing and optimizing the platform through equal communication with subordinates, developing a common cause for both leaders and employees, activating their potential, and promoting mutual growth and achievement, a new type of leadership (Hao, 2016a). Xing and Kong (2020) pointed out that platform leadership has the characteristics of sharing altruism, building cooperative relationships, and empowering equality. Platform leaders can provide employees with opportunities for growth, job resources, and autonomy, effectively enhancing their sense of work significance, responsibility, and satisfaction. This creates a good relationship of equal mutual benefit between leaders and employees and can effectively promote the release and development of employees' wisdom, passion, and talent.

Reviewing existing platform leadership studies, most focus on conceptual dimensions and scales, with limited exploration of impact mechanisms on employee attitudes and behaviors. Xin et al. (2020) found platform leadership's five dimensions positively influenced satisfaction and organizational citizenship behavior, and enhanced organizational commitment. Hao et al. (2021) demonstrated platform leadership's positive effect on employee innovation, fostering potential and psychological needs. Li et al. (2022) identified leadership's role in workplace

example-setting and continuous innovation, with creative self-efficacy and team learning as dual mediators.

1.2 Measuring Platform Leadership

Hao (2016) defines platform leadership as four dimensions: internal communication, mutual growth, shared resources, and continuous improvement. Hou (2016) adds inclusiveness, insight, platform creation, and common growth, emphasizing resource accommodation, environmental prediction, self-realization support, and mutual progress. Zhao (2018) developed a six-dimensional scale analyzing inclusiveness, affinity appeal, change planning, platform optimization, and common growth, focusing on resource sharing, leadership appeal, environmental foresight, institutional support, and mutual trust. Xin et al. (2020) developed a 38-item platform leadership scale, refined to a five-dimensional, 22-item version. Hao et al. (2021) used grounded theory and interviews to create a six-dimensional, 25-item scale, later adjusted to 28 items. The core dimensions of platform construction and optimization distinguish this leadership style. Hao's 2021 scale is widely adopted, hence also used here. Chinese scholars have developed a list of dimensions and conceptual items for measuring platform leadership, as shown in Table 1

Table1: Measurement Dimensions of Platform Leadership

Scholar	Year	Measurement	Dimension	Constructive content
Hou Mengxuan	2016	4-dimensions with 16 constructs	capacity	Fairness, openness, affinity, expertise, and charm
			insight	Macro environment insight, meso environment insight, micro environment insight
			Platform creation	By establishing and optimizing the platform objectives, integrating and coordinating the platform resources, establishing and optimizing the platform mechanism, establishing a personalized, active and effective platform,
			growing together	Guide the growth of employees, employees promote the growth of leadership, leadership independent growth, leadership and employees interactive promotion
Hao Xuguang	2016	4 dimensions	Leadership charm	Focus on the growth of your leaders and your subordinates
			Mutual achievement	Shape a mutually fulfilling and interactive relationship
			grow up	Build and continue to expand and optimize the business platform
Zhao Yuxue	2018	28 with 6 dimensional constructs	trends	Emphasizes the dynamic optimization of the interaction process
			Inclusive sharing	Appreciating One's Strengths, Accepting One's Faults, Welcoming Sharing, Receiving Constructive Criticism, Embracing Differences
			Affinity and appeal	Positive and optimistic, easy-going kindness, perseverance, professional and decisive, comprehensive integrity
			Change planning	Forward-looking, insight, building vision and strategy, and action force

Platform building	Building a culture of mutual trust, interests driven, system building and resource guarantee
Platform optimization	Achievement-oriented, organizational learning, cultivating innovation, emotion-oriented, cross-department coordination and cooperation
growing together	Trust and care, pay attention to the growth of subordinates, full authorization, leadership self-growth, interactive relationship shaping

Table 1: (Cont.)

Scholar	Year	Measurement	Dimension	Constructive content
Xin Jie, Kong Ming, Xie Rongbei	2020	5 dimensions of 22 constructs	Share altruism	Build a platform to share fame and wealth, help altruism, pay attention to the growth of subordinates, employees and enterprises share win-win
			Interactive collaboration	Build a platform to help employees self-realize, actively communicate, cooperate and unite, value creation, build a business platform,
			Incubation maker	Encourage employees to participate and give advice, fully authorize employees to independent, employees fully access to resources, encourage makers, encourage employees to make decisions and look for resources
			Turn yourself into a man	A culture of mutual trust builds, builds a common mission vision and makes common progress
			Empower equality	Develop potential, encourage to play freely, encourage creativity, team motivation, lead employees equal cooperation

