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Innovation and Efficiency Improvement of Enterprise Management Models in the Context of the Digital Economy

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Abstract. Driven by the rapid development of big data, artificial intelligence and other technologies, the digital economy is reshaping all trades and professions in the world. In this background, companies are facing not only opportunities but also challenges. What's more, companies really need to innovate management practices and improve efficiency. This article explores how the digital economy can reshape the business environment and drive companies to use innovative management models. Research has found that digital technology can achieve flatter organizational structures, smarter decision-making and quicker processes, which can help to improve operational efficiency and competitiveness. This paper summarizes practical paths for management innovation, including flattening organizational hierarchies and adopting Artificial Intelligence (AI) driven human resources systems. Moreover, strategics also be thought to improve financial, operational and labor efficiency. Through integrating these opinions, this study emphasizes the importance of aligning companies' management with digital transformation and provides theory and practical opinions for maintaining competitive advantage in the digital age.

Keywords: Digital economy, management innovation, efficiency, digital transformation, organizational change.

1. Introduction

The rapid development of the digital economy has not only reshaped business environment for companies but also greatly promotes innovation and resource optimization of companies. The market has become even more dynamic and data-driven, and competition also really depends on information and technological capabilities. The digital economy has significantly reduced transaction and information costs through reducing many traditional intermediaries, which improves the transparency and efficiency of market trades. For example, digital markets and online platforms enable businesses to coordinate trades with minimal friction and contact with global customers and suppliers. Therefore, small and medium-sized enterprises can currently serve the international market more easily, but they also face competition from all over the world at the same time. Empirical research has confirmed these changes: Peng et al. found that the expansion of the digital economy has significantly increased research and development investment and innovation by relieving their financing restriction [1]. At the same time, Li et al. found a positive correlation between regional digital economic growth and innovation output of enterprises, which is achieved

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through the digital transformation of enterprises themselves [2]. These research findings show that broader digital connectivity broadens the space for innovation and improves resource allocation efficiency. For example, a medium-sized manufacturer can use online sales data to adjust their product almost in near real time based on different regions, which was not possible before the digital age. In summary, the digital economy is reshaping the market and enabling businesses of all sizes to innovate and allocate resources more effectively [2].

In view of these considerations, this article focuses on two themes: corporate management innovation and efficiency improvement in the context of the digital economy. This topic is greatly important because it connects digital economy and management science. This helps offer a comprehensive understanding of how companies can transform their management models and operational practices to achieve sustainable performance improvement in the digital age. Finally, this research provides some opinions that are beneficial for academic studies and practical guidance. And these also help companies solve the challenges of digital transformation and improve the competitive advantage through innovation and efficiency improvements.

2. The impact of the digital economy on enterprise management

Within the company, the digital economy is changing the way information and processes. Most advanced technologies such as big data analysis, artificial intelligence, and cloud computing have greatly improved the data accessibility and the ability of decision-making within the company. These systems are able to achieve real-time operational monitoring, predictive resource planning, and the automation of daily tasks. As a study suggests, digital technology can effectively reduce business operation costs and improve operational efficiency by reducing middle sector and simplifying workflows [3]. They can also strengthen information sharing and reduce search cost, which can relieve traditional information asymmetrical issues in enterprise management. Research from China also confirms these benefits. For example, Zhou shows that using digital tools like sensors and analytical methods can make fixed asset management much more efficient and clearer, which can reduce risks and boost overall performance [4]. Actually, this means that machines that are equipped with sensors, enterprise resource planning (ERP) systems, and cloud-based dashboards are always giving managers information about how resources are being used. This can help them make decisions more quickly and precisely according to data.

