

Research on the Synergistic Mechanism of Corporate Digital Transformation and ESG Management——Based on the Perspectives of Strategic Integration and Value Co-Creation

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Abstract

This paper delves into the synergistic mechanisms between corporate digital transformation and Environmental, Social, and Governance (ESG) management. By employing literature review and case analysis methods, it summarizes and highlights the current challenges faced by enterprises in digital transformation, namely "transformation barriers, capability deficiencies, and risk avoidance." From the perspective of strategic integration and value cocreation, it proposes a theoretical framework and practical pathways for the synergy between the two. The research findings indicate that enterprises should incorporate digital transformation and ESG management into their top-level strategic design. It proposes the construction of pathways of the synergy mechanism between corporate digital transformation and ESG management through threedimensional strategic integration, fourstage improvement of value cocreation, and comprehensive construction of risk prevention and control mechanisms, achieving deep integration of the two and thereby promoting sustainable corporate growth and longterm value creation. The research findings not only help enhance the digital transformation capabilities of small and mediumsized enterprises but also provide reference experience for other similar industries.

Keywords: corporate digital transformation, ESG management, strategic integration, value cocreation, synergistic mechanism

1. Introduction

1.1 Research Background

Driven by the current trend of globalization, enterprises are encountering unprecedented opportunities and challenges. Digital transformation has become a key strategy for enterprises to adapt to global market competition. With the help of digital technologies, enterprises can break through geographical boundaries to optimize the allocation of global resources, thereby improving operational efficiency and innovation capabilities. Meanwhile, digital transformation also helps enterprises more effectively cope with market changes. Through data analysis and intelligent decisionmaking, enterprises can quickly respond to customer needs and thus enhance their market competitiveness. In addition, digital technologies have promoted changes in the organizational structure of enterprises. They have broken the shackles of traditional hierarchical systems and formed more flexible networked organizational structures, further improving the internal collaboration efficiency of enterprises. Against the backdrop of globalization, digital transformation is not only a necessary condition for the survival of enterprises but also a key driving force for sustainable development.

In recent years, the Chinese government has attached great importance to digital transformation and introduced a series of policies to support enterprises in accelerating the transformation process. In December 2024, the Ministry of Industry and Information Technology, in conjunction with multiple departments, issued the "Implementation Guide for the Digital Transformation of Manufacturing Enterprises," providing enterprises with clear directions and implementation paths for transformation. In 2025, the national standard "Reference Architecture for Digital Transformation Management" was officially released, further standardizing the processes and management of corporate digital transformation. These policies offer comprehensive support for enterprises from multiple aspects such as strategic planning, technology application, and talent cultivation. They have accelerated the implementation of digital transformation in Chinese enterprises, promoted industrial upgrading, and contributed to highquality economic development. The guidance and support of policies have provided a solid guarantee for the digital transformation of enterprises, enabling them to better adapt to the global digital wave.

From the perspective of corporate operations, digital transformation is the key to enhancing competitiveness. Digital technologies can optimize internal management processes, achieve business automation and intelligence, improve operational efficiency, and reduce costs. At the same time, digital transformation provides impetus for corporate innovation, helping to explore new business models and pathways for value creation. However, enterprises face challenges such as high costs of technological investment, shortages of digital talents, and data security risks. Therefore, enterprises need to formulate clear digital strategies, strengthen technology research and development as well as talent cultivation, and improve data security management systems in order to advance the transformation and achieve sustainable development.

1.2 Research Questions and Objectives

This study aims to uncover the intrinsic connections and interactive mechanisms between corporate digital transformation and ESG management. It seeks to propose a theoretical framework and practical pathways for the synergistic mechanisms between corporate digital transformation and ESG management, and to provide strategic recommendations and practical guidance for enterprises to implement digital transformation and ESG management, thereby promoting their longterm development. The research focuses on the following core questions: How can the synergistic mechanisms between corporate digital transformation and ESG management be constructed? From the perspective of strategic integration and value cocreation, what are the effective pathways for the integration of corporate digital transformation and ESG management? Through case analysis, to verify the effectiveness of the synergistic mechanisms between corporate digital transformation and ESG management, and to provide theoretical support and practical evidence for the sustainable development of enterprises.

