

Research on Intelligent Asset Evaluation of Modularization of International Logistics Enterprises

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ABSTRACT. *This paper studies the significance of asset evaluation in the process of modularization of international logistics enterprises. This paper puts forward the definition method of the assets of the related enterprises in the modular process, and puts forward some suggestions from the point of view of intangible assets and enterprise value. Accordingly, the application of intelligent asset evaluation is explored. The possibility of artificial intelligence and big data's application is put forward. The fuzzy mathematics and grey theory are integrated into the discussion. Finally, this paper also puts forward the problem of matching for the cross-application and research of various theories, and points out the significance and difficulty of the research on the matching.*

KEYWORDS: *International enterprises; Modularization; Artificial intelligence; Asset evaluation*

1. Introduction

The development trend of international logistics enterprises is modularization. Small and medium-sized enterprises are moving towards joint operation. Whether towards integration or horizontal integration, it is necessary to optimize the enterprise itself, that is, the modularization of the enterprise itself. The modularization of the enterprise itself requires external rules and coordination. Modular rules and coordination mechanisms are often dynamic, but this dynamic change is convergent. That is, a single enterprise tends to be stable in the process of modularization. The author believes that the nature of convergence and the stable state are the premise of asset evaluation. In theory, the process of enterprise modularization follows the theory of supply chain management. However, the initial stage of supply chain construction is often organized by enterprises spontaneously, with the characteristics of disorder. Especially in the field of emerging industries. The process of modularization and the construction of supply chain are carried out at the same time. Modular dynamic mechanism often affects the construction mechanism of supply chain. The dynamic mechanism of modularization is that enterprises will increase the value of assets in the process of modularization, not just

the efficiency at the business level. The problem of enterprise value is involved here. The best way to solve the problem of measuring enterprise value is asset evaluation. This paper is to study the asset evaluation of the current enterprise modularization process, which is also the innovation of this paper.

2. Research on the Definition of Assets in Modularization of International Enterprises

In the process of modularization, international logistics enterprises will involve the cooperation and competition of Chinese and foreign enterprises. This will give rise to the application and conflict of international rules in asset evaluation. Different countries have different understandings of assets, especially the intangible assets or intellectual property rights of enterprises. There are also great differences in the legal system. The assets of an enterprise can generally be divided into tangible assets and intangible assets. There is a great difference in the evaluation methods between the two kinds of assets. And for supply chain partners, the right attribute of tangible assets is clear. For intangible assets, the cooperation between enterprises has radiation correlation and joint and several functions. As the ancient Chinese proverb says, “those who are near ink are black, and those who are near red are red.” Cooperation with good enterprises can not only improve the efficiency at the business level, but also bring good results to the reputation of enterprises. The example of cooperation with high-quality enterprises can be used as an important part of enterprise publicity. Especially with the good reputation of large enterprises, but also has a high-level market recognition effect. This kind of goodwill is an intangible asset of an enterprise. However, the understanding of this kind of goodwill is different from country to country. Moreover, people from all walks of life have great differences in the level of understanding of the quantitative methods and technologies of goodwill.

There are no strict asset appraisal laws in China, only similar regulations. China's legislation on asset evaluation has not yet been completed. The integrity and compatibility of the relevant laws are not good enough. Many enterprises do not have more understanding of the goodwill effect of commodity origin, and many enterprises do not attach importance to it. In the process of modularization, enterprises form a node in the supply chain. Many nodes in the supply chain form the common penetration effect of intangible assets. This involves the intangible asset management of supply chain, which is the current research blank. Based on the asset evaluation of supply chain, the modularization of enterprises can get the new value of intangible assets. That is, while the enterprise adapts to supply chain management, the intangible assets of the enterprise have changed, or increased or decreased. This has caused the change of enterprise value. At this time, the intangible assets of the enterprise can be divided into intangible assets before modularization and intangible assets exposed to radiation. Intangible assets exposed to radiation may be positive or negative. If it is positive, the goodwill of the enterprise is strengthened; if it is negative, the goodwill of the enterprise is lost. In addition, in the supply chain cooperation, the loss of intellectual property rights is often potential. Trade secrets

and technology are known to supply chain enterprises, which will bring potential threats and risks to enterprises. After some enterprises join the supply chain, the management level and management concept are improved, which will also bring benefits to the enterprise. For example, after some enterprises participate in the international logistics supply chain, in order to connect with the foreign supply chain management system, they begin to improve the management connotation to adapt to the foreign laws and regulations and market rules, for the quality management system, environmental responsibility standards, social responsibility standards have been better used, which directly enhance the competitiveness of enterprises.

3. Research on Intelligent Asset Evaluation of Modularization in International Enterprises

At present, the evaluation of intangible assets needs a lot of data to support. There are three basic methods of asset evaluation: market method, cost method and income method. At present, enterprises tend to use the income method to evaluate intangible assets. The income method needs a lot of data as the basis. Big data and artificial intelligence provide new support for the evaluation of intangible assets.

The node enterprises in the supply chain will pay attention to the management of intangible assets in the future. The management of intangible assets between node enterprises has the relationship of competition and cooperation in interests. There are static game and dynamic game, which can be divided into complete information game and incomplete information game. According to the cooperation degree of intangible assets management inside and outside the supply chain, it can be divided into non-cooperative game of intangible assets and cooperative game of intangible assets. These game methods about intangible assets can be supported by good mathematical models. These mathematical models can be used by artificial intelligence. Artificial neural network and fuzzy mathematics have good computer adaptability. Grey system theory has good predictability for intangible assets with high degree of incomplete information. Big data, on the other hand, has a good predictive effect on intangible assets with high degree of information.

The application of artificial intelligence in the intangible assets of modular enterprises can have a good prospect. Artificial intelligence can automatically search the intangible asset value of other modules and evaluate qualitatively and quantitatively. Such an evaluation report can be used as a basis for enterprises to make decisions. At present, artificial intelligence and big data technology are still in the process of rapid development, although there is a certain commercial value, but for modular intangible assets evaluation can not be well adapted. On the one hand, it is the perfection of intelligent technology, on the other hand, the theory and practice of modular asset evaluation still need to be developed. Therefore, the author believes that the content of this study has a forward-looking significance and fills in the research gap.

4. The Matching Problem of Asset Evaluation Theory of International Enterprise Modularization

The theory of asset appraisal is complex and diverse, and the relevant laws and practices of each country are quite different. This brings basic difficulties to the research. All kinds of big data technology and artificial intelligence technology have to face this kind of uncertainty. Modularization is also based on the theory of supply chain management, so the theory of supply chain management is also the research background of this problem. In this way, the cross-application of various theories has produced the matching problem of theory. The matching problem proposed in this paper is still a research gap in academic circles, which has strong use value and theoretical value. This is a typical technical theory and management theory fusion problem. The matching problems here include: the matching of Chinese and foreign legal systems, the matching of technology development and management theory, the matching of supply chain theory and asset evaluation technology, and the matching of modularization theory and asset evaluation technology. The complexity of these matches leads to ambiguity and uncertainty of information. Fuzzy theory and grey theory have the theoretical advantages of problem description and analysis. Therefore, the application of mathematics is inevitable and critical. Artificial intelligence often requires mathematical models as the basis. The current artificial intelligence cannot directly carry out the direct use of human semantics, especially the problems related to the laws of various countries. Therefore, the matching problem, as the core difficulty of the modular asset evaluation business of international logistics enterprises, has forward-looking research significance.

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