Research on the Optimization Path of Strategic Cost Management under the Background of the Digital Economy

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Abstract. Under the background of the digital economy, the research on the optimization path of strategic cost management for enterprises is particularly important. This paper discusses key paths such as data-driven cost management systems, intelligent cost control, and collaborative cost management, revealing the profound impact of the digital economy on corporate cost management and proposing a series of optimization strategies. The data-driven cost management system requires enterprises to establish comprehensive data collection and analysis mechanisms, using big data and advanced analytical tools to achieve real-time monitoring and dynamic analysis of costs. This not only improves the accuracy of cost management but also enhances the enterprise's ability to respond to market changes. Secondly, the implementation of intelligent cost control, through automated and predictive cost management, enables enterprises to more effectively control and predict cost changes, thereby improving the efficiency of resource allocation and the quality of cost management decisions. Furthermore, the development of collaborative cost management emphasizes the synergy between internal departments of enterprises and with external partners. By breaking down information silos and promoting resource sharing and business collaboration, enterprises can achieve cost optimization throughout the entire value chain.

Keywords: digital economy, corporate strategy, cost management

1. Introduction

In the context of the digital age, the business environment has undergone profound changes, and the rise of the digital economy has brought unprecedented opportunities and challenges to enterprises. The digital economy has not only changed the business models and competitive landscape of enterprises but also posed new requirements for corporate cost management. Traditional cost management methods seem inadequate under the impact of the digital economy, and enterprises urgently need to explore strategic cost management optimization paths that adapt to the characteristics of the digital economy [1]. This paper aims to explore the optimization paths for strategic cost management of enterprises in the context of the digital economy. First, this paper will analyze the impact of the digital economy on corporate cost management; second, it will discuss the necessity for enterprises to engage in strategic cost management in the context of the digital economy; finally, it will propose specific paths for the optimization of strategic cost management in enterprises.

2. The Impact of the Digital Economy on Corporate Cost Management

2.1. Data-Driven Cost Analysis

In the tide of the digital economy, how enterprises can leverage the power of data to optimize strategic cost management has become a crucial issue. Data-driven cost analysis, as a core path for the optimization of enterprise strategic cost management, is significant not only for simple numerical analysis but also for achieving precise control and forward-looking predictions of costs through in-depth data mining [2]. Firstly, data-driven cost analysis requires enterprises to establish a comprehensive data collection system. This means that every cost factor, from transportation expenses to labor costs, should be accurately captured and updated in real-time. Enterprises need to utilize advanced data analysis techniques, such as machine learning algorithms, to meticulously deconstruct the cost structure, thereby identifying key points for cost control and potential areas for optimization. Predictive

maintenance is another critical area. By monitoring equipment operation data in real-time, enterprises can predict and prevent potential failures, thus avoiding the high costs associated with unexpected downtime [3]. This proactive cost management strategy helps enterprises gain an advantage in cost control. Additionally, the application of big data should also be extended to the optimization of operations and sales. Enterprises need to use data analysis to better understand market demands and consumer behavior, thereby adjusting product pricing, promotional strategies, and channel selection. Such data-driven decision-making can not only reduce costs but also enhance the competitiveness of the enterprise in the market. To implement data-driven cost analysis, enterprises need to build a management system centered on data. This involves establishing data lakes or data warehouses for centralized data management, using business intelligence tools to extract insights, and cultivating a professional data analysis team to support decision-making. At the same time, enterprises also need to pay attention to data governance to ensure the accuracy and reliability of data, providing a solid data foundation for cost management. In summary, data-driven cost analysis is key for enterprises to optimize strategic cost management in the era of the digital economy. By deeply mining the value of data, enterprises can not only achieve precise control and prediction of costs but also maintain sharpness and flexibility in fierce market competition, thereby gaining a long-term development advantage.

2.2. Intelligent Cost Control

In the era of the digital economy, enterprises are facing brand new challenges and opportunities in cost management. Intelligent cost control, as one of the key paths for optimizing strategic cost management, lies in the use of advanced information technology, such as artificial intelligence, big data analysis, cloud computing, etc., to improve the efficiency and accuracy of cost management. Intelligent technology can monitor cost data in real-time during enterprise operations, integrate data from multiple systems such as ERP, TMS, WMS, and use advanced analytical tools, such as machine learning algorithms, to deeply deconstruct the cost structure. This real-time monitoring and analysis help enterprises to detect cost anomalies in a timely manner, respond quickly to market changes, and thus achieve precise cost control.

