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Research on the Digital Capability Building of Chinese Small and Medium Sized Enterprises

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Abstract: ***Establishing and developing digital capabilities is the key for small and medium-sized enterprises in China to adapt to the development of the digital economy and respond to the challenges of digital transformation. This study explores the necessity of digital capacity building for small and medium-sized enterprises in China from two aspects: competitiveness enhancement and management innovation. It deeply analyzes the problems of lack of top-level design in digital capacity building, weak digital foundation, insufficient development of digital talent team, and the need to strengthen digital ecological construction in small and medium-sized enterprises in China, and proposes corresponding countermeasures.***

Keywords: Digital capability, Digital transformation, Small and medium-sized enterprises**.**

1. Introduction

With the rapid development of the digital economy and the extension of digital technology to various aspects of economic and social development, as well as enterprise management, the production environment in which Chinese enterprises operate is also undergoing significant changes. By realizing the onlineization and collaboration of industrial resource elements, enterprises have achieved significant breakthroughs in information acquisition, business processing, and product service methods. This not only improves operational efficiency and enhances the ability of enterprises to adapt and develop rapidly, but also brings new business models. Digital transformation is an important strategy that global enterprises are currently focusing on and striving to promote, achieve, and enhance their competitiveness and influence. Small and medium-sized enterprises are one of the most dynamic and innovative groups in the Chinese economy. As an important force in China's economic development, they occupy a significant position in the national economy. The "Special Plan for the Development of Digital Economy for Small and Medium sized Enterprises (2021-2035)" released by the Ministry of Industry and Information Technology proposes that by 2025, the added value of core industries in the digital economy should account for more than 30% of the national GDP, and small and medium-sized enterprises should strive to reach more than 60%. Small and medium-sized enterprises are an important part of China's digital economy and the main force of digital transformation. How to seize opportunities, achieve transformation and upgrading, and achieve better development in the digital age is a major issue facing China's small and medium-sized enterprises. Many large enterprises have already formulated and implemented digital strategies, establishing a complete digital value chain covering product research and development, production control, and customer service. They have the comprehensive ability to systematically use digital technology to improve business management efficiency, meet consumer needs, reduce business risks, and improve business efficiency. However, most small and medium-sized enterprises face challenges such as low information sharing and high management costs, which make it difficult for them to adjust their digital capability structure in a timely manner and compete with large enterprises in the process of digital transformation. When small and medium-sized enterprises undergo digital transformation, they should not only fully recognize the importance of digital capability building, but also regard it as an important component of their development strategy. Therefore, in order to cope with the opportunities and challenges brought by digitization, promote transformation and upgrading, and achieve high-quality development, small and medium-sized enterprises should pay attention to enhancing their competitiveness by establishing and developing digital capabilities, and cope with the challenges faced in the process of digital transformation.

2. The Significance of Digital Capacity Building for Small and Medium-sized Enterprises in China

Digital capability refers to the ability to improve internal management efficiency and production and operation level of enterprises by fully utilizing new generation information technology in an informationized and digital environment, and to achieve the transition of enterprise digitalization process to a sustainable and high-quality development stage. The construction of digital capabilities is of great significance for the survival and development of small and medium-sized enterprises in China in the digital economy era.

2.1 Digital Capability is an Important Guarantee for the Transformation and Survival of Small and Medium-sized Enterprises in China

Due to the general lack of information technology construction in Chinese enterprises, they are unable to meet the personalized needs of customers. Meanwhile, due to the different stages of development of information technology, many small and medium-sized enterprises find it difficult to meet the personalized needs of their customers. In addition, with the popularization and application of technologies such as big data and artificial intelligence in small and medium-sized enterprises, they will have to face problems such as mismatched technological levels, which will reduce their competitiveness and increase their survival pressure. For

small and medium-sized enterprises with weak market competitiveness, their market share is likely to be eroded by industry giants. Establishing a digital capability system can help small and medium-sized enterprises quickly adapt to the information environment, improve their ability to respond to customer needs, and meet personalized customer demands. For example, in the early stages of development, China Tower adopted some technical measures to reduce costs and improve efficiency. However, as the scale continued to expand and industry competition became increasingly fierce, problems gradually emerged. Through new technological means, cost control can be maximized, thereby enhancing the core competitiveness of the enterprise. Therefore, in order for small and medium-sized enterprises to remain invincible in the fierce market competition, they must have core competitiveness, that is, whether their efforts in product and service quality compared to competitors have core competitiveness, that is, whether small and medium-sized enterprises can better provide differentiated products and services to occupy the market and not be eliminated by the market.