Hao Xuguang, Zhang Jiaqi, Lei Zhuoqun, Liu Wenqi	2021	6 dimensions of 25 constructs	Tolerance	Appreciating One's Strengths, Accepting One's Faults, Welcoming Sharing, Receiving Constructive Criticism, Embracing Differences
			Charisma	Positive and optimistic, easy-going kindness, perseverance, professional and decisive, comprehensive integrity
			Change planning	Forward-looking, insight, building vision and strategy, and action force
			Platform building	Building a culture of mutual trust, interests driven, system building and resource guarantee

			Platform optimization	Achievement-oriented, organizational learning, cultivating innovation, emotion-oriented, cross-department coordination and cooperation
			NE.Cms_Insert growing together	Trust and care, pay attention to the growth of subordinates, full authorization, leadership self-growth, interactive relationship shaping

2. Research on employee innovative behavior

As the national Platformization process accelerates, the enterprise capability system This study focuses on individual-level employee innovative behavior, reviewed through multi-stage process theory (Liu et al., 2015; Rosabeth, 1988; Schroeder et al., 1989a). Key definitions include Amabile (1996) and Scott and Bruce (1994), emphasizing process and results of innovative ideas (Schroeder et al., 1989b; Susanne & Reginald, 1994). West and Farr (1990) and Onne (2000) define innovative behavior as applying new ideas to work roles, while Dul et al. (2011) and Gu and Peng (2011) focus on creating and implementing ideas.

This article finds that the factors influencing employee innovative behavior include organizational factors, leadership style factors, and employee-related factors, as table 2. Innovation behavior is not only an individual behavior, but also a result of the interaction between organizations, leaders, and individuals. From a leadership perspective, Leadership significantly influences employee innovative behavior via styles like transformational, empowering, and tolerant leadership (Ye, 2021; Wei, 2020; Zhang, 2022a). Authentic leadership fosters innovation through organizational trust (Wei, 2020), while empowering leadership enhances behavior via knowledge sharing (Ye, 2021) and platform leadership boosts innovation through knowledge-sharing willingness (Xu, 2022). Organizational factors (atmosphere, support, culture) impact innovative behavior; mediation by network embedding and moderation by organizational learning confirmed (Li & Li, 2022; Wang, 2021; Yan & Zhang, 2017). Personality traits and psychological cognition positively impact innovative behavior; mediation by internal motivation and moderation by organizational identification confirmed (Li & Wang, 2018; Su et al., 2018; Yuan et al., 2018a; Li, 2018; Fei & Cai, 2021; Shi et al., 2021).

Existing literature extensively discusses employee innovative behavior (EIB) concepts, dimensions, and influencing factors, impacting organizational and innovation performance. Research methods include empirical studies, theoretical explorations, case studies, and experiments. Recent focus shifts to empirical outcomes. Despite progress, limitations persist: 1) Conceptual, structural, and research perspective disparities; 2) Insufficient exploration of influencing factors like psychological aspects and personal factors; 3) Narrow research scope, mainly focusing on leaders and R&D personnel in developed regions; 4) A need for in-depth exploration of internal mechanism frameworks to understand EIB formation comprehensively.

Table 2: Studies on factors affecting employee innovative behavior

Factors of employee innovative behavior	Correlation studies	
Leadership factors	Transformational leadership	Hong (2018); Li (2018); Li Yuan et al., (2019); Lu Yanqiu et al.,(2020); Miao(2019b); Zhang & Wang, (2020)
	Service-oriented leadership	Yang Jin (2016; Ye Baojuan et al., (2021)
	Real leadership	Li (2018); Li (2019); Wang & Zhang(2019); Wei(2020); Xu Shuang et al.,(2022); Zhao(2021)
	Platform leadership	Li Ling et al., (2022); Cao Yuankun et al., (2022); Jiang Bing et al.,(2022) ; Xu (2022)
	Inclusive leadership	Kong Liang et al., (2020); Fang Yangchun et al.,(2021); Tang(2021a); Wang(2021b); Zhang(2022a)
Organizational factors	Entrepreneurial leadership	Chen (2015a, 2015b); Li Shuo et al.,(2020); Song (2020)
	Shared leadership	Sun(2020); Hao(2016); Wang(2017); Zhou & Cheng (2018b)
	Benevolent leadership	Wei & Li(2021); Lu Hui et al., (2021a)
	Authorized leadership	Ma(2016); Fangyuan & Willow(2021); Jiao (2021); Ma (2022); Ye (2021)
	Damage management	Yang, C., Tang, D., & Mei, J. (2021).
	Organize an innovative atmosphere	Munir & Beh (2019)
	Human resource management practice	Fang, Y., Lei, Y., & Song, Z. (2019); Liu Fang et al., (2016); Zhao Fuqiang et al., (2022b)
	High-performance work system	Miao et al. (2020); Liu Fang et al., (2016)
	Error management culture	Deng Chuanjun et al. (2015);Zhu & Pei (2014)
	social capital	Yang, D., Hou, Y., & Zhang, H. (2017)
Personal perspective	Active personality, creative personality, the great five personality	Kong & Li (2018); Choi (2012); Yao & Han (2013)
	Positive emotions, and negative emotions	Zhou, W., Gu, Y., & Tang, T. (2019).
	Harmonious type of work passion	Jan & Zainal (2020)
	Psychological authorization	Moulang (2015)
	psychological security	Javed et al. (2019)

