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Service Strategy Analysis of Big Data Management in Small and Medium-sized Enterprises

Lumi Lang

Management Science and Engineering, Chongqing Industry Polytechnic College, Chongqing, China

Abstract: As the basic force to promote the development of national economy, small and medium-sized enterprises face many difficulties in their development process. And big data technology can help them improve the efficiency of enterprise management and enhance the viability of enterprises. The rise of the Internet, relying on big data technology, effectively alleviates the financing problems of SMEs. At the same time, it has a great impact on the traditional credit business of commercial banks. The legal service platform for small and medium-sized enterprises, with the development of emerging information technologies such as Internet, big data and sharing economy, has unique service advantages, which can achieve economies of scale and scope in the process of legal services, and has important practical significance for the healthy and rapid development of small and medium-sized enterprises. However, the innovation and development of small and medium-sized technology-based enterprises are difficult to achieve only by themselves, and they need to be provided with targeted and professional knowledge services by internal knowledge service departments, intermediary service agencies, and government departments, so as to improve the knowledge reserves of small and medium-sized technology-based enterprises and promote their development and innovation. This paper analyzes the relationship between SMEs and big data technology, puts forward problems in terms of awareness, technology, policy and talent, and gives corresponding strategies to help SMEs develop.

Keywords: Small and medium-sized enterprises, Big data, Service.

1. Introduction

In recent years, the development of small and medium-sized enterprises is particularly rapid, the scale of enterprises is constantly expanding, and the economic strength is obviously enhanced. In 2014, China upgraded Widespread entrepreneurship and innovation to a national strategic level. In just three years, about 8,000 mass entrepreneurship and innovation bases have been built, and great social and economic benefits have been achieved, including driving more than 3 million jobs, innovating more than 250,000 intellectual property rights, stimulating social investment and financing of about 100 billion yuan, and cultivating more than 2,000 listed and listed enterprises, initially realizing the organic combination and virtuous circle of innovation, entrepreneurship and employment [1]. However, at present, China's small and medium-sized enterprises are in a very embarrassing situation. On the one hand, the state attaches great importance to them, and on the other hand, they lack financing channels [2]. In fact, the financing of small and medium-sized enterprises is a worldwide problem, and governments and scholars all over the world are studying and formulating corresponding policies and systems to alleviate this problem. However, due to the special situation in China, the financial reform and the relatively backward system, and the inherent shortcomings of small and medium-sized enterprises, this problem is particularly prominent [3].

For small and medium-sized enterprises, it is relatively difficult to find lawyers with professional knowledge of their industry nationwide. On the other hand, at present, the lawyer industry is confused in accepting cases, and some lawyers lack the level and professionalism of the industry, resulting in unsatisfactory final litigation results [4]. As a result, customer needs cannot be met. Therefore, it is urgent to provide professional legal services for small and medium-sized enterprises. Innovation is the core of the development of technology-based SMEs, and the formation of intellectual capital is the basis of innovation [5]. In the big data environment, facing the knowledge resources with massive data and diverse structures, small and medium-sized technology-based enterprises can only meet the knowledge needs of enterprises for continuous innovation and sustainable development by virtue of more advanced big data technologies, more effective enterprise organizations and knowledge services. In addition, the arrival of the big data era has brought great challenges to the development, organization, storage, management and service of enterprise knowledge resources, and put forward higher requirements. Therefore, the research on the knowledge service model of technology-based SMEs in the big data environment deserves our in-depth discussion [6].

Small and medium-sized enterprises should define their own product positioning, build their own brand characteristics with "specialization and innovation", be market-oriented and customer-centered, and constantly innovate service concepts, service structures and service methods to win the market. How to accurately grasp market trends and customer needs can rely on big data technology services. Big data technology is the specialized processing of data sets, and deep mining of valuable data to realize data appreciation [7]. Through big data technology, the scope of information acquisition can be made more accurate, thus improving the efficiency and accuracy of the whole process. It is the rise of Internet finance based on big data that reduces information asymmetry and borrowing costs. "Small micro-loans" are gradually becoming the "blue ocean" of the future financial market, and the "long tail effect" is emerging. This new lending model is impacting the traditional credit of commercial banks. How commercial banks can rely on their own advantages to cope with financial disintermediation, realize their own strategic transformation, and win in the market competition of "small micro-loans" is exactly what

this paper focuses on [8].