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3. Problems in the Digital Capacity Building of Small and Medium Sized Enterprises in China

3.1 Lack of Top-level Design in Digital Capability Building

Currently, small and medium-sized enterprises are facing many development issues and enormous survival pressures. Some companies lack sufficient understanding of themselves and profound thinking about the significance of digital transformation. At present, small and medium-sized enterprises generally lack the correct concept and action of digital capacity building, and lack top-level design. One is the lack of unified strategic deployment and clear implementation path. Although the national government is actively promoting the deep integration of new generation information technology and manufacturing industry, China's small and medium-sized enterprises have not formed a comprehensive understanding of information construction. Many companies, although having clear strategic goals and directions for digital transformation, have not developed practical and feasible strategic plans based on their own reality. Lack of top-level design and implementation plan at the execution level. Although many benchmark enterprises and typical cases of digital transformation have emerged in China in recent years, there is still a lack of unified digital development strategies and promotion measures for small and medium-sized enterprises. Secondly, there is a lack of effective guidance and implementation pathways for digital transformation practices.

3.2 Small and Medium-sized Enterprises with Weak Digital Foundations Still have Many Shortcomings in Digital Capacity Building

On the one hand, the level of information technology construction is not high. The informationization construction of small and medium-sized enterprises started relatively late, and their infrastructure is relatively weak. Small and medium-sized enterprises have not yet formed a relatively complete industrial Internet application system, with low degree of informatization and high cost of information system construction, operation and maintenance. On the other hand, small and medium-sized enterprises lack a complete data processing platform and data sharing mechanism internally. Due to the traditional manual production and operation mode of industrial enterprises, their ability to analyze the economy and the efficiency of data processing are limited. On the one hand, small and medium-sized industrial enterprises lack platforms and capabilities for statistical analysis of production and operation data, making it difficult to conduct relevant analysis modeling and decision analysis; On the other hand, small industrial enterprises themselves lack data application capabilities and the construction of data processing systems.

Therefore, there is a lack of effective guidance and supervision on the application of digital technology within small and medium-sized industrial enterprises.

3.3 Lack of Digital Capability in Business Processes. Business Processes are One of the Fundamental Aspects of Enterprise Operation

If the business processes of an enterprise are not scientific and reasonable, it will affect the normal operation of the enterprise and also have an impact on its profitability. This is precisely the digital capability in business processes that small and medium-sized enterprises lack. Firstly, the business process system of small and medium-sized enterprises is not sufficiently complete. The business process system of most small and medium-sized enterprises is very complete, but there are still many drawbacks. Firstly, there is a lack of process construction. Most enterprise business process systems are too simple to meet the needs of complex internal business processing and decision-making, and cannot be designed reasonably; Secondly, there is a lack of process management philosophy. Most small and medium-sized enterprises pursue simplicity and efficiency in business process design, but lack effective and professional concepts and methods for process control. Enterprises do not have sufficient manpower and material resources to systematically improve and optimize related business processes, and most small and medium-sized enterprise employees can only complete enterprise business process settings through simple and crude means. Finally, there is a lack of information technology support. With the development of mobile Internet, big data and cloud computing technology, digital technology has penetrated into all walks of life. SMEs also need to use digital technology to improve their operational efficiency and management level.

3.4 The Quality of Digital Products and Services is Not High, and There is a Lack of Digital Application Level

In terms of product quality in enterprises, due to the limitations of production processes, raw materials, and production processes, most enterprises can only produce low-cost products, and the product and service quality of most small and medium-sized enterprises is difficult to meet the needs of economic development. In addition, many enterprises have a low level of digital application and generally lack professional talents and systems in the process of implementing business informatization. Although the government and enterprises have taken certain support measures for the digital application of small and medium-sized enterprises, there is not a significant difference in the level of digital application among small and medium-sized enterprises, and the digital development level of most small and medium-sized enterprises is relatively low. When implementing business informatization, most enterprises still lack competitiveness in terms of technology and products; In addition, compared with large state-owned enterprises and foreign-funded enterprises, small and medium-sized enterprises have the characteristics of small business scale, weak brand effect, low R&D investment, and few financing channels, which determine that they need to solve more problems in the development process.

