

# Research on the Challenges for Leadership and Coping Strategies in the Context of Digital Transformation

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**Abstract:** As digital transformation enters a new era, corporate leaders face unprecedented challenges. The main content of this paper involves the integration of digitalization and leadership, management challenges, and coping strategies. We take a closer look at how changing executive roles and market trends are influencing strategic decision-making, as well as data disruption, skills shortages, and the risks stemming from digital dominance. These include systematic upgrading in skills, improving leadership as technology becomes more widespread, sharing and co-management of responsibility, and returning to values. This research concludes that leadership needs to keep pace with the times. They should actively address the challenges of digital transformation, be people-oriented, and improve leadership, thus promoting high-quality development of enterprises, and meeting the needs of the people for a better life.

## 1. Introduction

Digital transformation is one of the primary responsibilities of enterprise development and one of the measures of enterprise reform in the new era. It can be separated into technology change and management change, which consists of technology advancement and leadership, innovation, and flexibility of digital content. Enterprises also delegate leaders to make strategic decisions for successful digital transformation to achieve high-quality development. Due to the digital transformation, leadership has become the key to enterprise development. Moreover, digitalization has become an indicator for judging a company's competitiveness. Unlike traditional management mode, the management based on digital transformation focuses on technological reform, leadership, and flexibility [1]. Therefore, we propose research on the challenges of leadership and coping strategies in the context of digital transformation. Digital transformation brings new challenges and chances for leadership.

Digital transformation originates from technology-centered changes, and its goal is to improve the efficiency and competitiveness of enterprises. It is also a tool for modernizing the business. In corporate structure, digital transformation pursues optimizing business processes, combines technological innovation with management changes, and realizes enterprise modernization. And this is only at the theoretical level. Today, many enterprises have implemented a unique approach. The comprehensive promotion of digital transformation has changed the operation mode of enterprises and reflected the competitiveness of enterprises. Moreover, it will affect the market structure and pose a management challenge. Therefore, a forward-looking vision and a global perspective are needed when discussing digital transformation. In this paper, we will introduce the topic of leadership challenges and response strategies in the context of digital transformation.

In summary, digital transformation is the technical condition and guarantee to realize the high-quality development of enterprises. In practice, digital transformation has progressed, but there are also shortcomings. Enterprises need to find effective ways to deal with digital transformation, and relevant personnel are working hard. In addition, leadership needs constant adaptation and change, which is vital to the development of enterprises and a necessary condition to meet the people's needs for a better life.

Based on the above analysis, this paper puts forward a research framework of challenges for

leadership and coping strategies under the background of digital transformation, aiming at solving the difficulties faced by leadership in digital transformation through theory and demonstration. The main contents include analyzing the integration of digitalization and leadership, challenges in management, and coping strategies. This study has effectively dealt with digital risk, which has theoretical and practical significance.

## **2. Combining Digital Transformation and Leadership to Achieve New Changes in Enterprises**

### **2.1 Technological Change of Digital Content**

The technological change of digital content is developed with digital transformation, reflecting technological innovation and highlighting the orientation of enterprise development. Furthermore, it shows the importance and support of enterprises in the new era of technological progress. However, when we use some traditional standards to construct the definition and essence of technological change, it is still not easy to get a clear consensus.

### **2.2 Leadership, Innovation and Adaptability**

#### **2.2.1 Leader Role Transformation and User Needs Analysis**

Leadership is an important part of enterprise management, which reflects the level of team organization. Scholars have discussed the definition of leadership from the perspectives of adaptability and innovation. In addition, some scholars believe that leadership is reflected in the speed of responding to changes and emergencies, or the degree of completion of corporate goals. Leadership is strategic to some extent, and it belongs to management science aiming at the long-term success of enterprises. The origins of leadership can be traced back to the Industrial Revolution, focusing on motivating staff, leading groups, and developing plans. Enterprise innovation and adaptability are closely linked to both the concept and implementation of this. By undergoing role changes and analyzing user needs, leaders are entrusted with a crucial role in driving the digital transformation of businesses. The main contribution of related theories includes an understanding of how to adapt to the rapidly changing market through technological integration and innovation [2]. Thus, leadership was initially focused on being measured against the standard attributes of a managerial leader.

