The Construction of Enterprise Financial Performance Evaluation Index System Based on Computer Binary Tree Theory

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Abstract. At the present stage, more and more enterprises integrate the theory of computer binary tree into the financial performance evaluation index system of enterprises, so as to build a more effective enterprise performance evaluation system. Enterprise performance evaluation refers to that the stakeholders of an enterprise apply the knowledge theory of mathematical statistics and operational research, establish a scientific and comprehensive evaluation index system, according to the objective evaluation standards, adopt the method system of combining quantitative analysis and qualitative analysis to make profits in a certain period of operation Research, judgment and evaluation on business performance and management level of ability, asset quality, cash flow and sustainable development ability.

Keywords: Computer Binary Tree Theory, Enterprise Performance Evaluation Construction

1. What is computer binary tree theory
In computer science, binary tree is a tree structure with at most two subtrees per node. Usually, subtrees are called "left subtree" and "right subtree". Binary tree is often used to implement binary search tree and binary heap.

2. Based on computer binary tree theory
Objective and fair evaluation of enterprise performance can help stakeholders to accurately measure the financial status, operating results and the contribution of managers, improve the long-term value of enterprises and promote the sustainable development of enterprises. It is helpful to guide the operation behavior of enterprises, promote the managers to improve management, enhance the overall value of enterprises, and gradually improve the core competitiveness of enterprises. It is helpful for the investor to choose the operator correctly, strengthen the assessment and restriction of the enterprise operator, and effectively encourage the enterprise operator to create value for the enterprise.
3. The principles and requirements of establishing the financial performance evaluation index system of enterprises

3.1. Principles of establishing enterprise performance evaluation system

3.1.1. The principle of objectivity
That is to say, the performance evaluation system should truthfully reflect the business performance of enterprises and be objective and fair.

3.1.2. The principle of relevance
That is, the information provided by the performance evaluation system is helpful to evaluate the decision-making and to predict the future.

3.1.3. Systematic principle
That is, the design of performance evaluation system is comprehensive and comprehensive, and the overall performance of the enterprise is evaluated systematically and scientifically.

3.1.4. The principle of comparability
That is to say, the economic content, space-time range, calculation caliber and index system involved in the performance evaluation system are comparable, which is conducive to the comparison of different industries and different enterprises in the same industry.

3.1.5. Economic principle
That is to say, the performance evaluation system reflects the cost-effectiveness, and selects the representative indicators which can comprehensively reflect the performance level of enterprises.

3.1.6. The principle of combination of quantitative and qualitative
The performance evaluation system includes financial measurement and non-financial evaluation index.

Table 1. Principles of establishing enterprise performance evaluation system.

| Principle | Explanation |
|-----------|-------------|
| 1         | Objectivity | Truthfully reflect the business performance; Be objective and fair. |
| 2         | Relevance   | Be helpful to evaluate the decision-making and to predict the future |
| 3         | Systematicity | Be comprehensive and comprehensive; Be systematical and scientifical. |
| 4         | Comparability | Be conducive to the comparison of different industries and enterprises. |
| 5         | Economy     | Reflect the cost-effectiveness; Select the representative indicators. |
| 6         | Combination of quantitative and qualitative | Include financial measurement and non-financial evaluation index. |

3.2. Requirements of establishing enterprise performance evaluation system

3.2.1. Enterprise performance evaluation is combined with strategic planning
In the enterprise performance evaluation system, it takes the enterprise strategy as the guidance and emphasizes the realization of the long-term goal. The performance evaluation index comes from the realization of the enterprise strategic goal, which reflects the strategic vision of the enterprise and promotes the sustainable development of the enterprise according to the long-term plan.

3.2.2. Market oriented performance evaluation system should be constructed
The long-term stable market is the cornerstone of an enterprise's survival. The design of performance evaluation index should help enterprises adapt to the needs of market competition, enhance market competitiveness, and reflect the profitability and operating performance of enterprises.

3.2.3. The combination of financial indicators and non-financial indicators
Enterprise performance is the comprehensive embodiment of financial performance and non-financial performance. Financial and non-financial performance is an organic part of the overall performance of enterprises. Financial performance is mainly reflected by the measurement of accounting information system and the increment of tangible assets. The non-financial performance is reflected by the accumulation of elements, processes and intangible assets obtained by the operation and management system. Scientific enterprise performance evaluation system is an organic combination of financial and non-financial evaluation indicators.

3.2.4. It needs to be combined with computer binary tree theory
Using the theory of computer binary tree to realize the upgrading of enterprise performance evaluation system.