3.5 The Digital Talent Team is not Fully Developed, and the Talent Flow is Not Smooth

With the arrival of the "Internet plus" era, the scale and influence of Internet enterprises are also constantly improving, and the importance of digital capabilities is becoming increasingly prominent. However, the training of information technology talents in China's small and medium-sized enterprises is not in line with the level of digitalization of enterprises, and the quantity and quality of information technology talents in some small and medium-sized enterprises and large enterprise level IT companies are not high. However, talents in large enterprise level IT companies are mostly technical and management backbones, lacking specialized talents who have a deep understanding and accumulated experience in the department's business, technology, and management functions. This makes it difficult for small and medium-sized enterprises to cultivate and retain various talents. Currently, small and medium-sized enterprises often rely on cost and sales as their main sources of income to recruit and train employees. If these talents cannot be effectively resettled or attracted and retained, it will be difficult to maximize their potential. At the same time, due to the lack of understanding and familiarity with digital talent demand in the context of the "Internet plus" era, talent flow has become more difficult.

3.6 The Construction of Digital Ecology Needs to be Strengthened, and the Digital Competitiveness of Enterprises is Insufficient

The development of enterprise information construction cannot be separated from ecological construction. At present, the digital ecosystem of enterprises mainly includes the construction of data sharing platforms, talent training, technological innovation, and ecological cooperation, which are all important parts of digital construction. At present, there is still an undeniable problem in the digital construction of small and medium-sized enterprises - the digital ecosystem construction has not been effectively utilized in practical operations. For example, currently many small and medium-sized private enterprises can only rely on their own strength to carry out digital construction and application. Some small and medium-sized private enterprises are unwilling to undergo digital transformation and adopt a "high input, low output" model for construction. Due to the lack of necessary resource input and other factors, these small and medium-sized private enterprises have limited their willingness and ability to build Internet business models.

4. Research on Countermeasures for Digital Capacity Building of Small and Medium sized Enterprises in China

4.1 Establish a Digital Capability Building Model That is in Line with the Characteristics of Small and Medium-sized Enterprises

Small and medium-sized enterprises have different characteristics and should adopt different methods in digital capability building in order to effectively improve the overall digital capability building level of small and medium-sized enterprises. Based on the characteristics of small and

medium-sized enterprises and the actual situation of various industries, a digital capacity building plan that is in line with the characteristics of small and medium-sized enterprises should be formulated. Small and medium-sized enterprises should establish a digital capability building platform based on their own situation and technological strength. The establishment of a platform should follow certain principles and processes, adhere to standardization principles, and prioritize service. Set different goals for the digital capacity building needs of different industries and various small and medium-sized enterprises, and achieve their digital capacity building goals. Tailored "is the basic principle for carrying out digital capacity building, and developing digital capacity building plans based on the characteristics of different industries, scales, and industries is in line with the unique features of small and medium-sized enterprises.

4.2 Building a Digital Management Platform is a Systematic Project

It is a digital technology platform based on the Internet. Therefore, small and medium-sized enterprises must also attach importance to the construction of digital platforms in order to improve their own capacity building and adapt to the opportunities and challenges brought by digital transformation. Small and medium-sized enterprises need to possess digital capabilities and the ability to develop digital products. Firstly, the strategic objectives for building digital capabilities should be clearly defined at the strategic level; Secondly, it is necessary to clarify the path and direction of its digital capability building; Finally, corresponding implementation plans need to be formulated. Therefore, targeted analysis and thinking should be conducted on the problems faced by small and medium-sized enterprises in building their digital capabilities. The digital platform should have five major functions: first, fast decision-making and auxiliary decision-making functions; The second is to achieve collaborative office and online meetings; Thirdly, enhance digital capabilities and promote the development of core businesses; Fourth, integrate innovation and intelligent production functions; The fifth is to achieve networked management of the production process and improve the level of intelligent factory management. The application of digital platforms in small and medium-sized enterprises should be in line with their own characteristics and development requirements: the digital transformation capabilities of small and medium-sized enterprises should be adapted to their own development characteristics, avoiding singularity, centralization, and fragmentation; The digital transformation of small and medium-sized enterprises should be a comprehensive and multi-level promotion that can be effectively implemented; In the process of digitization, it is necessary to pay attention to the relationship between the development needs of enterprises for digital technology and capacity building. Establishing an enterprise data center based on a digital platform is a systematic construction plan that involves the deep participation of technical teams in the development and implementation of integrated resources and application systems required by the enterprise, after relevant requirements are proposed by various departments.