With the arrival of the era of big data, the connotation of knowledge service is constantly changing. Knowledge acquisition, knowledge storage, knowledge processing and communication mechanism, knowledge form, science and technology innovation mode, etc. have all been faced with huge challenges, and the key knowledge bottleneck and knowledge management mode of knowledge service have also undergone significant changes. It can be seen that for the scientific and technological innovation of small and medium-sized technology-based enterprises, the research of knowledge service mode in the big data environment is particularly important. The research of this paper will provide a theoretical basis for the knowledge service of technology-based SMEs, and provide a reference for the knowledge service of map information and specialized enterprises.

2. Theory Related to Big Data and Enterprise Smart Services

2.1. Analysis on big data service problems of small and medium-sized enterprises management

The public service platform for small and medium-sized enterprises mainly refers to an open and resource sharing service portfolio that provides various public services such as R&D, design, testing, inspection and detection, talent training, technical consulting, new technology promotion, information service IU and entrepreneurship waxing, marketing, financing guarantee, environmental governance, etc. for small and medium-sized enterprise groups in an industry or industrial cluster [9]. Small and medium-sized technology-based enterprises rely on innovation as a means of survival and a driving force for development. Therefore, despite their small size and financial constraints, enterprises will still increase their investment in scientific research funds in order to gain their own core competitiveness in market competition [10]. Statistics show that about 88% of small and medium-sized scientific and technological enterprises have different types of R&D institutions, and about 73% of enterprises' annual investment in scientific research accounts for more than 2% of their total sales. Many enterprises only use big data technology in the sales system due to limited funds, but ignore its decision-making value. The lack of big data awareness in enterprises often leads to the loss of useful data and the inability to obtain accurate data information, which is also the main reason why big data can't play a better service in the management of small and medium-sized enterprises. Small and medium-sized enterprises are relatively small in scale and seldom have the funds to set up their own knowledge service outlets, so there is relatively little research on the mode of providing knowledge services within them. According to the service process of a small number of small and medium-sized scientific and technological enterprises, this paper constructs the main mode of existing internal knowledge service. As shown in Figure 1.

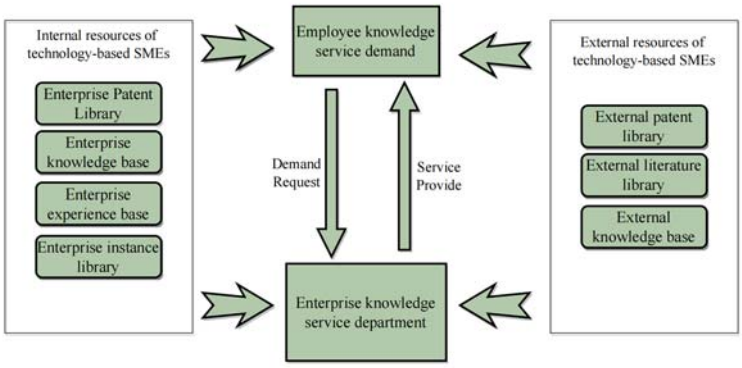

Figure 1. Internal knowledge service mode of SMEs

It can be seen from Figure 1 that the employees of small and medium-sized technology-based enterprises can find the required knowledge from the internal resource pool or external resource pool, or consult the service department about their unknown or high-level knowledge needs. In this mode, enterprises can set up various departments according to their own needs to provide employees with a series of knowledge services such as technical training, patent novelty search, lecture training, scientific and technological query, patent, project application, etc., so as to meet user needs and enhance the competitiveness of enterprises.

From the perspective of market development, small and medium-sized enterprises have limited their marketing level due to the limitation of funds, which virtually increases the difficulty of developing new markets, and at the same time, they have to bear huge risks. From the perspective of funds, the shortage of funds in small and medium-sized enterprises is an objective reality, so external forces must be used for financing. From the perspective of market development, small and medium-sized enterprises have limited their marketing level due to the limitation of funds, which virtually increases the difficulty of developing new markets, and at the same time, they have to bear huge risks. From the perspective of funds, the shortage of funds in small and medium-sized enterprises is an objective reality, so external forces must be used for financing. However, the current threshold for financing is out of reach for small and medium-sized enterprises. Because of its small scale, low credit rating and uncertain future, it is even more difficult to obtain loans from banks and other financial institutions. Big data services can not be separated from technical support. At present, the policy support for enterprises clearly points out the support for scientific and technological innovation, but it is difficult to achieve the support for scientific and technological

innovation of SMEs in specific operations, which is reflected in: (1) The macro design is not in place, and there is no top-level strategy for technological innovation and implementation policies and measures for SMEs; (2) The policy promotion is not smooth, and there is no fair environment for small and medium-sized enterprises to provide technological innovation; (3) The service system is not perfect, and there is no scientific optimization of resource allocation to break the information barrier, which makes it difficult for SMEs to obtain useful information.

