

Retraction

Retracted: Economic Information Analysis and Its Application in Decision-Making under the Background of Big Data

Mobile Information Systems

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

- [1] S. Chen and I. Sanweng, "Economic Information Analysis and Its Application in Decision-Making under the Background of Big Data," *Mobile Information Systems*, vol. 2021, Article ID 4471485, 6 pages, 2021.

Research Article

Economic Information Analysis and Its Application in Decision-Making under the Background of Big Data

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In the Internet age, data information is expanding at an alarming rate, and at the same time, it is showing a trend of diversification and fragmentation. How to make reasonable use of this intricate information and effectively use it in the work to give full play to the value of big data (BD) seems urgent. Based on this, this paper studies the economic information analysis and decision-making system under the background of BD. This article first analyzes the development status of our country's industrial economic decision-making technology, then studies the service role of BD on macroeconomic decision-making in industrial development, then conducts an in-depth study of industrial economic information analysis methods and trends, and designs an industrial economic information model. Finally, this article tested the running speed and interactive function of the system. The test results show that the running speed of the system is very fast, and the interactive function is very accurate.

1. Introduction

“Data” are known in Latin as “fact” and “known.” Big data refers to the huge amount of data involved, which cannot be captured, managed, processed, and sorted into more active information to help enterprises make business decisions in a reasonable time through the current mainstream software tools. Big data is essentially information, but it contains not only direct information in the traditional sense but also potential value information hidden in the data. Therefore, in the era of big data, not only the information volume is huge but also the depth and level of information are unprecedented. Specifically, big data is characterized by four aspects: large data volume (Volume), low value density (Value), fast growth rate (Velocity), and multistructured (Variety), “4V” characteristics. For a country, region, or enterprise to gain a firm foothold in the increasingly fierce international competition and achieve development, it must analyze and make decisions on various factors that may affect its own development. Adjust the development strategy in time, and take corresponding measures to achieve the expected strategic

goals and economic indicators [1]. Industrial economic analysis is to study the relationship between the future development trend of the industrial economy and various industrial economic indicators, so as to accurately describe the past, make scientific judgments and decisions on future trends, and provide information for the macrocontrol of the industrial economy [2]. In our country, with the continuous improvement of the market economy and the continuous deepening of corporate reforms, the main function of the government is gradually changing to create a good economic environment and strengthen the control of the macroeconomy. Therefore, government departments need to speed up the selection and application of correct economic analysis methods, establish an economic information analysis and decision-making system, strengthen the analysis of the industry business, and provide a basis for making decision-making suggestions to leaders in a timely manner.

With the rapid development of science and technology and the rise of cloud computing and Internet of Things, various social networks make an explosive trend of information; in addition, 5G will be based on high-speed low-

delay internet cloud service technology revolution, and it will greatly improve user service quality and bring more possibilities to the cloud service; the internet will flood into more levels of people and promote the data types and category of the whole society; the arrival of the big data era makes information communication more convenient, which will cause a new round of information technology revolution.

Chinese scholar Wang pointed out that, in terms of industrial economic information analysis, it is necessary to adapt to the development of the times and use relevant data analysis methods to integrate information processing solutions that are compatible with industrial development to ensure that the industry can develop steadily. From the development process of big data, not only China attaches great importance to big data but also the whole world realizes the huge development potential of big data. It has become a trend to research and develop big data technology to promote economic development, enhance national strength, improve the social governance mechanism, and improve government services and government supervision [3]. Di pointed out that BD is the result of human scientific and technological progress, and it is also the general trend of social development. In the context of BD, BD can create very favorable conditions for the data analysis of market economy information and the formulation of marketing decisions [4]. Wang pointed out that, in the current data analysis of various industries, mining technology is generally used to mine valuable data from massive data. Computer research is mainly combined with genetic algorithms to ensure the scientificity and rationality of data mining and technically guarantee the development of our country's social economy [5].

Based on the computer as a computational tool, the computer is made a necessary tool for modeling [6]. There are many widely used and well-established software systems in analysis and data mining. These systems are highly versatile but require certain expertise and usually only the work of the final analysis phase. It is inconvenient to use to analyze specific industrial economic information and specific application problems in the system. In order to make the analysis of some practical problems more convenient, it is necessary to study the analysis systems applying specific problems. Economic analysis systems in many industries have centered on large amounts of operational data, using mathematical models for analysis and decision-making. A single system typically contains multiple mathematical models [7]. This paper believes that the impact of big data on the decision support process of enterprises and organizations is of research value. At present, in other fields such as business and economy, decision-making has increasingly relied on data and analysis rather than experience and intuition. In the future, enterprises or organizations will face more challenges, such as how to collect data effectively and how to analyze data automatically and intelligently. How to efficiently distribute and collect data and intelligently and reliably execute and analyze data is an urgent problem for enterprises to think about and solve, which also challenges the ability of enterprises. Such challenges will lead to a series

of changes in the decision-making process of organizations or enterprises, such as collecting data for decision-making, making plans for decision-making, and finally selecting decision-making plans.

