## The Research on the Changes of Chinese Enterprises' Innovation Factors under the Background of Industrial Convergence

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**Abstract:** Since entering the era of information development, a large number of high-tech information exchange technologies have been widely used in various industries. While promoting the economic construction and development of various industries, it has also promoted the establishment of effective information sharing resource platforms between different industries. The development of different industries has been gradually integrated through continuous exchanges and coordination, making the integration and development of industries a process of future social and economic development. In the mainstream, At the same time, with China's proposal on the "Internet +" concept, it has promoted the trend of industrial integration in various industries. Therefore, in order to adapt to the current market economic development pattern, promote the construction of enterprise Internet informatization, and enable enterprise innovation to grasp the existing opportunity to realize the growth of economic benefits of enterprises is a major issue on the road of future enterprise development.

#### 1. Introduction

With the industrial integration of China's economic development, the domestic market's economic system has become more mature and complete. In such a fierce market competition environment, companies must actively implement the innovative spirit of economic management in order to gain a firm foothold in the fierce market competition and have the opportunity to flourish and grow. The economic management of an enterprise should not only be reflected in the internal management control and development of the enterprise, but also the production management, human resource management, and economic management innovation of the enterprise [1]. When companies are blindly thinking about making profits and not thinking that they also need to solve various problems encountered in the fierce market competition, they are destined to be eliminated. Today, with the rapid development of knowledge and technology, it is necessary to implement comprehensive corporate economic management. Enterprises want to grow and develop, and they cannot stand still. All aspects of implementation can keep the company from being eliminated by the market. Recognizing the huge role that market economy management plays in an enterprise, we can only attach importance to innovation in enterprise economic management and develop in the long run. At the same time of economic management innovation, it must also bear corresponding social responsibilities. This is the leader of the development of Chinese enterprises under industrial integration [1].

#### 2. The Connotation of Industrial Integration

Benner M J, Ranganathan R, and others believe that industrial convergence can be defined as the process of blurring the boundaries between two or more different industries by combining their scientific knowledge, technology and markets. The word "fusion" was first proposed and used by Rosenberg N in 1963. He described the changes in the machine tool industry at that time as "technical convergence"-describing the processes taken at different stages of unrelated industrial sectors and tool production. Y. C. Yan and others explained that there are four stages from integration to industrial integration <sup>[2]</sup>: 1) Knowledge fusion; 2) Technology fusion; 3) Application fusion; 4)

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Industry fusion. Among them, technological integration is considered to be the main driving force for economic development.

In the past few decades, a series of factors such as globalization, deregulation, coordinated development, and increasingly rapid technological change have fundamentally changed the structure of more and more industries, making traditional strategic management methods difficult to apply or even become It doesn't matter. In the mid-to-late 20th century, Bettis RA and Hitt MA believed that an important aspect of this changing competitive landscape is the blurring of industrial boundaries and the redefinition of industrial boundaries. In this context, the concept of industrial integration can be defined as two or the convergence of several independent industries to date has attracted increasing interest from management researchers [2].

## 3. Analysis of Problems and Countermeasures in Chinese Enterprise Innovation

At the current stage, most Chinese enterprises have problems with incomplete or chaotic management systems. Under the industrial integration of the global economic integration, many advanced modern management systems are gradually spreading in the country. Some companies seize the opportunity to transform and upgrade, so they have achieved qualitative change <sup>[3]</sup>. However, most domestic companies have incomplete economic management systems the problem has not been completely solved. Due to the cost of controlling economic management of the enterprise, the old management system and ideas are still used, and the problem has not been effectively changed. Some enterprises are at the forefront of economic management innovation, while some enterprises have implemented economic management innovation systems, but actually have not established a relatively complete economic management system, which has led to the details of business economic management <sup>[3]</sup>. Therefore, in the new economic situation, China's economic management innovation needs to be taken seriously, relying on a rigorous and scientific management system to protect the development of enterprises.