#### **2.2.2 Market Dynamics Promote Strategic Decision-making**

Unlike the traditional market environment, we now emphasize the relationship between market dynamics and strategic decision-making, which is rapidly changing and uncertain [3]. Although some scholars have questioned whether market dynamics are directly related to strategic decision-making, most scholars argue that market dynamics can impact strategic decision-making. Scholars have proposed a classical model of market dynamics analysis, including market trends, consumer behavior, and technological progress. Since then, the model has become a typical tool for strategic decision-making, and the research on market dynamics driving strategic decision-making has been developed. These scholars believe that markets are dynamic and are a "source of change." When enterprises can understand and adapt to market dynamics, strategic decision-making will be more accurate and effective, and play its due role. Therefore, strategic decision is the result of market dynamic analysis. In addition, scholars have summarized market dynamics-driven strategic decision-making as a dynamic adaptation model, that is, a strategic decision-making model based on market dynamics and a strategic decision-making model based on enterprise adaptability. The former focuses on market dynamic analysis, and the latter focuses on the adaptability of internal resources and capabilities, also called strategic matching. Although it has experienced some failures in practice, in the long run, strategic decision-making can improve the market competitiveness and adaptability of enterprises [4]. Subsequently, market dynamics have gradually become an important part of strategic management research and practice.

### 3. The Challenges of Digitalization and Leadership to Management

Figure 1 is the manifestation of the challenges that digitalization and leadership bring to management.

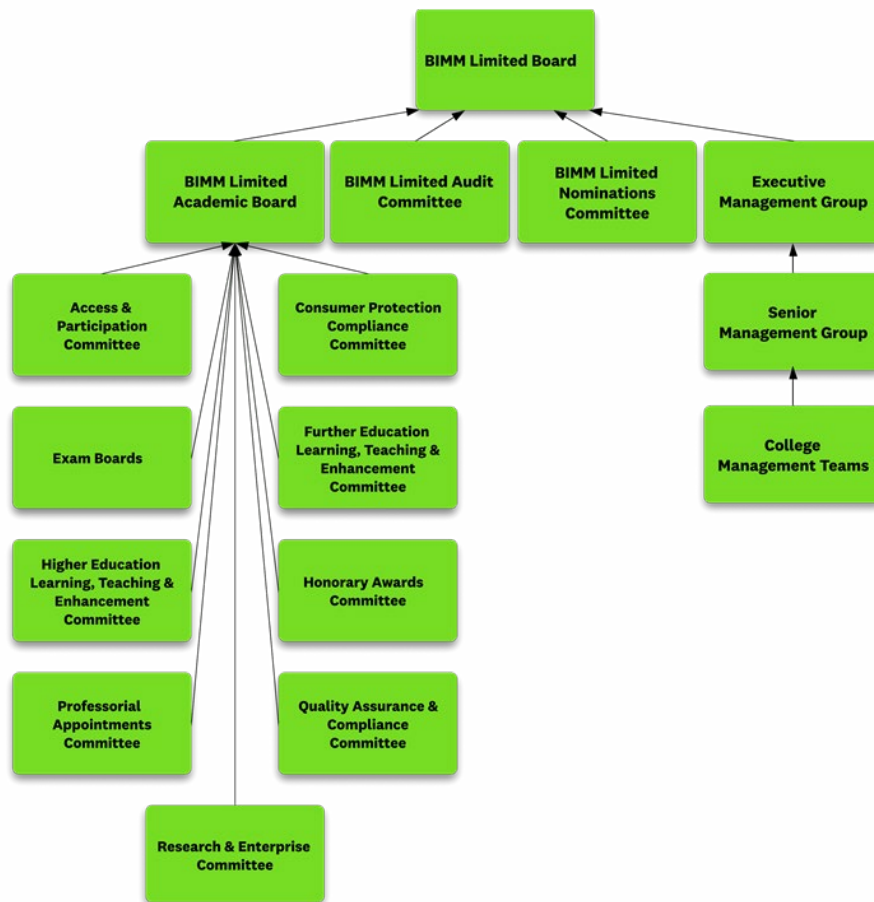


Figure 1 A framework for the management challenges posed by digitalization and leadership

