

The Path for Digital Transformation of Enterprise Business Management

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Abstract. With the gradual popularization of big data and Artificial Intelligence (AI) products in society, their impact on various industries has also increased. The main line of enterprise management has changed from empirical decision-making to data decision-making, from more subjective in the past and easy to ignore the multi-variable characteristics of the market to more dependent on data accuracy, more accurate and rational data decision-making, so as to time data. There are still some cognitive gaps in the reasons and paths of its transformation. Therefore, this paper will focus on the digital process of enterprise business management and combine with other relevant literature to discuss the three obstacles that hinder the transformation, namely cognitive obstacles, process obstacles and human obstacles, and output the basic path of digital transformation of enterprise management in a structured way. Specifically, it includes lightweight tools, making it easier for the company to start the first step of transformation, process slicing, restructuring the key links of transformation, organizing actual combat, and ensuring the implementation of transformation. Finally, based on the previous analysis, this study will take a long-term view of the or uncontrollable risks brought about by digital transformation. It aims to fill the theoretical gap faced by the digital transformation of enterprise management from empirical decision-making to data decision-making.

Keywords: digitalization, data decision-making, enterprise digital transformation, transformation.

1. Introduction

Digitization is one of the core issues in all walks of life nowadays. With the rapid development of AI and big data, various industries have integrated big data into various professional fields. In the management of this position that has a crucial impact on the company's industry structure, the use of big data will undoubtedly greatly improve the efficiency of enterprises and reduce the opportunity cost of enterprise decision-making in the past. At the same time, in the face of a more complex and changeable market environment, the empirical decision-making under the traditional model may not be able to fully provide positive feedback on market changes. Its characteristics of being easily affected by individual subjective factors and lacking objective data support have laid the foundation for enterprise management to adopt digital transformation and become data decisions based on

objective big data and technology. From the microscopic point of view, compared with traditional decision-making methods, data decision-making has the advantages of higher objectivity, scientificity, accuracy and repeatability. In the face of complex problems, data decision-making shows more efficient solving ability. At the same time, the above advantages help enterprises move towards a more scientific management system while maintaining their competitive advantage and agility in a rapidly changing market [1]. From a macro perspective, the digital transformation of enterprises also has a positive impact on the urban digital economy. This emerging economic form is a key force to promote high-quality economic development, resolve regional development incoherence, and enhance the level of urban resilience [2]. The report shows that the AI penetration rate of global enterprise management processes in 2023 is 38 %, covering scenarios such as human resources, finance, and strategic decision-making , jumping to 62 % in 2024 [3,4]. This data simply and directly illustrates the significant increase in the use of data in enterprise management. However, the obstacles and specific paths of data-based transformation cannot be known from simple data. Therefore, in order to fill this gap, this paper first introduces the existing objective obstacles of enterprise digital transformation by combining other literature and conducting unified analysis. It is classified into three different types, and the obstacle factors are analyzed from multiple perspectives. Secondly, the enterprise transformation path is phased to improve the theoretical demand support of enterprise digital transformation. Finally, for a long-term goal and objective perspective, this paper also analyzes the uncontrollable risks that digital transformation may have for enterprises.

2. Obstacles to transformation

2.1. Cognitive disorder

Data decision-making is highly dependent on the degree of introduction of various technologies and data by enterprises, such as artificial intelligence algorithms, big data platforms, visual analysis tools and other technologies are indispensable technical means to achieve data decision-making. However, for enterprises, technical means and enterprise cognitive planning are highly bundled, and they are positively correlated in the process of enterprise management digitization. When there is a deviation in enterprise management planning, such as wrong prediction of customer expectations, ignoring business adaptability and customer demand stratification, this instrumental rationality-oriented decision-making is easy to lead to the separation of technology application and business value. For example, in the service of the catering industry, too much emphasis is placed on mobile phone scanning and ordering, and even tough measures are taken, which completely ignores the underlying needs of the elderly customer group. This move is caused by cognitive impairment. The failure of digital transformation of enterprises has not had a positive impact on corporate profits, but has caused customer activity, and loyalty to decline, and the loss of old customers.

