Research on the International Business Operation Indicator System of Central Enterprises

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Abstract. Currently, under the accelerated evolution of the century changes, China is facing a more complex international political and economic landscape. At the same time, the domestic economy has entered a stage of high-quality development, which has put forward higher requirements for improving the quality and efficiency of central enterprises' international business. In order to effectively support the international business operation and management of central enterprises, this paper constructs an international business index system of central enterprises, which covers four categories of indicators covering operational efficiency, operational management, internal risk, and external environment. The application strategies of the indicator system are proposed from three perspectives: horizontal and vertical comparison of key indicators, comprehensive application based on exponential models, integration and embedding with digital platforms.

Keywords: Central Enterprises; International Business Operations; Indicator system

1 Introduction

Currently, the century changes are accelerating and the international situation is increasingly characterized by instability, uncertainty and insecurity. The world has entered a new period of turbulence and transformation. On the one hand, with the escalation of the Russian-Ukrainian conflict, the big power game and the "left and right game" of regional politics have entered a new stage, and there is no sign of substantial improvement in the policies of Western countries towards China. On the other hand, the world economic recovery is seriously differentiated, and presents the characteristics of high inflation, high risk, and low growth, which further promote the reshaping of the global industrial chain and supply chain. Domestically, China's economy has entered a stage of high-quality development, and is accelerating the construction of a new development pattern in which domestic economic cycle plays a leading role while international economic cycle remains its extension and supplement. At the same time, the reform of state-owned assets and state-owned enterprises continues to deepen, requiring the central enterprises to continuously improve the quality and efficiency, and to walk more steadily, solidly, and better on the path of internationalization.

At the present, the regional differences in the operation of the international business of central enterprises remain prominent, and the difficulty of internal control continues to increase. In order to carry out the work of improving quality and efficiency of central enterprises' international business at a deeper and higher level, it is necessary to make sustained efforts from the

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transformation of "stock tapping" to "mechanism incentive" and continuously strengthen the degree of lean management of key operational indicators by building a scientific indicator management system.

2 Construction of indicator system

On the basis of referring to and drawing on domestic and international index systems related to international business operation, combining with SASAC's requirements for central enterprises' "One Profit and Five Rates" , and central enterprises' own characteristics of international business operation, we have formed a underlying database of central enterprises' international business operation. Based on this, four categories of indicators are designed: operational efficiency, operational management, internal risk, and external environment.

2.1 The construction of the underlying database

According to the needs of operation and management and the accumulation of preliminary data, the underlying database should cover the content of asset statistics, finance, operation and external environment.

Asset statistics-related indicators refer to a series of indicators reflecting the quantity and scale of resources owned by international operations, such as the size of assets, number of employees, etc. This type of indicator is often reflected in the form of actual values. **Finance-related indicators** refer to a series of indicators reflecting the financial situation of international operations, such as income, cost, profit, tax amount, etc. This type of indicator is often reflected in the form of actual and planned values. **Operation-related indicators** refer to a series of indicators directly related to international business operations, such as total labor productivity, regulatory asset base, recordable work-related injury rate , and the amount of foreign investment driven. This type of indicator is often reflected in the form of actual value, planned value, and regulatory value. **External environment-related indicators**, namely macro environmental indicators that have a significant impact on international business operations, such as GDP, CPI, number of extreme weather warnings, etc. This type of indicator is often reflected in the form of actual values.

2.2 Construction of indicator system

(1)Operational efficiency indicators

Operational efficiency indicators are the key outcome indicators to show the operation of the international business. Changes in these indicators can directly reflect the main achievements and problems of asset operation in the current period. Referring to the evaluation dimensions such as the Interim Measures for the Performance Assessment of Central Enterprise Leaders[1], Forbes[2], and World Competitiveness Yearbook[3], combined with the actual international business operations, operational efficiency indicators can be designed into five common indicators: revenue cost, regulatory deductions, profit, owner's equity, and investment returns, as well as multiple differentiated individual indicators under the five dimensions.

Revenue cost category reflects the inflow and outflow of economic benefits during international business operations, including operating income, operating costs (e.g., CAPEX and

OPEX of power assets).**Regulatory deduction category** reflects the extent to which international business operations satisfy local regulatory policies and the resulting outflow of economic benefits, such as the RAP deduction involved in transmission assets and the line loss suppression index involved in distribution assets. Profit category reflects the final results realized by the production and operation of the international business in a certain period of time, such as gross profit, EBITDA, net profit and so on. **Owners' equity category** reflect the preservation and appreciation of capital invested by owners and the ability of the enterprise to resist financial risks. **Investment return category** reflects the economic returns that owners can obtain through investment in offshore assets, such as investment return rate, fund withdrawal ratio, and so on.

