

The Impact of Digital Transformation of Family Businesses on Employees' Psychological Adaptation

Yifan Lei *

BA Psychology Program, The University of British Columbia, Vancouver, Canada

* Corresponding Author Email: ylei11@student.ubc.ca

Abstract. Family businesses are a vital component of the global economy, making significant contributions to Gross Domestic Product (GDP) and employment. Notably, their digital transformation process differs markedly from that of non-family businesses, presenting both unique challenges and new opportunities. This study examines three defining characteristics of how family businesses approach digital transformation: gradual strategic adaptation, the coexistence of traditional and innovative cultures, and uneven implementation practices. Together, these elements shape their transformation trajectory. Gradual strategic adaptation reflects their preference for low-risk digital solutions, driven by limited financial resources and differing perspectives across generations. The coexistence of traditional and innovative cultures highlights the tension between preserving long-held values and embracing digital change, often intensified by generational conflicts and employee resistance. Meanwhile, uneven implementation practices stem primarily from varying management capabilities and a lack of formal training, forcing businesses to rely on informal knowledge-sharing to bridge the gap. This study also examines how employees psychologically adapt during digital transformation, with social cognitive theory providing a useful lens to interpret individual and organizational behavior patterns. The research highlights several common challenges faced by family businesses, such as technology-induced job insecurity and employee resistance, and proposes three key solutions: strong leadership guidance, comprehensive training programs, and enhanced internal communication. For family businesses to succeed in digital transformation, they must strike a careful balance between adopting new technologies and preserving their core cultural values. Equally crucial is maintaining focus on employee mental well-being throughout the change process. Together, these findings offer practical guidance for family enterprises seeking to modernize while protecting their unique heritage and remaining competitive in the marketplace.

Keywords: Family businesses; digital transformation; cultural duality; implementation asymmetry; employee psychological adaptation.

1. Introduction

Family businesses form the backbone of the global economy, consistently driving economic progress and social advancement. Research shows these enterprises generate over 70% of worldwide economic output while providing employment for more than 60% of the global workforce [1]. Their unique strengths include deeply rooted family values, multi-generational planning horizons, and remarkable adaptability during economic fluctuations. With the advancement of modern science and technology and the increasingly fierce market competition, digital transformation has shifted from an optional choice to a necessary condition for the continuous development of enterprises. Family businesses are now at a crucial turning point. Whether they can adopt appropriate digital solutions will determine their development capabilities in the modern economy.

Digital transformation fundamentally reshapes how family businesses grow and compete. A well-executed digital transformation enhances operations, strengthens competitiveness, and stimulates innovation, all of which are vital for success in the current business landscape. However, for family businesses, the transition to digitalization is not merely a matter of technology; they also encounter some specific obstacles such as corporate culture, how employees adapt to changes, and their unique leadership structure. In addition, for family businesses, how to maintain family values across different generations, handle leadership transitions, and preserve the uniqueness of the company are also issues that they need to consider. While plenty of research exists about digital transformation in big

corporations, family businesses haven't received nearly as much attention. Most studies about them concentrate on how they're organized, how decisions get made, and how they pass down their traditions [2]. This leaves important gaps in understanding their digital transformation journey.

According to current research, family businesses often encounter three unique challenges during the process of digital transformation: first, the general low acceptance of technology; second, the ideological conflicts between generations of management; and third, the psychological adaptation barriers among the employee group. If these key factors are not handled properly, it is likely to result in a delayed transformation process or ultimate failure [3]. Family businesses face a fundamental dilemma during the process of digital transformation. On the one hand, they need to actively adopt new technologies to maintain their market competitiveness. On the other hand, they must adhere to the family culture and organizational traditions that have been passed down through generations, as these cultural traditions form the foundation of the core values of the enterprise. What's more, decision-making in family businesses is often deeply influenced by emotional ties between family members and generational cognitive differences. The differences in opinions between younger and older family members may lead to conflicts during the digital transformation process [4]. Furthermore, the issue of employee psychological adaptation is particularly prominent during the transformation. In addition to technological changes, family businesses must also focus on supporting employees' psychological adaptation and providing emotional support. Therefore, exploring how family businesses can undergo digital transformation while maintaining family values and cultural heritage, and how to balance technological innovation with cultural preservation, holds significant theoretical and practical value.