## 3.1 Fierce Market Competition for Enterprises under Industrial Integration

If an enterprise wants to quickly gain a foothold in such a market economy, it will need an enterprise to improve its internal management organization. Especially when the economic manager of an enterprise has obtained the innovative awareness of economic management, the internal management system of the enterprise can be continuously mature and complete [4]. When the enterprise is building an internal organization, it is also necessary for the enterprise to improve the employees' awareness of economic management innovation. Cognitive ability, keep in mind that only the sense of innovation can bring a significant role to the development of corporate economic management, so that economic management innovation runs through the entire development process of the enterprise. In addition, enterprises should also focus on cultivating financial staff and improve the overall quality of the company's economic development level, so as to ensure that they can be familiar with and master the entire process of economic management innovation [4]. Enterprises must also start to formulate economic management-related systems to further manage economic management Innovation comes to fruition. Establish an independent economic management department and clarify the powers and responsibilities of each post, so that the economic management work forms a complete system, and improve the efficiency of each department of the enterprise.

#### 3.2 Underdeveloped Human Resources Management of Enterprises

Human resource management can bring a steady stream of human resources to the transformation and development of the enterprise, thereby ensuring the implementation of various tasks of the enterprise. However, there are also many problems revealed, such as low employee enthusiasm, large staff turnover, and imperfect positions. These are issues that require corporate managers to focus on, and they need to be managed to promote innovation in economic management of enterprises. Those who pay attention to human resources management work, respect and affirm employees' contribution to the development of the company, and develop with them <sup>[5]</sup>.

# 3.3 Existing Conditions Need to Be Further Optimized for Economic Management Innovation of Enterprises

Strengthen the grasp of the development direction of enterprise economic management, because economic management innovation is directly related to the overall competitiveness of enterprises and overall economic benefits, which has a huge effect on the development of enterprises. In today's Chinese society, the scientific and economic development is becoming more and more mature, and the economic competition between various countries in the world has begun to gradually shift to the field of knowledge and technology. This is also the trend of social development today. Therefore, if business managers are not effective the innovation of the company's own economic management must lag behind other companies, make the company lose competitiveness, and even be eliminated by the fierce market economic environment. Under the influence of economic globalization in the new era, the economic construction of all countries in the world is closely related <sup>[5]</sup>. This has brought about huge competitive pressures and also brought many opportunities and challenges to enterprises in each country. In addition, if an enterprise wants to gain a firm footing in the fierce market economy, it must have a deep understanding of its own economic development.

# 4. The Influence Mechanism of Industrial Integration on the Innovation Efficiency of Enterprises

There are two main types of impact mechanisms of industrial convergence on industrial innovation efficiency: basic impact mechanisms and heterogeneous impact mechanisms, which are discussed below.

#### 4.1 Basic Influence Mechanism

The basic influence mechanism of the integration of industry and information industry on the efficiency of industrial innovation is mainly manifested in the dimensions of technology integration, knowledge transfer and risk control.

First, technology integration. Inter-industry integration occurs first in the technical field. The diffusion and application of information technology innovation in traditional industries has caused spillover effects, which stimulated the occurrence of innovation activities within the industry. Information technology has high permeability and integration. As a leading technology, it is integrated into the industrial production value chain to realize design information and product information. With the help of network and computer, through product data model, the use of computer-aided design (CAD), computer-aided engineering analysis (CAE) and other digital tools to achieve rapid simulation of product design, performance testing and optimization analysis, thereby improving enterprise products R & D design efficiency. The application of information technology increases the information proportion of products and reduces the proportion of substances. By embedding intelligent components, products have more information processing capabilities and increase the added value of products [6].

Second, knowledge transfer. The internal organization of traditional manufacturing enterprises has clear vertical layers and strict systems. This organizational structure is conducive to improving the management efficiency of enterprises under the original industrial technology environment, but it is not conducive to exploring new products, new business models and opening new markets. With the continuous innovation and penetration of information technology, the in-industry informatization application has deepened from decentralized production local applications to a new stage of organizational network integration <sup>[6]</sup>. The internal organizational structure of the company has changed from a traditional hierarchical management structure to a flat and open structure.

