

# Research on the Application of Big Data Technology in Business and Financial Integration of Enterprises

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## Abstract

With the continuous progress of China's scientific and technological level, the Internet has become more and more popular, and the application of big data technology in enterprises is increasing. The original traditional financial management model of enterprises has become failed to adapt to the actual business needs of the new era. Many enterprises are trying to transform the original financial management model to an integrated model of business and finance integration. The integration of business and financial of enterprises cannot be separated from the support of big data technology and financial sharing platform. This paper analyzes the application status of big data technology in the integration of business and finance, and explores the effective application of big data technology in the integration of business and finance, so as to help enterprises better apply big data technology to business and financial integration .

## Keywords

**Big Data Technology; Enterprise; Integration of Business and Finance; Applied Research.**

## 1. Introduction

With the continuous development of China's economy and society and the increasing progress of information technology, the amount of data and information in China's society has grown exponentially, and all walks of life have entered the era of big data. Enterprises need to make full use of big data technology, give full play to the advantages of big data technology in their daily management, and better cope with the changing external environment in the era of big data. Business-finance integration is a new type of financial management mode for enterprises in the current information age . This financial management mode emphasizes strengthening the effective combination and real-time sharing of enterprise business data and financial data by means of information technology in financial management. The financial activities of the enterprise are closely connected with the business activities, and the continuous integration can promote the enterprise to better cope with the changes in the external environment and effectively improve the overall management level of the enterprise. The integration of business and financial integration of enterprises is inseparable from the intelligent information platform of big data. The effective application of big data technology in the integration of business and financial integration of enterprises can ensure the smooth development of the management mode of business and financial integration of enterprises.

## 2. Integration of Business and Finance and the Application of Big Data Technology

Integration of business and finance is the process of integrating business and finance. It mainly extends finance to the front end of business, provides decision support for the company's business, and supervises and evaluates it in real time and integrate the business activities and financial data in the daily operation of the enterprise through informatization. The integration

of business and financial of enterprises can give full play to the functions of financial information in predicting, controlling and evaluating the daily business of enterprises, and transforms the role of enterprise finance from the traditional recording role in the past to a business partner in the era of enterprise informationization .

Application of big data technology is an important technical guarantee for enterprises to realize the integration of business and financial, which can effectively enhance the analysis of process data and better promote the process of business and financial integration of enterprises. Big data technology will allow finance to mine more process information, and can also fully mine relevant massive business information data in business, so that financial data and business data can be integrated and analyzed collaboratively, and corporate financial personnel can make full use of corporate financial and non-financial information, and then help enterprises to formulate the correct strategy and improve the competitiveness of enterprises.

### **3. Application Advantages of Big Data Technology in the Integration of Business and Financial of Enterprises**

#### **3.1. Big Data Technology Can Broaden the Scope of Enterprise Data Collection**

The financial management of an enterprise is inseparable from the collection of data. The size of the data collection scope will directly determine the accuracy of the data , which will have a significant impact on the effect of related follow-up financial work. At present, the financial work of enterprises mainly collects conventional business data and financial data , but in the new era, enterprises have a lot of semi-structured data and unstructured data in addition to these structured data, which makes data collection increasingly difficult. The increase also makes the data collection and arrangement of the integration of business and financial more difficult. The application of big data technology in data collection can more effectively collect semi-structured data and unstructured data, and can clean and organize the collected data, so that different types of data can be effectively applied. Big data technology can also more conveniently collect view data and image data related to enterprise business, further reducing the difficulty and workload of enterprises in collecting these data, and improving the comprehensiveness and accuracy of business-finance integration data collection .

#### **3.2. Big Data Technology Can Expand the Space for Enterprise Data Storage**

Integration of business and finance of enterprises not only needs to collect various business data and financial data, but also needs to effectively store these various types of data, so as to facilitate the subsequent retrieval, analysis and application of these data , which requires there must be a large data storage space to store these massive data in order to ensure the normal implementation of the integration of business and finance. The application of big data technology in the integration of business and financial of enterprises can effectively expand the data storage space of enterprises, and the effective expansion of data storage space can be realized by using distributed storage technology and shared cloud platform. The database built on the basis of distributed storage technology can also better ensure the security and stability of the database, and facilitate the unified processing of multiple types of data. It can also reasonably divide the database according to the different business nature of the enterprise in the process of integration of business and finance, and classify and store various data of different business nature. The shared cloud platform can ensure the rapid transmission of data and information for enterprises, make data query and invocation more convenient, and promote the realization of the integration of business and financial of enterprises.

