

Research on the Model of Intelligent Upgrading Capability of Automobile Enterprises Based on Niche Perspective

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Abstract: The intelligent upgrading of enterprises has become the inevitable trend of the development of modern manufacturing enterprises, which has positive significance for promoting the high-quality development of manufacturing industry and accelerating the industrial transformation and upgrading. As the pillar of manufacturing industry, the intelligent upgrading of automobile industry is imminent. This paper defines the connotation of the intelligent upgrading capability of automobile enterprises, and constructs the formation model of the intelligent upgrading capability of automobile enterprises based on the niche situation theory. On this basis, it puts forward the development countermeasures of the intelligent upgrading of automobile enterprises from the aspects of selecting the upgrading direction suitable for their own development, finding the correct positioning in the market, strengthening the interaction with the environment and active selection, It lays a theoretical foundation for the intelligent upgrading of automobile enterprises in practice.

Keywords: Intelligent Automobile Enterprises, Upgrade Capability, Niche, Situation Theory.

1. Introduction

China's manufacturing industry is at the crossroads of reform and upgrading. As an important member of the manufacturing industry, the intelligent upgrading of automobile enterprises is imminent. Vigorously developing enterprise intelligent upgrading will greatly promote scientific and technological progress and sustainable and stable economic development. The integration and development of new technologies such as big data, intelligence, Internet of Vehicles, and automatic driving with the automobile industry has profoundly changed the form of automobile products and the operation mode of the automobile industry. From research and development, design, manufacturing, production, logistics, marketing, after-sales service and other aspects, the automobile industry chain has been reconstructed and the ecosystem of the development of the automobile industry has been reshaped.

At present, the theoretical research on the upgrading ability of enterprises from the perspective of niche is not sufficient. Based on the niche perspective, Xu Hui, Deng Weisheng and others divided the growth process of enterprises into three stages: start-up, development and maturity, and believed that the changes in these three stages were due to the formation of strong market traction and the realization of sustainable development of enterprises, and the growth focus of the three stages was gradually transitioning from structural construction to capacity cultivation[1]. Based on the niche perspective, Chen Fajie and others analyzed the brand building capacity of enterprises and drew the following conclusions: enterprises should improve their organizational structure, achieve independent research and development, continuously improve the added value of products, and pay attention to the changes in market demand and the latest research results of the industry, so as to continuously improve their technological innovation capacity[2]. Xiao Meng constructed the niche measurement index of competitiveness of service enterprises from the niche situation theory, and

evaluated the competitiveness level of three banks in Liaoning Province, which theoretically enriched the competitiveness evaluation theory of service enterprises.

This paper applies the ecological theory to define the connotation of the intelligent upgrading capability of automobile enterprises, and constructs the formation model of the intelligent upgrading capability of automobile enterprises under the niche situation theory. Based on this, it puts forward countermeasures and suggestions to improve this capability, providing theoretical basis for the intelligent upgrading of automobile enterprises in practice.

2. The Connotation and Characteristics of Intelligent Upgrading Capability of Automobile Enterprises from the Perspective of Niche

2.1. The Connotation of Intelligent Upgrading Capability of Automobile Enterprises

Niche theory is an important concept in modern ecology, which is often used as the theoretical basis for social management practice. The niche situation theory believes that the biological units in nature and society have the properties of state and potential. The state refers to the current state of the biological unit, that is, the result of the accumulation of various factors in the past on it, and the potential refers to the ability of the biological unit to influence or dominate the environment. In addition, enterprises will adjust their internal environment according to the changes in the environment, so that they can better adapt to the environment. This is neither state nor potential. This paper refers to the existing research results and calls this situation interface. Niche describes the relative position of a biological unit in the process of interaction with the environment, and is the synthesis of the "state", "situation interface" and "potential" of the biological unit.

