

Study on Immunization Strategy for Supply Chain Quality Risk of Specializing and Special New Enterprises

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Abstract: As China's economic development approaches to integration, the competition between enterprises is gradually replaced by the competition between supply chains. As an enterprise vigorously guided and promoted by the state, specialized and special new enterprises are an important force to promote economic development. The complex relationship between specialized and special new enterprises has led to complex supply chain quality risks, which makes more uncertain risk factors than traditional economic industries, and the possibility of supply chain quality risks becomes greater ----- supply chain risks are diverse, and quality risk is a common concern, By analyzing the spread of supply chain quality risk and risk factors, combining with biological immune mechanism. This paper applies it to enterprise management, and puts forward immune strategies to deal with the spread of supply chain quality risk. The immune strategy of supply chain quality risk studied in this paper is of great significance to the healthy development of specialized and special new enterprises.

1. Introduction

At present, China is vigorously promoting the development of specialized, special and new enterprises. Specialized, special and new enterprises have become an important industry in China to promote employment, promote enterprise innovation and drive enterprise economic development. Even in many regions, there is a trend to become a leading industry, but the development of specialized and specialized new enterprises is still facing huge challenges. This paper studies the supply chain quality risk immunization strategy of specialized and specialized new enterprises based on the immunization theory by widely referring to the research of supply chain quality risk at home and abroad and relevant immunization practices, Put forward countermeasures to improve the supply chain quality of China's specialized and special new enterprises^[1]. This paper summarizes the current situation of enterprise supply chain development, analyzes the impact of quality risk factors on enterprises, and combines the biological immune mechanism to provide theoretical basis for enterprises to deal with supply chain quality risk.

2. Development Status of Supply Chain of Specialized and Special New Enterprises

In recent years, under the high attention of the state, the development of China's "specialized and innovative" enterprises has achieved good results. Taking a representative province as an example, Guangdong Province has been aiming at "building global technological industry innovation and influence" in recent years^[2]. With the continuous growth of specialized, specialized and new enterprises, they are facing the improvement and implementation of national strategies, the rapid development of digital economy reform and the endless emergence of new consumption patterns, which inject continuous vitality into the development of specialized, specialized and new enterprises, and also bring huge challenges to the development of enterprises. Customers' requirements for enterprise products or services are also increasing. When enterprises are in this competitive environment, The supply chain is vulnerable to various quality risks^[3].

3. Supply Chain Quality Risk Analysis of Specialized and Special New Enterprises

3.1 Connotation of Supply Chain Quality Risk

At present, researchers have divided the definition of supply chain quality risk into the following categories: first, from the perspective of enterprise objectives, it emphasizes the quality risk of products produced by enterprises; Second, from the perspective of supply chain, enterprises emphasize the risk transmission between enterprises, the stability risk of enterprise structure and the risk of enterprise function quality; Third, from the perspective of consumers, it emphasizes the safety and quality risks of products produced by enterprises. In the supply chain environment, the quality assurance and maintenance of the products of specialized and special new enterprises is more difficult than the quality assurance and maintenance of the individual products of other enterprises. In the supply chain, there are differences in the quality management between various entities, which also means that there are quality risks in the supply chain^[4]. The supply chain quality risk of specialized and special new enterprises can also be seen as the quality risk facing consumers and partners. Quality does not only mean that the products are qualified, but also refers to the degree of demand and demand to a greater extent for specialized and special new enterprises^[5]. Product quality includes product design, raw material procurement, product production, product sales and other related contents in the supply chain process. The quality risk of supply chain products is the sum of quality risks around these contents.

3.2 Formation Mechanism of Supply Chain Quality Risk

The member enterprises in the supply chain are generally composed of raw material suppliers, product manufacturers, product sellers, and logistics carriers. The process of logistics and transportation from raw materials to products reflects the transfer of logistics, information flow and capital, as well as the transfer and accumulation of product quality^[6]. There are quality risk problems at all nodes of the supply chain, such as the quality risk of raw materials supplied, the quality risk caused by product manufacturing, the quality risk caused by product sales, etc. The sum of all possible quality risks in the supply chain constitutes the supply chain quality risk. At present, the research on the causes of supply chain quality risk tends to be diversified.

3.3 Analysis of supply Chain Quality Risk Factors of Specialized and Special New Enterprises

In recent years, the vigorous development of specialized and specialized new enterprises has also revealed more and more problems in the supply chain risk. As long as the supply chain quality risk

event occurs, its harm radiation area is large, and associated enterprises will be greatly affected, and will also have a certain impact on the current economy. The causes of supply chain quality risk come from all aspects. Domestic research found that most scholars believe that the risk of supply chain quality is to affect the quality of products and then the quality of supply chain through various uncertain factors^[7]. Another part of scholars believe that there are some behavioral motivations that may easily cause quality problems in supply quantity quality management, such as moral corruption and spreading false information to smear other enterprises. From different research perspectives, scholars have different methods to deal with problems.

4. Immune Response to Supply Chain Quality Risk of Specialized and Special New Enterprises

The goal of supply chain quality risk immunization activities is to enable enterprises to produce qualified products and generate certain economic benefits for enterprises. In this process, the factors that lead to unqualified products are the elements of supply chain quality risk management, and also the primary issue of immune response. In the supply chain, the essence of quality risk management is to find and eliminate the sources of variation under the supply chain, which is the "immune response" in immunology^[8]. In organisms, the main operating way of the immune system is the immune response. The immune effect is reflected through the immune process. According to the biological immune response, it can be divided into two types: innate immune response and acquired immune response^[9].