This study aims to explore the unique challenges and opportunities that family businesses face during the digital transformation process, particularly in terms of changes in governance structure, employee psychological capital, and organizational culture. This paper will focus on analyzing how family businesses balance technical rationality with emotional factors, investigating how generational differences impact decision-making, examining how employees adapt to technological changes, and exploring the role of family business cultural characteristics, such as the long-term strategic orientation and family culture in the transformation process.

2. The Characteristics of Digital Transformation of Family Businesses

The digital transformation of family businesses exhibits three interconnected core characteristics, which together form a unique transformation model. These characteristics are Strategic Incrementalism, Cultural Duality, and Implementation Asymmetry. They interact with each other throughout the transformation process and have a profound impact on the overall transformation of family businesses.

First, Strategic Incrementalism is a significant characteristic of the digital transformation in family businesses. Empirical studies show that 75% of family businesses tend to adopt low-risk digital tools, such as e-commerce platforms and basic Enterprise Resource Planning (ERP) systems, while they remain cautious towards cutting-edge technologies like the Internet of Things and big data [5]. This cautious attitude stems from two main reasons: on the one hand, family businesses face dual constraints in terms of financial capital and digital talent, which limit their investments in digitalization; on the other hand, intergenerational cognitive differences and conflicting time perspectives deeply influence technology adoption decisions [6]. Specifically, the younger generation (typically the third generation of family members), as "digital natives," naturally have an affinity for disruptive technologies like cloud computing and Artificial Intelligence (AI), and are inclined to promote the adoption of these technologies. In contrast, the founding generation is more focused on the short-term returns and operational risks of technological investments [7]. In terms of time orientation, older managers often adopt a "transgenerational view" when making decisions, paying more attention to the long-term impact of technology investments on family control, while the younger generation focuses on the market competitive advantage brought by digital transformation

[8]. Furthermore, older managers tend to rely on experience-based tacit knowledge transfer, whereas younger members prefer standardized, digitalized explicit knowledge management systems [5]. These intergenerational differences result in a technology adoption process that often requires prolonged negotiation, ultimately leading to a gradual and compromise-driven transformation path.

Secondly, Cultural Duality is another key characteristic of the digital transformation in family businesses. Research indicates that about 60% of family businesses experience significant "digital cultural misalignment," which manifests in both organizational cognition and employee behavior [5]. From the perspective of management cognition, more than 40% of family business managers still rely on traditional experience rather than data analysis for decision-making, and nearly 60% of businesses have not established performance evaluation systems that align with digital operations. This results in insufficient cognitive preparation for digital transformation, thereby affecting the progress of the transformation. At the employee behavior level, the implementation of digital processes often encounters significant adaptation barriers—more than a quarter of key employees exhibit anxiety towards new technologies. This cultural conflict stems from three main factors: First, emotional factors, as many family businesses maintain symbolic traditional practices, such as handwritten ledgers and physical seals. The digitalization of these traditions often causes a sense of loss among members [9]. Second, power structure, where the centralized decision-making model in family businesses means that technology adoption typically requires approval through nearly two additional layers compared to non-family businesses, significantly delaying the transformation process [5]. Third, intergenerational value differences, with 83% of younger family members supporting radical technological changes, especially in cloud transformation, while 67% of older managers insist on maintaining face-to-face decision-making. These generational cognitive differences further intensify the cultural conflict [7]. These factors combined make the cultural adaptation challenges of digital transformation in family businesses particularly complex.

Finally, Implementation Asymmetry is the third characteristic of digital transformation in family businesses. This asymmetry is manifested in a structural imbalance in management capabilities. Studies show that only 28% of family business managers have received systematic digital management training, and this lack of expertise results in differentiated transformation outcomes. Although the introduction of automation technologies and remote work models has helped modernize workflows, the new risks, such as cybersecurity threats, have exposed the company's inadequate preparedness in digital governance [5]. Notably, some family businesses have developed unique coping mechanisms: they leverage the social capital accumulated within the family to create informal knowledge-sharing networks. This learning channel, based on kinship and shared values, partially compensates for the lack of formal technical training systems.