Table 2 : (Cont.)

Factors of employee innovative behavior	Correlation studies
Excess sense of qualification	He & Zhang (2019)
happiness	Liu, L., Mei, Q., & Wu, J. (2020).
sense of self-value	Shi Qing et al., (2021)
Knowledge sharing willingness	Yuan Pengwei et al. (2018)
Communication will	Wang & Liu (2017)

3. Research on Platform leadership and employee innovative behavior

Hao (2016) introduced the concept of platform leadership, emphasizing the creation of a synergistic ecosystem among organizations, leaders, and employees through a career platform. This collaborative approach focuses on organizational sustainability and growth by building an inclusive, value-driven platform (Hao et al., 2021; Xin & Kong, 2020). Central to platform leadership is equality and sharing, transforming hierarchical relationships into equal statuses and facilitating resource sharing (Chen, 2016). Employee innovative behavior involves problem discovery, idea generation, promotion, and implementation (Scott & Bruce, 1994), often outside standard role expectations and reward systems (Strickland & Towler, 2011b). Recent literature highlights that open, autonomous leadership styles are crucial for fostering innovation (Li, 2019; Wihuda et al., 2017). Drawing on social exchange theory, when employees feel respected and valued by leaders, they exhibit greater internal motivation and organizational contribution (Cropanzano & Mitchell, 2005).

4. Methodology

This article conducts a semi-structured interviews with 24 employees, and through data mining analysis used tools like Python and the Chinese open-source tool "Weiciyun," explored the intrinsic influencing factors and underlying mechanisms between platform leadership and employee innovation behavior through text word frequency statistics, semantic network analysis. The interviewees mainly consisted of managers and employees working in the digital intelligent manufacturing and internet industries in Guangxi. The basic information of the interview text is provided in Table 3, and the summary of word part-of-speech statistics can be found in Figure 1

Table 3: Basic Interview Text Information

Information	Value
Word count	12,000
Valid paragraph entries	35
Total word count	2100
Valid word count	259
Average sentence length	23 words
Word density	6.01%

5. Interview result and finding

The interview results show that all 24 interviewees believe that platform leadership has a positive impact on employees' innovation behavior, as figure 1 and 2, To understand how platform leadership influences employee

catalyst for innovative behavior among employees. This article posits that each of these six dimensions positively contributes to fostering innovative behavior, manifesting in five distinct ways.

Firstly, by cultivating tolerance within its ranks, platform leadership not only fosters a diverse range of contributions and establishes a conducive environment, but also promotes error acceptance. This, in turn, elevates employee motivation and creativity, which are paramount for navigating the uncertainties inherent in innovation.

Secondly, charismatic platform leadership, characterized by its ability to forge visionary relationships, challenges established norms and inspires followers to innovate. This is achieved through the setting of high expectations and the formation of strong emotional bonds, often culminating in proactive organizational innovation.

Thirdly, platform leadership that encourages change promotes critical reexamination of tasks, thereby enhancing followers' self-awareness and fostering a sense of autonomy and forward-looking vision. This supports the adoption of innovative work methodologies and the generation of novel ideas.

Fourthly, by aligning employee self-worth with business growth, platform leadership enhances its credibility and encourages innovation, thus creating a fertile ground for creativity. This leadership style emphasizes current needs and collaborates to advance business objectives, aiding employees in their journey of self-actualization.

Lastly, leadership focused on mutual growth enhances empathy and confidence among employees, promoting the development of innovative solutions. As employees realize their self-worth through a supportive enterprise platform, their commitment to innovation increases.

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