

Exploration of the Evaluation Index System for Economic Responsibility Audit

-- Taking the Perspective of the Balanced Scorecard and State-owned Enterprise Leaders as an Example

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Abstract

According to the policy document "Regulations on Economic Responsibility Audit of Principal Leaders of Party and Government Organs and State-owned Enterprises", establishing an economic responsibility audit evaluation index system for leaders of state-owned enterprises is of great significance. It not only helps guide the decision-making and development of enterprises and strengthen the supervision of state-owned assets, but also contributes to the management of cadres and the construction of a clean and honest government. This paper establishes an economic responsibility audit evaluation index system for leaders of state-owned enterprises based on the Balanced Scorecard. This evaluation system fully combines financial and non-financial indicators, as well as the assessment results and the assessment process. It also comprehensively adopts the Analytic Hierarchy Process (AHP) and CRITIC method for weighting, quantitatively evaluating the fulfillment of economic responsibilities by leaders from both subjective and objective perspectives. This provides certain reference opinions for the supervision and evaluation of leaders of state-owned enterprises by relevant departments. In addition, when constructing the economic responsibility audit evaluation index system for leaders of state-owned enterprises, this paper also flexibly adjusts the evaluation index system by comprehensively drawing on relevant audit policies from abroad, thereby better exerting the role of economic responsibility audit.

Keywords

Economic Responsibility Audit Evaluation Index System; Leaders of State-owned Enterprises; Balanced Scorecard; Analytic Hierarchy Process (AHP) CRITIC; Audit Policies Related to Foreign Countries; Foreign-related Audit Policies.

1. Introduction

Economic responsibility audit is an auditing system with Chinese characteristics. It refers to an auditing method in which independent auditing institutions and auditors, based on the Party and state's policies, financial and economic laws, regulations and systems, as well as plans, budgets and economic contracts, supervise, review, evaluate and verify the fulfillment of economic responsibilities by the subjects of economic responsibility relations. Since its inception, economic responsibility audit has demonstrated an irreplaceable role that other audits cannot match. Whether in safeguarding the safety, integrity, preservation and appreciation of state property, or in improving the supervision and management of leading cadres and promoting clean governance, it has achieved remarkable results and played an important role. This article will construct a more scientific and systematic economic

responsibility audit evaluation index system from the perspective of the balanced scorecard, based on three major theories and four principles.

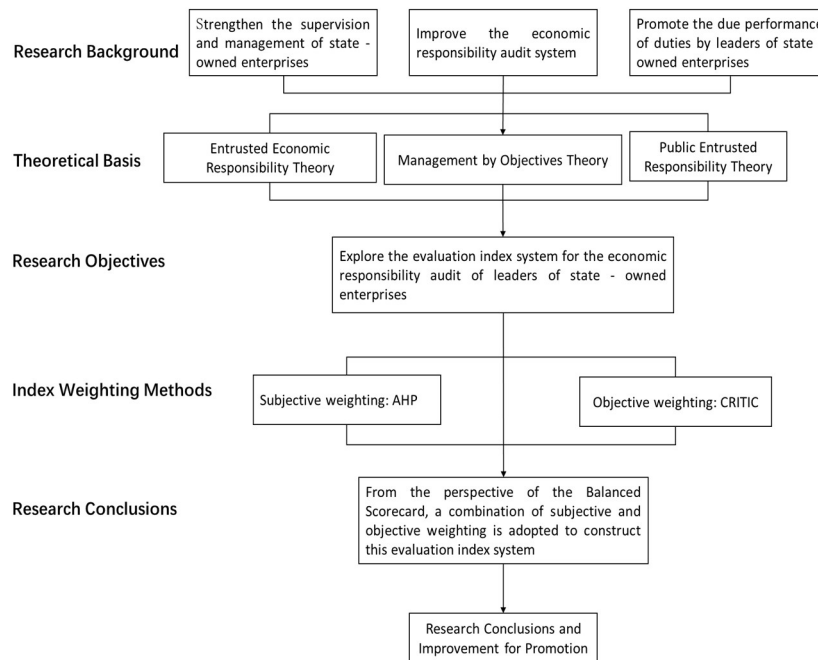


Figure 1. Exploratory Framework Diagram of the Evaluation Index System for Economic Responsibility Audit

1.1. Theoretical Basis for the Construction of Evaluation Index System

1.1.1. Theory of Entrusted Economic Responsibility

The concept of "entrusted economic responsibility" was first proposed by the renowned Chinese scholar Yang Shizhan. Professor Yang Shizhan (1986) proposed that when one entity accepts the commission of another to manage funds or undertake certain tasks, the trustee should be responsible for reporting the completion of the entrusted funds or matters with the utmost good faith, and be subject to the review of the principal based on this report. This responsibility is known as the economic responsibility of trusteeship.