2.2. Process obstacles

In the evolution of enterprise (Information Technology) IT systems, if it is in the decentralized construction period before the ' control stage ' for a long time, the independent selection of each department will inevitably form an island. (Nolan Stage Model). Each part is isolated from each other, and different data systems are used, which leads to the need for manual summary of later data, thus increasing the possibility of error. In addition, the technical system needs to match the social system, organizational structure and culture. When the department Key Performance Indicators

(KPI) is separated, the process coordination will inevitably fail. The key contradiction lies in the goal conflict. The sales pursue rapid delivery and need to be overstocked. The financial pursuit of inventory turnover and the need to minimize procurement is one of the core causes of planning deviation. At the same time, when the data is transmitted across the system due to different standards, such as different material coding rules, the information loss rate will soar with a high probability. (Information Entropy). Typical scenarios are as follows: the sales system accepts customer orders and transmits them to the production system, and the production system needs to re-enter order information. The artificial check price of the financial system leads to an increase of information entropy, which leads to the distortion of procurement volume calculation.

2.3. Human barriers

In the public-oriented service industry, the transformation of enterprise data is more dependent on human operation, which is also an uncertain obstacle that cannot be ignored. Digital transformation requires employees to master new skills, such as electronic price tag cloud operation, but the original ability structure of grass-roots employees, especially the elderly and low-education groups, is out of touch with new needs, so personal ability anxiety will be transformed into resistance to digital systems, which will lead to low utilization rate of data systems and adversely affect enterprise transformation. Secondly, the digital transformation of enterprises may be a digestion of personal rights for employees. In the traditional working mode, employees rely on information monopoly to gain influence. For example, supermarket clerks obtain customer favor through manual price adjustment, but digitization makes the transaction process transparent, so employees lose bargaining chips and are more resistant to digital transformation. For example, the key mechanism in the supermarket is the electronic price tag to achieve headquarters unified pricing, resulting in the store staff cannot 'flexible discounts', so the customer relationship control transfer to the system. Employees maintain the old power structure through negative resistance, such as deliberately not updating the price tag. It has a negative impact on the digital transformation of enterprises.

3. Analysis of transformation path

3.1. Lightweight tools

During the transformation of enterprises, they often face the fear of sunk costs that cannot be ignored. The traditional transformation requires a million-level investment. Once it fails, it will form a huge sunk cost, and small and medium-sized enterprises will fall into the prisoner's trap of 'no transformation waiting to die, turn wrong to find death'. The key to breaking the situation lies in the early stage of transformation. Lightweight tools can be used. Low-cost digital tools such as DingTalk Tencent documents can be invested in advance. The cost is less than the company's monthly profit, so that the sunk cost is lower than the decision-maker's psychological threshold. Help enterprises take the first step in digital transformation. Yiwu merchants use Changjietongyun ERP management supplier. The first-year cost is only 80,000-yuan, equivalent to the salary of 2 employees, but the benefit of the decrease in the delivery error rate is 120,000 yuan, and the return is 6 months. The formation of a positive cycle [5].

3.2. Process slicing

For small and medium-sized enterprises, if they directly transform the whole process, such as an end-to-end supply chain, they need cross-departmental collaboration and complex modeling, which

may exceed the capacity boundary of small and medium-sized enterprises. Therefore, the slicing process needs to be carefully selected: only cutting high-friction and high-value links, such as inefficient meetings and paper approvals that consume too much time and energy. The digital tools are implemented into the workflow, such as electronic signature instead of paper approval, and online meeting instead of monthly business meeting, so as to realize the precise transformation of a single slice. At the same time, it is necessary to manifest the value of data and focus on the improvement of single-point efficiency, such as the acceleration of approval by 80 %, so as to form a quantifiable evidence chain of transformation.

3.3. Organization actual combat

In the process of enterprise digital transformation, more measures are also needed to ensure the safe landing of the project. In order to avoid the pain points that digital projects cannot be landed, a special team can be set up in the landing stage to help grassroots employees adapt to and be familiar with scientific and technological means. The special group should also include IT commissioners, business backbones, and executives. The special group should also shoulder the role of teaching, special management, and demonstration promotion. In the early stage of implementation, IT commissioners eliminated technical uncertainty, business backbones establish persuasiveness, and executives push for transparency of the system and inject institutional pressure. Help other employees adapt to new technologies faster, more efficiently, and more easily. Secondly, develop a digital operation manual to help employees more easily replace the initial action, systematically learn and help employees gradually replace the old technology. At the same time, a reward and punishment mechanism are set up, such as the top three-monthly winners are awarded bonuses and commendations at conferences, and the bottom three consecutive times are deducted from personal performance, and the power stimulus policy is implemented to internalize digitalization into the daily life of enterprises, while promoting healthy competition in the industry.