During the digital transformation of family businesses, three interrelated core characteristics emerge, which together form a stable theoretical framework. Firstly, the gradual strategic decision-making model directly affects the speed of the transformation; secondly, the dual nature of culture largely determines the degree of resistance of the organization to change; finally, the imbalance in implementation capabilities ultimately determines the success or failure of the transformation. This theoretical framework provides a new analytical perspective for organizational change research. It is worth noting that the impact of digital transformation on the psychological aspects of employees is particularly profound. During the process of transformation, family businesses need to place particular emphasis on providing systematic training for employees' digital skills and establishing a complete psychological support system for employees.

3. The Core Mechanism of Employees' Psychological Adaptation in the Digital Transformation of Family Businesses

In the digital transformation process of family businesses, the formation mechanism of employees' psychological adaptation can be analyzed from multiple dimensions of social cognitive theory. In this process, employees' psychological adaptation is influenced not only by individual

cognition but also by factors such as team interactions, organizational culture, and leadership behavior. This multi-layered influence mechanism demonstrates that digital transformation impacts employees both professionally through skill requirements and psychologically through cognitive changes. These findings provide family businesses with valuable insights and practical approaches to better support their workforce during technological transitions.

Employees' perceptions of and responses to digital transformation are shaped by workplace interactions and team dynamics. Drawing on social cognitive theory, individuals adapt their behaviors and attitudes through observation and environmental engagement [10]. In family firms implementing digital technologies, employee reactions often evolve—initial enthusiasm may give way to resistance as they grapple with new systems. This cognitive shift stems from heightened mental strain, frustration, and inadequate preparation [11]. When innovations disrupt familiar routines or expose skill gaps, reluctance can emerge, driven by job security concerns or perceived inefficiencies [8]. Empirical data reveal that digital adoption substantially escalates time pressure ($\beta=0.780$) and task complexity ($\beta=0.730$), exacerbating stress and undermining productivity [11].

Workplace changes, particularly technological adoption or organizational restructuring, often generate negative emotional responses among employees. As these changes unsettle established social hierarchies, feelings of resentment and job insecurity frequently emerge [10]. Such emotional reactions tend to slow implementation progress while negatively impacting both work performance and employee engagement [12]. This is especially evident when staff feel inadequately prepared for technological transitions, leading to diminished job satisfaction and increased turnover. The impact is magnified in family businesses, where the entire organizational culture is deeply rooted in personal relationships and social dynamics [13].

To mitigate these challenges, family businesses must focus on optimizing team interactions, improving communication, and reducing negative emotions during the transformation process. This can be achieved through comprehensive training programs, fostering a supportive work environment, and enhancing collaboration [11]. Mentorship programs and peer-learning opportunities can facilitate the transition by helping employees perceive digital transformation as an opportunity rather than a threat [13].

The hierarchical relationship between leaders and staff proves critical in shaping how employees psychologically adjust to digital transformation. While executives concentrate on big-picture strategy and technological implementation, frontline workers naturally worry more about concrete impacts on their daily work and team dynamics [10]. This fundamental mismatch in perspective often breeds resistance, particularly when communication channels break down. Workers who feel left out of crucial discussions frequently experience psychological distress. Drawing from social cognitive theory, this study observes that managerial actions and responsiveness serve as powerful external influences on employee mindsets. Studies demonstrate that perceived unfairness in leadership decisions or feelings of being unheard can substantially weaken an employee's ability to adapt psychologically [10]. For family businesses navigating digital shifts, this underscores the necessity of establishing genuine two-way communication. By creating spaces for employee voices to be heard and consciously addressing emotional concerns in strategic planning, organizations can lower resistance barriers and foster healthier psychological adjustment.