4.3 Carry Out Information Infrastructure Construction Services and Consolidate the Foundation of Digital Capabilities

Digital capability construction cannot be separated from technical infrastructure and operational management services. One is to build an intelligent operation management system. Building an intelligent operation and management system is an important issue that needs to be considered in the digital capacity building of small and medium-sized enterprises. A series of intelligent infrastructure construction can be carried out to enhance the operational and management capabilities of small and medium-sized enterprises. The second is to establish a digital operation management service platform for small and medium-sized enterprises. Provide technical support services to small and medium-sized enterprises based on advanced applicable technologies and operational management capabilities, to assist them in achieving digital transformation. The third is to build an ecological public infrastructure. Providing information technology support services for the digital capacity building of small and medium-sized enterprises is an important component of the development of information technology construction.

4.4 Establish and Promote Digital Business Processes based on Strategic Goals

In the process of digitalization, it is usually necessary to achieve key changes in business, organization, information, technology, environment, etc.: firstly, strategically determine digital business goals and processes, and promote implementation. We should focus on the current business scope and processes of the enterprise, deeply understand the connotation of digital business, scientifically formulate executable digital business transformation strategies, and steadily, efficiently, and continuously promote business goals. The planning and execution of specific actions can gradually promote the completion of digital business. The second is to transform the organizational structure and culture of enterprises through innovative thinking, transforming concepts into behaviors, behavior driven models, and behavior oriented models. Firstly, it is necessary to consider whether it is suitable for the enterprise's digital strategy from a business perspective. Secondly, from an organizational perspective, it is necessary to analyze factors such as organizational change, organizational management, personnel roles, and process changes that may lead to changes in the organizational structure and business objectives of the enterprise when it changes its business. Finally, it is necessary to optimize processes and organizational culture from an organizational perspective and develop corresponding implementation plans, such as using the plan as the basis and guarantee for digital transformation execution. By judging and deploying the future development direction of small and medium-sized enterprises, establishing corporate culture, and adjusting organizational structure, it can help enterprises to have a more comprehensive understanding of the changes happening in the world today, the environment in which they operate, and the challenges and opportunities facing their development. This is beneficial for enterprises to formulate corresponding digital transformation strategies.

4.5 Improving the Quality of Digital Services is the Greatest Advantage for Enterprises to Achieve Self Realization in Development

Small and medium-sized enterprises have weak digital capabilities and often lack corresponding infrastructure investment, resulting in low service quality and difficulty in meeting customer needs. With the increasing integration of network information technology, information security issues are becoming more prominent. More and more small and medium-sized enterprises are using cloud service products to replace traditional methods to ensure the security of user data. Therefore, in order to actively build a digital service system for small and medium-sized enterprises and improve the quality of digital services, it is necessary to attach importance to service quality. One is to strengthen the construction of digital infrastructure. On the basis of continuously improving the level of information technology application, small and medium-sized enterprises are encouraged to engage in independent innovation and actively explore the application of new technologies and models such as big data in their business, so as to fully realize the application effect. Enterprises are making efforts in technology research and development, product innovation, and service system construction to promote the innovative application of digital products and services through strengthening information platform construction, service provider cooperation, and joint innovation.

4.6 Establishing a Digital Talent Team and Promoting Human Resources

Digital talent is a key factor in achieving sustainable development of enterprises, and the construction of a digital talent team is an important factor in achieving sustainable development of enterprises. At present, most well-known companies in the world attach great importance to talent cultivation, which is one of the most important indicators to measure the strength of a company. Digital talent management is an important part of enterprise digital construction, and enterprises should pay attention to the cultivation and use of digital talents. Talent cultivation is a very important part of enterprise digital construction. Only by continuously improving the digital talent training system and optimizing the talent structure and team structure can we meet the digital development needs of enterprises and ensure the smooth implementation of their digital strategies. Therefore, we need to increase efforts, expand scale, improve standards, and perfect mechanisms in talent cultivation. Therefore, digital talent should be studied and developed as an important component of enterprise human resource management. In addition, it is necessary to strengthen the construction of the IT talent team, establish and improve the organizational structure, performance evaluation system, and incentive mechanism with IT talents as the core. For personnel with low levels of expertise, lack of professional knowledge, or inability to handle long-term work environments, as well as lack of cross departmental communication skills, it is necessary to actively introduce external talents for training and learning.

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