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Research on the Optimization of Enterprise Cost Management Models Under the Circular Economy Model

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Abstract: Against the background of increasing resource constraints and environmental pressures, enterprise cost management models need to shift from traditional cost control to a new development direction, so as to provide theoretical support and practical guidance for the subsequent sustainable development of enterprises. As a sustainable development model that can replace the traditional linear economy, the circular economy can reconstruct the enterprise's production and operation model through the development principles of reduction, reuse, and resource recycling, promoting the efficient recycling of resources and the structural reduction of costs. Traditional cost management usually focuses on the control of explicit costs in the production link, and it is easy to ignore the potential implicit cost-saving potential brought by resource recycling. However, by requiring enterprises to incorporate the entire life cycle of resources into the cost accounting system, the circular economy model can realize the systematic control of costs in all stages of raw material acquisition, production and manufacturing, product use, and recycling, thereby achieving in-depth optimization of the cost structure.

Keywords: Circular economy; Cost management model; Optimization strategies

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1. Introduction

From industrial civilization to the traditional linear economic model formed today, it has always followed the one-way flow logic from resources to products and finally to waste. This development model usually achieves economic growth at the cost of excessive resource consumption and continuous environmental damage. However, as resource depletion and ecological imbalance become increasingly serious, this extensive development model can no longer meet the requirements of the current era of sustainable development. Therefore, under this background, the circular economy, as a new economic model centered on efficient resource utilization and recycling, has gradually become a key path to promote the sustainable development of the economy and society. By reconstructing the industrial chain and treating waste as renewable resources, the circular economy can not only

effectively alleviate the pressure on resource supply but also reduce the cost of environmental pollution control, thereby continuously enhancing the long-term competitiveness of enterprises. Starting from the meaning of the circular economy, this paper deeply analyzes the importance of optimizing enterprise cost management models under the circular economy model, and systematically discusses the optimization strategies of enterprise cost management models under the circular economy, hoping to provide a new path for the sustainable development of enterprises.

2. Meaning of the circular economy

In the implementation stage of enterprise cost management, the integration of the circular economy concept can enable enterprises to break through the limitations of traditional cost control and incorporate the entire process of resource flow into cost considerations. From the perspective of the circular economy, enterprise cost management needs to go beyond cost reduction in a single link, and improve the management system and implementation measures through analysis, decision-making, control, and other links, so as to realize the dynamic control of the entire life cycle cost and ensure good results [1]. At the same time, in this process, every fund use in the enterprise will be recorded in detail. Combined with a more refined management model, enterprise decision-makers can conduct in-depth analysis, thereby effectively reducing and controlling the production and operation costs of the enterprise, and providing a solid cost support for the development of the enterprise. In addition, from the perspective of enterprise operation and development, the market competition among various industries has become increasingly fierce. If enterprises want to maintain their advantages in the competition, they must take the initiative to adapt to the development trend of green transformation and integrate the circular economy concept into strategic planning and operation management [2]. By building a closed-loop resource recycling system, enterprises can not only reduce raw material procurement costs and waste disposal expenses but also create new economic value in links such as product remanufacturing and recycling, maximizing the resource utilization efficiency of their own enterprises.

3. Importance of optimizing enterprise cost management models under the circular economy model

3.1. Break through the limitations of traditional cost management and realize accurate cost accounting

The traditional cost management model still has certain problems, including narrow cost accounting scope, neglect of external environmental costs, and lack of evaluation of resource recycling value. As a result, enterprises are likely to simply include implicit costs such as resource exploration, environmental governance, and waste disposal into period expenses during the development process, leading to the failure to accurately reflect the true cost of resource consumption, thereby affecting the scientificity of operational decisions [3]. Under the circular economy model, the cost composition of enterprises is redefined. The cost of resource recycling, investment in regeneration treatment, and environmental external costs are all integrated into the accounting system, enabling enterprises to more comprehensively evaluate the comprehensive cost of resource use in the subsequent development process, thereby maximizing the scientificity and forward-looking of cost management [4].