Digital transformation reshapes employees' psychological and behavioral responses in nuanced ways. Empirical evidence reveals a dual effect that while it can strengthen psychological resources, it simultaneously introduces novel stressors [14]. For instance, as staff gain proficiency with digital tools through structured training, they often report heightened self-efficacy. This growing technical mastery fosters not only workplace confidence but also greater willingness to experiment with new approaches [15]. However, these benefits coexist with significant psychological risks. Many workers develop "automation anxiety" which is a persistent worry that their skills may become redundant or their roles obsolete. Notably, workforce resistance accounts for approximately 70% of unsuccessful digital initiatives, underscoring how emotional factors can derail technological adoption [15].

The social cognition theory provides an important background framework for explaining this interesting phenomenon. This theory emphasizes that an individual's self-efficacy plays a crucial role in adapting to environmental changes. In the context of digital transformation, the psychological adjustment ability of employees becomes particularly important for whether they can adapt to the rapidly changing environment. The use of digital tools can significantly enhance employees' work efficiency and give them greater autonomy, but at the same time, the rapid iteration of technology and fundamental changes in work processes may bring psychological pressure to employees [16]. To cope with this situation, managers should formulate more detailed assistance channels and human resource strategies.

Research shows that transformational leadership can significantly alleviate the psychological negative impacts brought about by digital transformation on employees and enterprises by formulating effective new policies [13]. Such leaders with unique insights can effectively help employees establish a positive view of the change, enabling them to psychologically accept and support the change. Especially in periods of high environmental uncertainty, the communication style and decision transparency of leaders will directly affect the psychological security of employees. It is worth noting that empirical studies have found that environmental uncertainty significantly enhances the positive impact of digital transformation on financial performance, but its impact on operational performance is relatively limited [14]. This finding provides new insights into the relationship between employees' psychological capital and organizational performance.

Furthermore, studies have shown that digital transformation has a positive impact on the job satisfaction and organizational loyalty of enterprise employees, which is consistent with the cognitive feedback mechanism in the social cognition theory [13]. During the process of digital transformation, those employees who feel supported by their leaders, the effectiveness of the technology, and the long-term benefits brought by the transformation often experience significant improvements in job satisfaction and organizational loyalty. However, this process does not occur naturally and is especially true in family enterprises, as the centralized management structure may limit employees' sense of participation and initiative, thereby affecting their creativity and enthusiasm [13]. Therefore, when family enterprises promote digital transformation, they should focus on enhancing employees' participation while retaining centralized decision-making power, cultivating creativity and innovative behaviors, in order to better achieve the organizational transformation goals. Therefore, family businesses, when driving digital transformation, should focus on balancing the concentration of decision-making power with the enhancement of employee involvement, fostering creativity and innovative behavior to better achieve organizational transformation goals.

4. Conclusion

Overall, the impact mechanism of digital transformation on employees' psychological adaptation in family businesses is a complex, multi-level process, involving individual cognition, team interactions, leadership behavior, and organizational culture. Based on social cognitive theory, family businesses should focus on optimizing leadership styles, enhancing employee training, improving communication channels, and strengthening social support to help employees better adapt to changes during the digital transformation process, thereby enhancing their psychological capital and adaptation capabilities. This approach not only facilitates the digital transformation of family businesses but also improves employees' job satisfaction, organizational commitment, and overall effectiveness, laying a solid foundation for the sustainable development of family businesses.

The digital transformation journey for family businesses presents distinctive complexities arising from their hybrid nature as both traditional institutions and modern enterprises. These organizations must navigate three core tensions: gradual strategic evolution versus disruptive innovation, preservation of heritage values alongside adoption of new mindsets, and inconsistent technological fluency among leadership tiers. Underlying these operational challenges is the fundamental human dimension—how employees psychologically process and adapt to continuous change. The social

cognition theory provides a valuable framework for understanding and addressing these adaptation disorders. Its principles can guide organizations in formulating effective coping measures to alleviate employees' resistance and build a resilient work culture.

For family businesses to achieve successful digital transformation, they must strike a delicate balance between technological innovation and cultural preservation, while giving due consideration to employees' psychological adaptation. This transformation process essentially represents a dual challenge of organizational change and human-centric care.