The theory of economic responsibility of trusteeship holds that the economic responsibility audit of state-owned enterprise leaders originated from the agency problem resulting from the separation of management rights, ownership, and income rights. The main purpose of economic responsibility audit is to promote the full and effective fulfillment of the economic responsibility of trusteeship. In the economic responsibility of trusteeship, "power" and "responsibility" are correspondingly emphasized. Economic "power" corresponds to economic "responsibility". This means that trustees, while enjoying the power to control and manage economic resources, also need to bear the responsibility of ensuring the preservation and appreciation of these economic resources. In the relationship of economic responsibility of trusteeship between state-owned enterprise leaders and the state as the principal, the state hopes that the entrusted state-owned enterprise leaders can achieve the preservation and appreciation of state-owned assets and fulfill their economic responsibilities satisfactorily. Considering both the trustee and the principal, there is a need for the audit and supervision of economic power, that is, the principal supervises the use of economic power by the trustee through economic responsibility audit [1].

1.1.2. Management by Objectives (MBO) Theory

The Management by Objectives (MBO) theory was proposed by management expert Peter Drucker in the 1950s and is known as "management of management". This theory uses the

setting and decomposition of goals, the implementation of goals, and the inspection of the completion of goals, as well as rewards and punishments as means, to achieve the business objectives of an enterprise through self-management by employees. This method not only emphasizes the completion of goals and the achievement of work results but also attaches great importance to the role of people, emphasizing the active participation of employees in the formulation, implementation, control, inspection, and evaluation of goals.

The application of the MBO theory is very crucial in the construction of the economic responsibility audit evaluation index system. This theory can build evaluation indicators based on the strategic goals and annual business goals set by the enterprise in advance. For example, if the goal of the enterprise is to increase market share, then the audit indicators can include the actual changes in market share and other contents, thereby measuring the contribution of leading cadres in the process of achieving the goals and effectively supervising and evaluating the fulfillment of their economic responsibilities.

1.1.3. Public Accountability Theory

"Public Accountability" is an important theory formed on the basis of the theory of trusteeship, specifically targeting the management of public sectors and public resources. The theory of public accountability holds that in modern democratic systems, the ownership of public resources belongs to the public. The public entrusts the management and use of public resources to government agencies, public sectors, or public officials (trustees) to exercise. These trustees have the responsibility to manage and use public resources in accordance with the interests and will of the public, reasonably, fairly, and effectively. Effectively manage public resources and handle public affairs.

This theory emphasizes the responsibility of the public sector in social and economic development, including responsibilities for social equity, sustainable development, and other aspects. Therefore, in the evaluation index system, indicators of social equity (such as the fairness of tax burden distribution) and sustainable development (such as the environmental sustainability assessment of public projects) can be included, enabling economic responsibility audits to comprehensively evaluate the fulfillment of responsibilities by public sector leaders in multiple fields including economy, society, and environment.

1.2. Principles for Constructing the Evaluation Index System

1) Comprehensive Principle. The evaluation index system for economic responsibility audits should comprehensively cover all aspects of the economic responsibilities of the audited subjects. This includes multiple dimensions such as economic decision-making, economic management, implementation of economic policies, economic development achievements, financial management, asset management, and internal control. Because the responsibilities of leading cadres in economic activities are extensive, involving numerous links and fields, only by considering comprehensively can their fulfillment of economic responsibilities be accurately evaluated.

2) Operability Principle. The index system should be practically operable, including easily accessible indicator data, simple and clear calculation processes, and easily understandable and applicable evaluation standards. Indicators that are overly complex or difficult to obtain data for will increase audit costs and difficulties, and may even lead to the inability to conduct effective evaluations.