1.3 Research Framework

This study aims to thoroughly explore the synergistic effects between corporate digital transformation and ESG management. It begins by establishing a theoretical foundation, elucidating relevant concepts and principles to provide a solid theoretical underpinning for the research. Subsequently, through the analysis of synergistic mechanisms, it reveals the intrinsic connections and mutually reinforcing roles between digital transformation and ESG management from four dimensions: technological support, management philosophy, strategic integration, and value cocreation. Next, the case analysis section selects representative corporate cases. By analyzing specific practices, it uncovers the interactive relationships and synergistic effects between the two and summarizes lessons learned. Finally, based on the research findings, strategic recommendations are proposed. These recommendations aim to strengthen technological support, improve the management system, optimize strategic positioning, and deepen value cocreation. They are designed to promote the coordinated development of corporate digital transformation and ESG management and to drive enterprises to achieve their sustainable development goals.

1.4 Research Significance

1.4.1 Theoretical Significance

This study focuses on the integration of digital transformation and ESG management. By constructing a systematic theoretical framework, it provides an indepth analysis of the current state and issues of digital transformation and proposes pathways for building a synergistic mechanism between corporate digital transformation and ESG management. This not only reveals the intrinsic logical relationship between digital transformation and ESG management but also offers new perspectives and methods for management theory, thereby promoting the further development of related theories.

1.4.2 Practical Significance

On the practical level, this study offers specific guidance and recommendations for how enterprises can effectively incorporate ESG management into their digital transformation processes. Through case analysis, it provides actionable strategies and pathways for corporate digital transformation. This helps enterprises to enhance their environmental, social, and corporate governance performance while achieving digital upgrades, thereby strengthening their longterm competitiveness and sustainable development capabilities.

2. Research Methods

2.1 Literature Review Method

By systematically sorting out and analyzing the relevant literature on corporate digital transformation and ESG management, this study understands their development history, theoretical foundations, and practical experiences, providing theoretical support and background information for the research.

2.2 Case Study Method

This study analyzes the current status of digital transformation of Anhui Jianghuai Automobile Group Co., Ltd., and explores its practical experience and challenges in integrating digital transformation with ESG management. Through a systematic analysis of the current situation, it summarizes successful experiences and existing difficulties, and provides references and suggestions for the digital transformation of other enterprises.

3. Overview of Digital Transformation and ESG Management

3.1 Concept of Digital Transformation

Digital transformation is the process by which enterprises introduce and apply digital technologies to restructure and optimize their internal management processes and business models. With the continuous advancement of information technology, digital transformation has become a key means of driving corporate innovation and enhancing competitiveness. The core of digital transformation is not just the renewal of technology, but also a fundamental change in corporate strategy, organizational structure, business processes, and management methods. Digital transformation is an important driving force for the development of enterprises today. It not only changes the way enterprises operate but also provides new directions and practical pathways for the sustainable development strategy (ESG) of enterprises.

3.2 Concept and Mechanism of ESG Management

ESG (Environmental, Social, and Governance) management is a comprehensive management practice in which enterprises effectively control environmental impacts, actively fulfill social responsibilities, and build sound governance structures in their operations. ESG management has become an indispensable consideration for modern enterprises in their pursuit of longterm value. In the current business environment, ESG management has become one of the key factors driving corporate sustainable development. This management philosophy not only requires enterprises to pursue economic benefits while taking into account environmental protection, social responsibility, and good corporate governance, but also emphasizes the creation of longterm value. ESG management is highly consistent with the goals of digital transformation in improving efficiency, reducing costs, and enhancing competitiveness, and together they promote the development of enterprises towards sustainability, efficiency, and responsibility.

4. Current Status of Corporate Digital Transformation and ESG Management

4.1 Analysis of the Current Status of Corporate Digital Transformation and ESG Management

Anhui Jianghuai Automobile Group Co., Ltd. has made significant progress in digital transformation, initially establishing a digital system covering multiple links such as production, management, and marketing. By introducing advanced ERP (Enterprise Resource Planning) and MES (Manufacturing Execution System), the company has achieved automation and informatization of production processes, with production efficiency increasing by about 20% and equipment utilization rate rising by 15%. Meanwhile, Jianghuai Automobile has accelerated the construction of an industrial internet platform, integrating data resources from multiple internal systems, promoting the intelligent upgrading of production processes and the interconnectivity of data, and providing strong support for the company's refined management and decisionmaking.

