The Emergence and Impact of the "Data Only Theory" Phenomenon in the Digital Transformation of Enterprises

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Abstract. In recent years, with the continuous promotion of enterprise digital transformation, the role of data in enterprise management has become increasingly stronger. Based on the background of enterprise digital transformation, this paper analyzes the role of data in enterprise management, and focuses on the causes and effects of "data only theory". This paper finds that data plays a positive role in improving enterprise information processing ability, optimizing business processes and supporting decision-making. It also has some limitations in the application process. If enterprises only rely on data analysis results in the decision-making process, they may ignore experience judgment and some important factors that are difficult to quantify, thus affecting the comprehensiveness of decision-making. Based on the above analysis, this paper believes that enterprises should use data more rationally in the process of promoting digital transformation. On the one hand, it is necessary to clarify the auxiliary position of data in management, on the other hand, it is necessary to strengthen the combination of data analysis and empirical judgment. At the same time, in the specific management links such as talent evaluation, a more diversified evaluation system should be established.

Keywords: Digital Transformation, Data Driven, Enterprise Management, Data Only Theory, Data Assets

1 Introduction

In recent years, with the continuous development of information technology, enterprise digital transformation has gradually become a common development trend. In this process, the role of data in enterprise management has been continuously enhanced, and it has gradually changed from the initial auxiliary tool to an important basis for participating in decision-making. In fact, more and more enterprises begin to optimize processes, evaluate performance and support strategic decisions through data analysis.

Previous studies have discussed this issue from different perspectives. For example, some scholars pointed out that digital transformation can have a positive impact on enterprise performance by improving information processing capacity and resource allocation efficiency [1]. Other studies have analyzed the role of data in enterprise value

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creation from the perspective of data assets [2]. To some extent, these studies show that data has become an important resource in the operation of enterprises.

However, from the perspective of practical application, the current research pays more attention to the positive effects of data, and pays less attention to the problems that may occur in the process of data use. In some enterprises, managers gradually tend to rely on the results of data analysis when making decisions, but they do not give sufficient consideration to experience judgment or specific situations. This phenomenon can be summarized as "data only theory" to a certain extent.

Based on this, on the basis of combing the role of data in the digital transformation of enterprises, this paper further analyzes the causes and effects of the phenomenon of "data only theory", and tries to put forward corresponding improvement ideas. Through this analysis, it hopes to provide some reference for enterprises to use data more reasonably, and also provide some supplements for relevant research.

2 The Role of Data in Enterprise Digital Transformation

2.1 The Impact of Data on Enterprise Decision Making

In the process of digital transformation of enterprises, data has gradually become an important reference for enterprises to make business decisions. In the past, when formulating business strategies, enterprises often relied more on management experience and judgment of market environment. With the development of information technology, the amount of data that enterprises can collect and process continues to increase. Through the analysis of these data, enterprises can more clearly understand the changes in market demand, customer behavior characteristics and their own business conditions, which improves the efficiency of decision-making to a certain extent.

Some studies have pointed out that the application of big data technology in enterprise financial management can improve the ability of data analysis and provide support for enterprise operation prediction and risk control [3]. At the same time, with the increasing importance of data resources, some scholars began to regard data as an important asset of enterprises, and studied its value evaluation and accounting treatment. In this context, data not only affect the daily business decisions of enterprises, but also gradually participate in the process of enterprise strategy making.

In addition, enterprises tend to establish corresponding data platforms or information systems when promoting digital transformation, which enables enterprises to obtain business information in a more timely manner and respond to market changes. Relevant research shows that digital transformation can have a positive impact on the production efficiency of enterprises by improving information processing capacity and resource allocation efficiency [1]. Therefore, in the current digital environment, data has become an important factor affecting enterprise decision-making.

2.2 The Role of Data in Business Process Optimization

In addition to having an impact on enterprise decision-making, data also plays an increasingly important role in enterprise business process optimization. By continuously recording and analyzing the data of production, supply chain and sales, enterprises can more clearly identify the problems existing in the operation process, and adjust and improve the relevant processes accordingly.

Through the integration and utilization of data resources, enterprises can have a more comprehensive understanding of their own operations, so as to improve management efficiency. In the field of financial management, big data technology can help enterprises to monitor capital flow in real time and analyze business risks, so as to improve the efficiency of financial management [3]. At the same time, as data resources are gradually incorporated into the enterprise asset system, their role in the process of enterprise value creation has also been paid more and more attention [4].