Third, risk control. The success of industrial innovation activities is often affected by multiple factors such as technological level, market changes, policy orientation, and management capabilities. The instability of constraints determines that innovation is a high-risk, long-term process <sup>[5]</sup>. The integration of industry and information industry provides effective means for enterprises to control innovation risks.

#### 4.2 Heterogeneity Impact Mechanism

The operational practice of any change strategy is unstable, and not all regional industries can achieve deep integration and continue to benefit from it. Due to the gradual development characteristics of China's industrial regions and the uneven construction of information infrastructure, significant regional heterogeneity exists in the stage of industrial integration and development. On the one hand, compared with developed regions with high industrial development quality, underdeveloped regions dominated by traditional resource-intensive and labor-intensive industries have extensive production methods, low levels of production organization technology, and insufficient product innovation awareness [4]. This relatively rigid technological condition and business model is less dependent on highly specialized information technology services, and there is insufficient pull for industrial integration. On the other hand, the development of the information industry in less-developed areas is constrained by a shortage of funds, talents, and technology, and the level and technical content of the information industry is low.

#### 5. Changes in Corporate Innovation Factors under Industrial Integration

#### 5.1 Transform from Linear Innovation to Network Innovation

Schumpeter (1934) first proposed the concept of "linear innovation", and subsequent scholars began to think that innovation was carried out according to a single path of research and development, production, and sales. Until Morieux et al. proposed that the key to the success of technological innovation was to rely on the cooperation between technology and the market, people gradually believed in the close relationship between innovation and cooperation <sup>[7]</sup>.

#### 5.2 Transformation from Discrete Innovation to Integrated Innovation

At first, innovation activities were discrete, which not only reflected the independence of innovation activities, but also showed that innovation activities were completed within a single organization, and there was insufficient communication and cooperation between the subjects. However, as the complexity of modern technology continues to increase, the integrity and interconnectedness of innovation elements become more important. L.F. Zhang enriched the concept of integrated innovation [7]. They believed that integrated innovation is the integration of the elements of innovation, the object, and the environment, to achieve common innovation in a systematic form.

#### 5.3 Transformation from Closed Innovation to Open Innovation

Traditional technological innovation is closed. Through the use and integration of internal resources, innovation activities can be launched. In the 1990s, open innovation replaced closed innovation. Chesbrough (2009) elaborated the concept of "open innovation", that is, under the premise that the innovation system is open, technological innovation bids farewell to the simple and linear form of the past, and is replaced by a more complex and diversified feedback. [8] Mechanism, which is a combination of science, technology, production, and demand.

#### 5.4 Motive Change of Innovation Paradigm

In this new era, the relationship between the subject of innovation and the environment of innovation has naturally produced new changes, and technological and economic innovation is the prerequisite and source of strength for the formation of an innovation ecosystem. Against the background of the rapid development of technology and information, technological innovation and the distribution and spread of knowledge have made a single entity's mastery of knowledge, technology, and resources increasingly scarce <sup>[8]</sup>. Therefore, it is only possible to mobilize external forces by seeking a close connection between industry, academia and government to supplement the energy pool to address opportunities and challenges.

### 6. Summary

Under the industrial integration of China's economic development, enterprises should be clear and develop in the direction of economic management innovation in order to allow themselves to advance aggressively, to become sublimated under the fierce market competition. In order to construct a sound economic management system and formulate an optimization strategy, a comprehensive analysis and targeted solution of potential problems in the current economic management of enterprises. It is necessary to grasp important issues and ensure that work can progress smoothly. All in all, for the innovative development of Chinese enterprises' economy, it is necessary to comprehensively understand the state's economic regulation and policies in various regions, combine the company's own development and national policies, set appropriate economic development goals, and rely on scientific guidance to appropriately adjust.

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