3) Objectivity Principle. Evaluation indicators should be based on objective facts, with reliable data sources and scientific and reasonable calculation methods. This can ensure that the evaluation results are not overly influenced by subjective factors and enhance the credibility of the audit evaluation. The definitions and measurement standards of the indicators should be clear and accurate information can be obtained through methods such as reviewing documents, account books, and statistical data.

4) Comparability principle. First, horizontal comparability, that is, the audited objects of the same level and type should be comparable on the same indicators. This helps to compare and evaluate different units or regions, and discover strengths and weaknesses. Second, vertical comparability, the indicators should maintain consistency and coherence over different periods, so as to conduct dynamic analysis of the economic responsibility fulfillment of the audited objects during their tenure.

2. The Necessity of Introducing the Balanced Scorecard

The Balanced Scorecard (BSC), proposed by Kaplan and Norton in the early 1990s, is an advanced strategic management and performance evaluation system. It decomposes the strategy into measurable indicators and evaluates performance from four aspects: finance, customers, internal processes, and learning and growth. Economic responsibility audit evaluates the performance of the audited person in fulfilling economic responsibilities. The purpose of both is the same, so it is feasible to introduce the Balanced Scorecard into the economic responsibility audit evaluation system.

As a new type of evaluation tool, the Balanced Scorecard has a rigorous scientific theoretical foundation and can effectively manage an organization's economic activities. Its multi-level evaluation mechanism, on the basis of the traditional sole assessment of financial indicators, introduces non-financial indicators such as customer elements, internal process elements, and learning and growth elements, thus enabling a comprehensive and integrated evaluation. For both financial and non-financial indicators, financial indicators reflect historical information that has already occurred and have a certain objectivity, and are mostly quantitative indicators, while non-financial indicators mainly consist of qualitative indicators, marking a fusion of quantitative and qualitative indicators; financial indicators mostly reflect the business results of an enterprise and cannot explain the relevant factors and realization paths that affect enterprise performance, whereas non-financial indicators reveal the process of performance creation, representing a fusion of result-oriented and process-oriented indicators. Finance indicators mainly involve the evaluation and analysis of an organization's internal performance, while non-financial indicators emphasize the degree of contribution an organization makes to the external society. This represents a fusion of internal and external indicators. Financial indicators may lead organizational leaders to overly focus on short-term performance, whereas non-financial indicators enhance the attention paid to sustainable development capabilities and core competitiveness, marking a fusion of short-term and long-term indicators.

In summary, the Balanced Scorecard organically integrates financial and non-financial indicators, achieving a balance between quantitative and qualitative indicators, results and processes, internal and external aspects, as well as short-term and long-term performance. Therefore, introducing the Balanced Scorecard into the economic responsibility audit evaluation system can more comprehensively, objectively, and fairly reflect the performance of the audited person in fulfilling their economic responsibilities [2].

3. Steps for Constructing the Evaluation Index System

The economic responsibility audit evaluation index system for state-owned enterprise leaders contains numerous indicators, and some of these indicators have a high degree of correlation. It is a typical comprehensive evaluation index system. The core lies in the selection of evaluation indicators and the determination of indicator weights. This article will construct an evaluation index system from four aspects - the financial perspective, the customer perspective, the process perspective, and the development perspective - based on the perspective of the Balanced Scorecard. Different weighting methods will be adopted according to the nature of different indicators to determine the weights of each indicator, thereby achieving a more

objective and comprehensive reflection of the audited person's performance in fulfilling their economic responsibilities.

3.1. Determining the Evaluation Index System

From the perspective of the Balanced Scorecard and based on the content of the economic responsibility audit for state-owned enterprise leaders, this article has classified and selected evaluation indicators from four major aspects: the financial perspective, the customer perspective, the process perspective, and the development perspective.