#### **3.3. Big Data Technology Can Enhance the Depth of Enterprise Data Analysis**

Business and financial integration of enterprises is inseparable from data analysis. Only when enterprises conduct in- depth data analysis, can the accuracy of enterprise financial and

business decisions be ensured, so that enterprises can have more accurate and effective data to participate in decision-making. Traditional data analysis technology of enterprises cannot analyze data in a comprehensive and in-depth manner. In many cases, the results of data analysis are prone to deviations, which seriously affects the accuracy of data analysis and can not provide more accurate data reference for business and financial decisions of enterprises. Traditional data analysis methods have great limitations and cannot conduct in-depth analysis of this data especially when analyzing of semi-structured data and unstructured data. The application of big data technology can effectively break through the limitations between data types, and can effectively conduct in-depth analysis of various types of data through cloud computing-based platforms. Structured data, structured data, or unstructured data all can rely on the cloud effective analysis through calculation, which greatly enhances the depth of enterprise data analysis, and provides a more objective and accurate data reference for the integration of business and financial of enterprises.

## **4. Application Strategies of Big Data Technology in the Integration of Business and Financial of Enterprises**

### **4.1. Strengthen the Data Collection Link of Enterprises**

The daily financial work and business work of an enterprise will generate a large amount of various types of data. The amount of data is huge and the types are different, which brings great difficulty to the data collection work and the business finance integration of the enterprise. For this reason, we need to strengthen the enterprise data collection link and apply big data technology to this link to ensure the efficient and accurate collection of enterprise receipts. The business data involved in the daily business of the enterprise is mainly the data of the procurement link, the data of the production link and the data of the sales link. The enterprise must strengthen the control of the supply, production and sales links. When collecting procurement data, corporate finance needs to start from the formulation of procurement plans, the selection of suppliers, the signing of procurement contracts, and the settlement of contract payments, so as to ensure the comprehensiveness of procurement data collection. When collecting production data, corporate finance should start from the formulation of production plans, the acquisition of raw materials, and the settlement of production costs to ensure that all production data can be collected in place. When collecting sales data, enterprises should pay attention to the sales data of sales tasks, sales plans, after-sales service, etc., in order to avoid omissions in sales data collection. When collecting external environmental data, enterprises should focus on policy information, industry information, competitor information, etc. Enterprises applying big data technology in the process of integration of business and finance must strictly control the above-mentioned supply, production and sales links. From the formulation of the initial procurement plan to the formulation of the production plan, to the formulation of the sales task, a comprehensive receipt collection and monitoring must be carried out. After the receipts are collected, the information sharing cloud platform should be updated in time to achieve the integration of data collection and sharing, in order to promote the smooth progress of the business and financial integration analysis of the enterprise, thus ensuring that the financial management of the enterprise can be combined with the enterprise business in real time, so as to promote the integration of business and financial of enterprises.

### **4.2. Pay Attention to the Effective Integration of Enterprise Data**

After collecting a large amount of data, enterprises need to effectively integrate these data, mainly to reasonably integrate financial data and non-financial data. Only when data integration have been done well can the integration of business and financial be guaranteed. Big data technology is very important for the data integration of enterprises. The rational use

of big data technology can improve the logic of data input and the interactivity between data. The unique data sharing mode can also optimize the allocation of data resources. Generally speaking, there are structured data, semi-structured data and unstructured data. When enterprises integrate business and financial, they need to classify and clean these data according to the actual production situation, so as to improve the application value of these data. At the same time, it is necessary to clearly define the channel boundaries of these data to prevent mess and confusion, so as to ensure the pertinence of enterprise database construction. At the same time, enterprises should also clarify the internal relationship between different data types, and promote the effectiveness of the docking between various databases. Enterprises should strictly abide by the logic when building the database, and carry out data cleaning to ensure the integrity and reliability of the captured data. Finally, we can establish a comprehensive and integrated data sharing center and apply big data technology to provide guarantee for the integration of enterprise financial data information and business data information.