(2)Operational management indicators

Operation management indicators can describe the state of asset operation and management that is directly related to operation efficiency, evaluate the management level and find out the direction of improvement, so as to better promote the optimization and enhancement of asset operation and management. Referring to the China Business Daily[4], and related internationalization capability evaluation research[5][6], combined with the actual international business operation, operational management indicators can be designed as two common indicators dimensions of asset efficiency and cost control, two personality indicators dimensions of growth synergy and asset structure, and multiple differentiated personality indicators under the four dimensions.

Asset efficiency category measures the profitability of unit assets and the contribution of unit revenue to profits, reflecting the efficiency and quality of international business assets, such as the contribution rate of unit asset profits. **Cost control category** measures cost consumption per unit of assets, per unit of benefits and per unit of customers, reflecting the level of cost management, such as unit asset cost. **Growth synergy category** is primarily for business types that use price-based restrictions, and is used to measure the relationship between growth in sales (e.g., distribution) and growth in revenues and profits, reflecting the synergistic growth of the international business itself. **Asset structure category** is mainly for business types that use capital investment driving revenue growth, and is used to measure the ratio of capital investment/fixed assets, reflecting the reasonableness of the asset structure of the international business as well as the future development potential of asset operation.

(3)Internal risk indicators

Internal risk indicators are indicators reflecting the key internal risk points, which should be emphasized may have a greater impact on international business operations. Referring to the evaluation systems of overseas investment risk assessment of state-owned enterprises in the new era[7], as well as overseas investment risk assessment of state-owned enterprises[8][9], and combining with the actual international business operations, internal risk indicators can be designed as two common indicators dimensions of litigation risk and operational risk, as well as multiple differentiated individual indicators under the two major dimensions.

Litigation risk category reflects the level of risk control for compliant international business operations, involving indicators such as litigation amount and litigation provisions. **Operational risk category** reflects the risk of recovery (e.g., bad debt losses, amount of fees owed,

etc.), the risk of additional costs and expenses (e.g., regulatory fines, customer compensation, etc.) and other operational risks.

(4)External environment indicators

External environment indicators reflect the changes in the situation and environment of countries and energy industries, and anticipate the potential impact on the countries and industries in which the central enterprises' international businesses are located through the potential indirect impact on the operation of the international business. Referring to evaluation systems[10] such as the United States, the European Union, OECD, and commonly used external environmental risk assessment indicators in China, combined with international business operations, external environmental indicators can be designed as common indicators such as GDP, CPI growth rate, benchmark interest rate, exchange rate, as well as individual indicators such as terminal electricity prices, commodity price indices, and extreme weather warning times.

On the basis of underlying data accumulation, the international business of central enterprises can be combined with the actual business development, in accordance with the principles of SMART, scientific, systematic, cohesive, and concise, indicators can be selected according to the common and individual indicator framework under the above four categories of indicators, and then an indicator system reflecting the actual international business operation of central enterprises can be built.

3 Strategies for applying the indicator system

The biggest problem in the implementation of the international business operation index system of central enterprises is that the comparability of different business index systems is not strong because of the large differences. Based on this, it is suggested to select key common indicators or construct an index model on the basis of the four-dimension index system, and compare the international business of central enterprises from the vertical time dimension and horizontal project dimension, so as to provide more abundant information for expanding index analysis conclusions and supporting international business management decisions.

3.1 Horizontal and vertical comparison of key indicators

On the one hand, for a single international business, a few key indicators are selected for data display to grasp the key details of project operation.

For example, Figure 1 shows some operational efficiency indicator data of a central enterprise in a project in Brazil from January to July 2022. These indicators are some revenue cost (net operating income, CAPEX, OPEX) and profit (net profit) indicators selected under the selection framework of operating efficiency indicators in Chapter 3. It can be seen that the planned completion rate of net operating income and net profit of the project is less than 58% (7/12), indicating that the project should continue to make efforts to improve revenue and profit in the future. The planned completion rate of CAPEX and OPEX is below 50%, indicating that project cost control is effective and should be maintained.