3.2. Stimulate the motivation to participate in the circular economy and help sustainable development

For enterprises, implementing the circular economy in the current development process requires investing certain resources in technological research and development, process transformation, and recycling system construction, which may increase the operating costs of enterprises in the short term. However, traditional cost management only focuses on short-term cost increases and is difficult to reflect the long-term value of the circular economy, ultimately leading to insufficient motivation for enterprises to participate in this regard [5]. Therefore, optimizing the existing cost management model can help enterprises build an accounting mechanism from short-term investment to long-term returns, thereby quantifying and presenting the long-term benefits of the circular economy. This enables enterprises to incorporate environmental and social benefits into the evaluation system during the green transformation process, thereby promoting enterprises to fully consider the cost-saving potential and value space in the development process [6]. Through reduction, the cost of resource procurement can be further reduced. At the same time, reuse and resource recycling can reduce the cost of waste disposal and enable enterprises to obtain regenerative value. In this way, efficiency can be improved by means of green technological innovation, and energy and material consumption can be minimized.

4. Optimization strategies of enterprise cost management models under the circular economy

4.1. Innovate the cost accounting system and build a full life cycle cost management framework

The traditional cost accounting system is easily limited by the one-sidedness of the accounting scope and the singleness of methods, making it difficult for enterprises to adapt to the multi-dimensional management needs of the current circular economy. Therefore, innovating the existing cost accounting system and building a full life cycle cost management framework can further optimize the core management model of enterprises and lay a solid foundation for their subsequent development [7]. On one hand, in defining the accounting scope, it is necessary to break through the limitations of the traditional production link and extend it to the entire process of enterprise operation to achieve full coverage of cost composition. For example, in the resource acquisition stage, it is necessary to account for the corresponding costs in links such as resource exploration, mining, and procurement. These costs should also include the opportunity cost of non-renewable resources and the cultivation cost of renewable resources to ensure the comprehensiveness of the plan.

In the production and manufacturing stage, it is necessary to account for the current consumption of raw materials, as well as explicit costs such as labor costs and equipment depreciation. In the product circulation stage, the focus should be on the cost calculation of links such as green packaging, low-carbon transportation, and warehousing management to ensure that the costs of each link have real basis [8]. On the other hand, in the selection of accounting methods, it is necessary to shift from the traditional manufacturing cost method to an accounting model combining activity-based costing and environmental costing. Activity-based costing mainly takes activities as the core accounting object.

By deeply identifying various activity data in the operation process and dynamically allocating the corresponding costs to products or services according to the activities, it accurately reflects the cost consumption of different activity links and provides a basis for subsequent process optimization. Environmental costing can account for the environmental-related costs generated in the production and operation of enterprises, including

environmental investment, environmental damage, and environmental governance costs, and accurately measure the impact of operational activities on the environment. Finally, in terms of cost measurement and accumulation, it is necessary to establish a multi-dimensional cost classification system. For example, it can be divided into direct circular economy costs, indirect circular economy costs, and external environmental costs based on the degree of association with circular economy activities [9]. According to the 3R principle, it can be divided into reduction costs, reuse costs, and resource recycling costs. Through this multi-dimensional classification method, the composition characteristics and corresponding change rules of costs under the circular economy model can be reflected more clearly, providing more accurate data support for subsequent cost analysis and control.

4.2. Build a full-chain collaborative management mechanism and strengthen cost control in all links

At present, the material and energy circulation characteristics of the circular economy require enterprise cost management to break the existing single enterprise boundary to a certain extent. In the construction process, enterprises need to cover various internal departments and coordinate the main bodies of upstream and downstream supply chains, consumers, and social institutions to establish corresponding management mechanisms, thereby realizing accurate cost control in all links. For example, at the level of internal enterprise collaboration, relevant managers of enterprises need to break the restrictions between departments and build a cost management organizational system that can communicate horizontally and vertically [10]. In terms of horizontal collaboration, the financial department can take the lead to integrate production, technology, procurement, sales, and environmental protection departments to form a corresponding cost management committee, clarify the responsibilities that each department should bear, and achieve a management mechanism with clear responsibilities.

