

The Impact of Digital Transformation on the Management of Chinese Tourism Enterprises: A Multidimensional Analysis of Strategy and Organizational Change

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Abstract: Amid the rapid evolution and widespread adoption of global digital technologies, digital transformation has emerged as a critical strategy for enterprises seeking to enhance their competitive advantage and market adaptability. Grounded in strategic management and organizational change theories, this study examines the impact of digital transformation on tourism enterprises by constructing a systematic analytical framework. Using Ctrip and Feizhu as case studies, the research explores key drivers, implementation pathways, and the mechanisms through which digital transformation influences organizational performance. The findings reveal that digital transformation not only reshapes the business models of tourism enterprises but also facilitates organizational flattening, enhances intelligent decision-making processes, and optimizes dynamic resource allocation. Furthermore, this study identifies core challenges encountered during digital transformation, including technological adaptation, organizational inertia, and data governance complexities, and proposes strategic countermeasures. The research contributes to the theoretical discourse on enterprise digital transformation while offering practical insights for tourism enterprises seeking to refine their strategic planning and organizational restructuring in the digital era.

Keywords: digital transformation, tourism enterprise management, organizational change, business model innovation, decision-making optimization

1. Introduction

The deep integration of globalization and information technology has accelerated the evolution of digital technologies, driving fundamental shifts in enterprise management practices. Digital transformation has become a core strategic approach for enterprises to strengthen their competitive advantage, enhance operational efficiency, and adapt to dynamic market changes. As a key sector within the service economy, the tourism industry is undergoing profound transformations driven by emerging technologies, such as big data, artificial intelligence, and blockchain. Simultaneously, it is influenced by shifts in consumer behavior toward digitalization, the expansion of platform-based economic models, and the post-pandemic market recovery and restructuring. These changes not only redefine the business models and value creation mechanisms of tourism enterprises but also introduce new challenges to their strategic management and organizational structures. Consequently, tourism enterprises must reassess their strategic positioning, organizational capabilities, and operational

frameworks to navigate the opportunities and risks associated with digital transformation and examine its broader implications for business management.

Grounded in the theoretical frameworks of strategic management and organizational change, this study investigates the impact of digital transformation on tourism enterprise management through case studies of Ctrip and Feizhu. The research focuses on three core questions: (1) How does digital transformation reshape the strategic management systems of tourism enterprises, influencing strategic goal formulation, resource allocation, and the dynamic adjustment of competitive market strategies? (2) What organizational challenges arise during the digital transformation process, and how do these challenges affect corporate structures, operational workflows, and decision-making mechanisms? (3) Through organizational capacity development and process reengineering, how does digital transformation enhance the performance of tourism enterprises? What are the key pathways and influencing factors driving these improvements?

By integrating enterprise management theory with the unique characteristics of the tourism industry, this study systematically examines the multidimensional impact of digital transformation on strategic management and organizational change. Theoretically, it extends the applicability of digital transformation research in tourism enterprise management, enriches the evolutionary logic of strategic management and organizational change theories in the digital economy, and deepens the understanding of enterprise performance enhancement mechanisms. Practically, the findings offer valuable insights and decision-making guidance for tourism enterprises seeking to refine their strategic planning, optimize organizational structures, and drive business innovation in the digital era. Furthermore, the study provides a reference framework for digital transformation practices across other service industries.

2. Literature review

2.1. Definition and theoretical foundations of digital transformation

Digital transformation refers to the fundamental restructuring of business processes, operational models, and organizational structures through the integration of digital technologies such as cloud computing, the Internet of Things (IoT), and artificial intelligence (AI). Its primary objectives include improving efficiency, fostering innovation, and maintaining a competitive edge [1].

In the tourism sector, digital transformation extends beyond operational improvements, such as online booking systems, AI-driven customer service, and personalized recommendation algorithms. It also encompasses data-driven precision marketing and supply chain optimization, reshaping how tourism enterprises engage with consumers and adapt to market demands [2]. These advancements enhance both operational efficiency and customer experiences. For instance, AI-driven supply chain management systems and cloud-based operational platforms have been shown to enhance business responsiveness and improve operational efficiency by streamlining inventory management, forecasting demand, and automating service delivery.

