# Analysis on the Impact of Big Data on Enterprise Management Decisions

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**Keywords:** big data; enterprise management; decision making; influence

**Abstract:** In recent years, with the rapid development of information technology and market economy, the era of big data has emerged, and enterprise decision-making management must make appropriate changes. This paper first introduces the definition of big data, then analyzes the characteristics of big data technology, and finally puts forward the impact of big data on enterprise management decision-making, hoping to provide reference for those in need.

## 1. Introduction

In recent years, with the development of China's science and technology, the comprehensive use of information technology and the Internet and family members in China's enterprises can not only lay a solid technical foundation for promoting the sTable development of enterprises, but also provide a strong guarantee for improving the efficiency of enterprise decision-making management. Originally, enterprises only rely on the database management system when collecting data. This management model is difficult to improve the decision-making level of enterprises.

## 2. Definition and characteristics of big data

### 2.1 Definition

Big data, in simple terms, mainly refers to a large amount of data aggregation with a certain function. It can be clearly recognized from a large number of vocabularies that the data aggregation in the data is large in scale and quantity, not just limited to people. understanding. In terms of analyzing, managing, and collecting big data, professional hardware facilities and software devices must be used. Otherwise, general equipment cannot meet the actual functional requirements of big data analysis. Big data is defined as data that is large in scale, fast in circulation, and diverse in type. The so-called big data technology mainly refers to the technology that utilizes big data, in other words, the technology that can use, manage, and collect big data in a short period of time.

### 2.2 Features

In general, the characteristics of big data technology are reflected in the following aspects: First, massive data. Massive data is the most important feature of big data. Compared with conventional data, the amount of data in big data is described by a large amount. Currently, the common data files also use GB units, but big data is already TB level long ago. Even the data collection of PB units is very common, especially in business, many large-scale retail enterprises, The amount of data has exceeded terabytes many years ago. Second, it spread quickly. The data volume of big data is large, so higher requirements are put forward on the data transmission speed in the data processing process. In recent years, under the background of the continuous development of information technology, network technology and mobile communication technology are developing rapidly, which also leads to faster data transmission speed and production speed, which also greatly promotes the sTable development of big data technology. It is precisely because of the faster circulation of data that it can fully play the important role of big data technology itself. Third, a variety of data. Over the years, with the continuous advancement of the times and the rapid development of information technology, the data types are no longer single, but diversified. Usually, data is mainly divided into two different types, one is structured data, and the other is unstructured data. First of all, structured data mainly refers to the data that appears in the behavior of the

underlying performance. The process of occurrence of this type of data is very similar, so there is no big difference in the structure of the data. The data must be processed in a special mode so that the information involved in the data can be obtained. Second, unstructured data is presented in different ways, especially in radio frequency identification and text transmission, which can cause a lot of unstructured data information. Fourth, value. Big data involves many economic and social values. However, not all data in big data can produce certain value. Only some data and effectively processed data will gain more value. In other words, it is necessary to continuously explore and apply the actual needs of big data so that it can appear in all walks of life in society, so as to better promote the sTable development of society.

## 3. The impact of big data on business management decisions

### 3.1 Impact on business management decision data

### 3.1.1 Data Management in the Background of Big Data

Big data is the most important feature of the background is that the data size is quite large and various types. Before using the data, it is necessary to integrate and select data to ensure the correctness of the data, and then use the same organization to store the data information. In the past, data analysis methods and management methods have been unable to meet the actual needs of the big data era. Enterprises must innovate their own technologies to adapt to the development of the big data era. Because of the rapid emergence of data and the need for real-time processing of data, most companies have fully realized the importance of real-time data in research and analysis. And highly value the real-time data stream. How to properly use and effectively process these real-time data is the main problem that needs to be solved urgently in enterprise management decision-making. At the same time, we must actively do a good job in management decision-making based on big data enterprises. First, we need to have a clear understanding of the relationship between them and other data. In fact, there is a close correlation between each piece of data and the value of big data. In the context of big data, the change between each data is the most prominent change. Using the correlation between data to make a comprehensive analysis and mining all the value information contained in big data is the main advantage of big data. Extracting valuable information from various types of data can provide a more comprehensive service for business management decisions, which is also the biggest demand of modern enterprises.

### 3.1.2 Knowledge Management in the Background of Big Data

Knowledge is involved in big data, and the key element in making decisions is knowledge. With the rapid development of resource-based enterprise theory, people gradually realize the key role of intangible knowledge in enterprise development. In the era of big data, it is necessary to dig all kinds of data information with scientific truths in an all-round way, and gain more knowledge, and enterprises can increase economic benefits. The well-known scholar Ross has a close relationship between the knowledge of his managers and the size and capabilities of the company. In the era of big data, companies can fully understand business information and use knowledge to improve their decision-making management methods. These are the important values of big data when it comes to collating and analyzing large amounts of data, and getting the main information that affects the development of the enterprise. In corporate decision-making, subjective decision-making and objective decision-making need to be organically combined.

### 3.2 Affecting the business management decision-making environment

According to data released by the US Internet Data Center, the amount of data appearing on the current network is increasing at a rate of 45% per year. The sudden rise in the data indicates that the era of big data has emerged. In this case, the enterprise management decision-making environment has gradually changed. For example, the first question that enterprises need to consider in the management decision-making process is how to correctly and effectively collect relevant market environment data information, and then analyze, integrate and process the collected data reasonably,

and implement the accurate data. Enterprises can improve the scientific nature of decision-making. In other words, big data affects the enterprise management decision-making environment, which is embodied in the process of collecting information and formulating corporate management decision-making programs. As far as the current domestic enterprises are concerned, there will be a large amount of data and more data in the development of enterprise operations. Therefore, in this case, enterprises must use information technology to analyze and process many data, and make the right decision to promote the sTable development of the enterprise. Although most enterprises in China have realized that the era of big data has emerged and pay more attention to big data, the application of big data technology in China is not yet mature. The problem that Chinese enterprises need to consider is how to use big data technology to increase enterprises. Competitive advantages. [1] In the era of big data, for enterprises, management decisions are not just technologies, but also new types of decision-making methods. Modern enterprises should adapt to this change as soon as possible and firmly grasp various development opportunities.