From the perspective of the overall operation of enterprises, digital transformation can also reduce the internal transaction costs of enterprises by improving the information sharing mechanism. Relevant research shows that enterprise digital transformation can have a positive impact on enterprise performance by improving the efficiency of resource allocation and information transmission [5]. Therefore, in the process of enterprise digital transformation, data has gradually become an important tool to promote business process optimization.

2.3 Data Driven and Organizational Management Change

With the wide application of data in enterprise operation, the organizational structure and management mode of enterprises are also gradually changing. Traditional enterprise organizations usually have a more obvious hierarchical structure, and information transmission needs to go through multiple links. In the digital environment, enterprises can achieve faster information sharing through the data platform, so as to improve the collaboration efficiency between departments.

At the same time, the results of data analysis have gradually become an important reference for enterprise performance evaluation and management decision-making. Research shows that in the process of promoting the digital transformation of enterprises, not only the technical system will change, but also the cognitive style of managers will be affected [6]. In a data-driven management environment, managers need to have a certain amount of data understanding ability and be able to make a comprehensive judgment between the data analysis results and the actual situation of the enterprise.

Therefore, from the organizational level, the wide application of data is promoting the gradual change of enterprise management mode.

3 The Emergence and Influence of "Data Only Theory"

3.1 The Formation Background of "Data Only Theory"

With the continuous promotion of enterprise digital transformation, the scale of data that enterprises can acquire and process continues to expand. At the same time, the popularity of various data analysis tools has gradually improved the status of data in enterprise management. Through data, managers are usually able to quickly and effectively formulate relevant decision-making schemes, which are often fast and effective in practice. In this context, some enterprises began to rely excessively on data analysis results in the process of operation and management, thus forming the so-called "data only theory".

From a technical point of view, the development of big data technology enables enterprises to process a large amount of information more quickly and is widely used in business analysis and risk management [7]. At the same time, as the value of data assets continues to receive attention, enterprises' attention to data resources has also significantly increased [4]. In this environment, some enterprises tend to regard the results of data analysis as the most important or even the only basis for decision-making.

3.2 The Influence of "Data Only Theory" on Enterprise Decision Making

However, it should be noted that the data itself is not completely objective. The data collection method, analysis method and interpretation process may be affected by many factors. Some studies have also pointed out that while big data promotes the improvement of enterprise efficiency, it may also bring problems in data quality, analysis bias and application methods [8]. Without necessary judgment, it is often difficult to fully reflect the true operating conditions of enterprises by relying only on data results for decision-making.

To a certain extent, data analysis can indeed help enterprises improve decision-making efficiency and enable enterprises to obtain more information support in the face of complex market environment. However, if enterprises rely too much on data indicators, it may also have a certain impact on the quality of decision-making.

For example, when an enterprise makes digital investment or transformation planning, if the project effect is evaluated only based on short-term data indicators, the long-term development strategy of the enterprise may be ignored. Research shows that the impact of digital transformation investment on enterprise value creation often lags behind, and its effect needs to be gradually reflected in a long period of time [5]. Therefore, relying only on short-term data for judgment may cause some deviation in enterprise decision-making.

In addition, if managers lack sufficient data analysis ability, they may misread the data results, thus affecting the direction of enterprise decision-making.

3.3 The Influence of "Data Only Theory" on Organization Operation

At the organizational level, if enterprises rely too much on data indicators, it may also have a certain impact on enterprise management. When enterprises overemphasize

quantitative indicators, some factors that are difficult to quantify but equally important, such as employee experience, organizational culture and market judgment, may be ignored. For example, in talent management, managers' excessive reliance on data will simply quantify and one-sided the value of talent, ignoring the diversity and complexity of talent development, which will restrict the scientificity and long-term effectiveness of talent management. It is easy to exclude talents with innovative ability, practical experience, team cooperation consciousness and other outstanding characteristics that are difficult to quantify, leading to the misunderstanding of talent selection of "only score, only index", forming a talent structure of "one thousand people", which is difficult to meet the needs of organizational development for compound and innovative talents.

Relevant studies have pointed out that in the process of enterprise digital transformation, the cognitive framework of managers will affect the way enterprises use data [6]. If enterprises lack the understanding of data limitations, it is easy to form excessive dependence on data in the management process. Therefore, in the digital environment, how to use data more rationally has also become a concern in enterprise management.