At the organizational level, the digital economy drives a shift from rigid hierarchical structures to more flexible and collaborative ones. Many companies are simplifying their management levels and switching to a flat team structure. Geng and Sun pointed out that in the digital age, companies are focusing on winning the market through platform ecosystems rather than isolated competition [5]. Within the enterprise, this model is reflected in a cross-functional team and platform-based governance, where power is distributed across various networks rather than being focused on at the top. For example, companies such as Amazon and Alibaba are examples of platform models: they empower autonomous teams internally and coordinate through shared digital tools. Collaboration technology and shared data platforms can quickly reallocate resources and personnel to new projects. So, the product development department can quickly assemble experts from other functional departments to avoid bureaucratic delays and significantly shorten the innovation cycle. In this environment, managers usually coordinate strategies in real-time through video conferencing or the use of integrated dashboards. For example, by using a cloud-based project management platform, companies can almost immediately reallocate personnel and budgets based on market signals. These architectures can make companies more effectively respond to changes and seize new opportunities [3].

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At the strategic ability level, the digital economy improves the flexibility and perseverance of enterprises. Digitally empowered enterprises are able to sense and respond to demand changes more quickly, reconfigure production, and experiment with new business models. For example, companies with great analytical platforms can quickly adjust their routes during supply chain suspensions or shift production towards high-demand products. This adaptability requires ductility resource networks: Mu et al. emphasize that elements such as human capital ductility and flexibility supplier relationships which can improve a company's ability to innovate in the process of digital transformation [6]. With these abilities, companies can quickly turn to profit opportunities and keep a competitive advantage. For managers, this means that digital measures should be integrated into core strategies, because they have a profound impact on the organization and outcomes.

3. Innovation in enterprise management models

In order to make full use of the opportunities brought by digital transformation, enterprises must innovate management models in key functional departments. In terms of organizational management, enterprises are moving to flatter and more flexible structures to support quick decision-making. Xiao emphasizes that the use of big data and AI in management processes can help optimize resource allocation and decision-making, thereby improving overall efficiency [7]. This includes reducing levels, delegating power to cross-functional teams, and using digital collaboration platforms. Enterprises usually build networking ecosystem which includes partners, suppliers and customers. For example, some companies may create internal "digital incubate" teams which contain many fields such as research and development, marketing, and manufacturing, supported by collaborative tools. Within the enterprise, this may include weekly virtual sprints or dashboards where real-time performance data drives decision-making. In practice, this agility can achieve quick redistributuion of resources: through using integrated workflow platforms, enterprises can quickly redistribute personnel and budgets from one project to another according to market feedback, which can greatly reduce the innovation cycle. These agile organizational models can help businesses respond faster to new opportunities and promote continuous innovation.

In the background of digitization, human resource management must also be thought about again. Enterprises are laying out advanced human resource information systems that use artificial intelligence and analytical technologies to optimize talent management and improve productivity. For example, AI-driven tools can filter candidates according to large-scale data patterns and match them with positions, while human resources dashboards continue to track indicators such as employee engagement, skill gaps and loss risk. Performance evaluation has also shifted from annual assessment to continuing feedback and indicators according to results. Employees use digital learning platforms to improve their skills in areas such as data quality and machine learning, which can reduce the training cycle. In practice, this means that companies will build internal "innovation laboratories" and flexible excitation mechanisms. For example, some companies allocate a part of their employees' time for experiments. It has been proven that this way can lead to an improvement process. In short, combining digital human resource systems with employee training can create a more adaptable team, which can improve innovation output and productivity.

Digital innovation is also fundamentally changing operational management. At various stages of their production and supply chains, enterprises are laying out, Internet of Things (loT) sensors, and advanced analytic technologies. For example, many manufacturers have created digital twin models of their production lines, which allow engineers to test and optimize processes virtually before making actual changes. Robotics technology and 3D printing have improved production flexibility, which achieves quick switching between products and minimizes downtime to the greatest extent

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possible. The supply chain has also become more integrated: through sensors and RFID tags people can achieve real-time tracking, which can achieve full visibility from raw materials to finished products. Duan points out that big data systems can make enterprise monitor production, distribution and inventory in real-time, which makes the whole industry chain “more continuous and complete” [8]. For example, purchasing robots can reorder parts automatically when inventory falls below a threshold. As time goes by, these operational innovations can reduce production delays and waste, which allows businesses to focus on higher-value activities. For example, integrating production data can trigger maintenance automatically before a failure occurs, which can minimize downtime to the greatest extent possible. In short, digital technology in operation has broken traditional bottlenecks, which makes enterprises make full use of property and pave the way of improving efficiency.