4.1 Inherent Immune Response

In biology, innate immunity is also called non-specific immunity. It is acquired through the inheritance of the previous generation. It can react quickly to the invading pathogen or its own antigen foreign body, thus generating a response immune activity. In the system of specializing in the supply chain of special new enterprises, the inherent immunity has been determined before the enterprise carries out the supply chain activities, which is determined by the enterprise's rules and regulations, the current national laws and the inherent norms of the industry. Therefore, no matter which supply chain the enterprise is in and which enterprises are involved in the supply chain, the inherent culture of the enterprise will not be easily changed^[10]. Under the operation system of the supply chain, enterprises can identify and eliminate the hazard sources that may cause product quality in the event according to their unique corporate culture when targeting specific events. The specific immune response process can be divided into: contact-identification-effect, that is, the relevant quality personnel of the enterprise summarize and sort out the target events by contacting the target events, evaluate the target events according to the enterprise's own culture, and eliminate the hazards that do not conform to the enterprise's culture.

4.2 Acquired Immune Response

Similarly, in biology, acquired immunity is also called specific immunity. The defensive behavior of organisms that only work against specific pathogens due to the stimulation of pathogens. Under the operation system of the supply chain, the quality management of enterprises will inevitably be threatened by the internal and external sources of variation. When enterprises deal with these sources of variation, some of them are contrary to the inherent culture of the enterprise, and are eliminated through innate immunity, while the other part is difficult to identify under the current development of the enterprise, which has certain particularity, and the innate immunity is often ineffective. Therefore, enterprises need to formulate relevant strategies according to the

characteristics of the source of variation, so as to effectively identify and eliminate the source of variation, and analyze and summarize the experience gained in this process, so that when the source of variation reappears, enterprises can quickly identify and eliminate it. The specific immune response process can be divided into: contact - recognition - effect - memory and learning - feedback, That is, the relevant quality personnel of the enterprise classify the target event according to the enterprise culture after contacting it, and judge it according to the existing standards of the enterprise. If the target event is not involved in the relevant regulations of the enterprise, the relevant management personnel will try to deal with it. This stage is also called the initial immune response process^[11].

5. Immunization Strategy Analysis of Supply Chain Quality Risk of Specialized and Special New Enterprises

Both innate immune response and adaptive immune response have certain defects. There may be no response and excessive response in the immune response. The former can be understood as the immune system is indifferent to the abnormal situation of the enterprise, and the latter can be understood as the immune system makes a fuss about the abnormal situation of the enterprise. Only the response process between these two situations is called effective immune response process, Improving the effective immune response of enterprises is an effective measure for enterprises to manage the supply quantity and quality risk^[12]. There are many ways to guarantee the quality of enterprises' supply chain. According to the actual situation of enterprises and different priorities, there are also many differences in taking corresponding measures^[13].

According to the current development situation of specialized and special new enterprises, the following ways to improve the immune response ability of enterprises are proposed: the basis for improving the leadership ability of senior managers and the business ability of employees; The unremitting persistence of all employees of the enterprise is the guarantee for the continuation of the enterprise culture, and the experience gained will continue to improve the scope of the inherent immune response; Timely exchange of experience on supply chain quality management by all departments of the enterprise is conducive to the innovation of technology and culture, as well as the cultivation of enterprise quality management awareness; Enterprises have certain requirements for products in all processes, so they need to constantly improve the quality standards at all stages and deal with products that do not meet the standards; While ensuring the control of each node, strengthen the reasonable planning of the production activities of the supply chain line to avoid duplication of operations; Establish an effective performance appraisal standard, urge employees who make frequent mistakes in their work according to the standard, and reward employees who perform well in their work; Ensure the smooth internal information exchange of the enterprise, avoid the lack of information in the process of transmission leading to the improvement of the quality risk of the enterprise supply chain, and the reduction of information transmission time is conducive to the improvement of the operational accuracy of each post; The transmission of enterprise supply chain quality information plays a decisive role in the time of immune response, and the accuracy of information transmission can also provide reliable support for the decision-making in the process of immune response, thus ensuring the quality of immune response activities.

6. Conclusion

The theory of biological immunity provides a certain reference for the management of supply chain quality risk. The unique immune system of the human body is an important hub for resisting the invasion of viruses from itself and from outside. Similarly, quality risk management also enables

enterprises to effectively deal with the interference of internal and external dangerous events. In the market environment of enterprise operation, the risks that enterprises need to deal with come from all aspects. During the operation of the supply chain, the stability of the supply chain is borne by the core enterprise, which affects and determines the development of the supply chain, thus guiding and standardizing the behavior of other enterprises related to the corresponding supply chain. Problems in any link of the enterprise's production and operation will directly affect the operation of the entire supply chain, and will cause certain economic harm to the enterprises in the supply chain, and even cause the collapse of the supply chain. Appropriate immune response strategies can effectively reduce the risk of quality risk transmission in the enterprise supply chain. Therefore, future research can focus on the construction of immune strategies for the spread of quality risk in enterprise supply chain.

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