A Review of High Performance Work Systems and IT Employee's Innovation in Chinese Smartphone Industry: Insights and Implications

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Abstract: The innovative behavior of IT employees is crucial for smartphone companies to gain a competitive edge in both the Chinese and international markets. This paper reviews the relationship between High Performance Work Systems (HPWS) and the innovative behavior of IT employees in the Chinese smartphone industry. The review of previous studies indicates that the relationship between HPWS and employee innovation (IWB) is dialectical, particularly for knowledge-based and technical IT employees. Our study confirms the necessity for future empirical research to further explore the specific relationship between HPWS and IWB.

Keywords: HPWS; Innovation; IT Employee; Smartphone

1. Introduction

The importance of smartphone technology (SMT) has become increasingly evident, particularly highlighted by global events such as the COVID-19 pandemic, which underscored the vital role of mobile technologies in maintaining societal well-being. During the pandemic, people relied more than ever on their smartphones to stay connected with others, remain informed, entertained, and even manage health concerns through telemedicine (Cai, 2022). Moreover, the ongoing rollout of 5G technology is set to further revolutionize this landscape, with expectations that it will significantly benefit all sectors of the global economy, particularly enhancing services and manufacturing. In terms of economic contribution, SMT generated an impressive $4.4 trillion in economic value added globally in 2020, accounting for 5.1% of the global GDP.

Specifically for China, the development of smartphone technology is crucial for industrial upgrading and economic growth, with the government providing substantial policy support to foster the advancement of high-tech enterprises. By focusing on IT employees, Chinese smartphone companies can better integrate into the global value chain, leverage advanced technologies, and eventually drive the development of indigenous innovations. This approach is essential for reducing dependence on other countries' technologies and fostering a more resilient and self-sufficient technology ecosystem. The Chinese government has recognized these challenges and strongly encourages local technology firms to intensify their IT efforts, a move aimed at fostering a more self-reliant tech industry (The Diplomat, 2023). In the highly competitive IT sector, the innovative capacity and knowledge reserve of employees are crucial.

This study reviews the relevant literature on the background, HPWS, and IWB. It is crucial to understand each of these constructs to establish a logical foundation for the current research. This overview will help to contextualize the relationships and mechanisms at play, providing a robust framework for further research.

2. Literature Review

2.1 Review of IT employees in Chinese smartphone industry

In the context of the Chinese market, there is a noted deficiency in the technologies required to create high-end mobile phones, with core technologies predominantly reliant on foreign countries (Cai, 2022). This technological dependency underscores a critical gap in the China's capability to produce high-end components and systems. Therefore, from the perspective of the global value chain, it becomes imperative for emerging economic entities within the Chinese mobile phone industry to focus on IT and position themselves upstream in the industry chain.

Furthermore, the IT sector, noted for its intense pressure and high stakes, often pushes employees to the brink of exhaustion (Menon

& Krishnan, 2021). This stressful environment makes it imperative for companies to focus on strategic HRM practices that not only enhance employee well-being but also contribute to their professional and personal development. Effective HRM practices in IT can lead to greater innovation outcomes, enhancing job satisfaction and retention rates (Kim & Park, 2021). Thus, it becomes evident that for China's smartphone industry to maintain its competitive edge and innovate independently, significant emphasis must be placed on nurturing and supporting its IT workforce through thoughtful and effective HRM strategies.

2.2 Review of IWB

The study of IWB emerges from a focus on organizational innovation and employee actions. With the advent of the knowledge economy, innovation is recognized as a key factor for organizations to gain competitive advantage and ensure sustainable development. Therefore, researching how employees generate and implement new ideas, and subsequently drive organizational innovation, has become essential. In today's competitive market, organizations must continually innovate to adapt to changes. Studying IWB helps organizations better understand and promote innovative behaviors among employees, thereby enhancing organizational innovation capability and competitiveness.

Recent research emphasizes that the study of IWB has evolved significantly. Historically, innovation was considered a characteristic inherent to employees with creative personalities, primarily focusing on the recruitment and selection of such individuals (Ajlouni, 2021). However, recent studies have expanded this view to understand how HRM practices can stimulate innovation among existing employees (Zhao et al., 2022; Wang et al., 2022). This shift is crucial as organizations need to continuously innovate to maintain a competitive edge in a rapidly changing market environment. For instance, IWB is now defined as the generation, promotion, and realization of new ideas within a work role (Breidenthal et al., 2020).

Academically, the study of IWB has garnered widespread attention. Numerous scholars have dedicated efforts to exploring the intrinsic mechanisms, influencing factors, and outcomes of IWB, leading to the development of various theoretical models and research methods. For example, various factors influencing IWB, such as team atmosphere, leadership behavior, and employee traits, have been examined, with numerous empirical studies further validating the positive impact of IWB on organizational innovation and performance, thereby underscoring the academic significance of this field (Wang et al., 2022; Zheng et al., 2022).

2.3 Review of HPWS

HPWS was first explained by Huselid in 1995 and was given importance by Appelbaum et al. in 2000. HPWS according to them refer to "A group of HR practices that are designed to enhance employee competence, motivation and commitment" (Appelbaum et al., 2000). Based on Delery and Doty (1996)'s theory, HPWS is achieved through results-oriented appraisals, profit sharing, clear job descriptions, employment security, internal career opportunities, training, and participation.

In recent years, the theories concerning HPWS can be categorized into two main perspectives. On one hand, behavior-based theories such as AMO theory, social exchange theory, and self-determination theory suggest that HPWS can influence employee attitudes and motivations, subsequently affecting their behavior (Miao & Cao, 2020). On the other hand, organization-level theories like the job demands-resources model and the capital integration perspective explain the mechanisms of HPWS (Wei et al., 2020).

2.4 Relationship between HPWS and IWB

Many scholars have emphasized the positive relationship between HPWS and IWB in empirical studies. Yan & Bai (2016) demonstrated through empirical analysis that training, promotion and decision-making could significantly influence employees' innovative behavior in Chinese high-tech enterprises, with training development and reward promotion having the most substantial effects. Zheng et al. (2020) conducted a survey in the Yangzi River Delta's industrial parks, revealing that HPWS significantly boosts open innovation. The study found that HPWS practices enhance employees' learning orientation, supporting their ability to manage and utilize external knowledge. Another empirical study based on 366 leader-employee paired samples explored the relationship between HPWS and IWB from the perspective of self-determination theory, revealing that autonomy mediates this positive relationship while formalization plays a moderating role (Sun &

Wang, 2016).

However, some scholars believe that HPWS cannot effectively promote IWB of knowledge workers. Research (Sun and Wang, 2016) shows that anticipating rewards can lead individuals to focus on short-term goals and outcomes rather than groundbreaking thinking and problem-solving. Encouraging employees through external rewards and incentives (performance-oriented assessments and compensation systems) may primarily stimulate extrinsic motivation, which is not conducive to fostering creative work performance and extra-role behaviors beyond the job description. An investigation based on HRM process theory also pointed out that organizations might enhance control over employees through performance management models (Islam et al., 2022). Scholars argue that increasing employees' controlled motivation will significantly reduce their autonomy and self-management at work, leading to decreased individual performance and innovation (Islam et al., 2021; Sun and Wang, 2016) .

3. Conclusion

Although many scholars posit a positive correlation between HPWS and IWB, some researchers remain skeptical or even hold opposing views, particularly concerning knowledge-based and technical workers. This divergence in opinions suggests the necessity for further empirical studies to explore the specific relationship between HPWS and IWB.

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