2. The Service Role of Big Data in Macro-Decision-Making for Industrial Development

2.1. The Connotation of Macro-Decision-Making for Industrial Development. Industrial development macro-decision-making refers to the guidance and planning of major issues such as development goals, strategic measures, and implementation steps for each industry in the national economy at each stage of the life cycle. Structural change is the core, and industrial structure optimization is the direction. Industrial development not only includes an increase in quantity but also includes a qualitative leap [8]. The macro-decision-making of industrial development is an important part of the macro-decision-making and the highest level of the national economy. The macro-decision-making of industrial development has the following characteristics: from the perspective of decision-making institutions, it is not a logical combination of people or more individuals nor composed of scholars in one field or more fields, but experts and scholars, government officials, and other high intelligence groups in multiple industries and fields. From the perspective of decision-making objects, the macrodecision of industrial development is a comprehensive problem, rather than a single problem in a certain field, involving a wide range of aspects.

Its comprehensiveness can be reflected in many aspects such as environment, law, transportation, environmental protection, and employment [9]. From the perspective of the decision-making process, the industry's macro-decision-making is not a single plan, but a systematic project, including economics, humanities and social sciences, technology, data and information, and other aspects. From asking questions and formulating plans to evaluating and implementing plans and tracking feedback, there are not only certain factors but also many uncertain and complex factors. From the perspective of decision-making consequences, the correctness of macro-decision-making is of great importance, and the harm is not local, but overall. It will affect multiple areas and even harm the entire national economic system. The consequences and impact are very far-reaching. There is a disconnection between the high development of big data and data protection, privacy protection, and data security, and data utilization efficiency has not received corresponding attention, and a complete set of big data governance has not formed a complete system. Some links are speeding, and the two levels are seriously differentiated, which has become an important shortboard restricting the development of big data.

2.2. The Scientific Basis for Macro-Decision-Making on Industrial Development. First, the collection of data and information is the basis of macro-decision-making. In the Internet era, macro-decision-making needs to use BD to collect all aspects of data information to ensure the

scientificity, accuracy, and feasibility of macro-decision-making. There is a large amount of information behind the decision, which is the foundation of industrial economic work. Correct decision-making needs to analyze a large amount of data and information and then process them through technology and ultimately serve the development of industrial economy and enterprise production and operation. Data information related to the content of decision-making is an important support for scientific decision-making. Second, data information management is the key to macro-decision-making [10]. The long-term development of the economy must rely on scientific management, and a series of management processes must rely on information. From this perspective, management is a process of collecting, sorting, analyzing, processing, and using information. Effective management of data information is the key to macro-decision-making. The management of data information in each link directly affects the use of data and information and ultimately affects the effect of macro-decision-making [11]. Third, standardized procedures are the guarantee for macro-decision-making. The transparency and openness of decision-making is very important, which is the key to ensuring that the decision can be executed efficiently. The formulation of macrodecisions should combine the development and characteristics of different industries, clarify different quantitative standards, and solicit opinions and suggestions from the society to ensure the openness and democracy of macrodecisions. Major macro-decision-making must go through clear procedures and steps and be carried out in an open and standardized manner. Therefore, the standardization of procedures is an important guarantee for macro-decision-making.

2.3. The Service Value of Big Data to the Macro-Decision-Making of Industrial Development. BD has created conditions for the changes of the times, the amount of data is large, and it is very important to the results of industrial economic analysis. It can understand the macroeconomic situation more accurately, predict the macroeconomic development trend, formulate reasonable and feasible industrial economic policies, and better serve industrial economic development service [12]. In the Internet age, data are expanding day by day and are generated in real time. Industrial economic analysis can use these real-time generated data to increase the speed of industrial economic analysis or macroeconomic development trend prediction. In this era, big data application is everywhere; the public is no longer just “consumers.” Its identity positioning will be more and more diversified and more and more deeply participate in the production process and value creation of enterprises. The previous management mode of the disregard for social reality will gradually disappear in this new era. Through the communication and interaction with the netizens, the enterprises lead the netizens into the business process management of the enterprise, and according to the interactive feedback information, innovative ways are found to optimize the product production so that the value creation of the enterprises can develop more effectively in the process of

socialization. The accelerated expansion of data volume and the continuous improvement of data processing capabilities have prompted economic analysis to break through the limitations of previous samples and enable statistics on the whole [13]. For industrial economic analysis, the entire system is complex. To improve the accuracy of the overall industrial economic analysis, it is necessary to abandon the traditional hypothesis testing model, select as much information on the behavior of economic agents as possible, and consider many variables related to it. At the same time, traditional economic statistical models mainly focus on the causality of information, while BD analysis mainly considers the correlation of data. The industrial economic system has intricate and complex relationships, and it is difficult to accurately test the causal relationship in the industrial economy, while the correlation test is more reliable. Making full use of the correlation between data is of great significance to economic information analysis and decision-making [14, 15].