The specific selected indicators are as follows:

Table 1. Table of the Evaluation Index System

First - level Indicators	Second - level Indicators	Nature	
Financial Dimension (C1)	Profitability	Return on Net Assets	Quantitative
		Return on Total Assets	Quantitative
		Profit Rate of Cost and Expenses	Quantitative
		Return on Capital	Quantitative
	Asset Quality	Total Asset Turnover	Quantitative
		Ratio of Non - performing Assets	Quantitative
		Current Asset Turnover	Quantitative
		Accounts Receivable Turnover	Quantitative
	Debt Risk	Asset - liability Ratio	Quantitative
		Quick Ratio	Quantitative
		Cash Flow to Current Liabilities Ratio	Quantitative
		Contingent Liability Ratio	Quantitative
	Business Growth	Sales (Operating) Growth Rate	Quantitative
Rate of Capital Preservation and Appreciation		Quantitative	
Total Asset Growth Rate		Quantitative	
Customer Dimension (C2)	Market Share	Quantitative	
	Customer Retention Rate	Quantitative	
	Customer Acquisition Rate	Quantitative	
	Customer Profitability	Quantitative	
Process Dimension (C3)	Investment Intensity	Quantitative	
	Proportion of New Product Sales in Total Sales	Quantitative	
	Order Demand Fulfillment Rate	Quantitative	
	After-sales Service Satisfaction	Quantitative	
Development Dimension (C4)	Employee Satisfaction	Quantitative	
	Percentage of Training and Education Expenses in Sales Revenue	Quantitative	
	Number of Employee Suggestions	Quantitative	

The above-mentioned economic responsibility index system is only applicable to the common parts of the economic responsibility audit evaluation for leaders of state-owned enterprises. For different regions and enterprises, the economic responsibility audit evaluation still needs to be adjusted based on specific circumstances on this basis.

3.2. Determine the Weight of the Index System

The evaluation index system for the economic responsibility of leaders of state-owned enterprises covers 4 first-level indicators and 27 second-level indicators, which is a typical comprehensive evaluation system. How to scientifically and objectively assign weights to each indicator is the key to conducting economic responsibility audits for leaders of state-owned enterprises. Although each evaluation indicator reflects certain aspects of the economic responsibility fulfillment of leaders of state-owned enterprises, the influence degree of each indicator in the overall target evaluation system is different. Therefore, the weight coefficients of each indicator will have a significant impact on the final score of the evaluation system.

The methods for confirming the weight mainly include two categories, namely subjective weighting and objective weighting. Subjective weighting is a method of determining the weight of indicators based on people's subjective judgment. It mainly relies on the knowledge, experience, and personal viewpoints of experts, and converts these subjective judgments into the weights of indicators through certain methods. For example, Analytic Hierarchy Process (AHP) and Expert Scoring Method; Objective weighting methods are based on the actual data characteristics of indicators to determine the weights, and this weight is completely based on the data itself, avoiding the interference of human factors. For example, Entropy Weight Method, Coefficient of Variation Method, and CRITIC Method, etc.

The advantage of subjective weighting is that it is highly flexible and can fully consider factors that are difficult to measure with data, and can also well reflect the importance that decision-makers or experts attach to different indicators. However, this method is rather arbitrary, as it is based on personal subjective judgment, so different experts or decision-makers may give different weight results; The advantage of objective weighting methods is that they are highly objective. This method is based completely on the data itself and determines the weight coefficients of different indicators by fully utilizing the information contained in the data. However, since this method is based completely on data, it may ignore some factors that are very important in actual situations but are not clearly manifested in the data, such as brand building investment factors, etc.

In this paper, when constructing the evaluation index system for the economic responsibility of leaders of state-owned enterprises, a method combining subjective weighting and objective weighting is adopted for the audit evaluation. Specifically, when assigning weights to the first-level indicators, the Analytic Hierarchy Process (AHP) under subjective weighting method is used; when assigning weights to the second-level indicators, the CRITIC method under objective weighting method is used.

4. Promotion and Improvement of the Evaluation Index System

By reading a large number of literatures, it is understood that the establishment process of related evaluation systems in foreign countries and the combination with the actual situation of China, this paper gives the following three suggestions based on the above evaluation system:

4.1. Establish a Dynamic Adjustment Mechanism for Indicators

In terms of indicators, the United Kingdom has formed a situation where the "national indicators" uniformly set by the central government, the performance indicators set by central departments themselves, and local performance indicators coexist. China can draw on this multi-level indicator system construction method and, in the evaluation indicators of economic responsibility audits, in addition to the unified macro-level indicators, specific indicators should be formulated according to the characteristics and goals of different regions, industries, and units. For example, for the economic responsibility audits of leaders in economically developed regions and less developed regions, the weight and specific requirements of

economic development indicators can be different; for enterprise leaders in different industries, specific performance indicators should be set according to industry characteristics, such as manufacturing can focus on production efficiency, product quality, etc., and service industry can focus on customer satisfaction, service innovation, etc.