In terms of digital technology application, Jianghuai Automobile has actively explored the use of emerging technologies such as big data and artificial intelligence in product research and development, quality control, and customer service. Big data analysis has optimized the product development process, shortening the product launch cycle; artificial intelligence technology has improved the accuracy of quality inspection, with the product's firsttime pass rate rising to over 95%. In addition, the company has upgraded its customer relationship management through a digital marketing platform, significantly enhancing customer satisfaction.

4.2 Issues in Corporate Digital Transformation and ESG Management

Despite the progress made by Anhui Jianghuai Automobile Group Co., Ltd. in digital transformation and ESG management, the company still faces many challenges. Data silos still exist, with inconsistent data standards across different business systems, making data integration difficult and affecting indepth data analysis and application. At the same time, there is a shortage of professional talent needed for digital transformation, especially compound talents who are familiar with both automobile manufacturing and information technology, which restricts the company's progress in technological innovation and project implementation. Moreover, as the degree of digitalization deepens, the pressure of data security and privacy protection is increasing day by day. The company needs to invest more resources to build a comprehensive security protection system to cope with potential cyberattacks and data leakage risks. Through the analysis of the current status of digital transformation at Anhui

Jianghuai Automobile Group Co., Ltd., this study has summarized the following four common issues in the process of digital transformation and ESG management:

4.2.1 Insufficient Transformation Capability

The insufficient transformation capability of enterprises is specifically manifested in the lack of funds and equipment, shortage of talent, and weakness in technology.

The lack of funds and equipment is a major issue that enterprises face in their digital transformation. Due to their relatively small size and limited financing capabilities, enterprises generally encounter the dilemma of fund shortage, which restricts their investment in the infrastructure construction and equipment renewal required for digital transformation, thereby hindering the comprehensive implementation of digital transformation. The shortage of funds also limits the scope of digital solutions that small and medium-sized enterprises (SMEs) can choose from, often forcing them to opt for cheaper but less functional digital solutions. This limitation not only affects the production efficiency and market competitiveness of enterprises but also slows down the widespread application of digital technologies, further impeding the digital transformation process of enterprises.

The shortage of talent and the weakness in technology are another significant challenges that enterprises face in their digital transformation. Compared with large enterprises that have abundant resources and great influence, SMEs face greater difficulties in attracting and retaining high-end technical talents and are at a competitive disadvantage. The lack of professional talent makes it difficult for SMEs to update their technological reserves and experience in the process of digital transformation, and they are unable to keep pace with the latest technological trends and applications in a timely manner. As a result, SMEs find it hard to effectively plan and implement relevant strategies, which affects the effectiveness of the transformation.

Moreover, SMEs generally have relatively less investment in technology research and development and often lack dedicated R&D teams or departments to promote technological innovation and application. This situation makes it difficult for SMEs to find suitable technological pathways in the early stages of digital transformation and also lacks technological support in subsequent development.

4.2.2 Lack of Strategic Planning and Implementation Pathways

Firstly, enterprises face significant challenges in organizational management and cultural transformation. Digital transformation requires not only technological upgrades but also profound changes in organizational management and culture. During the transformation process, companies need to redesign business processes, adjust organizational structures, and cultivate a digital culture. However, many small and medium-sized enterprises (SMEs) underestimate the complexity and potential risks of change. They worry about the uncertainties and possible disruptions to operations that change may bring, and therefore, they are conservative in adjusting their organizational management and corporate culture. This reduces their support for digital transformation. Moreover, employees' mindsets often lag behind technological advancements. Their ability and willingness to learn and accept new technologies are insufficient, which further increases the difficulty of corporate cultural transformation.

Secondly, there is a poor fit between SMEs and digital transformation. On the one hand, many SMEs have relatively traditional core business models that rely on offline channels and manual operations. Digital tools and platforms often do not match these models, leading to a relatively disjointed development between online and offline channels for SMEs. On the other hand, many digital solutions available on the market are designed for large enterprises. These solutions focus on large-scale market strategies and are not easily applicable to SMEs with flexible and variable market positioning. This discrepancy makes it difficult for SMEs to find suitable pathways for digital transformation.

Due to the lack of clear strategic planning and effective implementation pathways, SMEs often find themselves in a dilemma during digital transformation. Even though they recognize the importance of digital transformation, they struggle to find appropriate entry points and effective action plans due to the lack of know-how. This results in slow progress or even stagnation in their transformation efforts.

