

# Construction and Research of Economic Management Analysis Model Based on Cost-Benefit Theory

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**ABSTRACT.** *Economic management is a key component of various management of enterprises, which helps to ensure the smooth progress of various production and management activities of enterprises, and plays a key role in the sustainable development of enterprises. In order to clarify the economic influencing factors based on cost-benefit theory, the literature review method and expert survey method are used to summarize the influencing factors of economic management. On this basis, the theoretical model of influencing factors of economic management analysis based on cost-benefit theory is constructed. Assume that the data is collected by issuing questionnaires, and the reliability and validity of the collected data are analyzed by SPSS to verify the reliability of the data. Finally, AMOS is used for empirical research. Research shows that there is a significant impact between financing capabilities, corporate management mechanisms, corporate financial management systems, leadership capabilities, production efficiency, innovation capabilities and corporate economic management.*

**KEYWORDS:** *Cost-benefit theory; economic management; influence factors; structural equation modeling*

## 1. Introduction

The fundamental principle of the cost-benefit analytical method is to put forward some schemes to achieve some specific expenditure target, calculate the cost and benefit of each scheme by using certain technique and select the optimal decision scheme by comparative method and according to specified principle[1].

## 2. The theoretical model of influence factors of the economic management analysis based on the cost-benefit theory

Cost-benefit theory is a method to evaluate project value by comparing the full cost and benefit of the project. As an economic decision-making method, cost-benefit analysis applies cost-expense analysis method to the planning decision of government departments in order to get the maximum benefit with the least cost in

investment decision[2]. Cost-benefit analysis is often used to assess the value of projects of public cause that need the quantification of social benefits. Managers in non-public industries can also adopt this method to analyze the intangible benefits of some large-scale project. Using this method, all the costs and benefits of a project or strategy will be listed and quantified[3].

### **3. Questionnaire design and test**

#### **3.1 Questionnaire contents**

The question items related to variables in this questionnaire are mainly designed by 5-point Likert Scale. The questionnaire consists of three parts. The research model involves six latent variables, each latent variable corresponds to five measured variables, and there are a total of 30 measured variables. The design content of each measured variable comes from the maturity scale in classical Chinese and foreign documents, and the respondents choose 1-5 scale marks to express the consent grade according to the actual degree of their own perception.

#### **3.2 Reliability test and validity test**

Reliability analysis of the collected data is conducted to verify the stability and reliability of the data. The reference standards for reliability analysis are as below: Cronbach's  $\alpha > 0.90$  represents very high reliability of the questionnaire;  $0.80 < \text{Cronbach's } \alpha < 0.90$  represents good reliability of the questionnaire;  $0.70 < \text{Cronbach's } \alpha < 0.80$  represents acceptable and general reliability of the questionnaire;  $0.65 < \text{Cronbach's } \alpha < 0.70$  represents the least acceptable and unsatisfactory reliability of the questionnaire, and that it is necessary to revise anew the scale or delete problem items;  $\text{Cronbach's } \alpha < 0.65$  represents that the questionnaire is valueless and it is suggested to abandon it. SPSS23.0 is used to test the Cronbach's  $\alpha$  reliability coefficient of the sample data in the research questionnaire, and the overall reliability of the questionnaire is 0.936. It can be seen from the reliability analysis that the Cronbach's  $\alpha$  values of financing capacity, enterprise management mechanism, enterprise financial management mechanism, leaders' abilities, production efficiency and innovation capability are respectively 0.891, 0.880, 0.923, 0.923, 0.951, 0.933 and 0.939. It can be concluded from the above data that the questionnaire has good reliability.

After the reliability of the questionnaire meets the requirements, validity analysis of the questionnaire is conducted. The standards for validity analysis are as follows:  $0.5 < \text{KMO} \leq 0.6$  represents inappropriate;  $0.6 < \text{KMO} \leq 0.7$  represents barely appropriate;  $0.7 < \text{KMO} \leq 0.8$  represents appropriate;  $0.8 < \text{KMO} \leq 0.9$  represents fairly appropriate;  $\text{KMO} > 0.9$  represents very appropriate. The overall KMO value of the questionnaire is 0.945, indicating that it is fairly appropriate.

#### **4. Empirical study**

Using AMOS 21.0 software, a structural equation model on the influence relation between financing ability, enterprise management mechanism, enterprise financial management system, leaders' abilities, production efficiency and innovation capability and enterprise economic management is built.

##### ***4.1 Model fitting***

After the theoretical model of influence factors of economic management based on cost-benefit theory, the first step is to analyze the fitting degree of the model. The fitting degree is to test the matching degree between the path relationship of the model hypotheses and the empirical data by comparing the difference between the regenerative covariance matrix and the sample covariance matrix. The common evaluation indexes of fitting degree are divided into absolute indexes and relative indexes.

##### ***4.2 Correction of the model***

Not all the fit indexes of the model meet the requirements, so the model should be corrected, the corresponding residual errors should be added, and re-fitting needs to be done until all the fit indexes meet the standards. The index of correlation is represented by MI (Modification Indices). The closer the correlation between the residual terms is, the greater the MI value will be. MI correction is to connect the residual terms with larger correction coefficients using double sided arrow, so as to enhance the fitting degree of the model. The correction principle is to find out the residual terms of MI value according to the size in turn, and only one correlation path can be corrected each time, as each path is closely related to the verification results, and as long as the path is changed, the results will be affected. According to the correction idea, the first correction is made, that is, deleting the inconspicuous paths. After the correction, NFI is 0.836, and RFI is 0.861, which do not meet the requirements, so the second correction is made. The maximum value of the correction index (MI) is looked for and corresponding residual paths are added. After the second correction, all the data meet the standards.

#### **5. Countermeasures and suggestions**

The innovation capability of the enterprises is poor. Innovation is the soul of enterprises, as well as the key to the smooth transformation of state-owned economy. As far as China's existing enterprises are concerned, their innovation capability is poor on the whole, and the main business of the enterprises has not gotten big development. Besides, those fields with new economic growth have not made substantial breakthroughs, thus no relatively stable core competitiveness has been formed. At the same time, due to the lack of independent innovation

consciousness, the research input of the enterprises is seriously inadequate, or the research and development achievements have not been effectively transformed into productive forces, so the enterprises lack high-valued self-owned brands. Innovation capability is the catalyst for the development of enterprises, so enterprises should attach great importance to it. The economic benefit of enterprises is closely related to the production efficiency, high production efficiency will inevitably exert a positive impact on the economic benefit of enterprises and lead the enterprises to reach one height after another.

## 6. Conclusions

The standardized path coefficients between financing capacity, enterprise management mechanism, enterprise financial management system, leaders' abilities, production efficiency and innovation ability and enterprise economic management based on cost-benefit theory are respectively 0.837, 0.890, 0.815, 0.881, 0.861 and 0.850, and the influence is significant.

The research shows that financing capacity, enterprise management mechanism, enterprise financial management system, leaders' abilities, production efficiency and innovation ability exert a positive impact on enterprise economic management based on cost-benefit theory. Therefore, in terms of economic management, enterprises should improve their internal financing ability, strengthen the enterprise management mechanism, perfect the enterprise financial management system and improve the management ability of leaders and the working competence of staff, who are the main creators of enterprise economic benefits. Furthermore, enterprises should enhance their production efficiency, always maintain a leading state, keep to innovative ideas and capabilities, arm themselves with innovative ideas and capabilities, face the difficulties, and create one glorious tomorrow after another.

## References

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