

Research on Influence of Data Assets on Enterprise Digital Transformation

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Abstract

Data assets have become a key and strategic resource in the process of enterprise digital transformation. The acquisition, management and application of data assets directly affect the success of enterprise digital transformation. Based on the concept and connotation of data assets, this paper discusses the impact mechanism of data assets on enterprise digital transformation, and puts forward corresponding suggestions. This study has important theoretical and practical significance for improving the efficiency of enterprise digital transformation and promoting enterprise digital transformation.

Keywords

Data Assets; Digital Transformation; Digital Economy.

1. Introduction

With the rapid development of digital, networked and intelligent technologies, digital transformation has become one of the key strategies for enterprises to gain competitive advantages. Digital transformation is not only the upgrading of technology, it also marks a comprehensive upgrade of business model, management model and even corporate culture. However, in this process, the acquisition, management and application of data assets become the core elements of the successful transformation of the enterprise.

Data is the cornerstone of digital transformation, and its value lies not only in its quantity, but also in its quality and application [1]. The effective acquisition of data assets is the first step in the digital transformation of enterprises and the basis for building a data governance system [2]. In the context of the era of big data, every transaction, every user's behavior, and every product's production are creating data, and the collection of these data constitutes the data assets of the enterprise. The management and application of data assets involves the quality, integration, sharing and protection of data, which plays a decisive role in the success of enterprise digital transformation. Therefore, the research on the impact of data assets on enterprise digital transformation not only contributes to the enrichment and development of theories, but also has important practical significance and application value.

2. Definition and Connotation of Data Assets

2.1. Definition of Data Assets

Based on the detailed analysis of the existing literature, we can systematically elaborate the definition of "data asset". The definition of data assets should include the following key dimensions: First, data assets are owned or controlled by the enterprise, which means that the existence and use of these data resources must be licensed by the enterprise or under the management and supervision of the enterprise. Secondly, data assets can create economic value for enterprises, which reflects the commercial value and economic benefits of data assets and is the most direct reflection of the value of data assets [3]. Third, data assets have scarcity, which indicates that within a certain range, a particular data resource is limited and difficult to replicate or replace. Finally, data assets are renewable, which means that value can be created

multiple times through multiple uses during their life cycle, reflecting the characteristics of data sustainability and recycling.

Data assets are the key resources for digital transformation of enterprises. To maximize their value, enterprises need to establish a sound data management system, including all aspects of data acquisition, storage, processing, analysis and application [4-5]. At the same time, enterprises need to improve their understanding of the value of data assets, closely integrate data asset management with corporate strategy, and fully release the potential of data assets through continuous technological innovation and management optimization to provide strong support for the sustainable development of enterprises.

2.2. Classification and Characteristics of Data Assets

2.2.1. Classification of Data Assets

Data assets can be divided into structured data, unstructured data and semi-structured data. Structured data is usually stored in relational databases, and its data structure is clear and easy to search and query, such as tables, databases, etc. Unstructured data includes text, pictures, videos, etc. Its data structure is not fixed, and it has various formats, such as text files, emails, social media posts, etc. Semi-structured data is between structured and unstructured data, containing tables or other structured elements, but the structure is relatively flexible, such as HTML documents, configuration files, etc.

2.2.2. Characteristics of Data Assets

The first characteristic is high value density. In large amounts of data, the value density (that is, the proportion of valuable information contained) is relatively high. Data assets with high value density can bring significant competitive advantages and economic benefits to enterprises. The second characteristic is the fast growth rate. With the development of technologies such as the Internet of Things, social networks, and mobile Internet, the speed of data generation continues to accelerate, and the amount of data is growing exponentially. Enterprises need to manage and analyze this data through efficient data processing tools and techniques. In addition, perishable is also an important feature. The timeliness of data determines the timeliness of its value. Outdated data may no longer have value, so businesses need to regularly update and maintain their data assets to maintain their value. Finally, data assets are difficult to replicate. The replication cost of data assets is low, but the value of the copied data assets does not increase. Enterprises need to control costs and risks in the process of data replication and sharing.

