

Research on the Digital Transformation of Traditional Enterprises: A Case Study of Midea Group

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Abstract. Against the backdrop of a rapidly expanding digital economy, digital transformation has become an imperative for traditional enterprises seeking to enhance their competitiveness and ensure sustainable development. Employing literature review and case study methodologies, this research investigates the driving forces, core pathways, and challenges inherent to this transformation. Using the Midea Group as a primary case, the findings indicate that a successful transformation requires a clear strategic vision, a systematic overhaul of the entire value chain, a focus on users' central value creation, and supportive organizational. Furthermore, policy support plays a crucial role in mitigating risks and optimizing resource allocation. This study not only enriches the theoretical framework of digital transformation but also offers a practical, transferable pathway for other traditional enterprises.

Keywords: Digital Transformation, Traditional Enterprises, Midea Group, Industrial Internet, Digital Economy

1. Introduction

Currently, the global digital economy is reshaping the industrial landscape at an unprecedented pace. Digital transformation has evolved from a strategic option for enterprises into an imperative crucial for their survival and development. Digital technologies, represented by artificial intelligence, big data, and cloud computing, are driving a profound realignment of global value chains [1]. However, traditional enterprises face multiple challenges during their transformation. This study takes Midea Group as a typical case to systematically examine the internal mechanisms and practical pathways of digital transformation in traditional enterprises. Midea Group achieved remarkable results, including a 250% increase in operating revenue and a 400% rise in net profit [2]. Theoretically, it enhances understanding of phased digital transformation in manufacturing and clarifying underlying mechanisms. Practically, it provides pathways and policy advice for traditional enterprises.

2. Literature review

The literature relevant to this paper can be categorized into two main strands: (1) the drivers and underlying mechanisms of digital transformation; (2) the challenges enterprises face during transformation.

2.1. The drivers and underlying mechanisms of digital transformation

2.1.1. External driving factors

Reference [3] identified three key external factors propelling enterprise digital transformation based on its current state: First is the policy drive effect; second, the advanced overall transformation level within the industry; third, the significant progress in building Industrial Internet platforms. As a key corporate strategy, digital transformation is also inevitably influenced by climate policy uncertainty [4].

2.1.2. Internal driving factors

Digitization promotes a shift from hierarchical structures to networked organizations, enables to achieve precise reach through data analysis; shifts market insight from experience-driven to data-driven, fostering innovation; facilitates more flexible resource allocation in human resource management via digital platforms [5]. Executive pay disparity can drive digital transformation by intensifying strategic aggressiveness and improving the quality of internal controls [6].

2.2. The challenges enterprises face during transformation

2.2.1. Cognitive and resource constraints

Reference [7] found that the difficulties of transformation stem from multiple factors. To break through these bottlenecks, a comprehensive advancement mechanism encompassing strategic planning, talent development, data management, and resource guarantee is required. Inadequate talent reserves constrain the transformation process, weak data governance capability results in low efficiency in information integration and application [8].

2.2.2. Systemic contradictions

Reference [9] identified a triple dilemma: "the contradiction between micro-level necessity and macro-level inefficiency, the conflict between long-term strategic nature and short-term costs, and the trade-off between technological innovation and operational stability." Reference [10] proposed a significant positive correlation between the digital transformation process and default risk. Transforming enterprises more prone to enlarged asset impairment scales and increased financial fraud.

3. Case study analysis - Midea Group

3.1. Background and challenges

Midea Group, founded in 1968, has evolved from a local fan factory into a global corporation offering smart home appliances, robotics, automation, and logistics. With over 30 brands serving 200+ countries and 400 million users, it has invested over RMB 20 billion since 2012 in digital transformation, building an integrated operational system from R&D to after-sales under the strategy of "Technology Leadership, User Directness, Digital-Intelligence Drive, and Global Breakthrough." Consumers now expect highly personalized and scenario-based solutions, forcing faster adaptation and greater flexibility. Internally, the company struggles with siloed IT systems across its business

units, which obstruct group-wide data integration and hamper real-time decision-making. Outdated production models and a lack of unified data governance further slow responsiveness and constrain innovation.

3.2. Digital transformation strategy

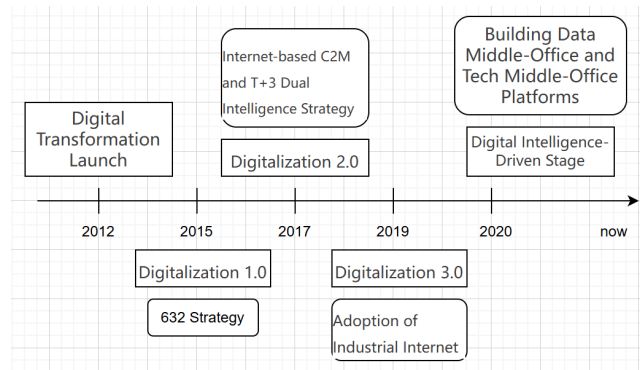


Figure 1. Timeline of transformation

Midea Group's digital transformation has evolved from technology-supported initiatives to a comprehensive strategy-driven effort, progressing through four distinct phases. Midea has developed new businesses in Industrial Internet, robotics, and smart logistics to drive industrial upgrading. It also launched digital products and adopted a C2M model to shift from hardware sales to a "product + service" approach. Midea achieved both ecosystem integration and operational efficiency. The transformation is fundamentally driven by business innovation, demonstrating the restructuring impact of digital initiatives.