#### **4.3. Optimize the Storage Link of Enterprise Data**

In the storage process of enterprise data, it mainly faces two problems: data storage order and data storage space. In order to optimize the storage of data, it is necessary to start from the two aspects: data storage order and space. As for the problem of data storage order, there has been a preliminary order during data integration. Data is divided according to different types during integration. When data is stored, it is necessary to establish a macro logic for data storage. According to purchasing data, production data, sales data, and environmental data, we should establish different large databases respectively, and then further subdivide each database according to different stages of the business process. For example, our procurement database can be subdivided into basic procurement information database, supplier database, procurement fund management database and so on according to the business process. The problem of data storage space, has been partially solved with the development of science and technology. The traditional data storage mode of enterprises is to store data by purchasing servers. This kind of storage space for data is very limited. For data storage without big data technology the managed company may be barely enough. It is obviously not suitable for companies that need to store massive data for the integration of business and financial. At this time, we need to rely on the cloud platform of big data technology for data storage: store all these data in the cloud, i.e. upload, store and download data through the cloud, which solves the problem of insufficient data storage space. At the same time, we also need to pay attention to the security of cloud data. We can use advanced network security protection technology to prevent data loss that may occur during data storage and backup, and finally realize the continuous optimization of enterprise data storage.

#### **4.4. Develop a Report on the Results of Enterprise Data Analysis**

Enterprise big data technology can innovate the data analysis method of the enterprise, which is not only reflected in the improvement of enterprise data capacity, but also in the development of the computing power of the data storage platform. In the past, traditional data analysis was mostly based on cost-effective considerations. The sampling method is used to carry out the data analysis of the whole sample, so the results of the analysis will lack accuracy and comprehensiveness. The data stored on the cloud platform through big data technology is divided into databases in a fine and orderly manner, so that the data capture is more prepared and complete. When an enterprise needs to make a certain decision, it can directly grab all the data related to the decision, and conduct a comprehensive analysis of the data through the cloud platform combined with various analysis tools to ensure that comprehensive data analysis results are obtained. Only by ensuring the accuracy of data analysis results can the integration of business and finance data of enterprises effectively promote enterprise decision-making. For

example , it is often difficult to obtain accurate and objective budget results in the budget of an enterprise under the traditional data analysis method. Now , through the application of big data technology, the cloud computing big data analysis platform can be used to comprehensively analyze various historical data and internal and external enterprise data. Finally, the budget model is constructed to get more accurate and objective budget data results. After completing the data analysis, the enterprise must output the data analysis result report, which is a very critical link in the integration of business and financial of the enterprise. This process requires the enterprise not only to ensure the timely delivery of the report, but also to do a good job in the management of the historical report of the enterprise. Through the application of big data technology, enterprises can promote the improvement of the enterprise reporting system, and classify the reports according to the types of management decisions , i.e. divide the reports into strategic decision reports, budget decision reports, business decision reports and performance assessment reports, so as to adapt to the business industry integration's reporting characteristics of multi-type and multi-form.

## 5. Conclusion

To sum up , after the enterprise carries out the integration of business and finance, it not only allows the financial personnel of the enterprise to obtain various financial and non-financial data more conveniently , but also enables the financial personnel of the enterprise to better analyze and manage the data. It can also ensure the better coordinated implementation of corporate financial work and business work. The application of big data technology in the integration of business and financial of enterprises can not only expand the scope of data collection , but also expand the storage space of enterprise data, enhance the depth of enterprise data analysis, and promote the effective integration of business and financial, so as to line with the actual needs of the future development of the enterprise. When enterprises apply big data technology in practice, they need to strengthen the collection of enterprise data first, and then pay attention to the effective integration of enterprise data, continuously optimize the data storage link, and finally obtain the most accurate data analysis result report, so as to achieve the real and effective connection between enterprise financial work and business, and finally realize the integration of business and financial of the enterprise.

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