According to the concept and research idea of niche, the intelligent upgrading capability of automobile enterprises is mainly manifested through three levels of capabilities: first, the sum of the R&D and design, production and manufacturing, supply chain management and service marketing capabilities formed by automobile enterprises due to historical experience, which are the basis for the survival of automobile enterprises, and can be defined as the core capabilities of enterprises; The second is the ability of auto enterprises to continuously adjust their various capabilities in order to adapt to the environment, to make their own healthy operation, and to make continuous progress; The third is the ability of automobile enterprises to influence the market. Through their product advantages, enterprises can lead the market.

Based on the above analysis and in combination with the niche theory, this paper defines the intelligent upgrading capability of automobile enterprises as: using intelligent information technology, giving full play to the role of material resources (plant, machinery and equipment, production line, etc.), human capital and management resources (organization, management and water equality) of automobile enterprises to promote enterprises from automobile production to R&D and design, production and manufacturing, supply chain management, marketing services, logistics and transportation. The ability of all-round development such as brand building, and by virtue of this ability, the quality of products and services is continuously improved, the brand value is continuously improved, the influence and control of enterprises on the whole automobile industry chain is continuously improved, and the total market value of enterprises' products and services is continuously improved along the entire automobile industry chain.

2.2. Characteristics of Intelligent Upgrading Capability of Automobile Enterprises

1."Status" attribute of intelligent upgrading capability of automobile enterprises

According to the meaning of the biological individual in the niche, the state of the intelligent upgrading capability of traditional automobile enterprises is the description of the attributes of the core elements that constitute and affect the intelligent upgrading capability of automobile enterprises. According to the definition, the intelligent upgrading capability of automobile enterprises is a capability system composed of R&D and design capabilities, production and manufacturing capabilities, supply chain management capabilities, and marketing capabilities. Therefore, state is an objective description of the actual situation of these sub-capacity indicators of automobile enterprises in the context of intelligence.

Carry out intelligent upgrading along the value chain to realize the value chain climb. Each link in the value chain has its own barriers to entry and difficulty of self-mastery. Some scholars will focus on technology. If an enterprise wants to form its own advantages in the market, it must have its own core technology. However, it is undeniable that there is a strong interaction between technological capabilities and market forces. Only under the joint effect of technology and market can enterprises improve their niche in the market.

2.The "situation interface" attribute of intelligent upgrading capability of automobile enterprises

According to the meaning of biological individuals in the niche situation interface, the situation interface of the

intelligent upgrading capability of traditional automobile enterprises is the management and decision-making center of automobile enterprises. Its function is to give full play to the role of intelligent technical means. By regulating and controlling the exchange of material, energy and information between the automobile enterprises and the external environment, the core competence of the enterprise reflects the relative advantage difference with the core competence of the surrounding enterprises. The function of the "situation interface" can be intuitively understood as making adjustments to the "state" and "trend" of the enterprise based on environmental information, that is, conducting strategic decision management[4].

For example, the ability of enterprises to adjust their internal resources and management to meet the requirements of enterprise development in order to achieve the long-term objectives of enterprises by identifying and analyzing the environment and combining the current situation of enterprises. The external environment of the enterprise is changeable and uncertain, but the enterprise will pay attention to and predict the changing trend of the environment at any time to form the perception of the external environment, and this perception ability will continue to improve over time.

3."Potential" attribute of intelligent upgrading capability of automobile enterprises

The enterprise's adaptability to the environment and its dominance and influence on the environment are its "potential". The enterprise must accept the influence of the external environment on it. At the same time, the enterprise will release its influence on the environment and change the environment. When the impact of the external environment on the enterprise is greater than the impact of the enterprise on the environment, the enterprise needs to adapt to the impact of the environmental change. At this time, the enterprise is in a passive state, and needs strong adaptability to turn the crisis into safety or take advantage of the situation. When the impact of the external environment on the enterprise is less than the impact of the enterprise on the environment, the enterprise is in a more active position at this time. The enterprise has a certain control and influence over the environment and can become a market leader.

