

Challenges and Countermeasures of Big Data to Enterprise Accounting Information Quality

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Abstract

Accounting information reflects the economic operation of enterprises and is an important basis for managers to make decisions in the future. Therefore, the quality of accounting information affects the economic interests of all parties. The arrival of big data era has brought many challenges to accounting information quality control. Therefore, under the influence of big data, we should strengthen the control of enterprise accounting information quality and improve the ability of accounting information analysis, which is not only conducive to the sustainable operation of enterprises, but also conducive to the orderly operation of the whole economy and society. Accounting information belongs to the important data in the business activities of enterprises, which provides decision-making basis for enterprises to make decisions on economic issues. At present, with the rapid development of economy and society and the rapid progress of informationization and intelligence, these phenomena are announcing the arrival of the era of big data to the world. Big data has a series of characteristics, such as diversified information sources and quantitative information scale. Because of this, the quality of accounting data cannot be guaranteed, and the quality of accounting information under the background of big data is inevitably affected, showing many problems in quality management. Therefore, in the era of big data, enterprises should strengthen the control of accounting information quality and improve the ability of accounting data analysis to ensure the sustainable development of enterprises and the good operation of the whole economic environment. This paper puts forward corresponding solutions to the challenges brought by big data to the quality of accounting information, so as to help enterprises improve the quality of accounting information in the era of big data and make enterprises have a longer-term development.

Keywords

Big Data; Accounting Information Quality; Enterprise.

1. Quality of Big Data and Accounting Information

1.1. The Concept of Big Data

The network ecosystem composed of a new generation of information technologies such as the Internet, cloud accounting, blockchain and artificial intelligence has promoted the arrival of big data era [2] with unprecedented trend and speed. The term "big data" was much mentioned in 2012. People gradually began to accept and understand it, and use it to summarize and describe the huge amount of data generated by the information blowout era. Related technology development and innovation are also named after it. Has on the New York Times and the Wall Street Journal column cover, appeared in some domestic network topics lecture salon, even invested nerve sensitive zhonglian securities, Guotai Junan, galaxy securities and other institutions into the corresponding introduction statement, a world-famous sociology

professor said: " this is a revolution, huge data resources make various fields began the quantitative process, whether academia, business or government, all fields will start this process [2]"

1.2. Quality of Accounting Information

Accounting information refers to the [3] of various information, data and materials that can be accepted and understood by the people and reflect the past, present and future capital activities through the practical records or scientific prediction of accounting subjects. Accounting information quality is an important goal of the accounting profession to distinguish between the usefulness of the information obtained.

The quality of accounting information represents the high availability of accounting information obtained. The high quality of information in the big data environment should be characterized by its reliability, relevance, timeliness and integrity. The evaluation of accounting information quality can be standardized according to whether the basic business operation processes such as daily accounting statistics, whether some large-scale investment analysis is objective, whether the investment decisions are reasonable, whether some financial reports and problems are specific, and whether the situation description is detailed. Timeliness refers to whether the financial report can be timely written and disclosed, whether the major notice notice can be timely transmitted to all departments, and whether the consulting questions can be answered quickly. Integrity refers to whether the disclosed and reported accounting information is concealed, whether the policy changes and the proposal of economic decisions are fully presented. The evaluation of accounting information quality needs to be measured by the above indicators. Each element should have a corresponding evaluation index, and big data can just serve the measurement of accounting information quality and assist the successful completion of the accounting information quality measurement work.

Accounting information quality can be from two aspects: the international famous quality management expert Zhu Lan from the user perspective of accounting information quality: "the quality of accounting information is its satisfaction with the demand"; another quality management expert to the quality of accounting information from the producer perspective: "accounting information quality is the level of accounting information products meet accounting standards (standards), accounting standards (standards) is the template of accounting information production" [3].

2. Impact of Big Data on the Quality of Accounting Information

2.1. Opportunities

2.1.1. Help to Improve the Comparability of Accounting Information

Two levels of comparability include: horizontal comparison and longitudinal comparison. Horizontal comparability means that different enterprises can compare in the same period; longitudinal comparability refers to that the same enterprise can be compared in the different period. The arrival of the big data era provides resources and channels for the comparison of enterprise accounting data. when faced with the same accounting problems, the existence of big data channels makes it easier for companies to compare. Together, all the data supplied by big data channels is also greatly helpful to the internal comparison of accounting data in different years. Realizing the comparability of accounting information quality is more helpful.