Various departments can also communicate and coordinate regularly to uniformly manage the cost management goals of each department. In terms of vertical connection, enterprise managers can establish a full-level cost management responsibility system from senior decision-making to middle management and finally to grass-roots implementation, decompose cost management goals to each level and each position, and promote the formation of a management atmosphere in the entire enterprise where everyone participates in cost management [11]. At the same time, indicators related to the circular economy such as resource utilization rate, waste emission reduction rate, and renewable resource utilization rate can be incorporated into the performance appraisal system, and the final assessment content of employees can be linked to salary incentives to continuously stimulate employees' enthusiasm. In addition, it is also necessary to build a green supply chain cost management system, introduce upstream and downstream enterprises, and form a management mechanism for joint participation in the circular economy. In the upstream link, a green supplier evaluation and access mechanism can be established, incorporating goals related to the enterprise's development such as resource utilization efficiency, environmental compliance, and circular economy practice capabilities into the evaluation standards. Based on the final assessment results, priority is given to selecting suppliers that meet the requirements.

Through long-term cooperation, suppliers are further promoted to optimize production processes and reduce raw material supply and environmental costs [12]. In the midstream link, cooperation between enterprises in the same industry can be strengthened, with the main goal of building a circular economy network in industrial parks, further improving the effect of cross-enterprise resource utilization of waste, thereby effectively reducing the overall waste disposal and resource procurement costs of the supply chain. In the downstream link, the focus should be on the construction of product recycling and reuse systems. By cooperating with distributors and

recycling enterprises, enterprises can build a recycling network throughout the entire production process. At the same time, the cost structure of the circulation link can be optimized by means of green packaging and shared logistics, thereby realizing the further optimization of cost management in all links of the supply chain.

4.3. Strengthen technology empowerment and institutional guarantee to support the implementation of cost management models

Under the guidance of the circular economy model, the optimization of enterprise cost management is inseparable from the support of advanced technologies. Combined with the development of science and technology, enterprise cost management needs to keep pace with the times to achieve the maximum optimization effect. Therefore, in the optimization process, enterprises need to increase investment in the research and development of green technologies and the application of digital technologies, and continuously improve the precision and efficiency of cost management through the application of relevant technologies [13]. For enterprise development, green technology research and development is the core content in terms of cost saving. Enterprises should focus on key links such as reduction, reuse, and resource recycling, and further increase investment in the research and development of technologies such as energy conservation and consumption reduction, waste disposal, and renewable resource utilization. By using technological innovation to optimize production processes, resource consumption and environmental costs can be greatly reduced.

At the same time, it is also necessary to actively introduce digital technologies to build a more intelligent cost management system [14]. For example, enterprise managers can use the Internet of Things technology to real-time monitor resource consumption and waste discharge during the production process, and formulate corresponding risk plans and early warning systems to ensure that problems can be found in a timely manner during real-time monitoring and provide corresponding data support for dynamic management and control. Furthermore, it is necessary to improve the internal control system, supervise and control the entire process of circular economy projects, and establish a corresponding cost management audit system. Relevant personnel can verify the authenticity, accuracy, and compliance of the entire process through regular inspection of cost accounting, so as to achieve more perfect management risk prevention [15]. At the same time, attention should also be paid to external collaboration systems. Enterprises need to sign corresponding circular economy cooperation agreements with upstream and downstream enterprises in the supply chain to further clarify the cost sharing and benefit sharing mechanism and ensure the fairness and completeness of cooperation.

5. Conclusion

As a core path that can promote sustainable development in the current enterprise development process, the circular economy is profoundly reconstructing the enterprise's production and operation model in its unique way, and can transform the existing values of enterprises to a certain extent. The traditional cost management model can no longer meet the changing needs in the current economic development process. Optimizing the enterprise cost management model under the circular economy model has become a very important reform direction in the current enterprise development process. Therefore, enterprises need to further optimize the existing management model by building a collaborative management mechanism, innovating the cost accounting system, and strengthening technology empowerment and institutional guarantee, so as to lay a corresponding foundation for their future transformation and upgrading.

Disclosure statement

The author declares no conflict of interest.

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