4. Risks for transition

4.1. Loss of cost control

As mentioned above, the digital transformation of enterprises has great requirements for funds. For small and medium-sized enterprises, they need to be alert to the risk of cost out of control. When the growth rate of digital cost is greater than that of profit, enterprises are more likely to go bankrupt. At the same time, it is more likely to have the cost sunk effect (Sunk Cost Fallacy) when they have already experienced a large investment. Enterprises fall into the cognitive trap of 'having spent so much and stopping to lose more and continue to add budgets until the crash [6,7].

4.2. Lack of talent

Technical talents are the basis of digital transformation of enterprises. The lack of talent is one of the risks that cannot be ignored in enterprise transformation. For example, in the manufacturing industry, the digital transformation of enterprises requires compound talents. These kinds of talents who understand both industry and algorithms are often more scarce. The seller's monopoly of talents in the talent market leads to the tilt of bargaining power to employees, so other enterprises have a high success rate in mining talents. At the same time, in the transformation of enterprises, it is easy to appear the paradox of talent investment, such as the manufacturing industry, the logic of the enterprise is to have data results first, and then raise the salary to retain people, and the logic of

technical talents is to have salary guarantee first, and then put into precipitation [8,9]. Therefore, the manufacturing industry needs to pay the transformation premium in advance, but the ROI lag leads to decision-making hesitation, which also leads to an increase in the brain drain rate. The speed gap between technological iteration and organizational evolution is also one of the important reasons for the departure of talents. The technological progress cycle is often faster than the organizational adaptation cycle, and the technological breakthroughs valued by technical talents often conflict with the stability of self-knowledge and loyalty. This sense of tearing leads to the failure of the most advanced technological value to land, and ultimately promotes the departure of talents, causing harm to the company's digital transformation [10].

4.3. Customer fragmentation

In the process of enterprise digital transformation, enterprises will easily ignore the characteristics of customer groups, resulting in customer fragmentation and hindering the process of digital transformation. Enterprises equate digital adaptability with customer value, resulting in the systematic abandonment of physiologically vulnerable groups, such as the elderly and high-value non-digital indigenous people, and high-net-worth users who are accustomed to offline services. In order to save costs in the process of digitalization, enterprises choose to eliminate inefficient channels, such as closing offline outlets and promoting online services, which will lead to the failure of elderly customers, or the privacy concerns of high-net-worth customers, resulting in the loss of customer groups (Figure.1).

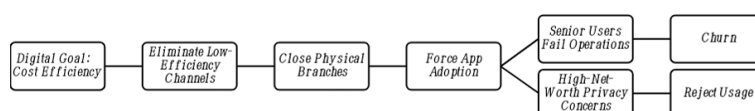


Figure 1. The path of digital transformation leading to customer churn

The most obvious impact of this customer churn is economic loss. Secondly, when the customer group is unable to enjoy the past services because of digitization, it will also easily cause social dissatisfaction and further affect the company's interests.

5. Conclusion

This study finds that there are some obstacles and risks in the digital transformation path experienced by enterprises. At the same time, in order to realize the digital transformation of enterprises, it is necessary to have clear planning for the transformation path. The path of enterprise transformation is as follows. Before the transformation, the company needs to clarify its own market positioning and reasonably avoid possible obstacles and transformation risks according to the company's own positioning. At the same time, the transformation goal is established in the early stage of the transformation, and the path arrangement is listed, such as tool lightweight, process slicing, organization actual combat and so on. Help the company to divide stages, make plans, and clarify stage goals during digital transformation. This paper provides reference suggestions for enterprise digital transformation and fills some gaps in the theoretical analysis of enterprise digital transformation path. It is conducive to the design and implementation of the path in the company's digital transformation. Finally, this study does not fully investigate the digital transformation of enterprises, lacks real data images, and may ignore the different emphases of different industries in

the digital transformation, ignoring the different purposes and nature of the digital transformation of enterprises, and making a relatively general analysis. In the future, people can continue to deepen under the above research, analyze the different properties of different industries, and further refine the research content in order to facilitate further research in this direction.

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