3. Industrial Economic Information Analysis

3.1. Industrial Economic Information Model. Industrial economic information model is composed of a series of subsystems, which has high fault tolerance, scalability, and reliability. In view of the working characteristics of industrial economic departments, the platform of the model proposed in this paper should be closed to ensure the security and stability of the system. At the same time, information sharing among subsystems shall be realized, and timely feedback shall be given according to the real-time information subsystem. Therefore, advanced information integration technology must be adopted. The information system highlights hierarchicalization and integrates the system with hierarchicalization as the concept to ensure the stability of the entire system and the scalability of the system. The acquisition of industrial economic information is the basis of the work of the industry and economic departments. By obtaining this information, we can understand the development of the social economy and predict possible development trends. The data information collection system is a system guarantee for obtaining various industrial economic information. The information liaison and sharing subsystem is a support system for the industry and economic department, which assists the decision-making of the industry and economic department. This system serves the decision and management of the industry and economic department and is also an important part of the industrial economic information system. Information processing and auxiliary decision-making systems interact and act together. Information processing serves for auxiliary decision-making, and auxiliary decision-making determines what kind of information processing is made. The information feedback system can play a role in revising the direction of the information work of the Ministry of Industry and Economics. Information feedback system data information is analyzed and processed, and the results are compared with expectations, so as to judge the effectiveness of the work of the industry and economics department, and the relevant

TABLE 1: System operation speed test.

Running speed	Number of times	Percentage
High speed	11	55
Faster speed	6	30
Average speed	2	10
Slower speed	1	5

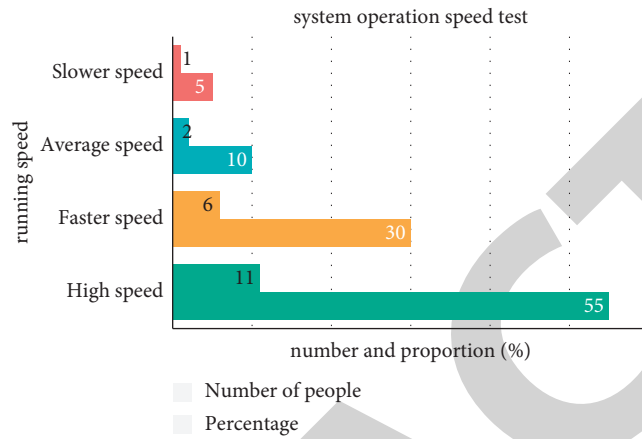


FIGURE 1: System running speed test.

TABLE 2: System interaction function test.

Interaction situation	Number of times	Percentage
Interact correctly	18	90
Interaction error	1	5
Unable to interact	1	5

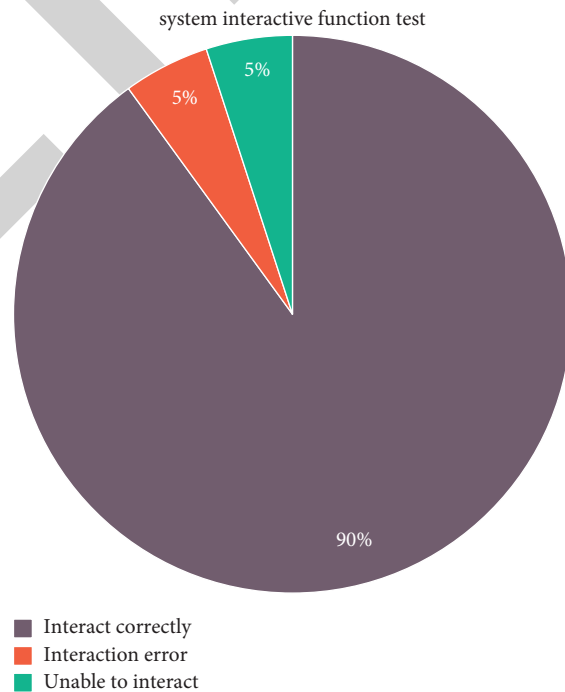


FIGURE 2: System interactive function test.

