# Research on performance evaluation problems and countermeasures in the digital transformation of state-owned enterprises

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**Abstract:** This paper takes state-owned enterprises as the research object. Firstly, it sorts out the problems existing in performance evaluation of state-owned enterprises in digital transformation; Secondly, from the perspective of balanced scorecard, related indicators of digital transformation are added to build a multi-level and multi-dimensional performance evaluation index system; Finally, this paper puts forward countermeasures such as improving data governance, improving employees' digital literacy, optimizing organizational structure, strengthening internal and external communication and collaboration, and innovating performance evaluation methods.

Key words: State-owned enterprises; Digital transformation; Performance evaluation; Problems and countermeasures

#### I. Introduction

With the rapid development of global digital economy, digital transformation of state-owned enterprises has become the important engine for our country's high-quality economic development. Many state-owned enterprises have taken digital transformation as the core strategy of enterprise development, and constantly promoted the transformation and upgrading of enterprises through innovative technological means, optimizing business processes and improving management efficiency. In the process of digital transformation of state-owned enterprises, performance evaluation plays an important role in guiding and motivating them.

This paper aims to analyze the problems existing in the performance evaluation of state-owned enterprises in the process of digital transformation, and discuss the relevant countermeasures, in order to provide strong support for the digital transformation of state-owned enterprises, so as to promote the state-owned enterprises to achieve high-quality development and make greater contributions to the sustained prosperity of China's economy.

# II. The problems of performance evaluation in the digital transformation of state-owned enterprises

1. Inadaptability of performance evaluation system

First of all, the traditional performance evaluation system pays too much attention to financial indicators, while ignoring non-financial indicators such as innovation ability, customer satisfaction and employee growth that soes pay attention to in the process of digital transformation. This has led soes to pursue short-term financial goals too much while neglecting long-term development and core competitiveness.

Secondly, the existing performance evaluation system fails to take full account of industry characteristics and corporate strategies. As various industries have different needs and challenges in the process of digital transformation, a universal performance evaluation system is difficult to meet the individual needs of different state-owned enterprises. In addition, as strategic goals change, the existing performance evaluation system fails to adjust in time, leading to a disconnect between the evaluation results and the actual development situation.

2. The disconnect between digital transformation and performance evaluation indicators

First, digital transformation requires soes to pay attention to the performance of emerging technologies, innovation capabilities, customer experience and other aspects, which are weak in the existing performance evaluation index system.

Secondly, digital transformation is often accompanied by the adjustment of enterprise organizational structure, business model, business process, as well as the change of enterprise culture, and the existing performance evaluation index system is difficult to fully reflect the impact of these changes, resulting in state-owned enterprises ignoring the long-term value creation of digital transformation.

3. Insufficient performance evaluation methods and data

First of all, the existing performance evaluation methods rely too much on quantitative indicators, but ignore the importance of qualitative indicators; The evaluation is too rigid, there is no dynamic adjustment.

Secondly, the existing performance evaluation data often come from inside the enterprise, which is difficult to fully reflect the market competition status of the enterprise in the process of digital transformation. With the popularization of technologies such as the Internet and big data, enterprises need to make more use of external data to evaluate their performance in the process of digital transformation more comprehensively and objectively.

4. Emphasize economic indicators over ecological and social indicators

In the performance evaluation of state-owned enterprises, the economic benefit index is dominant, while the ecological and social indicators are relatively weak. This phenomenon leads enterprises to easily neglect ecological environmental protection and social responsibility in the process of digital transformation, which in turn affects the long-term sustainable development of enterprises.

## III. Construction of performance evaluation index system in the digital transformation of stateowned enterprises

1. Establish core performance indicators

To measure the performance of soes' digital transformation, it is necessary to establish a set of core performance indicators. These indicators can be expanded from the four dimensions of the Balanced Scorecard.

- (1) Financial indicators: mainly include operating income, net profit, gross margin, asset-liability ratio, etc., which can reflect the role of digital transformation of state-owned enterprises in improving economic benefits.
- (2) Customer indicators: mainly include market share, customer satisfaction, customer loyalty, etc. Digital transformation helps to improve the level of customer service and enhance the competitiveness of enterprises, so customer indicators play an important role in performance evaluation.
- (3) Internal process indicators: mainly include production efficiency, supply chain management, human resource management, etc. Digital transformation can optimize an enterprise's internal process, improve operational efficiency and reduce costs.
- (4) Learning and growth indicators: mainly include R&D investment, employee training, organizational learning ability, etc. Digital transformation requires state-owned enterprises to have the ability of continuous innovation and adaptation, so learning and growth indicators are of great significance for performance evaluation.
  - 2. Add indicators related to digital transformation

In order to reflect the characteristics of the digital transformation of state-owned enterprises, the following three aspects of digital transformation related indicators should be added to the core performance indicators:

- (1) Digital capability index: mainly focuses on the investment and application level of enterprises in digital technology, including information technology expenditure, digital equipment penetration rate, digital technology research and development, etc. Improving digital capability can help enterprises realize transformation and upgrading in production, management and marketing.
- (2) Digital innovation index: It mainly focuses on the innovation achievements of enterprises in the process of digital transformation, including patent application, new product launch, technological innovation, etc. Digital innovation can bring new growth points for enterprises and enhance market competitiveness.
- (3) Digital synergy index: mainly focuses on the synergy between internal and external partners in the process of digital transformation, including supply chain synergy, research and development synergy, marketing synergy, etc. Digital synergy can improve the overall operational efficiency of enterprises and reduce costs.
  - 3. Build a multi-level and multi-dimensional performance evaluation index system

On the basis of establishing core performance indicators and relevant indicators of digital transformation, a multi-level and multi-dimensional performance evaluation index system from the aspects of economy, ecology and society can be built to comprehensively evaluate the achievements in the process of digital transformation of state-owned enterprises and provide strong support for further optimization strategies.