2.1.2. Help to Enhance the Reliability of Accounting Information

Different needs use the same accounting information resource for different purposes, which is, accounting information resource sharing.

In the face of fierce market competition, if enterprises want to stand out, they need to master more comprehensive information, they need to understand not only themselves, but also their

competitors. the arrival of big data makes the cloud platform appear in people's sight. And the emergence of the cloud platform enables all departments of enterprises to complete the data collection and analysis on the same platform, realize real-time data sharing, and make the communication between departments more convenient. In the resource sharing platform, it not only includes the internal departments of the enterprise, but also shares the resources with the external data environment. On the cloud platform, enterprises can easily obtain the required external data, and they can also realize online transactions between suppliers and customers through the cloud platform[4], Improve the availability of accounting data. The government and other relevant departments can also obtain the information of enterprises in real time through the cloud platform, which is conducive to the supervision of enterprises and reduces the possibility of enterprises forging accounting data to a certain extent.

2.1.3. Help to Improve the Timeliness of Accounting Information

The timeliness of accounting information quality puts forward requirements for the business or matters already produced by the enterprise: it needs to measure, confirm and report the business already occurring in time, and can not be early or delayed. Under the background of big data, accounting information is updated in real time on the data processing platform. Users can timely search for accounting information when needed, which reduces the circulation time of accounting data and is conducive to improving the timeliness of accounting information.

2.2. Challenge-take Kangexin Financial Fraud as an Example

Kant New is called Kant New Composite Group Ltd, with stock code 002450. Founded in August 2001, Kant is a listed company in Shenzhen small and medium-sized board. Kant Capital Group Limited holds 53.16% of its shares. The company is mainly engaged in three major affairs: "new materials centered on coating materials and photoelectric materials, SR, 3D, large screen touch smart display screen and carbon fiber affairs".

Table 1. Main accounting data units of Kangdexin Company from 2015-2018:10 thousand yuan

Project	2015	2016	2017	2018
Total revenue	745937.66	923274.94	1178907.35	915028.84
Total profit	164639.42	230230.22	291239.75	34250.30
Net profit	140492.43	196504.35	247583.96	28370.84
Net profit attributable to the owner of the parent company	140945.72	196290.80	247438.18	28069.73
Owned by the shareholders of the parent company	140589.85	196254.01	252044.61	35541.68
Total comprehensive income	90653.88	-4758.28	366176.17	131036.28
Cash generated from operating activities	1836800.41	2642513.67	3426235.64	3425370.74

As shown in Table 1: The financial data released by Kangexin is very remarkable and has attracted a lot of attention in a very short time through extensive spread in major financial channels and websites. In 2011, listed, high growth rate financial statements let Kant new stock price rapidly, peak of the new stock price continued nearly 20 times, Kant new stock price peak in November 2017, 26.71 yuan per share, a large number of investors, the optical film enterprise is widely optimistic, Kant new main business and market demand highly compatible, almost all investors are full of confidence in the enterprise. But the facts are very different. Everything came to a close on 15 January 2019, with "huge cash" on its books but unable to repay principal

and interest on \$1 billion in short-term financing bonds. After Kant's new frozen bank account "other risk warning" shenzhen stock Exchange rules, listed in the "stock delisting risk warning" list, then the China Securities Regulatory Commission issued a new company, the China Securities Regulatory Commission administrative punishment and shopping mall notice book, an estimated gambling billions of financial fraud case attracted the attention of the whole society.

Kang Dexin has inflated its profits by fabricating foreign customers, making false trade contracts, copying the signatures of foreign customers, copying and printing a series of false contracts, and creating a fake export trade chain. In 2015, the total fictitious profits were 2.381 billion yuan, accounting for 144.65% of the total foreign reported profits in the annual report. In 2016, the total fictitious profit was 3.089 billion yuan, accounting for 134.19% of the total annual profit. In 2017, the total fictitious profit was 3.974 billion yuan, accounting for 136.47% of the total annual profit. In 2018, the total fictitious profit was 2.381 billion yuan, accounting for 722.16% of the total annual profit. In the past four years, the accumulated false profit of 11.9 billion yuan, becoming the largest profit fraud case in the history of A-shares with the fictitious profit of 11.9 billion yuan. New shares have been suspended from July 8. By December 31, 2019, Kant's new market value was only 12.5 billion yuan, down nearly 5% from 27.053 billion yuan at the end of last year.