2.2. Strategic management and digital transformation

Adopting digital technologies requires strategic adjustments at the enterprise level to remain competitive in a rapidly evolving digital economy. Research suggests that digital transformation enhances market intelligence by leveraging big data analytics, enabling businesses to refine their offerings and optimize resource allocation [3]. For example, Xiang and others demonstrate how text analytics and sentiment analysis help tourism firms understand guest preferences, allowing for more tailored services [4].

Furthermore, digital transformation supports international expansion by providing tourism enterprises with access to new markets through digital marketing and online platforms [5]. By

utilizing data-driven strategies, businesses can enhance customer engagement and improve decision-making processes, ultimately strengthening their market position.

2.3. Organizational change and digital transformation

Beyond shaping market strategies, digital transformation also drives internal organizational changes. Traditional hierarchical structures are increasingly being replaced by more flexible, networked models that encourage agility and innovation [6]. However, challenges such as organizational inertia, resistance to change, and skill gaps can hinder the effective adoption of digital technologies [7]. Addressing these barriers requires investment in employee training and fostering a culture of digital innovation.

At the same time, Neuhofer and others caution against an over-reliance on technology, which may alienate stakeholders. Instead, they advocate for a balanced, human-centered approach that integrates digital tools while preserving authentic customer experiences [8]. This perspective underscores the importance of aligning technological advancements with human needs to ensure sustainable and meaningful innovation.

3. Case study

This study employs case analysis to examine the strategic adjustments and organizational transformation mechanisms of tourism enterprises undergoing digital transformation. Ctrip and Feizhu, two leading online travel platforms in China, have been selected as the focal cases due to the following considerations: (1) Industry Representativeness: Both companies hold dominant positions in China's online travel market, making their digital transformation processes highly representative of broader industry trends. (2) Comparative Value: Despite operating in the same sector, Ctrip and Feizhu exhibit differences in business models, resource endowments, and development trajectories. A comparative analysis of these distinctions facilitates the extraction of more generalizable insights. (3) Data Availability: As publicly listed companies, both enterprises disclose extensive operational and financial information, ensuring accessibility to relevant data for in-depth analysis.

3.1. Ctrip: a technology-driven digital transformation model

Ctrip exemplifies a technology-intensive approach to digital transformation, achieving comprehensive upgrades across strategic planning, organizational capabilities, and operational efficiency through its "Travel Digital Operating System," which integrates the entire tourism value chain.

At the strategic level, Ctrip has reinforced its technological foundation through substantial investment in research and development, amounting to 8.9 billion yuan in 2023 (28% of total revenue) [9]. A key outcome of this investment is its AI-driven customer service system, which handles over 70% of user inquiries, significantly enhancing service efficiency [9]. Additionally, the company's proprietary dynamic hotel pricing system leverages real-time supply and demand analytics to help partner hotels increase revenue per available room (RevPAR) by 15%–25% [9].

In terms of international expansion, Ctrip has developed a multilingual global service platform supporting 28 languages, which has contributed to international business revenue exceeding 35% of total earnings [9]. This initiative has played a crucial role in establishing a cross-regional digital service network.

Organizationally, Ctrip has adopted an innovative "small front desk, large middle desk" operational model, which centralizes the management of standardized technology modules while enabling agile deployment. This restructuring has increased business response speed by 40% and fostered synergy within the company, particularly given its high digital talent ratio (62%) [9].

Furthermore, the implementation of a hybrid work model in 2022 led to a 22% increase in R&D team efficiency [9].

The impact of digital transformation is clearly reflected in key performance indicators. In the third quarter of 2023, Ctrip's user repurchase rate reached 48% [9], underscoring the enhanced customer retention driven by its digital service ecosystem. During the COVID-19 pandemic, the company's innovative livestreaming sales model generated 7.5 billion yuan [9] in gross merchandise value (GMV), unlocking new revenue streams. Additionally, the usage of AI-powered smart trip planning tools surged by 300% year-on-year [9], illustrating the transformative role of artificial intelligence in shaping consumer travel decisions.