The dominance and influence of traditional automobile enterprises on the surrounding environment in the process of using intelligent technologies and means to promote the upgrading of enterprises, that is, the potential of traditional automobile intelligent capabilities, according to the meaning of the potential of biological individuals in the niche, is still reflected in the differences between enterprises and the surrounding environment, mainly reflected by the objective description of the differences in the comparative advantages between enterprises and surrounding enterprises. This difference can be expressed by the difference between the market value of the enterprise's products and services and the surrounding enterprises. The differences in the use value, experience value and dissemination value of the enterprise's products and services are specifically selected to measure the "potential" in the intelligent upgrading of traditional automobile enterprises.

3. Literature References

According to the previous analysis, the intelligent upgrading capability of automobile enterprises under the niche situation theory is reflected through the three levels of "status", "situation interface" and "potential", but the three are

not isolated, but there is an interactive relationship. The improvement of the enterprise's intelligent upgrading capability is essentially the improvement of its "state", "potential" and "situation interface". In the process of

enterprise development, the three levels of capabilities complement each other and jointly promote the improvement of the enterprise's niche.

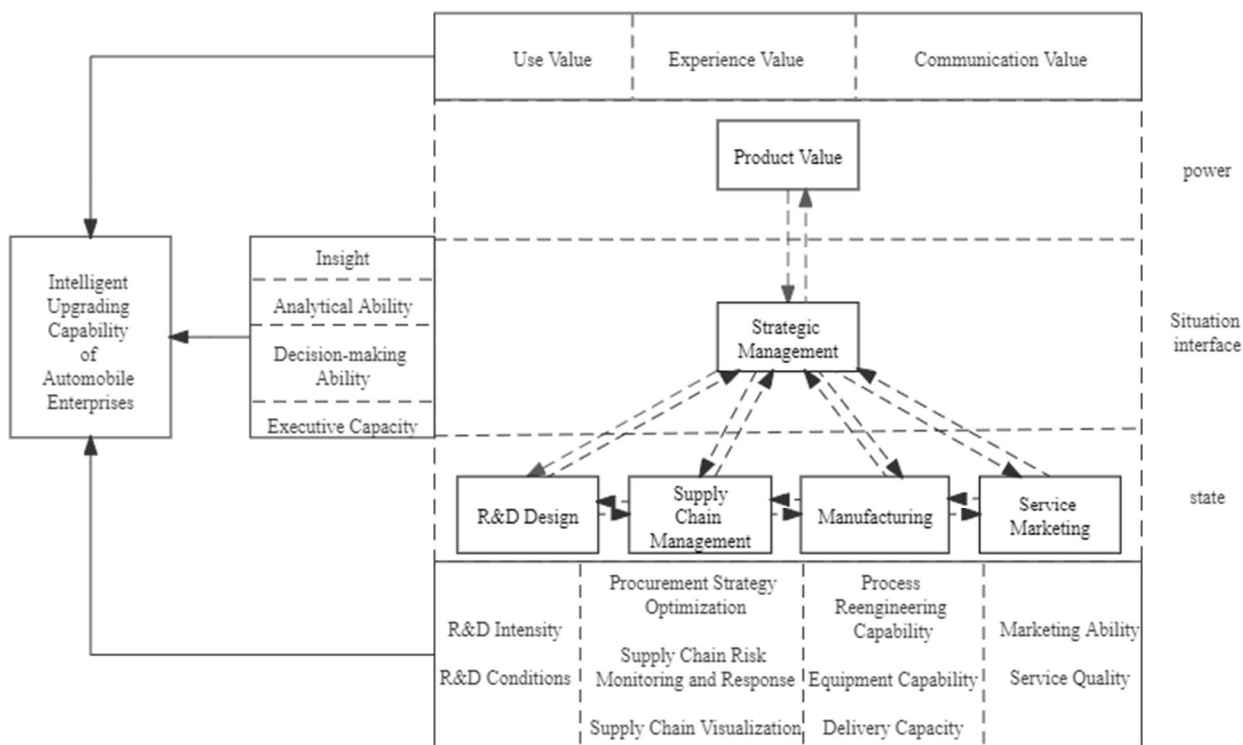


Figure 1. Forming model of intelligent upgrading capability of automobile enterprises