4.2.3 Insufficient External Support and High Transformation Risks

Firstly, when small and medium-sized enterprises (SMEs) advance their digital transformation, they often face a lack of external support, especially in strategic planning and policy guidance. Although China's digital economy has made certain progress, the government and industry organizations still appear insufficient in providing clear policies and support measures for digital transformation. This results in many SMEs lacking a sense of direction and confidence when formulating transformation plans, making it difficult to establish a systematic top-level design. Moreover, information asymmetry and uneven resource allocation in the policy implementation process further

weaken SMEs' opportunities to obtain external support. This lack of external support makes SMEs face greater uncertainty and resistance during the transformation process.

Secondly, the long transformation cycle, slow results, coupled with fierce competition and high cost pressure, lead to significant transformation risks for SMEs. The transformation process may take several years to show actual effects, and SMEs often can't bear the risk of longterm investment without returns. Moreover, the technical risks, market risks, and increased operating costs faced during the transformation process often lead SMEs to maintain the status quo when facing an uncertain market environment, rather than undertake transformation recklessly. For many SMEs, transformation failure means huge financial losses and may even endanger the survival of the enterprise. Therefore, when facing the high risk of transformation failure, many enterprises choose to maintain the status quo to ensure stable operations and avoid the great uncertainty brought by transformation.

Overall, the dual pressures of insufficient external support and high transformation risks lead to a common phenomenon among SMEs of "not daring to transform" in digital transformation, which restricts their development and improvement of competitiveness.

5. Construction of the Synergistic Mechanism of Corporate Digital Transformation and ESG Management

To address the challenges of "transformation barriers, insufficient capabilities, and risk aversion" that enterprises face during digital transformation, this study proposes enhancing corporate digital transformation and ESG management capabilities through strategic integration and value cocreation. Strategic integration refers to the process by which enterprises incorporate the concepts and methods of strategic management into their daytoday operations and management activities to achieve longterm strategic goals and competitive advantages. In this process, enterprises need to integrate internal resources, capabilities, as well as external factors such as market, technology, and policy, to form an organic whole. Value cocreation is a model in which enterprises create corporate value and competitive advantages together with customers, partners, and other stakeholders, which can provide new perspectives and impetus for the digital transformation of SMEs. Based on the above theoretical foundations, this study proposes the following pathways to promote corporate digital transformation and ESG management from the perspectives of strategic integration, value cocreation, and risk prevention and control.

5.1 Multilevel Strategic Framework Integration

5.1.1 Integration of Strategic Objectives: Incorporating Digital Transformation and ESG Goals into the Corporate Toplevel Strategic Design

The integration of strategic objectives is a crucial element in corporate strategic planning. It demands that enterprises closely combine their longterm development vision with shortterm business goals, ensuring that there is no conflict between the two, but rather that they support and promote each other, thus forming an organic and coordinated whole. This alignment not only helps clarify the direction of the enterprise but also ensures that in the pursuit of shortterm benefits, the enterprise does not deviate from its longterm development trajectory. Incorporating digital transformation and ESG goals into the corporate top-level strategic design treats digitalization as a longterm strategic tool and integrates ESG principles into strategic planning.

5.1.2 Integration of Resource Allocation: Optimizing Internal and External Resource Distribution through Digital Means

Synergistic resource allocation is key to enhancing corporate operational efficiency and effectiveness. Through effective resource allocation, enterprises can ensure that all resources are utilized in the most rational manner, thereby reducing costs while enhancing overall corporate competitiveness. Achieving the integration of resource allocation involves optimizing the distribution of internal and external resources through digital means, establishing a joint budget mechanism, and applying IoT-enabled equipment procurement.(1) Establishing a Joint Budget Mechanism: Creating a joint budget mechanism for digitalization and ESG is an effective means of ensuring rational resource allocation and utilization. Through this mechanism, enterprises can ensure that budget allocations fully consider the achievement of digital transformation and ESG goals, thereby avoiding resource wastage and redundant investments.(2) Application of IoT-enabled Equipment Procurement: With the rapid development of IoT technology, an increasing number of enterprises are leveraging this technology to boost operational efficiency. Allocating the costs of IoT equipment procurement to both digital infrastructure and environmental investments helps enterprises achieve comprehensive resource utilization while promoting their development towards intelligence and greening.