4. Ways to improve efficiency in the digital age

The change in management models brought by digital technology has led to many ways to improve efficiency. In the fields of finance and accounting, digital tools can achieve more precise cost control and financial supervision. The automation of financial processes, like automatic billing, robot accounting and continuous auditing, can help solve daily tasks, which allows financial personnel to focus on analytical work. These innovations have reduced management costs and improved cost control. For example, enterprises can lay out real-time budgeting software to continuously monitor expenses. Actually, Wei and Shen’s research shows that manufacturing companies carrying out digital transformation can reduce production costs and improve earnings [9]. At the same time, Zhou found that the application of digital technology can greatly improve the efficiency and transparency of fixed asset management, which can reduce financial risks and improve performance [4]. In fact, this means that CFOs can almost integrate global financial reports in real-time, which can make them detect cost overruns or revenue shortfalls and take measures immediately. Thus, digital finance makes CFOo’s office an aggressive and data-driven center, which greatly reduces costs and risks.

Digital integration has greatly improved operational efficiency. Enterprises try to use Enterprise Resource Planning (ERP) systems and cloud platforms to simplify workflows, which can integrate previously independent processes. Digital platforms make companies synchronize the activities of suppliers and customers, which can greatly reduce inventory backlog and delays. At the same time, electronic procurement platforms can automatically choose the best supplier quotes from all departments and save costs through bulk discounts. Valaskova et al. said that companies using integrated platforms can achieve higher profitability and operational efficiency [10]. In other words, through simplifying processes and sharing information with partners, companies can achieve the classic advantages of lean operations on a large scale. Finally, these simplified processes mean higher throughput and lower costs for the entire value chain.

Human productivity is another important way to improve efficiency. Digital decision support tools, collaboration software and knowledge management systems can improve employee performance. Xiao emphasizes that through decision-making, people can improve efficiency and sustainable innovation abilities through technology improvements [7]. In practice, this means that both junior employees and managers can get professional knowledge on demand, which can reduce task completion time. For example, maintenance work can put repair instructions on AR glasses, which can reduce downtime. In fact, Yu et al. found that digital transformation can greatly improve the efficiency of companies’ innovation through enhancing organizational flexibility [11]. In other words, once it breaks free from rigid processes, human efforts will become more efficient.

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5. Strategies and suggestions for enterprise efficiency

The above analysis provides several key strategies for managers to improve efficiency in the digital age. Internally, companies must build a cultural and strong cultural leadership around digitization. Geng and Sun think that companies need to "leverage the role of data" in daily management and build a data-driven culture [5]. This requires investing in digital infrastructure platforms and training employees how to use these infrastructures. Companies should also encourage attempts. For example, some companies may set up internal "innovation time" for employees to carry out data-driven improvement projects and encourage managers to try new tools without worrying about failure. Zhang et al. emphasize that having far-sighted digital leadership can greatly boost transformation [12]. In practice, it means they need to build a governance mechanism including all functional department managers and connect success indicators to digital tools. For example, leading companies will link executive bonuses to digital performance indicators to improve this culture change. These measures can make digitization integrated into strategy and let internal teams have the ability to advance these initiatives. Research shows that this can greatly improve efficiency.

Externally, companies should actively participate in digital ecosystems and collaborative networks. This means establishing partnerships and leagues that go beyond the internal workings of the company. For example, companies should join industry platforms or leagues to share data and develop same interoperability standards. Valaskova et al. say that digital platforms can make companies integrate data in innovative ways, which can improve the quality of decision-making. Actually, companies should actively achieve data sharing agreements and open APIs with key suppliers and customers [10]. For example, component suppliers and automobile manufacturers always use shared digital portals to coordinate on-time production in the manufacturing industry. Yu et al. emphasize that this open innovation network can improve efficiency by digital transformation [11]. Government and industry organizations usually support these ecosystems, and companies should actively use these measures. By making the entire ecosystem's goal as improving efficiency, companies can double the return on their digital investments.