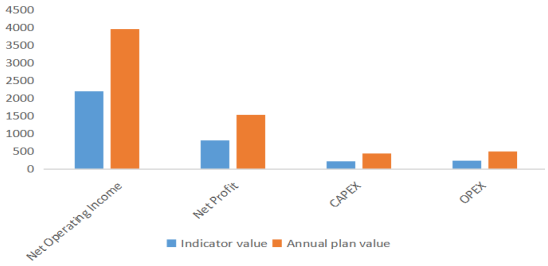

Fig. 1. Operational efficiency indicator of a Project in Brazil (Unit: Million Reais)

On the other hand, taking into full consideration of the differences in equity nature, region, business type and development stage of different international businesses, the indicators of each business are described mainly from the perspectives of current value and change rate, so as to realize the horizontal evaluation among different business.

For example, Figure 2 shows the horizontal and vertical comparison of the operational management indicators - unit asset profit contribution rate - of a central enterprise in two different projects in Brazil. Unit asset profit contribution rate is one of the common indexes of asset efficiency selected by the two projects according to the selection framework of operation management indexes in Chapter 3. It can be seen that from 2018 to 2021, the unit asset profit contribution rate of project A is better than that of project B. Although the unit asset profit contribution rate of Project B maintained an increase during 2018-2020, it declined significantly in 2021, which requires further analysis and targeted improvement.

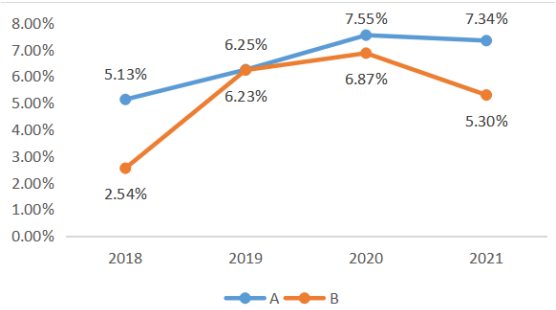

Fig. 2. Comparison of Unit Asset Profit Contribution Rates between Two Projects in Brazil

3.2 Application of indicators based on exponential modeling

Based on the international business operation index system, taking into account the difference in data capacity between stock projects and new projects, as well as the difference between quantitative indicators, index indicators and rating indicators, after screening and normalizing key indicators, and targeted selecting the subjective and objective empowerment method (such as hierarchical analysis method, supervised machine learning algorithm, etc.), ultimately the international business operation index will be formed to provide methodological support for vertical comprehensive comparison of a single project and horizontal and vertical comprehensive comparison of multiple projects.

For example, Table 1 shows the year-on-year index results obtained by filtering and normalizing various indicator data of a central enterprise's international business in 2020 and 2021, using the XGBoost model for weight calculation. In this case, if the index value is greater than 100, it indicates that the current company's asset operation is better than the base period level. The results show that the overall operation and external environment of the business in 2021 are better than those in 2021 (index value > 100), but the internal risk control is slightly insufficient (index value < 100), and more efforts should be made to strengthen the internal risk control.

Table 1. International Business Operation Index of a Central Enterprise

Index	Weight	Value
Operational efficiency Index	0.45	126.44
Operational management Index	0.45	101.28
Internal risk Index	0.1	90.90
Operational index	**-**	**111.56**
External environment Index	-	116.36

3.3 Integration and embedding with digital platforms

With the acceleration of the digital transformation of central enterprises, the indicator system and the horizontal and vertical comparison of key indicators, as well as the application of indicators based on index models, can be organically integrated with the digital platform, and given key functions such as visual display, data comparison and analysis, and abnormal situation warning, to achieve intelligent management of central enterprises' international business operation indicators.

4 Conclusion

Against the background of the complex and changing international environment and the high-quality development of the domestic economy, this paper combines the specific realities of the international business of central enterprises, constructs a systematic and open indicator system covering four major categories of indicators: operational efficiency, operational management, internal risk, external environment, which encompasses commonality and individuality, and the characteristics of the internal and external environments, and provides a powerful support for the central enterprises to accurately grasp the focuses , rapidly respond to the changes, and systematically assess the effectiveness.

Next, central enterprises can combine the framework of the index system and the characteristics of international business, build an index system that conforms to their own characteristics, develop the corresponding index management model, strengthen the application of the index system, and incorporate the results into the digital operation management platform.

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