5.1.3 Integration of Implementation Processes: Restructuring Organizational Structure and Business Processes to Achieve Dual Goals

The integration of implementation processes is a crucial task for enterprises to adapt to the adjustment and effective execution of strategic goals. As the market environment changes and corporate strategies evolve, the existing organizational structure may no longer meet new requirements, necessitating corresponding adjustments to ensure organizational flexibility and responsiveness. (1) Establishment of a Synergy Committee: To better coordinate the work of different departments and drive the achievement of strategic goals, enterprises can establish a Digital Transformation and ESG Synergy Committee. Comprising key members from various departments, this committee is responsible for overseeing and guiding crossdepartmental collaboration during the implementation of strategies, ensuring the effective execution of measures. (2) Formation of Crossdepartmental Working Groups: To achieve efficient resource allocation and utilization, enterprises can form a crossdepartmental working group coled by the Chief Technology Officer (CTO) and the Chief Sustainability Officer (CSO). Focusing on the integration of technological innovation and sustainable development practices, this group promotes the optimization and integration of internal resources through interdisciplinary cooperation.

5.2 Value Co-creation Pathways to Drive Corporate Value Creation and Growth

Zhou Wenhui and others, through their research on the value co-creation and performance innovation models between knowledge service institutions and small and medium-sized manufacturing enterprises, have deepened the value co-creation process into four stages: value consensus, value coexistence, value sharing, and value win-win. Based on these four stages, this paper proposes the following value co-creation pathways to promote corporate digital transformation from the perspectives of changing mindsets, applying technology, enhancing customer interaction, and conducting multi-party collaboration.

5.2.1 Establish Digital Mindset and Achieve Value Consensus

Enterprises need to discard traditional thinking, establish a digital mindset, and re-examine their positioning to build new corporate values. By integrating resources and introducing digital management concepts and tools, companies can enhance their digital level of management and decision-making. Meanwhile, businesses should value the potential of digital technology in improving business efficiency, innovating products and services, and enhancing customer experience. Additionally, attracting and cultivating digital-skilled professionals, offering competitive salaries and career development opportunities, and focusing on internal digital skills training can enhance the overall digital capability and strengthen employees' identification with digital transformation.

5.2.2 Apply Advanced Technologies to Achieve Value Coexistence

Enterprises should actively learn and adopt innovative processes and advanced technologies to update productivity in the value chain and increase alignment with digital transformation. Corporate management needs to strengthen their understanding of digital transformation and closely integrate technology application with the company's long-term development strategy. By collaborating with technology suppliers, universities, and other research institutions to introduce emerging technologies such as big data, cloud computing, IoT, and artificial intelligence, companies can improve production efficiency, reduce operating costs, and enhance product competitiveness. Moreover, appropriately increasing investment in technology research and development, attracting social capital, and broadening financing channels to encourage internal technological innovation and develop new products and services can better meet market demands. Through technology sharing and collaborative innovation, SMEs can achieve value coexistence with external technological forces, drive technological progress in the entire industry, and form a mutually beneficial ecosystem.

5.2.3 Enhance Customer Interaction to Achieve Value Sharing

Enterprises should highly value interaction with customers and, based on the service-dominant logic, include customers as the main participants in value co-creation. Using digital tools such as social media platforms, customer relationship management systems, and big data analysis, companies can maintain close contact with customers, collect feedback, and accurately grasp market dynamics. This enables them to optimize products and services according to customer needs and improve customer satisfaction. Based on in-depth analysis of customer data, companies can offer highly personalized products and services, including customized products and personalized customer communication strategies. For example, by analyzing customers' purchase history and preferences, companies can offer tailored product recommendations and promotional activities, thereby enhancing customer loyalty and dependence on the brand. Additionally, building online communities and user feedback systems allows customers to participate in product design and service improvement. This not only helps develop

products that better meet market demands but also makes customers feel their importance in corporate value creation, achieving two-way value sharing between the enterprise and its customers.