#### 3.1 Data Disruption: The Excessive Collection of Information Leads to the Imbalance of Decision-making System

The essence of the concept of data disruption focuses on information management. Excessive information collection is common when enterprises are eager to enhance their competitive advantage in the digital age. To overcome the shortcomings of this approach, we use a new alternative model to enter the research field: data governance framework. The basic idea of this framework is as follows. First, for information management, we should ensure the effective use of data. Second, we need to set professional standards for data output. Third, we should "capture" the value of information through technologies such as big data analysis. Fourth, we need to use advanced data analysis methods to evaluate data quality [5]. The framework for data governance revamps information management, enhancing data's transparency, accuracy, reliability, and timeliness.

#### 3.2 Skills Shortage: Traditional Mode of Operation

##### 3.2.1 The Mistakes of Empirical Decision-making and the Rigidity of Management

The mistakes of empirical decision-making are one of the problems in enterprise management, which reflects the limitations of traditional decision-making modes. Scholars have discussed the definition of empirical decision-making from decision science and behavioral economics. At the same time, some experts believe that empirical decision-making is the decision-maker's reliance on experience or the decision-making mode under incomplete information. Because experience-based decision-making has a certain degree of risk, it belongs to the empirical decision sciences. The history

of empirical decision-making can be traced back to the industrial period, and its main activities include decision-making based on historical data and individual cases. In addition, the theory and practice of empirical decision-making are closely related to the innovation and adaptability of enterprises [6]. By analyzing empirical decision-making errors and management rigidities, managers become central to facilitating the transformation and modernization of their enterprises. The main contribution of leadership theory in the digital age is to help people understand how to avoid the trap of empirical decision-making through data-driven and scientific methods. Therefore, empirical decision-making initially focused on measuring standard attributes of decision-makers in information processing and risk assessment.

### **3.2.2 Skill Gaps and Talent Risks**

Compared with the previous environment, people pay more attention to the relationship between skill gaps and talent risk in the digital age. Nowadays, technology is rapidly updated, and the demand for talent has changed. Some scholars question that there may be no direct relationship between the skill gap and talent risk, but most scholars advocate that talent risk can be evaluated rationally. Scholars put forward an analytical model including skills gap, talent training, and knowledge updating. From then on, the model has evolved into an instrument for managing talent risks, and the skill gap concept existed. Professionals think that the skill gap is constantly changing and affects talent careers. Effective talent risk management is attainable when businesses can recognize and adjust to skill gaps [7]. Furthermore, scholars put forward human resource models, namely, the human resource management model based on skill analysis and the risk management model based on talent development. The former focuses on human resources, while the latter focuses on the adaptability of personnel training and development in enterprises. Although researchers have experienced some practical failures, in the long run, it can improve the competitiveness of human resources. Subsequently, the skill gap and talent risk management have gradually become the consensus of human resource management research and practice.

## **3.3 The Birth of Derivative Risks under Digital Dominance**

### **3.3.1 Privacy Risks**

Given privacy risks, we discuss information security issues. In the digital age, privacy protection is essential in enterprise management. To solve the problem of data leakage and abuse, we propose a new model: a privacy protection framework. The basic idea of this framework includes the following points. First, we should ensure the effectiveness and security of user information. Second, we should set standards for data management. Third, technologists use encryption technology to eliminate the hidden threat of data breaches. Fourth, we need to use a compliance approach to risk assessment. The Data Protection Framework restructures information security, raising awareness of data protection and emphasizing the need to improve the transparency, accuracy, reliability, and timeliness of data management.

### **3.3.2 Security Risk**

Security risk is an essential content of enterprise management and a comprehensive expression of enterprise information security. Scholars have discussed security risks from network security and data protection. Some scholars believe that security risks reflect the enterprises' vulnerability in the face of threats. We strive to improve the defense ability of enterprises in addressing attacks. Security risk is more destructive, which belongs to the risk management science aimed at protecting enterprise assets. The research history of risk management can be traced back to the early days of information technology, and its main activities include risk assessment, security strategy formulation, and emergency response. At the same time, the management and practice of security risks are closely related to the technological development and business operation of enterprises. Enterprises have become an important responsibility to ensure information security. The main contribution of risk management theory in the digital age is to understand how to reduce security risks through technological innovation and management. Therefore, security risks initially focused on the standard

attributes of enterprises in information security protection.