2.2. Analysis of big data service strategy for small and medium-sized enterprises

Knowledge service is derived from the rapid development of knowledge management, but knowledge service and knowledge management are different. Knowledge management mainly focuses on systematically acquiring, defining, storing, transferring, analyzing and utilizing valuable knowledge existing in individuals, teams or groups inside and outside the organization. In order to break through the traditional management mode, small and medium-sized enterprises must realize that big data can more accurately position consumers' shopping psychology and grasp the market dynamics. At the same time, it is necessary to cultivate big data thinking, and change the thinking mode from individual thinking to overall thinking, from accurate thinking to fault-tolerant thinking, and from causal thinking to relevant thinking. The focus of enterprise knowledge service is not whether it provides the required knowledge, but whether the intelligence and knowledge demand services it provides can help knowledge personnel solve practical problems and complete corresponding tasks. Therefore, the focus of enterprise knowledge service is to provide intelligence and knowledge demand services to provide enterprise knowledge personnel with problem solutions to help them solve problems and complete tasks. In order to make up for various loopholes in Internet finance, banks have invested a lot of manpower and material resources, including the introduction of hardware encryption certificates, online payment passwords and other network security means, to minimize security problems. Internet finance companies have been innovative since their birth, and their business expansion is more important than network security. In addition, in order to reduce their own costs, internet finance companies usually limit the upper limit of customers' transaction amount, or avoid potential risks through third-party payment means such as commercial banks and online banking. Therefore, for investment in network security. The enthusiasm of Internet financial companies is obviously not as good as that of commercial banks.

It is precisely because SMEs are faced with the above difficulties that SMEs cannot easily obtain resources from the outside, and cannot simply meet the commodity trading volume necessary to support the survival of enterprises through the market. Moreover, from the analysis of the present situation of many enterprise management modes, enterprise managers lack objective knowledge of enterprise management modes in the era of big data, and ignore the importance of extensive market economy data information in the era of big data, which makes it difficult for enterprises to achieve the goal of improving management efficiency. In addition, at present, China is quite short of talents in the collection and collation of big data information, and complex talents with both information technology and management capabilities are extremely scarce. Talents with the above technical and management capabilities are also widely recruited by large enterprises. Therefore, the talent gap of SMEs in this area is systematically combined with enterprise management and new media application, which to a large extent promotes the sustainable development of enterprises. The industry should arrange professionals to regularly maintain the online marketing platform, including page information, platform settings, etc., to update regularly, so that customers can keep the online marketing platform fresh. Small and medium-sized enterprises should consider three aspects to build the network marketing platform: first, the design of the marketing platform should be novel and the layout should be reasonable; Secondly, the content and form of the marketing platform should be diversified, and the form should meet the requirements of the content; The third is to build a smooth channel for communication between customers and enterprises, so that customers can give feedback in a timely manner, and enterprises can adjust products and services in a timely manner to meet customer needs.

3. Analysis on Knowledge and Skill Demand and Influencing Factors of Small and Medium sized Technological Enterprises in Big Data Environment

3.1. Questionnaire design and questionnaire data collection

This paper mainly focuses on the research of abstract concepts, and it is difficult to obtain the required data in public information, so it is necessary to obtain the required data through questionnaire survey. On the basis of in-depth analysis of existing questionnaires in the fields of knowledge management, knowledge service and information service, a questionnaire form that conforms to this research is designed, which improves the validity and reliability of the questionnaire. Through reading a lot of relevant literature, drawing on the research ideas of information service, knowledge service, knowledge management, information service mode, etc., this paper designs the related questions about knowledge service demand of small and medium-sized scientific and technological enterprises based on big data, asks for the opinions of tutors, and consults some people working in library, information research institute or small and medium-sized scientific and technological enterprises by making use of interpersonal relationships, forming the final questionnaire. Considering the high recovery rate and effectiveness of the questionnaire, this paper mainly adopts the methods of mail distribution and face-to-face distribution. A total of 68 questionnaires were distributed, and 68 technology-based SMEs were investigated. Since this survey is mainly about the knowledge services of technology-based SMEs, only one questionnaire can be distributed to the same enterprise, and the main survey is to investigate senior executives who have a good understanding of relevant content. 63 questionnaires were collected, with a recovery rate of 93%. It can be seen from the analysis of the returned questionnaires that the main businesses of the technology-based SMEs in this survey mainly involve electronic knowledge, biomedicine, modern service industry, environmental protection, new energy and new materials and other industries, and the asset

scale is almost more than 10 million. Some enterprises have also set up full-time knowledge acquisition departments and personnel. The specific research and analysis results are shown in Figure 2.