3.3. Products and strategy

Midea has built a comprehensive digital platform system covering consumer, channel, and production ends. The Meiyunxiao platform manages sales and channels through a unified system for orders, inventory, pricing, and customers, enabling transparent and controllable omnichannel operations. The MJoT Industrial Internet platform supports manufacturing with equipment connectivity, data analytics, and model algorithms to enable closed-loop functions. The Meijia App integrates a "Cloud-Pipe-Device" structure to provide users with centralized control and automation for multi-brand smart home devices. An AI Open Innovation Platform supports adaptive product learning internally and offers APIs and SDKs for ecosystem collaboration. In terms of technological approach, Midea Group employs Infrastructure, Platform Capability, and Intelligent Application. The infrastructure is built on Midea Cloud that enable unified management and elastic supply of computing, storage.

3.4. Transformation results

Table 1. Comparison of core financial data of midea company before and after transformation

Indicator	Before Transformation (2012)	After Transformation (e.g., 2023)	Change	Driving Factors
Operating Revenue (100 million yuan)	~1,000	~3,500	+250%	Product intelligence, channel digitization, global layout
Net Profit (100 million yuan)	~60	~300	+400%	Improved production efficiency, cost optimization
Gross Profit Margin	~20%	~25%	+5 percentage points	Cost reduction through smart manufacturing, increased proportion of high-end products
R&D Investment (100 million yuan)	~30	~120	+300%	Investment in digital technologies (AIoT, industrial internet)
Inventory Turnover Days	~90 days	~45 days	Reduced by 50%	"T+3" model, data-driven supply chain optimization

Before transformation, Midea faced typical manufacturing inefficiencies: in 2012, revenue was around RMB 100 billion, net profit below RMB 6 billion, and gross margin approximately 20%. By 2023, through product intelligence, digital channels, and global expansion, revenue reached RMB 350 billion, net profit exceeded RMB 30 billion, and gross margin rose to around 25%. R&D investment grew from RMB 3 billion to RMB 12 billion, supporting AIoT and Industrial Internet development. Inventory turnover decreased from 90 to 45 days with the "T+3" model and data-driven supply chains. Overseas revenue increased from 30% to 45%, aided by digital collaboration and cross-border e-commerce.

3.5. Key takeaways

Midea's digital transformation shows that enterprises must track technological trends, focus on user needs, and drive comprehensive digital upgrades through tech innovation, business model evolution, and data management to sustain competitive advantage. Its success stems not only from technological and operational improvements, but also from embedding digital transformation into corporate culture, fostering continuous innovation. This model offers a reducible path for traditional manufacturers and insights for industry-wide digital advancement.

4. Recommendations for traditional enterprises' digital transformation based on the case study

4.1. At the enterprise level

Firstly, clear strategic positioning and long-term investment commitment. Midea Group established digitization as its core strategy, investing over RMB 20 billion in ten years. Secondly, systematic digital transformation of the entire value chain. Midea achieved a full-chain transformation through its Industrial Internet platform. Thirdly, value creation centered on user needs. Midea has built a smart home ecosystem, achieving a transition from hardware sales to scenario-based services.

4.2. At the policy level

Enterprises must shift from passive policy compliance to proactive integration of national strategic goals. Guided by the "14th Five-Year Plan for Digital Economy Development", they should internalize national targets. Technologically, leveraging policies such as the "Next Generation Artificial Intelligence Development Plan", using the "SME Digital Transformation Guide" as a blueprint.

Internationally, the U.S. emphasizes market-driven innovation through initiatives like the CHIPS Act and R&D tax incentives, strengthening leadership in AI and cloud computing while reducing operational costs. The EU combines regulation with investment, resulting in high e-government maturity and broad SME cloud adoption. China could learn from US's approach of having leading enterprises open their technical capabilities to empower SMEs. From EU, china could explore establishing a digital governance system that both promotes innovation and prevents monopoly.

5. Conclusion and outlook

5.1. Research conclusions

The core path for the digital transformation of traditional enterprises lies in a comprehensive change guided by strategy, supported by technology, and aimed at business restructuring. The key factors for successful digital transformation lie in the organic combination of three dimensions: strategic resolve, organizational adaptation, and ecological synergy. The breakthrough can only be achieved when organizational capabilities, corporate culture, and governance resonate with the digital strategy.

5.2. Limitations and future research directions

5.2.1. Limitations

The research is primarily based on the single case of Midea Group. The transformation paths of enterprises in different industries and of different scales may vary significantly. Therefore, the conclusions requires further verification. The lag between technological iteration and organizational adaptation may not have been sufficiently considered.

5.2.2. Future research directions

Based on the in-depth analysis of Midea Group's digital transformation case in this study, future research could explore to three directions. First, research should focus on differentiated pathways for digital transformation in manufacturing. Secondly, there is a need to strengthen research on the dynamic process of digital transformation. Thirdly, a multidimensional impact assessment system for digital transformation should be constructed. This system should provide a theoretical basis for formulating transformation policies that balance efficiency and equity.

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