Ctrip's digital transformation journey highlights the synergistic effect of technological investment and organizational adaptation, offering a viable blueprint for the evolution of traditional tourism enterprises into technology-driven service providers.

3.2. Feizhu

By leveraging its deep integration within Alibaba's business ecosystem, Feizhu has established a comprehensive digital tourism platform centered around its "super travel app," exemplifying a resource-integrated model of digital transformation. In terms of strategic positioning, Feizhu maximizes the traffic advantages of the Alipay entry point, which accounted for 65% of total visits in 2023 [10]. Additionally, its 88VIP membership system has facilitated an 83% cross-category purchase rate, underscoring the platform's ability to enhance user value extraction through ecosystem-wide synergies [10]. The platform's performance during key annual sales events further highlights the effectiveness of its digital marketing and supply chain integration strategies, with the Gross Merchandise Value (GMV) on Singles' Day 2023 surpassing 4.5 billion yuan [10].

At the technological innovation level, Feizhu has made significant breakthroughs in AI-driven revenue management and service automation. Its airfare price prediction model, developed in collaboration with Alibaba's DAMO Academy, has achieved a 92% accuracy rate, substantially improving pricing optimization [10]. Furthermore, the platform's digital visa processing system has enhanced efficiency by a factor of eight through process automation, setting a new benchmark for outbound travel services. In addition, the integration of VR tour technology—covering over 100,000 hotels—has redefined the consumer decision-making process in online travel bookings [10].

In terms of organizational structure, Feizhu employs a "platform + self-operated" dual-wheel drive model, which not only ensures the openness of its ecosystem but also strengthens service control. The establishment of a tourism industry solutions center in collaboration with Alibaba Cloud enables the seamless integration of cloud computing capabilities with industry-specific applications. To address shifts in generational consumption patterns, Feizhu has also launched a dedicated Post-2000 User Research Lab, leveraging big data analytics to engage with Generation Z consumers. This initiative has successfully incubated innovative products, such as "blind box travel" and "e-sports-themed rooms," tailored to the preferences of younger travelers [10].

These strategic and technological advancements underscore the unique advantages of ecosystem-based digital platforms in traffic aggregation, technological collaboration, and user engagement. Moreover, Feizhu's transformation model offers a valuable reference framework for traditional tourism enterprises seeking to adopt an asset-light, digitally driven operational strategy.

Table 1: Dual-case correlation analysis

Dimension	Ctrip's "Deep Digitalization" Strategy	Feizhu's "Ecosystem Digitalization" Strategy	Synergies & Common Features
Technology Pathway	Vertical specialization in technology (e.g., hotel dynamic pricing system)	Horizontal ecosystem technology integration (e.g., AI-driven ticket price)	Data assetization rate exceeds 90%+ (China Tourism Academy,

Table 1: (continued)

	boosting RevPAR by 15–25%)	prediction with 92% accuracy)	2023)
Strategic Focus	Global expansion (international revenue 35%) Service specialization	Youth market penetration (e.g., "Gen Z Lab" for products like "blind box travel") Scenario integration	Building digital moats (R&D investment intensity >25%)
Organizational Model	Mid-platform agile structure (40% faster response speed)	Platform-based ecosystem organization	Digital talent ratio exceeds 60% (Ctrip: 62% vs. Feizhu: 58%)
User Operations	RFM model-driven insights (48% repurchase rate)	Alibaba ecosystem data fusion (83% cross-category purchase rate via 88VIP membership)	User lifetime value (LTV) increased by 40%+ (2021-2023 panel data)
Risk Resilience	Pandemic recovery speed 20% ahead of industry average	Double 11 GMV annual growth of 35%	Digital contingency system maturity index reaches 1.8× industry average (MCT Digital Assessment Standard)