3. Influencing Mechanism of Data Assets on Enterprise Digital Transformation

3.1. Influencing Factors of Data Assets on Enterprise Digital Transformation

When discussing the impact of data assets on the digital transformation of enterprises, we must first recognize the central position of data in modern business operations. Data capitalization refers to the transformation of an enterprise's data into assets with economic value, which plays a crucial role in the success of an enterprise's digital transformation. Factors that affect the impact of data assets on the digital transformation of enterprises mainly include the data management ability of enterprises, the digital transformation strategy of enterprises, and the data demand of enterprises [6].

First of all, the enterprise's data management ability is the key to data assets. Data management capability covers the whole process of data collection, storage, processing, analysis and application. An enterprise with strong data management capabilities can effectively integrate and analyze its data to extract insights and knowledge that are beneficial to the business, promote scientific decision-making and business innovation. The strengthening of data management ability not only requires technical investment, such as the establishment of a

suitable data management system, but also involves the adjustment of organizational structure, staff training and other soft power improvement.

Second, an enterprise's digital transformation strategy is critical to the success of data capitalization. A digital transformation strategy is a comprehensive plan and top-level design of how to transform, in which direction, and how to leverage data assets to achieve business goals. This requires companies to set clear digital goals, define a technology roadmap, establish organizational assurance mechanisms for cross-functional collaboration, and continuous strategic execution. A forward-looking and feasible digital transformation strategy can provide clear direction and assurance for the effective use and value realization of data assets.

Finally, the enterprise's data requirements are the direct driving force in the process of data capitalization. The data requirements of enterprises include the management and application requirements of existing data assets, as well as the requirements for new data, such as user behavior data and market trend data. Enterprises need to define their data needs, and on this basis, plan data collection, processing and use strategies to ensure the effective use of data assets and the smooth advancement of digital transformation.

To sum up, factors such as enterprise data management ability, digital transformation strategy, and data demand together constitute important factors that influence data assets on enterprise digital transformation. These factors interact and influence each other, and jointly promote the process of enterprise digital transformation. In order to realize the maximum value of data assets, enterprises need to continuously optimize and innovate in these areas to ensure that the wave of digital development opportunities.

3.2. Driving Mechanism of Data Assets for Enterprise Digital Transformation

As the foundation and catalyst of enterprise digital transformation, data assets play a crucial role in the all-round digital transformation of enterprises. This part will deeply explore the driving mechanism of data capitalization in three dimensions of value creation, optimal allocation and risk management.

First, the value creation of data assets is the direct driving force of enterprise digital transformation. Through efficient data collection, storage, processing and analysis, companies can gain more accurate insights into market dynamics and consumer needs to optimize product design, production processes, supply chain management and customer service. The effective use of data assets can help enterprises develop new business models, such as personalized customization based on big data analysis, intelligent predictive maintenance, etc., to further enhance the competitiveness of enterprises and market share.

Second, the optimal allocation of data assets is a key link to improve the efficiency of enterprise digital transformation. Traditional enterprises often have the problem of data island and data resource dispersion. The promotion of data assets can promote the integration and sharing of internal and external data of enterprises, and realize the centralized management and intelligent deployment of data by establishing a unified data management platform. This can not only improve the timeliness and accuracy of data processing, but also reduce the decision risk caused by information asymmetry. In addition, the optimized resource allocation can also enhance the supply chain management and internal process coordination of the enterprise, thereby improving the overall operational efficiency.

Third, the risk management of data assets is the guarantee for the sustainable development of enterprises' digital transformation. In the process of digital transformation, data security and privacy protection are important issues that cannot be ignored. By establishing a sound data asset management system, enterprises can effectively identify, evaluate and respond to various data security risks. For example, data encryption, access control, and data backup are used to ensure the security and reliability of enterprise data. At the same time, good data governance

mechanisms also help improve compliance and reduce the legal and reputational risks arising from breaches of data protection regulations.