Figure 2. Status quo of knowledge demand of technology-based SMEs

As can be seen from Figure 2, the knowledge demand in the questionnaire survey is strongest in scientific and technological literature, patent knowledge, technical standards, industry analysis knowledge, etc., followed by market and policy knowledge such as competitive intelligence, policies and regulations, marketing knowledge, etc. In addition, enterprises also pay more attention to financing knowledge and statistical data. If they want to innovate, the knowledge of science and technology is the essential foundation and support means. Therefore, compared with other enterprises, small and medium-sized scientific and technological enterprises have a higher demand for knowledge of science and technology.

3.2. Cultivating network marketing talents

In the era of big data, in order to develop network marketing, small and medium-sized enterprises need to constantly cultivate network marketing talents and provide talent support for network marketing. Knowledge management incorporates modern management ideas, enterprise management ideas, dynamic information technology applications, etc., which is a new talent management mode based on the new management ideas of knowledge economy. Based on the enterprise's own talent strategy, we should actively build a talent management innovation model based on this management idea. Based on the effective management of knowledge learning, storage, access to network channels, systematic application, and positive innovation, the managers of enterprises have these necessary development skills in the future society, so as to improve the application level of talents and build a learning management team. However, although traditional media have problems such as weak interaction, excessive publicity functions, and poor timeliness, they have advantages such as easy control, strong authority, and rigorous reporting. Therefore, the integration and complementarity between the two are conducive to the development of enterprise management. Therefore, when enterprises use new media, they must pay attention to the following three points: First, according to the analysis of enterprise behavior, enterprises can choose suitable new media through the ultimate purpose of the enterprise. However, the premise of this approach is to effectively connect the functions of the new media itself with the business objectives of the enterprise, so that it can be truly realized. Second, we can learn how enterprises should use new media through past experience in media application. However, from the perspective of the development status of SMEs, online marketing talents are in short supply. Therefore, SMEs should actively cultivate online marketing talents, strengthen internal training while constantly introducing external talents, and constantly promote the orderly development of online marketing. In particular, they should train professionals who are good at using big data technology to analyze online marketing activities.

At the same time, through the knowledge management of enterprise talents, the efficiency and quality of enterprise information application can be improved, so as to provide more scientific and reasonable decision-making basis for decision makers. Moreover, the implementation of knowledge management mode in enterprise's talent management is conducive to stimulating the innovation power of innovative talents, enabling them to open up innovative knowledge fields based on their own innovative consciousness and ability, and constantly construct new knowledge management, thus making enterprises have stronger core competitiveness and further making enterprises get better development. Therefore, enterprises should reform and develop their internal management through the application of new media, and integrate it into their own management mode. Enterprises are still faced with more problems and tasks to be solved in the application of new media, which requires the joint efforts of employees and managers within the enterprise, so as to ensure the continuous improvement of the competitiveness of the enterprise itself and realize the true progress with the times.

4. Conclusions

In the age of big data, business owners want to use big data technology to achieve management change, improve enterprise production efficiency and enhance enterprise market competitiveness. SMEs should combine their own

characteristics to grasp the law of big data development and seek management innovation. The data in enterprise knowledge service also has these characteristics, so it can The advanced data processing technology in the big data environment will be introduced into the knowledge service for technology-based SMEs to improve the service level of knowledge service for technology-based SMEs. The professional service model is more targeted and professional. It takes in-depth analysis of the knowledge needs of technology-based SMEs as an important part of institutional knowledge services, mainly including enterprise internal journals, competitive intelligence, media monitoring, topic tracking, scientific and technological novelty search, public opinion analysis, etc. Collaborative service mode is a knowledge service mode in which service organizations in different regions and institutions build and share knowledge resources together, so that they can complement each other's advantages, unite with each other, and jointly carry out knowledge service for small and medium-sized scientific and technological enterprises to meet their knowledge service needs. Therefore, small and medium-sized enterprises should make rational use of big data technology, improve the status quo of network marketing of small and medium-sized enterprises, study network marketing strategies, and serve the sustainable development of small and medium-sized enterprises.

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