In the release of accounting information, due to the pressure of shell protection and refinancing, Kangdexin Company chose to illegally release false accounting information, fictitious performance, and use false accounting data to attract market attention and favor of investors, so as to achieve the purpose of financing. In terms of accounting data communication, websites and media do not strictly examine the accounting data disclosed by Kangdexin Company, but simply follow the trend of communication. From some angles, Kangdexin incident has caused such a serious impact that these website media have an unshirkable responsibility. In terms of accounting data supervision, the new company released serious false accounting data, and widely spread online, before the incident suspected the financial data, but the relevant departments concerned did not timely attention, leading to the scope of accounting data spread, make more investors suffered huge losses and serious adverse impact. In terms of accounting data users, due to the untrue accounting data disclosed by Kangdexin Company, and investors only based on the data provided by the network and media, they have not been deeply understood. When communicating information between users and publishers, there is information asymmetry in accounting information, which leads to investors to blindly follow the trend of investment and cause huge losses [5].

Big data as mentioned above enables accounting data to be certified by multiple parties to improve reliability. However, this improvement has a premise for it. Through the "Kangdexin" case, it can be seen that under the background of big data, the generation, release, supervision and use of accounting information will have a certain impact on the reliability of the quality of accounting information. Therefore, to improve the reliability of accounting information, it needs to conduct strict norms for each part.

In the case of financial data fraud of Kangdexin, due to the more convenient release of accounting information in the background of big data, and the transmission speed is fast after release, which will cause strong response in the market in a very short period, so has a wider range of impact and greater economic losses. Therefore, in the context of big data, if the reliability of accounting data is not guaranteed, it will bring more serious and wider adverse effects. To sum up, timeliness is a double-edged sword. In order to play a favorable role in timeliness, the premise is necessary to ensure the reliability of accounting information.

When disclosing accounting information, Kangdexin hid its false companies and related transactions, and deceived the market and many investors, which belongs to the lack of

completeness of accounting information. Big data for enterprise accounting information users brought massive and chaotic accounting information data, in the mass of information, accounting information data tend to be fragmented, fragmented, logic is not strong, ordinary accounting information users lack professional financial quality, easy to ignore the connection between information, difficult to effectively organize data, related information is often disclosed separately, data analysis is therefore prone to tube, the integrity of accounting information. In the era of big data, it is very difficult to obtain complete and extract valuable accounting information from massive data. At the same time, the large and diverse data brought by big data also makes it more difficult for companies to process accounting information. It is true that the number of traditional accounting information data cannot be compared with the number of accounting data brought by big data, but the traditional coverage and utilization value are greater, and the desired conclusion can be drawn after a fixed analysis process. In the era of big data, in the face of complex and massive data, the relative relationship between various accounting information is also more diversified, the analysis results have become more complex, more difficult to deal with, and the data analysis is one-sided.

3. Address the Challenges

3.1. Establish and Improve the Accounting Legislation under the Internet, and Build a Complete Reward and Punishment System

The unreliability of big data age, the reliability of accounting data and financial data fraud cases have occurred frequently in recent years, which has a negative impact on the normal production and operation of the enterprise and the whole economy and society. The cause of this phenomenon is related to the imperfect legislation, and the punishment for fabricating financial data is lighter. To sum up, in order to improve the quality of enterprise accounting information, the state should improve the network legislation, establish and improve the network reward and punishment mechanism [6]. After revising relevant laws and regulations, we will increase the punishment and compensation for users who intentionally spread false accounting information and mislead information on the Internet. Reward and penalties should be much higher than the profit cost of publishing false information and urge companies to publish real accounting information. At the same time, guide the enterprises to publish real and reliable accounting information, give corresponding rewards to the enterprises that publish high-quality accounting information, and encourage other enterprises to imitate.

3.2. Build a Good Network Environment

The progress and use of information technology have brought convenience to people's lives and work, and enterprises can handle data and information more conveniently. Under different working methods with the past, information resources and business environment are effectively integrated, and the communication between enterprise accounting and the outside world becomes more and more close. Because this provides a gap for illegal acts such as network theft, and the risk of accounting information loss is increased. Therefore, if you want to better ensure the quality of accounting information, you need to strengthen the network security construction. In order to better protect the security of accounting information and prevent artificial malicious tampering or stealing accounting information, network security awareness should be enhanced. How to build a secure network environment? The credibility of the information usage platform can be improved by establishing user identity security authentication and access authentication [7]. If we want to better use big data to improve the quality of accounting information, then we need to build a good network environment, so that all kinds of accounting information can be healthy spread out.