In terms of weights, the Audit Committee of the United Kingdom will regularly improve performance indicators based on changes in the evaluation object, changes in priorities of attention, etc. China should also establish a dynamic adjustment mechanism for evaluation indicators in economic responsibility audits, and timely revise and improve indicators based on changes in national policies, changes in the economic environment, and the development of the audited unit. For example, as the importance of environmental protection by the country continues to increase, in economic responsibility audits, indicators related to promoting environmental protection work and achieving green development by leaders can be added, and their weights and specific requirements can be adjusted according to the advancement of environmental protection policies.

4.2. Full-process Supervision

The U.S. Audit Service conducts full-process supervision of the performance of financial regulatory agencies. Specifically, it includes pre-event prompt and warning, mid-event follow-up assessment, and post-event summary evaluation. In economic responsibility audits in China, it is also possible to strengthen the supervision of the entire process of the fulfillment of economic responsibilities by leaders. Not only should the economic responsibility audits after the end of their terms be paid attention to, but regular or irregular audits during the tenure of leaders should also be conducted to promptly discover and correct problems and prevent the accumulation and expansion of problems. For example, an annual audit system for economic responsibilities of leaders can be established, which supervises and evaluates the economic decisions, fund usage, project management, etc. of leaders within the year, providing a basis for the economic responsibility audits after the end of their terms.

4.3. Social Supervision

Australia attaches great importance to the openness and transparency of performance information disclosure and requires public departments to regularly publish performance reports. In the construction of the evaluation index system for economic responsibility audits in China, this concept can also be borrowed. A public disclosure system for the results of economic responsibility audits of enterprise leaders should be established to ensure that the results are disclosed to the public and subject to social supervision, thereby prompting enterprise leaders to perform their economic responsibilities more prudently.

5. Summary

Applying the Balanced Scorecard to the evaluation index system for economic responsibility audits is an innovative move that draws on advanced management experience and methods from the West. This system overcomes the defect of the single evaluation index and achieves a more comprehensive evaluation effect. When applying this system for evaluation and auditing, it is necessary to make reasonable choices closely centered on the evaluation goals of economic responsibility audits of enterprise leaders, and fully combine the characteristics of the enterprises themselves for in-depth exploration to enhance the value and adaptability of this evaluation index system.

In addition, this paper adopts a combination of subjective and objective methods to assign weights to the indicators, fully considering the balance requirements of qualitative and quantitative analysis in the evaluation process. Subjective weighting adopts the Analytic Hierarchy Process (AHP), which can incorporate factors that are difficult to quantify, such as

experts' experience and decision-makers' subjective judgments, into the evaluation scope, reflecting the orientation and flexibility of the evaluation index system; objective weighting adopts the CRITIC method, which makes full use of the information contained in the index data to determine the weights, avoiding the deviation and arbitrariness that may arise from purely subjective judgment, making the evaluation index system more scientific and fair. Through this combination of subjective and objective weighting methods, it can fully leverage the advantages of subjective judgment in grasping the audit focus and adapting to special circumstances, and at the same time, draw on objective data to ensure the reliability and stability of weight allocation, thereby laying a certain foundation for building a more precise, comprehensive and reasonable evaluation index system for economic responsibility audits of enterprise leaders.

Although the construction of the evaluation index system for economic responsibility audits based on the Balanced Scorecard perspective has achieved a more comprehensive and objective evaluation effect, due to the influence of the times and national policies on the selection and weighting of evaluation indicators, the evaluation index system needs to undergo dynamic changes, and the implementation of this system relies on the collaborative cooperation of other departments. Therefore, the application of the Balanced Scorecard in the field of economic responsibility audits of enterprise leaders still needs to be tested and continuously improved through a large number of practical experiences.

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