### **3.3.3 Compliance Risk**

Unlike the previous business environment, in the new era characterized by rapid changes in laws and regulations and a complex regulatory environment, the relationship between compliance risk and corporate governance has come into sharp focus. Although some scholars question that compliance risk may not be directly related to enterprise development, most people advocate that compliance risk can propose a classic model including legal compliance, regulatory requirements, and moral standards. Since then, the model has become a typical tool for enterprise risk management, and thus a concept of compliance risk has been developed. Some experts believe that compliance risk is dynamic and is "the key to the sustainable development of enterprises". Only when enterprises can adapt to risks can management be more efficient. Therefore, some scholars put forward risk management models, namely, the risk management model based on compliance with laws and regulations and the risk management model based on ethics. The former focuses on compliance risk analysis, while the latter focuses on internal moral culture and compliance awareness. Although there are some failures in practice, it can improve enterprise compliance and market competitiveness in the long run. As a result, the concept of compliance risk management has gradually been established as a consensus in research and practice in enterprise risk management.

## **4. Coping Tactics for Dealing with the Technical Obstacles of Industrial Digital Advancement**

### **4.1 Two-way Empowerment: Overcoming Technical Barriers**

#### **4.1.1 Achieve High-quality Transformation of the Organization through Systematic Improvement of Capabilities**

The systematic improvement of capabilities focuses on organizational transformation. In the digital age, leadership is essential in promoting the transformation of enterprises. To overcome the low efficiency and skills shortage, we research a new alternative model-ability improvement framework. The basic ideas of the framework are as follows. First, the managers should ensure the effective realization of enterprise transformation. Second, they need to set professional standards for organizational output. Third, the managers enhance leadership and create opportunities through skill training and learning. Fourth, they use evaluation and feedback to promote ability improvement. The competency improvement framework promotes leadership, emphasizes the need to enhance the leader's strategic thinking, and promotes the development and innovation of leadership. The framework for improving competencies supports leadership, emphasizes the need to enhance leaders' strategic thinking, and fosters evaluation, development, and innovation in leadership.

#### **4.1.2 Upgrading Leadership under Technological Domestication**

Leadership upgrading under technology domestication is a key element of digital transformation, which focuses on the adaptability of leadership. We integrate technology to analyze the response of enterprises to digital challenges. With the continuous development of digital technology, some components of leadership upgrading are gradually taking shape, such as data-driven decision-making and agile management. Various systems are also gradually gaining attention. However, from the practical point of view, the practice of some enterprises is still in the primary stage, contrary to the logical framework and generation mechanism of digitalization, which leads to the mismatch between leadership and technology.

### **4.2 Shared Responsibility: Optimization of Leadership Mechanisms and Corporate Governance**

#### **4.2.1 Rule-making and Internal Governance**

From a corporate governance perspective, rule-making and internal governance are essential for ensuring the healthy development of enterprises and are also a core manifestation of effective leadership. Therefore, when we formulate coping mechanisms, we take rules and regulations as the

main generating logic. Rules and regulations are the means for enterprises to meet challenges and the key subject of corporate governance. At present, there are three main forms for enterprises to strengthen control from the perspective of governance. The first is to clarify the balance of power and responsibility between decision-making implementation and supervision. The second is that managers can realize the standardized control of enterprise operations by formulating internal management and information disclosure standards and making them public to stakeholders. The third is the reengineering of internal processes. Many enterprises have optimized their processes, thus improving their governance efficiency and enhancing competitiveness. However, the flexibility and adaptability of current corporate governance need to be further improved.