The traditional cost accounting process is cumbersome and prone to errors. Intelligent technology can achieve cost accounting through automation, reducing labor input and improving the accuracy and efficiency of accounting. For example, by using artificial intelligence technology, it is possible to automate and intelligentize the cost accounting process, improving the efficiency and accuracy of cost accounting. Intelligent technology can optimize the supply chain through smart algorithms, achieving cost reduction and efficiency improvement. By analyzing and optimizing each link in the supply chain, intelligent technology can help enterprises reduce procurement costs, transportation costs, etc., and improve the overall efficiency of the supply chain [4].

Implementation of intelligent cost analysis requires enterprises to build a management system centered on data. This involves establishing data lakes or data warehouses for centralized data management, using business intelligence tools to extract insights, and cultivating a professional data analysis team to support decision-making. At the same time, enterprises also need to pay attention to data governance to ensure the accuracy and reliability of data, providing a solid data foundation for cost management. In summary, data-driven cost analysis is key for enterprises to optimize strategic cost management in the era of the digital economy. By deeply mining the value of data, enterprises can not only achieve precise control and prediction of costs but also maintain sharpness and flexibility in fierce market competition, thereby gaining a long-term development advantage.

2.3. Networked Cost Collaboration

In the era of the digital economy, competition among enterprises has shifted from single product competition and technological competition to more complex ecosystem competition. Networked cost collaboration, as a new type of cost management approach, improves the competitiveness of the entire supply chain and even the entire ecosystem by building a cross-enterprise cost management network that achieves resource sharing, risk sharing, and profit sharing. Networked cost collaboration first requires enterprises to break through traditional organizational boundaries and connect and collaborate with suppliers, distributors, customers, and even competitors through digital platforms [3]. This connection is not only about sharing information but also about the deep integration of business processes, decision-making processes, and management activities. For example, through the supply chain management system (SCM), enterprises can achieve real-time communication with suppliers, optimize the procurement process, and reduce procurement costs; through the customer relationship management system (CRM), enterprises can better understand customer needs, reduce inventory backlog, and lower inventory costs. In addition, networked cost collaboration also requires enterprises to use technological means such as big data, cloud computing, and artificial intelligence to deeply analyze and mine cost data, identifying key points for cost control and potential areas for optimization. By integrating and analyzing cost data from various links in the supply chain, enterprises can more accurately predict market changes, respond in advance, and thus reduce market risks and operating costs.

3. The Necessity of Strategic Cost Management for Enterprises in the Context of the Digital Economy

3.1. Enhancing the Flexibility of Cost Management

In the tide of the digital economy, enterprises are facing unprecedented challenges and opportunities. To maintain competitiveness in this dynamic environment, it is essential for enterprises to enhance the flexibility of their cost management. Enhancing flexibility means not only being able to adapt quickly to market changes but also representing the ability of enterprises to find new growth points in uncertainty. Firstly, enhancing flexibility requires enterprises to build a more agile organizational structure [5]. This structure should be flattened, reducing hierarchical levels, to ensure that decisions can be rapidly conveyed to the execution level. Such an organizational structure can promote cross-departmental collaboration and increase the response speed to market changes. For instance, by establishing cross-functional teams, enterprises can bring together experts from different fields to jointly address issues in cost management, thereby improving the quality and efficiency of decision-making. The modularization of cost accounting is key to enhancing flexibility. Modularized cost accounting allows enterprises to break down costs into smaller, manageable parts, so that when market conditions change, the enterprise can quickly adjust the cost strategy of specific modules without having to redesign the entire cost structure. This flexibility enables enterprises to make precise responses to specific cost factors while maintaining overall strategic consistency.

3.2. Achieving Intelligent Cost Management

Intelligent cost management requires enterprises to establish a data-centric decision support system. This system can integrate data from multiple systems such as ERP, CRM, and SCM, and employ advanced analytical tools, such as machine learning algorithms, to deeply deconstruct cost structures. In this way, enterprises can achieve real-time monitoring and dynamic analysis of costs, detect cost anomalies in a timely manner, respond quickly to market changes, and thus achieve precise cost control. Predictive cost management is an essential component of intelligent cost management. By learning from historical data and pattern recognition, intelligent systems can predict future cost trends, helping enterprises to formulate more scientific and reasonable cost budgets and plans. This predictive cost management helps enterprises to avoid cost risks and optimize resource allocation [6]. Automated cost accounting is another key area of intelligent cost management. Traditional cost accounting processes are cumbersome and prone to errors. Intelligent technology can achieve cost accounting through automation, reducing labor input and improving the accuracy and efficiency of accounting. For example, by using artificial intelligence technology, the cost accounting process can be automated and intelligentized, improving the efficiency and accuracy of cost accounting. In addition, supply chain cost optimization is also an important aspect of intelligent cost management. Intelligent technology can optimize the supply chain through smart algorithms, achieving cost reduction and efficiency improvement. By analyzing and optimizing each link in the supply chain, intelligent technology can help enterprises reduce procurement costs, transportation costs, and enhance the overall efficiency of the supply chain.