- (1) Economic indicators: in addition to financial indicators, they can also include market share, return on investment, market value, etc., to measure the economic benefits of enterprises in the process of digital transformation.
- (2) Ecological indicators: including energy consumption, carbon emissions, resource utilization, environmental protection input, etc., to measure the environmental protection and sustainable development capabilities of enterprises in the process of digital transformation.
- (3) Social indicators: including employee welfare, social responsibility, customer satisfaction, corporate image, etc., to measure the social influence and public recognition of enterprises in the process of digital transformation.

# IV. Performance evaluation countermeasures in the digital transformation of state-owned enterprises

1. Improve data governance, improve data quality and transparency

Soes should strengthen data governance to ensure the authenticity, integrity and timeliness of data. In addition, improving data transparency so that various stakeholders can understand and supervise the performance evaluation process of enterprises will help enhance the credibility of performance evaluation. Specific countermeasures are as follows:

- (1) Establish a data governance framework, and clarify the main body of responsibility and division of responsibilities for data governance;
  - (2) Formulate data quality management measures to ensure the truth, integrity and reliability of data;
  - (3) strengthen data security and privacy protection to prevent data leakage and abuse;
  - (4) Improve data transparency, accept internal and external supervision, and enhance the credibility of performance evaluation.
  - 2. Improve employees' digital literacy and strengthen personnel training and incentive mechanism

State-owned enterprises should strengthen staff training, cultivate talents with digital thinking and skills, and establish incentive mechanisms to stimulate employees' enthusiasm and creativity. Specific countermeasures are as follows:

- (1) Formulate plans to improve employees' digital literacy and strengthen training and education;
- (2) Establish a talent training system to train talents with digital ability;
- (3) Establish an incentive mechanism to encourage employees to actively participate in digital transformation and performance evaluation;
  - (4) Strengthen employee team building to enhance employees' sense of organizational identity and belonging.
  - 3. Optimize the organizational structure and promote the synergy between corporate strategy and performance evaluation

The digital transformation of state-owned enterprises needs to optimize organizational structure, enhance organizational flexibility and innovation ability, achieve synergy between corporate strategy and performance evaluation, and improve the implementation effect of performance evaluation. The specific countermeasures are as follows:

- (1) Adjust the organizational structure to realize the synergy between enterprise strategy and performance evaluation;
- (2) Establish a cross-departmental coordination mechanism to improve the execution efficiency of performance evaluation;
- (3) Encourage team cooperation and give play to the guiding role of performance evaluation in team cooperation;
- (4) Strengthen the integration of performance evaluation with corporate strategy and corporate culture.
- 4. Strengthen internal and external communication and cooperation to improve the execution of performance evaluation

State-owned enterprises should strengthen internal and external communication and collaboration, improve the execution of performance evaluation, and ensure the smooth flow and sharing of information. Specific countermeasures are as follows:

- (1) Strengthen internal coordination, the enterprise's internal management and employees participate in the evaluation, review the performance from the internal perspective of the enterprise, and improve the implementation efficiency of performance evaluation;
- (2) Expand external customers and partners, understand customer needs through customer satisfaction survey, market feedback and other means, establish a communication mechanism with the supply chain and upstream and downstream partners of the industrial chain, collaborate on innovation, and collect external customers' evaluation of the enterprise.
- (3) Pay attention to social evaluation, based on the results of performance evaluation, pay attention to the performance of enterprises in social public welfare undertakings, environmental protection and other aspects, and collect the public's praise and opinions on enterprises.
  - 5. Innovate performance evaluation methods

In the process of digital transformation of state-owned enterprises, the innovation of performance evaluation methods is crucial, including the following three aspects.

- (1) Data-driven, emphasizing the use of big data analysis and artificial intelligence technology for in-depth mining and analysis of enterprise performance, helping state-owned enterprises to discover valuable information from massive data, and providing intelligent decision support for enterprises.
- (2) Dynamic adjustment, emphasizing real-time monitoring, feedback and adjustment of state-owned enterprises in the process of digital transformation of various key areas of the problems and shortcomings, and targeted adjustments, and constantly optimize the performance evaluation system to adapt to the development needs of digital transformation.
- (3) Cross-border evaluation, advocating the introduction of industry leading and benchmarking enterprises comparison, in-depth understanding of industry development trends and competitor dynamics, give play to the advantages of state-owned enterprises, avoid risks and traps, improve market competitiveness, in order to comprehensively and objectively evaluate the performance of state-owned enterprises in the process of digital transformation.

### V. Conclusions and prospects

In order to meet the needs of the digital transformation of state-owned enterprises, a scientific and reasonable performance evaluation system has been established, and countermeasures such as improving data governance, improving employees' digital literacy, optimizing organizational structure, strengthening internal and external communication and collaboration, and innovating performance evaluation methods have been put forward.

With the continuous deepening of the process of digital transformation of state-owned enterprises, performance evaluation will face more challenges. Future research can be carried out from further exploring the internal connection between digital transformation and performance evaluation, and exploring the intelligent development of performance evaluation system on the basis of advanced technologies such as artificial intelligence.

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