feedback is transmitted to the work system of the industry and economics department [16, 17]. The formula used in the model creation process is

$$F(t) = \sum_{i=1}^k w_i f_i(t) + \varepsilon. \quad (1)$$

3.2. Industrial Economic Information Analysis Method. To give full play to the value of industrial economic information, it is necessary to correctly analyze it. When analyzing, it is necessary to carry out user needs and analyze pertinently to do a good job in user consultation so that the analyzed information can give full play to the value of information resources. When analyzing industrial economic information, real-time sorting of dynamic information resources can ensure that the information resources developed are relatively novel. It is necessary to pay attention to selectivity when collecting information resources, and the whole work is more complicated. According to mathematical analysis methods, research methods can be divided into qualitative methods and quantitative methods. The qualitative research method focuses on the overall characteristics of the research object, which is an analytical research method for the nature of things. Quantitative research methods are to use certain methods to quantitatively analyze the specific attributes and relationships of the research objects so that the results of the analysis and research are more accurate. Abstract analysis is an important means for people to understand the objective world and discover the essential laws of the development of things. It reflects the use of abstract thinking, and it is a process from perceptual knowledge to rational knowledge. Analysis plays an important role in industrial economic information analysis and is the main method of scientific research. Scientific concepts reflect the regularity of objective things, which are the basis of scientific theories, and are also a kind of abstract thinking. The formula used in the analysis is

$$Z = \lambda_1 v_1 + \lambda_2 v_2 + \dots + \lambda_n v_n. \quad (2)$$

3.3. Industrial Economic Information Analysis Trend. In order to make full use of the value brought by data assets for decision-making by the industry and economic departments, it is necessary to conduct an in-depth analysis of relevant data and use complex analysis models to conduct an in-depth and multidimensional analysis. Time series analysis has accumulated a large amount of data and information through various macroeconomic activities and makes full use of these data and information to construct an efficient analysis mode. Through analysis, we can discover hidden and potential business opportunities. In the network graph, we analyze the network graph and know that each point represents an entity in the social network, which is connected as an edge. The network diagram essentially describes the degree of connection between entities. Through the analysis of the network graph, useful information can be fully excavated and transformed into knowledge. There is a

key entity in the network that can connect different groups together in various ways. Through network graph analysis, it can be used in organizational behavior analysis, organizational potential threat analysis, product marketing, etc. As the scale of social networks grows, nodes and edges also grow. Traditional analysis methods are no longer suitable for processing large-scale data and require finding more efficient analysis methods. This method uses sampling technology to reduce the large-scale data and decompose them into many small-scale data and then uses the current analysis technology to analyze and process the data. There are two major trends when analyzing data: one is that the amount of data will accelerate expansion; the other is that there is a great demand for in-depth and multidimensional analysis of data. At the same time, with the continuous growth of semistructured data and unstructured data, the diversification of data types makes data analysis face certain challenges.

4. System Test

4.1. System Operation Speed Test. According to Table 1 and Figure 1, it can be known that the system has been tested for 20 running speeds, 11 of which have a fast running speed, accounting for 55%, 6 have a faster running speed, accounting for 30%, 2 have the operating speed which is average, accounting for 10%, and the operating speed is slower once, accounting for 5%. Further investigation into the reason for the slower operation speed was found to be caused by network instability. Excluding the system's own factors, from the test results, the system running speed is relatively stable and reliable [18].

4.2. System Interactive Function Test. According to Table 2 and Figure 2, we can know that the system interaction function is tested 20 times. Among them, 18 interactions were correct, accounting for 90%, and interaction errors and failed interactions were both 1, accounting for 5%. Further analysis and investigation of the reasons for the interaction error and the inability to interact revealed that the interaction error was caused by an error in the staff interface, and the inability to interact was caused by network stalls. Excluding human subjective factors, the interactive function of the system is very accurate.

5. Conclusions

In the future, BD will play a very important role in social and economic development, just as indispensable as transportation, power, and communication networks. In the context of BD, many disciplines such as politics, economics, and society will undergo different changes from the past and achieve unprecedented development, which will fundamentally affect people's lifestyle, knowledge structure, and value system. The application of BD in the analysis of industrial economic information will become more and more extensive. Its practical significance lies in providing a reproducible analysis model for the discovery of industrial

economic information in the industrial sector, which has guiding value for management applications.

At present, the country has taken “big data” as the national development strategy, which shows the importance of big data. Therefore, enterprises should cultivate big data comprehensive talents, improve the enterprise financial management system, vigorously develop big data mining and analysis technology, improve the application understanding of financial decisions in the era of big data, and improve the comprehensive strength of the country.

Data Availability

The data underlying the results presented in this study are available within the manuscript.

Disclosure

The authors confirm that the content of the manuscript has not been published or submitted for publication elsewhere.

Conflicts of Interest

The authors declare no conflicts of interest.

Authors' Contributions

Both authors saw the manuscript and approved it to submit to the journal.

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