In the formation mechanism model of intelligent upgrading capability of traditional automobile enterprises based on niche, the "potential" of enterprises corresponds to the "upgrading" attribute of upgrading capability; The "status" and "situation interface" of the enterprise correspond to the "capability" attribute of the upgrade capability. Through the upgrading of the four links of R&D and design, supply chain management, production and manufacturing, and marketing services, enterprises can upgrade in the value chain. The added value of R&D and design is high. The enterprise's investment in R&D and design can obtain greater value than that in production and manufacturing. The R&D intensity and R&D conditions are directly related to the effect of R&D and design. Supply chain management includes procurement management, operation management and logistics management. Improving supply chain performance should start with procurement and planning. The supply chain takes planning as the engine and procurement, production and logistics as the executive functions. In order to get better development, enterprises will choose to climb along the value chain and shift their focus from the production and manufacturing links with low added value to the R&D and service marketing links with high added value. Strategic management plays a connecting role, monitoring the internal environment in real time, solving internal problems in a timely manner, keeping alert to the external environment, accurately judging the crisis and timing, and integrating internal resources to respond. Product value is the ability of enterprises to directly face the market, and the level of product value determines the position of enterprises in the market. Therefore, enterprises can identify and analyze the external environment to obtain countermeasures, and make

dynamic adjustments to the path of upgrading along the value chain, in order to improve product value, form enterprise intelligent upgrading ability, and improve enterprise profitability 错误!未找到引用源。 .

4. Suggestion

1.Strengthen the top-level design. Due to the late start of intelligent upgrading in China, different enterprises have different understanding of intelligent upgrading, and the cognition of R&D personnel and production personnel is not uniform. It is particularly important to reach consensus on intelligent upgrading through inter-departmental cooperation. The individual intelligence of R&D, production, supply chain, marketing and other links does not necessarily have a positive effect on the intelligent upgrading of enterprises. For example, the inconsistent data interface of each link will hinder the overall process. Getting through the data, process, business and software systems of all links requires top-level design and planning. Lack or improper top-level design will lead to inconsistent standards, inconsistent processes, and repetitive construction. Enterprises need to understand their intelligence capability base in advance, develop a comprehensive enterprise intelligence upgrade plan based on their own conditions, and achieve the goal of system integration and overall optimization.

2. Strengthen interaction with the environment In the process of intelligent upgrading, automobile enterprises should not only ensure the flow of information within the enterprise and effective communication between departments, but also strengthen the insight and analysis of the environment, grasp the relevant policies and cutting-edge

technologies of intelligence that are conducive to their own development, and effectively use environmental information to promote their own development, which has an important role in promoting the ability of intelligent upgrading of enterprises.

3. Enterprise's proactive choice. Automobile enterprises should accumulate and develop their own situation factors. Automobile enterprises are biological units with active adaptability and learning ability. In order to maintain competitive advantages in the market, they need to dynamically adjust their capabilities according to changes in market demand. It is not only necessary to improve the "state" advantages such as R&D and design, but also to form an efficient decision-making mechanism and response mechanism, improve the "state interface" advantages, improve the quality of products and services, improve its "state" advantages, and promote the improvement of enterprise niche.

4. Strengthen the construction of talent team. To carry out intelligent upgrading, enterprises should organize a high-level team, including high-tech talents, high-skilled talents and management talents, strengthen the intelligent technical training for employees, and strengthen the incentive incentives for talents, stimulate the innovative and creative vitality of various talents, and lead the intelligent upgrading

of automobile enterprises with talent revitalization.

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