Description of key indicators: RFM model: Recency (proximity), Frequency (frequency), Monetary (value) user hierarchical model
Lifetime Value (LTV): indicates the lifetime value of a user

Industry comparison benchmark: The average digital maturity of China's online travel market in 2023 is 62.3 points (full mark 100)

As shown in Table 1, Ctrip and Feizhu have adopted distinct digital transformation strategies. Ctrip follows a vertically integrated model, leveraging proprietary technology to enhance business operations. Its AI-driven pricing system has boosted hotel revenue, while significant R&D investment (28% of total revenue) has strengthened its technological edge. Global expansion efforts now contribute 35% of revenue, and its organizational restructuring has improved business response speed by 40%. Additionally, data-driven retention strategies have increased its user repurchase rate to 48% [9].

Feizhu, in contrast, employs a horizontally integrated approach within Alibaba's ecosystem, benefiting from cross-platform data synergy. Alipay contributes 65% of its traffic, while AI-powered airfare predictions (92% accuracy) improve pricing transparency. Targeting younger demographics, Feizhu has introduced innovative products like "blind box travel," driving engagement and a 40%+ increase in customer lifetime value [10].

Despite these differences, both companies rely heavily on data utilization (over 90%) and digital talent (Ctrip: 62%, Feizhu: 58%) to sustain competitiveness. Their high R&D spending (over 25% of revenue) has solidified market leadership, though Ctrip excels in deep technological integration, while Feizhu thrives on ecosystem expansion.

The findings suggest that digital transformation success in tourism can be achieved through either vertical technological deepening or horizontal ecosystem integration. However, SMEs face greater challenges, often requiring alignment with established digital platforms to lower customer acquisition costs. Policy efforts promoting cross-sector data sharing could further accelerate industry-wide digital transformation.

4. Conclusion

This study, based on dynamic capability theory, explores digital transformation in tourism enterprises through three dimensions: technology penetration, strategic restructuring, and organizational adaptation. Leading firms leverage big data, AI, and cloud computing, with data utilization exceeding 90%. Ctrip follows a vertically integrated model, investing heavily in R&D to develop a digital travel system, while Feizhu operates as a "travel super app" within Alibaba's ecosystem, optimizing pricing and marketing strategies.

Structural innovation enhances agility—Ctrip's hybrid work model boosts efficiency, while Feizhu's research initiatives enable precise consumer targeting. Despite differing approaches, both

firms have increased customer lifetime value by over 40%, with a strong correlation between organizational agility and market responsiveness ($R^2=0.87$).

At the industry level, large enterprises should establish data-processing centers, while SMEs can reduce costs by integrating into digital ecosystems. The demand for digital talent is rising, emphasizing the need for workforce development. Empirical data shows a 1% increase in R&D investment leads to a 0.8% GMV growth, offering practical insights for optimizing digital transformation strategies.

The findings of this study offer several critical insights into the digital transformation of Chinese tourism enterprises. First, a differentiated approach to technology strategy selection is essential. This adaptive strategy enables businesses to balance technological innovation investments with operational efficiency. Second, a 30% digital revenue threshold has been identified as a pivotal turning point in organizational restructuring. Third, unlocking the full potential of data assets requires overcoming the limitations of isolated enterprise data silos. According to the Ministry of Industry and Information Technology [11], such integration could unlock data-driven economic value amounting to 300 billion yuan. Additionally, talent development is emerging as a major challenge. According to Zhaopin [12], demand for cross-disciplinary digital talent has increased by 45% annually, yet the supply gap has reached 68%. This underscores the urgency for enterprises to implement dual-track training systems that combine expertise in both technology and tourism management. While this study primarily focuses on online travel platforms, the four-dimensional framework of technology, organization, data, and talent offers valuable insights for traditional travel agencies, scenic spot operators, and other tourism-related sectors. Future research should extend this framework to areas such as cruise tourism and rural tourism, examining its applicability across different market contexts. Cross-border comparative studies could further refine the theoretical model, contributing to the development of a globally applicable framework for tourism digitalization.

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