

Research on Change Engine Model of Enterprise Management Innovation Ability Evaluation

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Abstract: Technological innovation is the basis for enterprises to achieve sustainable development. The government and enterprises pay more and more attention to the research of technological innovation. Correct analysis and evaluation of enterprise's technological innovation capability is of great practical significance for promoting enterprise's technological innovation and enhancing enterprise's competitive advantage. This topic adjusts the work of enterprise innovation management from the perspective of market demand, and puts forward a new engine model of organizational management innovation capability evaluation according to the market innovation demand. In the engine model, the enterprise evaluation model can discover the limitation of enterprise management innovation capability in time. Using mathematical statistics and analytic hierarchy process, the mathematical model and index system for evaluating the technological innovation capability of enterprises are established. The evaluation index system of enterprise's technological innovation capability is constructed, and the fuzzy comprehensive evaluation model is used to evaluate the enterprise's technological innovation capability comprehensively.

1. Introduction

With the rapid development of science and technology, innovation consciousness and innovation ability are increasingly becoming the most important determinants of a country's international competitiveness and international status [1]. At the same time, we will systematically adjust the corporate culture structure, management methods, organizational structure, business strategy and business philosophy. This is often the case in real economic life. Under the same macroeconomic environment, enterprises with the same or similar conditions have very different technological innovation effects [2]. An important reason for this difference is that different enterprises have different technological innovation capabilities. Therefore, the construction of enterprise technology centers has always lacked effective judgment basis for improving the level of technological innovation capability of enterprises [3]. The improvement of risk resilience requires enterprises to have innovative capabilities and be able to adapt to complex market environments. Entrepreneurs have become more and more deeply aware that seeking development with innovation is the only way for today's enterprise development. Strengthening the innovation capability of enterprises is of great significance for improving the status of Chinese enterprises in international competition and the world.

2. The Change of Enterprise Management Innovation Ability

Many people believe that the main content of technological innovation capability of enterprises includes the application and development capability of enterprises involving resources. The full use of internal resources ensures that enterprise resources are not wasted [4]. Enterprise innovation refers to the process in which entrepreneurs, relying on advanced engineering technology and management technology, recombine production factors, establish a new production and management system, and then obtain economic benefits. Enterprise's technological innovation ability is to discuss the concept of enterprise's technological innovation ability from two aspects of product innovation ability and technological innovation ability [5]. It is under certain conditions, using certain scientific methods, according to a set of indicators that can characterize various

aspects of enterprise technological innovation capability. Taking the power engine model and the test model as the focus of research, the enterprise management innovation ability is evaluated. Through the dynamic comprehensive evaluation of the innovation ability of enterprises, the overall development trend of the innovation ability of enterprises in different time periods can be analyzed. Innovations in corporate culture, business strategy, and future direction of the company cannot be separated from reality. Under the full investigation of market trends and future demand trends, we will comprehensively construct innovations in enterprise management concepts that meet market needs [6]. This has important theoretical and practical significance for enterprises to successfully carry out technological innovation, establish and maintain competitive advantages, and obtain the best economic benefits.

3. Establishment of Change Engine Model for Evaluation of Innovation Capability

3.1 Model research design

The core competitiveness of an enterprise is undoubtedly its ability to innovate in management. However, a comprehensive and feasible evaluation system is needed for enterprise management innovation capability [7]. The purpose of designing the evaluation index system of enterprise's innovation ability is to reflect the level of enterprise's innovation ability, how to strengthen enterprise's innovation ability and the direction of future efforts, find out the weak links of innovation ability, and propose the means and methods to improve and strengthen it. The process of comprehensively evaluating an enterprise's technological innovation capability system so as to determine the enterprise's technological innovation capability. Using analytic hierarchy process, the evaluation index system of enterprise technological innovation can be constructed. Induce and supervise employees' behaviors. At the same time, it will supplement and play the role of corporate culture in places that cannot be touched by levels and institutions. The engine model uses the two models of inspection and power engine to construct a scientific and feasible assessment of enterprise management innovation capabilities. It consists of two aspects, the external environment of the enterprise and the internal mechanism, which combines the various systems of the enterprise. The system is the ethical behavior norms, ethics and service procedures, rules and so on. The influence weight is a kind of weight that is measured according to this and measures the mutual influence of each indicator. It reflects the relative importance of each indicator in the comprehensive evaluation from another aspect. It can be seen that the engine model design has a comprehensive analysis of the enterprise management innovation ability. It is more convenient for each level of evaluation data to be true and orderly, and the evaluation indicators are also fair and equitable.