#### **4.2.2 Intelligent Decision-making and Cultural Cultivation**

In governance, intelligent decision-making and cultural cultivation are vital means to promote the modernization of corporate governance. Intelligent decision-making can improve decision-making efficiency and accuracy. At present, the decision-making model lacks information and mechanisms related to governance, and the cause of this problem may lie in the dynamics and complexity of governance. In digital governance, intelligent decision-making is usually "data-driven", and its impact on governance directly reflects the level of modernization. However, the relevant data and information are scarce, and it is difficult to evaluate the governance effect. The asymmetry of information and the imperfection of mechanisms directly lead to obstacles to governance. Therefore, strengthening the collection and analysis of governance data and information and perfecting governance mechanisms are the keys to improving intelligent decision-making and cultural development.

#### **4.2.3 Responsibility Sharing and Collaborative Governance**

From the perspective of corporate governance, the traditional governance model restricts the level of enterprises to deal with digital challenges. Since the 21st century, intelligent governance, which integrates various governance elements, has reshaped the governance model through technical means. However, the shortcomings of traditional governance weaken the effectiveness of governance. Due to the limitations of technology and cultural influences, the governance system needs to be improved. Under the premise of digital governance, intelligent decision-making is regarded as a direct way to optimize governance. However, the practical effect of the governance model based on intelligent decision-making remains to be discussed. At the same time, information asymmetry leads to the lack of comprehensive information support for decision-making. Therefore, the governance model does not achieve the governance goal. It shows that governance is not only a technical problem but also faces cultural problems.

#### **4.3 Value Restoration: Reshaping Leadership and Putting People First**

For corporate governance, we take "people-oriented" as the core. The corporate governance mechanism is a standard and effective concept that plays a vital role in corporate governance. It also makes value reversion not only connected with the economy but also impacts governance. As a result, people-oriented governance has become the core mechanism of corporate governance. In conclusion, the practical deduction of corporate governance is gradually formed based on value, and it contains trial and error. From value governance to people-oriented, we have been closely paying attention to people's values and needs from beginning to end. Enterprises should devote themselves to governance innovation to meet the requirements of the digital age. However, in governance, there are many difficulties. Generally speaking, there is room for improvement in corporate governance, and the regulation needs to be further improved, which is a task in corporate governance.

### **5. Conclusion**

Digital transformation has impacted all industries of corporates, which poses new challenges and requirements for corporate leadership. Digital transformation is the symbol of corporate high-quality development and is an essential means for enterprises to achieve transformation and upgrading.

Furthermore, there is an urgent need to realize enterprise value and maintain competitiveness. It reflects the internal need for corporate development. Due to the progress of technology, researchers have constructed the theoretical analysis framework and practical mechanism of enterprise leadership. In recent years, modern information technologies such as big data and artificial intelligence have promoted the modernization of corporate governance, improving the accuracy of governance and regulation. The research value conforms to the internal logic of the corporate governance. Therefore, the transformation based on digital means also provides a new way for corporate governance. To sum up, the sustainable development of governance is conducive to corporate high-quality development and modernization of corporate governance.

## References

- [1] Van Veldhoven Z, Vanthienen J. Digital transformation as an interaction-driven perspective between business, society, and technology[J]. *Electronic markets*, 2022, 32(2): 629-644.
- [2] Latif K F, Nazeer A, Shahzad F, et al. Impact of entrepreneurial leadership on project success: mediating role of knowledge management processes[J]. *Leadership & Organization Development Journal*, 2020, 41(2): 237-256.
- [3] Staccioli J, Napoletano M. An agent-based model of intra-day financial markets dynamics[J]. *Journal of Economic Behavior & Organization*, 2021, 182: 331-348.
- [4] Zhu X, Du J, Boamah K B, et al. Dynamic analysis of green investment decision of manufacturer[J]. *Environmental Science and Pollution Research*, 2020, 27: 16998-17012.
- [5] Hallikainen H, Savimäki E, Laukkanen T. Fostering B2B sales with customer big data analytics[J]. *Industrial Marketing Management*, 2020, 86: 90-98.
- [6] Lai V, Chen C, Liao Q V, et al. Towards a science of human-ai decision making: a survey of empirical studies[J]. *arXiv preprint arXiv:2112.11471*, 2021.
- [7] Koripadu M, Subbiah K V. Skill gap analysis for improved skills and quality deliverables[J]. 2021.