

Enterprise Digital Transformation, Dynamic Capabilities, and ESG Performance: Based on Data From Listed Chinese Companies


Lan Zhang, Jilin University of Finance and Economics, China

Yuwei Ye, Jilin University of Finance and Economics, China

Zixuan Meng, City University of Hong Kong, China

Ning Ma, Northeast Normal University Library, China*

Chia-Huei Wu, Minghsin University of Science and Technology, China

 <https://orcid.org/0000-0001-6399-2113>

ABSTRACT

Digital transformation improves the operational efficiency and perceptual capabilities of businesses and creates a foundation for fulfilling ESG responsibilities. The authors use the theories of technological innovation and dynamic capabilities and select a sample of 4054 listed companies with commercial integration of ESG rating data to explore the mechanisms through which digital transformation affects ESG performance. Dynamic capabilities are further divided into innovation changeability (IT), coordination integration capability (CI), and learning absorption capability (LA) to investigate the mediating effects and summarize the causal path of “digital transformation - dynamic capabilities - ESG performance.” The research focuses on the impact of digital technology on ESG performance with the aim of helping businesses utilize technology more effectively to build dual competitive advantages in digitization and ESG.

KEYWORDS

Digital Transformation, Dynamic Capabilities, ESG

INTRODUCTION

Given the rise of the fourth Industrial Revolution, the pace of enterprises’ transformation to Industry 4.0 is gradually accelerating. The emergence of novel and powerful digital technologies, digital platforms, and digital infrastructure has greatly changed innovation and entrepreneurship (Satish et al., 2019). Digital transformation is defined as the use of new digital technologies, such as mobile, AI, cloud, blockchain and internet of things (IoT) technologies, to achieve significant business improvements, enhance customer experiences, streamline operations, or create new business models

DOI: 10.4018/JGIM.335905

*Corresponding Author

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(Karl, et al., 2019). As a new enterprise development model, digitization is of great significance to the development of contemporary economy and society. Digital transformation is urgently needed for businesses to overcome survival challenges and to plan for future development. Digital transformation possesses powerful capabilities to innovate traditional business forms, operational methods, and profit models. Digital transformation's technological, innovative, intelligent, and unique characteristics enable companies to gain new competitive advantages and become one of the factors influencing their environmental, social, and governance (ESG) responsibilities. Digital transformation brings more possibilities and opportunities for businesses to explore the positive impact of technology.

The ESG concept focuses on environmental management, social responsibility, and corporate governance. ESG considers both economic and social benefits and adapting to green, low-carbon objectives. ESG serves as a guiding principle for sustainable development and a practical tool for greening capital markets. In the new stage of economic development, companies not only need to enhance their own development quality and improve operational efficiency but also pay more attention to environmental protection, carbon emissions reduction, long-term development, and sustainability. ESG is an advanced approach that comprehensively evaluates a company's sustainable development from the three dimensions of environment (E), society (S), and governance (G). ESG also represents an important standard used by the international community to measure corporate green sustainability levels (Baker et al., 2021). Today's connected environment is characterized by ESG, a network of people, and organizations and equipment that constantly interact, talk and exchange information. These forms of communication show that information sharing, signaling, and brand value creation have evolved over the past decade (Lee et al., 2022). ESG performance, as a corporate evaluation standard and investment concept that focuses on corporate environmental, social and governance performance rather than financial performance, to a certain extent measures whether listed companies have sufficient social responsibility, reflects enterprises' potential in sustainable development, and provides important support for the country to achieve green development. Given the rapid growth of global ESG investments, ESG has become a hot topic for policy makers, regulators, and investors and has been gradually included in the decision-making process of investment and financing (Wu et al., 2023).

Regarding the microeconomic consequences of corporate digital transformation, scholars have mainly explored the impact of corporate digital transformation on financial performance, corporate performance, and operational performance. Fadi et al. (2022) proposed that CTTI4.0 disclosure has a positive impact on financial performance. In addition, the study found that ESG practices moderated the relationship between CTTI4.0 disclosure and financial performance, suggesting that firms with better ESG performance tend to be more actively involved in CTTI4.0 disclosure and simultaneously have better financial performance (2022). Qi and CAI (2020) note that many derivative management costs are generated in the enterprise digital transformation process, which seriously weakens its effect on driving enterprise performance. Chen et al. (2019) note that the unique rhythm and trajectory of digital technology enables enterprises to carry out innovation and transformation, thus improving economic performance. He and Liu (2019) concluded through empirical research that enterprise digital transformation can significantly improve a company's business performance.

The digital revolution has profoundly changed people's lifestyles. In the face of uncertainty and change, it has become increasingly challenging for enterprises to adapt, respond quickly, and maintain business continuity and stability. To overcome these challenges, companies need to rely on their internal capabilities but must make them dynamic and modify them when necessary to respond to or anticipate external changes. Nastaran (2023) proposed a business model innovation (BMI) model with the goal of pursuing sustainability to adapt to changes in the principle of pursuing dynamic capabilities in the digital era. Feroz et al. (2023) identified the dynamic capabilities of SDT and preliminarily determined 28 capabilities based on the hybrid method. Consensus (> 70% agreement) was reached on 19 capabilities, which were classified as the sustainable capture, perception, and

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