4. Countermeasures and suggestions on constructing and perfecting financial performance evaluation index system based on computer binary tree theory

4.1. Combining with the theory of computer binary tree to improve the enterprise performance evaluation index system
First, increase non-financial indicators, organically link financial and non-financial indicators according to the causal relationship, and enhance the integrity of enterprise performance evaluation. Non financial indicators include expanding market share, improving quality and services, innovation and productivity. It can be used to measure the performance of enterprises in wealth creation activities and pay attention to the long-term profitability of enterprises, which is conducive to guiding managers to promote the long-term development of enterprises. Enterprises should design the index system according to their actual business situation and the key driving factors of strategic objectives, select indicators and consider the balance between revenue and cost. Second, adjust the financial indicators and establish a financial index system with economic value added (EVA) as the core. The main feature of EVA is to include the cost of equity capital into the total capital of the enterprise. This is helpful to overcome the misunderstanding of enterprise managers that equity capital is a kind of free capital, which causes enterprises not to pay attention to the effective use of their own capital, resulting in the waste of equity capital, resulting in investment mistakes, repeated construction, low efficiency and other decision-making behaviors that are not in line with the long-term interests of enterprises. Third, supplement the cash flow index. The value of an enterprise is its ability to create cash. The performance evaluation system should supplement the indicators such as net present value.

4.2. Implementing Balanced Scorecard and promoting enterprises to establish performance evaluation system guided by strategy
At present, the design of enterprise performance evaluation system lacks strategic thinking, and the short-term phenomenon of managers' decision-making behavior is relatively serious, which makes it difficult to realize the sustainable development of enterprises. Financial indicators mainly reflect the business performance of an enterprise at a certain time or a certain period. The implementation of
Balanced Scorecard organically combines the enterprise's vision, mission and development strategy with the enterprise's performance evaluation system\(^{[3]}\). It transforms the mission and strategy of the enterprise into specific business objectives and evaluation indicators, and fully describes the driving factors to achieve the long-term strategic objectives of the enterprise. It overcomes the characteristics of unscientific and biased performance management by using financial measurement technology only, but considers the process of enterprise value creation from four different perspectives: finance, customer, internal process, innovation and learning. The Balanced Scorecard enables enterprises to realize the integration of business planning and financial planning. While paying attention to financial performance, it clearly reflects the driving factors of long-term value and competitive advantage of enterprises, so that enterprises can focus on the driving factors of future performance, and how to promote customers, internal processes, learning and innovation Investment and management create value for enterprises. The balanced scorecard can stimulate the behavior of managers and make them meet the requirements of enterprise strategy. Enterprise managers can evaluate the implementation of strategy according to the achievements of enterprise stage, and constantly revise the business plan, so as to promote the healthy development of enterprises along the established strategic goals\(^{[4]}\).

4.3. **With the help of Balanced Scorecard and non-financial indicators, it reflects the process of enterprise value creation and business decision-making**

The financial indicators of enterprise performance evaluation can not directly measure the activities and processes of enterprise value creation, but can only measure the results of these activities, and can not explain how the enterprise value is created. In order to reveal the process of enterprise value creation and business decision-making, we can use the Balanced Scorecard as a performance evaluation tool. In addition to financial factors, the Balanced Scorecard introduces factors such as customers, internal business processes, innovation and learning to show the knowledge, skills and systems needed by enterprise employees, allocate innovation and establish appropriate strategic advantages and efficiency, so that enterprises can create specific value for customers and markets, thus achieving higher shareholder value. It expands the mission, strategy and core financial indicators of enterprises into specific elements, objectives and indicators related to customers. Enterprises are customer-oriented and market-oriented, focusing on effective factors to meet the needs of core customers. Based on this, the enterprise establishes the market development goal, formulates the business plan, and refines it into the specific index, such as target market sales, new customer development rate, customer satisfaction, etc. The internal business process focuses on the operation process closely related to the objectives of shareholders and customers, such as shareholder return rate, delivery time, project progress completion rate, etc., including the improvement of short-term existing performance, long-term strategic development, involving innovation, operation and service. From the perspective of internal business process, business process reengineering promotes organizational change, which includes some driving goals, which can make enterprises focus more on market response and customer satisfaction, and can improve productivity, efficiency, product cycle and innovation by developing new products and improving customer service, so as to improve enterprise performance. This paper analyzes the core elements of enterprise value creation, analyzes the key links of enterprise management decision-making, and objectively evaluates the process of enterprise performance creation\(^{[5]}\).

4.4. **With the help of computer binary tree theory knowledge, to improve the financial performance evaluation index system**

The computer binary tree theory is a very important computer theory. With the continuous development and application of computer binary tree theory, the computer binary tree theory has been applied in many aspects, including enterprise performance evaluation system. At the present stage, the market competitiveness is becoming more and more strong, and enterprises have higher and higher requirements for the performance evaluation system. The computer binary tree theory can help enterprises better construct the performance evaluation system\(^{[5]}\).
5. Conclusion
At the present stage, enterprises have less experience on how to use the computer binary tree theory to construct the financial performance evaluation index system, or need enterprises to better understand the computer binary tree theory, so as to better use the computer binary tree theory to construct the financial performance evaluation index system.

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