In short, the road to improving companies' efficiency in the digital age is multifaceted and continuous and requires the effort of many parties cultivating an adaptable internal culture, improving technological abilities and building external partnerships. The literature all agrees that digital transformation and management innovation complement each other. Companies which use advanced digital tools to create a data-driven culture, and an agile organization have greatly improved productivity and performance. [9]. In practice, companies should continuously iterate digital initiatives, like expanding the scale of successful pilot projects and quickly learning from failures, which can accumulate efficiency improvements over time. If companies view digitization as a strategic investment in agility and productivity rather than a one-time project, they can convert the challenges into competitive advantages brought by digital economy.

6. Conclusion

The digital economy forces companies to innovate management models and improve efficiency to maintain competitiveness. This article demonstrates how digital technology can reshape the market environment, internal operations and organizational structure, thereby requiring companies to use quicker and data-driven management methods. Through using flat hierarchies, digital human resource systems and intelligent operations, companies can quickly respond to change and improve performance. The improvement of financial, operational and labor efficiency will greatly improve the innovation capability and ductility of companies. Combining digital tools with strategic goals

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can help businesses adapt quickly and maintain long-term advantages. This study provides practical strategies and theory for companies to achieve success in the digital age.

References

[1] Li, R., Rao, J. and Wan, L. (2022) The digital economy, enterprise digital transformation, and enterprise innovation. Managerial and Decision Economics, 43(7), 2875-2886.
[2] Peng, S., Jiang, X. and Li, Y. (2023) The impact of the digital economy on Chinese enterprise innovation based on intermediation models with financing constraints. Heliyon, 9(3).
[3] Yu, W., Zhang, L. and Yang, C. (2023) The impact of the digital economy on enterprise innovation behavior: Based on CiteSpace knowledge graph analysis. Frontiers in Psychology, 14, 1031294.
[4] Yu, B., Jiang, N. and Wang, Z. (2025) Digital transformation and enterprise innovation efficiency: evidence from China's A-share listed companies. Economic Change and Restructuring, 58(5), 1-35.
[5] Zhang, Y., Swatdikun, T., Lakkanawanit, P., Huang, S.Z. and Chen, H. (2025) Digital Transformation Capability, Organizational Strategic Intuition, and Digital Leadership: Empirical Evidence from High-Tech Firms' Performance in the Yangtze River Delta. Journal of Risk and Financial Management, 18(7), 405.
[6] Valaskova, K., Nagy, M. and Juracka, D. (2025) Digital transformation and financial performance: an empirical analysis of strategic alignment in the digital age. Journal of Enterprising Communities: People and Places in the Global Economy.
[7] Wei, J. and Shen, Y. (2025) Impact and mechanism of digital transformation on performance in manufacturing firms. Innovation and Green Development, 4(1), 100205.
[8] Mu, R., Xu, Y. and Zhang, J. (2025) Digital Transformation, Enterprise Niche Resilience, and Substantive Innovation in Manufacturing Single Champion Enterprises. Systems, 13(4), 235.
[9] Xiao, M. (2025) Research on Enterprise Management Innovation in the Context of Digital Transformation. Asia Pacific Economic and Management Review, 2(1).
[10] Duan, N. (2023) Research on enterprise management innovation strategy under the background of digital economy. Accounting and Corporate Management, 5(6), 43–47.
[11] Lin, G. and Sun, Q. (2022) Characteristics and innovative strategies of enterprise management culture in the context of digital economy. Journal of Heze University.
[12] Zhou, X. (2024) Innovation and optimization of internal control of fixed assets in enterprises under the background of digital economy. E-Commerce Letters, 13, 3920.