Future research should focus on two key areas, developing differentiated transformation strategies tailored to multi-generational workforce characteristics and establishing digital governance systems that align with the unique attributes of family enterprises. Notably, when technological advancement and humanistic care form a virtuous cycle, they often generate unexpected synergistic effects.

At the practical level, family businesses that simultaneously prioritize operational efficiency and humanized management tend to excel in the digital wave. These enterprises not only preserve their distinctive cultural DNA but also cultivate new competitive advantages in the globalized economy. This balanced development model may well represent the ideal paradigm for digital transformation in family businesses.

References

- [1] Ernst & Young LLP. Ernst and young tax guide 2018 (33rd ed.). John Wiley & Sons, Incorporated, 2017.
- [2] Appleton S W, Holt D. Aligning strategy and digitalisation activity as an incremental or radical innovation in family farms. *International Journal of Entrepreneurial Behaviour & Research*, 2024, 30(2/3): 498-519.
- [3] AlNuaimi B K, Kumar Singh S, Ren S, Budhwar P, Vorobyev D. Mastering digital transformation: The nexus between leadership, agility, and digital strategy. *Journal of Business Research*, 2022, 145: 636-648.
- [4] Begnini S, Oro I M, Tonial G, et al. The relationship between the use of technologies and digitalization strategies for digital transformation in family businesses. *Journal of Family Business Management*, 2024, 14(4): 710-726.
- [5] Mattos C S, Pellegrini G, Hagelaar G, et al. Systematic literature review on technological transformation in SMEs: a transformation encompassing technology assimilation and business model innovation. *Management Review Quarterly*, 2023, 1: 1-39.
- [6] Zapata-Cantu L, Sanguino R, Barroso A, Nicola-Gavrilă L. Family business adapting a new digital-based economy: opportunities and challenges for future research. *Journal of the Knowledge Economy*, 2023, 14: 408-425.
- [7] De Massis A, Audretsch D, Uhlaner L, Kammerlander N. Innovation with limited resources: management lessons from the German mittelstand. *Journal of Product Innovation Management*, 2018, 35(1): 125-146.
- [8] Rupeika-Apoga R, Petrovska K, Bule L. The effect of digital orientation and digital capability on digital transformation of SMEs during the COVID-19 pandemic. *Journal of Theoretical and Applied Electronic Commerce Research*, 2022, 17(2): 669-685.
- [9] Van Der Schaft A H T, Lub X D, Van Der Heijden B, Solinger O N. How employees experience digital transformation: A dynamic and multi-layered sensemaking perspective. *Journal of Hospitality & Tourism Research*, 2024, 48(5): 803-820.
- [10] Mohamed F, Zouaoui S K, Mohamed A B. The impact of digital transformation on employees' mental workload in the industrial sector: Evidence from Tunisia. *Current Psychology*, 2025, 44(7): 5494-5507.
- [11] Tarafdardar M, Tu Q, Ragu-Nathan T S. Impact of technostress on employee performance: The role of emotional regulation. *Information Systems Journal*, 2019, 29(4): 814-843.
- [12] Alieva J, Powell D J. The significance of employee behaviors and soft management practices to avoid digital waste during a digital transformation. *International Journal of Lean Six Sigma*, 2023, 14(1): 1-32.
- [13] Gun L, Imamoglu S Z, Turkcan H, Ince H. Effect of digital transformation on firm performance in the uncertain environment: Transformational leadership and employee self-efficacy as antecedents of digital transformation. *Sustainability*, 2024, 16(3): 1200.

- [14] Fu F, Zha W, Zhou Q. The impact of enterprise digital capability on employee sustainable performance: From the perspective of employee learning. *Sustainability*, 2023, 15(17): 12897.
- [15] Jafari-Sadeghi V, Amoozad Mahdiraji H, Alam G M, Mazzoleni A. Entrepreneurs as strategic transformation managers: Exploring micro-foundations of digital transformation in small and medium internationalisers. *Journal of Business Research*, 2023, 154: 113287.
- [16] Malodia S, Mishra M, Fait M, Papa A, Dezi L. To digit or to head? Designing digital transformation journey of SMEs among digital self-efficacy and professional leadership. *Journal of Business Research*, 2023, 157: 113547.