4 Suggestions and Development Path

4.1 Reasonably Define the Function Boundary of Data

In the process of enterprise digital transformation, data can provide important support for enterprise management, but data can not completely replace the judgment of managers. Therefore, when enterprises promote digital transformation, it is necessary to reasonably define the role of data in decision-making.

On the one hand, enterprises should make full use of the information advantages brought by data analysis to understand market changes and enterprise operations through data, so as to improve the scientificity of decision-making. On the other hand, it is also necessary to recognize that there may be some limitations in the process of data collection and analysis.

Research shows that as data resources are gradually incorporated into the enterprise asset system, their value continues to improve in the process of enterprise development [9]. However, if enterprises overemphasize data indicators and ignore the actual business environment and industry experience, it may affect the quality of decision-making.

4.2 Combination of Data Analysis and Management Experience

In the business activities of enterprises, the relationship between data analysis and management experience is not antagonistic, but should complement each other. Data analysis can provide an objective information base for enterprises, while management experience can help managers better understand the practical significance behind the data.

With the continuous promotion of enterprise digital transformation, managers need to gradually improve their data understanding ability, so that they can correctly interpret the data analysis results. At the same time, when making enterprise decisions, it also needs to make a comprehensive judgment based on the industry experience and the actual situation of the enterprise.

In addition, when evaluating the effect of enterprise digital investment, it also needs to be analyzed from the perspective of long-term development. Relevant studies have pointed out that the value of digital transformation investment often needs to be gradually reflected in a long time [5]. Therefore, the project evaluation should not only focus on short-term data indicators, but should be combined with the long-term development goals of the enterprise.

4.3 Promoting Rational Data Application Mechanism

In order to avoid the problems caused by "data only theory", enterprises also need to gradually establish a more rational data application mechanism. First of all, it should improve the enterprise data management system, standardize the data collection, processing and use process, so as to improve the data quality.

Secondly, enterprises can strengthen information sharing between different departments by building a unified data platform. Research shows that digital transformation can further improve enterprise performance by improving the efficiency of information transmission and resource allocation [10].

4.4 Promote Diversified Talent Evaluation Mechanism

In the process of enterprise digital transformation, data is not only applied to business management, but also gradually introduced into performance appraisal and talent evaluation. From the actual situation, some enterprises began to rely more on quantitative data indicators when evaluating employees, such as performance data or work output, which improved the efficiency of evaluation to a certain extent.

However, excessive reliance on these data indicators may also cause some problems. On the one hand, the value of some posts is difficult to be measured by simple data, such as teamwork ability or innovation ability. On the other hand, there are differences in data indicators between different posts. If there is no reasonable adjustment, it may affect the fairness of the evaluation.

Therefore, in the practice of enterprise management, it is necessary to introduce more diversified evaluation methods on the basis of data evaluation. For example, data indicators can be combined with supervisor evaluation, colleagues' feedback and specific work performance to make a comprehensive judgment on employees from multiple perspectives. In this way, it can not only play the reference role of data, but also make up for the limitations of data evaluation to a certain extent.

In the long run, the establishment of a more reasonable talent evaluation mechanism is also of certain significance for enterprises to improve management level and enhance organizational vitality.

5 Conclusion

Based on the background of enterprise digital transformation, this paper analyzes the role of data in enterprise management, and discusses the emergence and impact of "data only theory". Research shows that data has obvious advantages in improving enterprise information processing ability, optimizing business processes and supporting decision-making, but there are also some limitations in the actual application process. If an enterprise relies too much on the results of data analysis, it may ignore the empirical judgment and some important factors that are difficult to quantify, thus affecting the quality of decision-making.

On this basis, this paper believes that enterprises should treat the role of data more rationally in the process of promoting digital transformation. On the one hand, it needs to give full play to the supporting role of data in management, on the other hand, it should also combine data analysis with management experience. At the same time, in specific management links such as talent evaluation, it should avoid using data indicators as the basis for evaluation, but introduce more diversified evaluation methods to reflect individual value more comprehensively.

Future research can further explore the specific impact of "data only theory" on enterprise performance at the empirical level, and conduct in-depth analysis in combination with different industry situations.

In general, how to make good use of data is more important than whether there is data. Only under the premise of rational use can data really help the development of enterprises.

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