3.3. Promoting Collaborative Cost Management

Against the backdrop of the digital economy, the optimization of strategic cost management for enterprises is particularly crucial, where "promoting collaborative cost management" is an important way to achieve a cost advantage. Collaboration is not just a means of cost management, but also a strategic thinking approach. It requires enterprises to break down the barriers between internal departments and collaborate with external partners to optimize costs across the entire value chain. Promoting collaborative cost management requires the establishment of cross-departmental communication and collaboration mechanisms within the enterprise. By integrating information and resources from finance, procurement, production, sales, and other departments, enterprises can have a more comprehensive grasp of cost drivers, thereby making more precise decisions in cost control. For instance, close cooperation between the procurement and production departments can reduce inventory costs, while data analysis from the finance department can provide support for cost forecasting [7]. Enterprises should utilize digital technologies, such as cloud computing and big data analysis, to establish an integrated cost management platform. Such a platform can track cost data in real-time, achieving transparency and visualization of costs, thereby improving the efficiency of cost management. In this way, enterprises can not only identify cost wastage in a timely manner but also predict future cost trends and make adjustments in advance.

4. Optimization Pathways for Strategic Cost Management in Enterprises

In response to the optimization of strategic cost management for enterprises in the context of the digital economy, this paper proposes the following pathways:

4.1. Establish a Data-Driven Cost Management System

A data-driven cost management system requires enterprises to establish a comprehensive data collection system. This includes but is not limited to financial data, operational data, market data, etc., ensuring that every cost driver in the operation, from raw material procurement, production processing to product sales, can be accurately captured and updated in real-time. Such a data collection system is a prerequisite for refined cost management. Enterprises need to utilize data analysis tools, such as machine learning algorithms, to deeply deconstruct the cost structure. With these tools, enterprises can identify cost anomalies, evaluate cost efficiency, and formulate more precise budget plans accordingly. Dynamic budgeting models can flexibly adjust cost budgets according to market changes and fluctuations in business volume, ensuring the optimization of resource allocation. Furthermore, predictive cost management becomes possible. By utilizing historical and real-time data, enterprises can forecast future cost trends, thereby making strategic adjustments in advance [8]. This predictive cost management helps enterprises to avoid cost risks and optimize resource allocation.

4.2. Strengthening the Construction of Intelligent Cost Management

Intelligent cost management requires enterprises to establish a decision support system centered around data. This system can integrate data from various systems such as ERP, CRM, and SCM, and employ advanced analytical tools, such as machine learning algorithms, to deeply deconstruct cost structures.

In this way, enterprises can achieve real-time monitoring and dynamic analysis of costs, detect cost anomalies in a timely manner, respond quickly to market changes, and thus achieve precise cost control. Automated cost accounting is another key area of intelligent cost management. Traditional cost accounting processes are cumbersome and prone to errors. Intelligent technology can achieve cost accounting through automation, reducing labor input and enhancing the accuracy and efficiency of accounting. For instance, by utilizing artificial intelligence technology, the cost accounting process can be automated and intelligentized, improving the efficiency and accuracy of cost accounting.

4.3. Promoting the Collaborative Development of Cost Management

Collaborative development requires enterprises to break down internal barriers and promote cooperation among different departments [9]. This involves not only close collaboration between finance, operations, human resources, and other departments but also active participation of cross-departmental teams to ensure the comprehensiveness and effectiveness of cost management measures. For instance, by establishing cross-departmental cost management teams, enterprises can more effectively identify and manage cross-functional cost drivers, thereby achieving comprehensive cost control. When implementing collaborative cost management, enterprises also need to focus on risk management. Since collaboration involves multiple organizations and individuals, a robust risk assessment and response mechanism needs to be established to prevent cost losses to the enterprise due to risks such as collaboration failure or information leakage. Enterprises should value talent development and cultural construction. Through training and education, enhance employees' understanding and skills in collaborative cost management and encourage them to actively participate in all aspects of cost management. At the same time, enterprises should establish a corporate culture centered on cooperation and sharing to support the collaboration in cost management.

5. Conclusion

Overall, the digital economy provides new opportunities and challenges for strategic cost management in enterprises. Enterprises need to continuously innovate and improve cost management methods to adapt to the trend of digital transformation. By developing data-driven approaches, intelligent systems, and collaborative development, enterprises can enhance the flexibility, precision, and efficiency of cost management, thereby gaining an advantage in the competitive market and achieving sustainable development. Future research can further explore the application effects of these optimization pathways in different industries and enterprise sizes, as well as how to combine the specific circumstances of enterprises to formulate more personalized cost management strategies.

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