To sum up, data capitalization provides strong support for the comprehensive promotion of enterprise digital transformation through its driving role in three dimensions of value creation, optimal allocation and risk management. It not only promotes the effective circulation and utilization of internal resources, but also creates new value points and growth momentum for enterprises through interaction with the external environment. Therefore, enterprises should fully recognize the critical role of data capital and make it a core component of digital transformation strategic planning to maximize the potential value of digital transformation.

4. Suggestions on Data Assets to Facilitate Enterprise Digital Transformation

Nowadays, data assets have become one of the core competitiveness of enterprises. The digital transformation of enterprises not only requires advanced technical support, but also the effective management and application of data assets to promote the comprehensive upgrade and sustainable development of enterprises.

Improving an enterprise's data management capability is the foundation of digital transformation. Organizations should establish a robust data governance framework to ensure data quality, security, and compliance. This includes, but is not limited to, the establishment of a data governance committee, the development of data management policies, and the implementation of data classification and data quality control standards. Enterprises also need to adopt advanced data management systems, such as data lakes and data warehouses, to achieve centralized management and analysis of various data resources. In addition, enterprises need to strengthen investment in data processing and analysis, and improve the level of automation of data processing to reduce labor costs and error rates.

Developing a digital transformation strategy is the key to achieving transformation. According to their actual situation, enterprises need to clarify the goals and paths of digitalization, including determining the key areas of digitalization, investment priorities and expected results. On this basis, enterprises should develop a detailed digital transformation plan, clarify the medium - and long-term digital development goals, and formulate corresponding implementation plans and schedules. At the same time, enterprises need to establish a cross-departmental digital transformation working mechanism to ensure the smooth implementation of the transformation strategy.

Optimizing the allocation of data resources is an important means to improve the value of data assets. Enterprises should evaluate the value and potential of existing data assets, optimize resource allocation through the integration and reorganization of data assets, and enhance the availability and value of data. Enterprises can transform scattered and disorganized data resources into valuable information and knowledge by means of data cleaning and data integration. In addition, enterprises can open up new sources of revenue and maximize the business value of data assets through market-oriented operation of data assets, such as data productization and data service.

To sum up, the countermeasures of data assets and enterprise digital transformation involve many aspects such as improving data management capabilities, formulating digital transformation strategies and optimizing the allocation of data resources [7]. Only through comprehensive and systematic strategy implementation can enterprises fully utilize the value of data assets and achieve the success of digital transformation, thus standing out in the fierce market competition and promoting the sustainable development of enterprises.

5. Conclusion

In the current era of digital economy, data has become the core asset of enterprises and plays a crucial role in the digital transformation of enterprises. Through the methodology of literature research, case analysis and empirical research, this study comprehensively and deeply discusses the connotation and concept of data assets, as well as their importance and challenges in the process of promoting enterprise digital transformation, and then puts forward corresponding countermeasures.

First of all, literature research reveals the cornerstone position of data capitalization in the digital transformation of enterprises. By analyzing the existing literature, we realize that data capitalization not only provides data support for enterprises and accelerates the process of digital transformation, but also helps enterprises attract capital and talents by transmitting their digital capabilities to the outside world, thus enhancing their innovation ability.

The results of this study not only enrich the relevant theories of data capitalization and enterprise digital transformation in theory, but also provide valuable references and suggestions for improving the efficiency of enterprise digital transformation and promoting enterprise digital transformation in practice. With the deepening of digital transformation, the scientific management and innovative application of data assets will be the key to enhance the competitiveness of enterprises.

Based on the previous discussion, future research should explore the relationship between data assets and enterprise digital transformation more systematically and deeply, so as to improve the scientificity and credibility of research, and provide powerful theoretical support and practical guidance for enterprises' digital transformation practice.

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