## 3.3 Involved in the enterprise management decision-making participants

### 3.3.1 Decision-making changes in decision-making participants in the context of big data

In the era of big data, the main factors affecting decision-making are still decision-making participants. Big data technology has changed management decision-making methods, no longer relying on past experience or accumulated theoretical knowledge, or blindly analyzing data with its own subjective delusions, and the role of participants has changed more or less. First of all, in terms of enterprise decision-making managers, in the original decision-making, because of the lack of data, many major decisions rely only on management leaders to make judgments based on their own experience, but in the decision-making under big data, there is no need to worry about the lack of important data and difficulty. The key task for management leadership is to find the problem in a timely manner. Secondly, as far as the employees at the grassroots level are concerned, the information needed for decision-making can be obtained in the first place, which can greatly improve the decision-making level. In the context of the big data era, the serious challenge is that management leaders need to work together with enterprise employees to improve decision-making management efficiency.

### 3.3.2 Data analysts based on big data

In the context of big data, the role of data analysts is more significant and plays a vital role in business management decision-making. In fact, data analysts use distributed processing technology and statistical analysis technology in their work to find valuable information from a large amount of data, and to convey this data to decision makers to help decision makers make the right decisions. According to the relevant survey results, the talents in the computer industry are far from enough. There are quite a few big data analysts who meet the needs of social development. This is a major problem faced by many enterprises in the application of big data technology in the management decision-making process. [2] Generally speaking, it is not a simple matter to cultivate excellent personnel that are consistent with the development of the times. It takes a long time to carry out training and education.

## 3.4 Impact on Enterprise Management Decision Technology

The rapid development of big data technology often has an impact on enterprise management decision-making technology. As a management leadership, we must keep pace with the times and adopt the latest data processing technology in the world.

### 3.4.1 Data analysis and data processing technology based on cloud computing

In the past, data analysis technology has been difficult to meet the actual needs of data analysis and processing in the current society. It is impossible to use the data reasonably to fully exert its own value. Therefore, it is necessary to improve the existing data analysis technology. Cloud computing technology can effectively process big data, and can also provide strong support for data

management and data analysis. However, it must be noted that this technology can solve the problem with a large amount of difficulty: First, regardless of the source route, regardless of the structure of the data, can be unified structured processing. [4] Second, comprehensive analysis and processing of data. With cloud computing technology, companies can find information that helps decision-making in a short period of time, continuously optimize the entire decision-making process, and improve the rationality and scientificity of decision-making. Generally, the management decision of the enterprise attaches great importance to whether the data processing analysis has certain visibility, and the enterprise can fully utilize the visualization technology to display the results of the final analysis, and express the complex data analysis and processing results in an intuitive and vivid form. This can reduce the difficulty of understanding.

### 3.4.2 Knowledge Discovery Technology in the Background of Big Data

Big data sources are widely available, diverse in types, and large in number, so extracting valuable knowledge from big data can help business management leaders make accurate decisions. Specifically, the knowledge discovery technology must perform arithmetic processing on many data. Second, it is important to ensure that these data are processed in real time, as the value of the data is less and less with the passage of time. [5] At the same time, it is necessary to build knowledge discovery technology based on unstructured storage data and semi-structured storage data according to various types of data and potential associations, and to mine potential knowledge in big data. It reflects the scientific and rationalization of corporate management decisions.

### 3.5 Impact on Enterprise Decision Management Organization

In the era of big data, the role of corporate decision-making participants has changed a lot, and it is necessary to re-define decision-making power, which will inevitably affect the overall decision-making organizational structure of the enterprise. In fact, the most important factor in the change of corporate decision-making organizational structure is the concentration and dispersion of decision-making. With regard to decision-making concentration and distribution, its related theory proposes that the forecasting environment will not have a significant impact on the organizational structure of the enterprise, and constitute a hierarchical decision-making structure, if significant decision-making effects can be obtained in an unknown environment. In the process, computer technology is often used as an effective method to improve the efficiency of data processing. And the organizational structure of the enterprise is also susceptible to factors such as transfer and knowledge distribution. If the knowledge is relatively concentrated, a centralized decision structure must be adopted. [6] On the contrary, if knowledge is more dispersed, decentralized decision-making bodies should be adopted. In the context of big data technology. The decision-making environment is more complex, the knowledge distribution is quite wide, and decentralized decision-making has become one of the common forms of decision-making. As far as distribution is concerned, the most important reason why companies cannot improve their decision-making level is that there is no scientific allocation of decision-making power. Enterprise employees have a large amount of information, indicating that the decision-making power is large, and the relevant indicators of the organization will be higher. Under the background of big data technology, the in-depth study of the organizational structure construction method has gradually become a key content of the organizational structure of enterprises.

### 4. Conclusion

All in all, in the era of big data, many aspects of enterprise management decisions have different impacts, such as management decision data, management decision technology, management decision organization and so on. For enterprises, in the process of management decision-making, it is necessary to make full use of big data technology to solve the problems existing in their own management, and further improve the technology and knowledge of enterprise management decision-making, and maximize the level of enterprise decision-making management.

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