3.2 Establishment of change engine model

The concept of the change engine model mainly depends on the enterprise application technology, enterprise management mechanism and the comprehensive practice of corporate culture [8]. In order to verify the validity and comprehensiveness of the indicators, through the search for relevant literature, and extensively draw the opinions of experts and scholars, face-to-face interviews are used to communicate with some enterprise management personnel (Table 1 below is the evaluation index system for enterprise management innovation capability). In order to achieve the unity of the evaluation of the evaluation indicators, so that the evaluation results are true and effective, the subjective and objective weights need to be effectively integrated. Construct a transformation engine model for enterprise innovation management capability assessment, lay a continuous innovation in the future management capability of the enterprise, constitute a complete internal and external working mechanism, and form a sound management system that matches enterprise management and enterprise system. The subjective and objective weighting method is used to calculate the weight coefficient of each index, and the static evaluation result of enterprise innovation capability can be obtained through weighting. To evaluate the enterprise management innovation ability. At the same time, the evaluation indexes are summarized, and then the

management innovation ability of the enterprise is evaluated. As a tool, the evaluation system, on the one hand, the government can objectively grasp the technological innovation capability of enterprises and the dynamics of technological innovation system construction, so as to make policy responses. Therefore, the evaluation index system of enterprise management innovation capability plays an important role in employee behavior and attitude. The construction of the change engine model greatly promotes the innovation and progress of enterprise management capability.

Table 1 Enterprise management innovation capability evaluation index system

First-level indicators	Secondary index	Indicator description
Institutional mechanism	supervisery mechanism	Reflect the humanization, openness and fairness of management innovation
	Training mechanism	Including management ability, job promotion, organizational culture and job training
Scientific management method	Enterprise profitability	Enterprise's ability to use and manage funds
	Staff quality	It is the direct embodiment of enterprise management innovation ability
Company culture	Enterprise learning atmosphere	Including the enthusiasm and enthusiasm of employee learning and corporate training courses
	Corporate responsibility	It is the company's attitude towards internal employees, the integration of customers and behaviors and attitudes toward society.

This paper uses statistical software to analyze the data and derive the coefficients of corporate culture, scientific management methods and mechanism. The results are shown in Table 2 below. The results show that the company has a high internal consistency reliability.

Table 2 Reliability analysis

First-level indicators	Secondary index	Mean value	Standard deviation
Institutional mechanism	supervisery mechanism	2.33	0.23
	Training mechanism	1.24	0.19
Scientific management method	Enterprise profitability	3.38	0.44
	Staff quality	3.18	0.37
Company culture	Enterprise learning atmosphere	4.24	0.18
	Corporate responsibility	4.11	0.52

The validity test mainly refers to the accuracy of the measurement of the required things by the validity, including three types: structural validity, criterion validity and content validity. In this paper, principal component analysis and factor analysis are used to test the validity. SPSS17.0 is used for statistical analysis to make statistics on the original data. The survey results show that the measuring enterprise's innovation ability can meet the requirements of validity construction, as shown in Table 3.

Table 3 Evaluation index factor load

Secondary index	Factor 1	Factor 2
supervisory mechanism	0.64	0.88
Training mechanism	0.85	0.75
Enterprise profitability	0.73	0.68
Staff quality	0.6	0.98
Enterprise learning atmosphere	0.83	0.65

4. Analysis on the practice of change engine model

After the reform engine model of enterprise management innovation capability is initially put forward and the basic framework is constructed, it cannot be applied to enterprise management immediately, and the reform engine model needs to be repeatedly practiced and tested. Scientific research institutes and universities are committed to technological innovation research. Enterprises are committed to pushing technological innovation to the market and feeding back the market demand to scientific research institutes and universities to form a virtuous circle system of technological innovation and strengthen the cooperation between industry, university and research institute. Reflect the enterprise's ability to understand and grasp the customer's needs, and effectively transmit high customer concession value, thus enabling the enterprise to obtain higher economic benefits and finally realize the value of enterprise innovation. In addition, a large number of questionnaires were conducted to analyze the data and the proportion of indicators of the engine model, and to screen out the indicators that are not up to the requirements. Finally, a scientific index system of enterprise management innovation ability was formed. On the other hand, enterprises can analyze their own problems and promote the construction of technology centers, thus promoting the further improvement of technological innovation capabilities of enterprises.

5. Conclusions

Through the construction of evaluation index system, this paper can guide enterprises how to improve management innovation ability. The construction of pyramid-type management innovation system is a core driving force, which can promote the innovation and change of enterprises. The initial establishment and repeated practice of the change engine model show that corporate culture is an important indicator of enterprise management innovation and change. Enterprise culture is an important factor in the reform of enterprise mechanism and organizational concept. The core of enterprise reform is the reform of enterprise system and system. Enterprise culture is the motive force of enterprise management change, and the basis of change is the enterprise's system and mechanism. An enterprise must have scientific and perfect management methods, and must have perfect system and mechanism to support, so as to form a good enterprise innovation culture. Through the evaluation index system and specific evaluation model of enterprise innovation ability constructed in this paper, the level of enterprise innovation ability can be clearly understood, thus providing strong support for enterprise leaders to make scientific decisions to enhance the innovation ability of the enterprise and providing useful reference for government departments to formulate relevant policies.

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