5.2.4 Strengthen Multi-party Collaboration to Achieve Value Win-Win

SMEs face challenges of insufficient policy support and external resources in digital transformation, making it crucial to establish a broad multi-party collaboration mechanism. The government should create a favorable transformation environment for SMEs through policy support, financial subsidies, technology training, and consulting services. Meanwhile, companies should focus on integrating and transforming resources with stakeholders such as suppliers, partners, and the government to build a coordinated ecosystem involving multiple entities. By collaborating with upstream and downstream partners in the supply chain to share information and technology resources, companies can enhance the synergistic effect of the entire industry chain. Cross-industry collaboration and innovation are also key to achieving effective resource integration. Companies can establish cooperative relationships with partners from different fields to drive cross-industry technological and business innovation, achieving innovation in performance and value unification among multiple parties. This strengthens the integration of the cluster where the enterprise is located and achieves value win-win.

5.3 *Comprehensive Risk Prevention and Control Mechanism to Ensure Robust Corporate Operations*

Digital transformation brings numerous opportunities for enterprises but also comes with a range of risks. These risks may stem from technology application, data security, market changes, internal management, and other aspects. Therefore, enterprises must build a comprehensive risk prevention and control mechanism to tackle various challenges during the transformation process.

5.3.1 Comprehensive Identification and Assessment of Potential Risks

Enterprises need to conduct in-depth analyses of technological risks, data privacy risks, cybersecurity risks, as well as market and operational risks. By establishing risk assessment models, companies can quantify these risks and develop corresponding response strategies. For example, enterprises can regularly carry out technology security audits to evaluate vulnerabilities and potential threats in existing systems and take timely measures to fix them.

5.3.2 Strengthening Data Security Management

Enterprises should establish strict data management policies to ensure that the collection, storage, processing, and transmission of data comply with relevant laws, regulations, and industry standards. The adoption of advanced encryption technologies and access control mechanisms can effectively prevent data leaks and unauthorized access. Additionally, companies should regularly conduct data security training for employees to enhance their security awareness and operational standards.

5.3.3 Prudent Application of Emerging Technologies

Regarding technology application, enterprises should cautiously select and introduce emerging technologies. When adopting big data, cloud computing, artificial intelligence, and other technologies, it is essential to fully assess their compatibility with existing business processes and the potential technological risks they may bring. By collaborating with professional technology suppliers and establishing rigorous technology testing and validation processes, enterprises can ensure the smooth implementation and effective application of new technologies.

5.3.4 Improving Emergency Response and Internal Governance

To deal with possible technological failures, data breaches, or other unexpected incidents, enterprises should establish comprehensive mechanisms. Developing detailed emergency response plans and clarifying the responsibilities and response procedures of each department in critical situations can ensure that companies react swiftly to emergencies and minimize losses to the greatest extent. By establishing transparent decision-making processes and effective oversight mechanisms, enterprises can prevent risks arising from internal management chaos and decision-making errors.'

6. Conclusions and Future Work

6.1 *Conclusions*

This study has conducted an in-depth analysis of the synergistic mechanisms between corporate digital transformation and ESG management (environmental, social, and corporate governance). Through literature review and case study analysis, it has systematically examined the theoretical framework and practical models of the synergistic mechanisms between corporate digital transformation and ESG management. Focusing on the challenges of "transformation barriers, insufficient capabilities, and risk aversion" that enterprises face during

digital transformation, this research explores how to achieve sustainable growth and long-term value creation from the perspectives of strategic integration and value co-creation. To address these challenges, this study innovatively proposes constructing pathways for the synergistic mechanisms between digital transformation and ESG management from three aspects: three-dimensional strategic integration, four-stage improvement of value co-creation, and comprehensive construction of risk prevention and control mechanisms. These pathways can significantly enhance the capabilities of corporate digital transformation and ESG management and provide valuable experience for other similar enterprises.

6.2 Future Work

The pathways of strategic integration and value co-creation play a significant role in promoting corporate digital transformation and ESG management. Through multi-party collaboration and resource sharing, integrating a multi-level strategic framework forms a dynamic value network. This approach not only improves corporate production efficiency and market competitiveness but also, through interactions with customers, suppliers, and other stakeholders, builds a strategically resilient ecosystem that promotes continuous innovation and growth. This multi-party co-creation model helps enterprises maintain adaptability and competitive advantages in the rapidly changing digital economy environment.

In future research, exploring the application of value co-creation pathways in different industry contexts and market conditions to optimize corporate digital transformation strategies will hold significant academic and practical value. Additionally, researching how to construct a more comprehensive external support system to promote the effective integration of multi-dimensional resources, such as policy, technology, and finance, to comprehensively enhance corporate digital transformation and ESG management capabilities will also be an important direction for future research.

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