3.3. Improve the Comprehensive Quality of Enterprise Accounting Personnel

In the era of big data, higher standards for ordinary accounting work. Accounting work is not only limited to simple accounting and accounting information service enterprises in hand, but also need to learn to use big data platform to collect data to make themselves ahead of other enterprises. To meet these requirements requires the joint efforts of the three parties. Schools need to keep pace with The Times when training students, not only to teach book knowledge to students, but also to improve their practical ability, such as developing practical courses, let students understand the basic operation of the enterprise; arrange internship homework during winter and summer vacation, let students connect with the society, apply the book knowledge to practice. The school should timely pass on the changes from the outside world to the students, update the school curriculum in time, and cultivate high-quality talents for the enterprises. When enterprises cultivate talents, first of all, they need to improve the comprehensive quality of accounting personnel, actively learn from companies with rich experience in accounting information management, and then combine their own situation to develop talent training plans in line with their own development. Secondly, in practical operation, effective training method to enhance the comprehensive ability of accounting personnel. When training financial personnel, enterprises can appropriately increase capital investment, employ external experienced teachers, conduct regular classroom learning, constantly learn advanced accounting knowledge through classroom learning activities, and then effectively integrate theory and practice in daily work. On the other hand, it is necessary to regularly test the learning results of the financial personnel, survival of the fittest, urge the employees to study hard, improve their professional level, and reduce the error rate in the work [8]. Financial personnel themselves need to strive to improve their professional skills, actively learn the way accounting works in the era of big data, and the new computing methods used, and use more professional knowledge to efficiently handle accounting work.

3.4. Establish an Accounting Information System by Using Big Data Technology

Prior to the construction of the accounting information system, an overall plan should be made for the desired functions of the system. In the context of big data, if the accounting information system established by an enterprise wants to achieve multiple functions, then the system will certainly include many application modules, and each module is responsible for its own relevant information storage, classification, etc. If enterprises want to make a complete integrated information system, they need to combine these separate modules in the system together. It is worth noting that the joint module can never be listed as a separate process. If such operation may result in the information system is finally scattered, it may even be difficult to form an organic binding body, causing the failure of system establishment [9]. Of course, in different fields and different scale companies, the specific requirements of the accounting information system will be different, and enterprises need to establish their own contact to establish the characteristics of the system. Starting from reality, first establish a system in line with the preliminary vision of the enterprise for use, in the future use, the accounting information system is continuously updated, supplementary functions, to make up for the lack. In the process of gradual development of enterprises, enrich accounting information system, update not only information system, but also information. In the emergence of new accounting information, through the information system to record and store information, to ensure the timeliness of information, so that enterprises can always grasp their own development situation, make use of the information, make a phased plan for the future development of the enterprise, so that the enterprise better and faster development.

3.5. Establish a Special Accounting Information Release and Analysis Center

In the context of big data, the workload of accounting information collection and processing is increasing, and the workload of data analysis should be done before the information is

published increasing continuously. In such cases, in order to ensure the quality of accounting information, the enterprise shall set up a special organization for handling the release and analysis of accounting information [10]. In this way, the information that needs to be publicized can be classified and sorted out in a timely manner, and the information that does not meet the provisions can be eliminated in time, to ensure the quality of accounting information. In this process, the possibility of artificial adjustment and tampering of information can be reduced. When enterprises disclose financial data and analyze to the outside world, first, the enterprise should deeply analyze the financial data that will be published to the public, and then form a standard and high-quality financial report to ensure the quality of accounting information, which can be used at ease by the internal and external users of the enterprise.

4. Conclusion

Under the background of big data, it brings opportunities and challenges to the quality of accounting information, and puts forward higher requirements for the quality of accounting information. The arrival of big data helps the realization of comparable accounting information quality, enhances the reliability of accounting information quality, and improves the timeliness of accounting information quality. However, everything must have advantages and disadvantages, and opportunities and challenges coexist. The arrival of big data puts forward higher requirements for the reliability and timeliness of accounting information quality. At the same time, due to the wide application of big data, the data analysis is one-sided. To achieve good development in the era of big data needs to keep pace with The Times. How to improve the quality of accounting information in the era of big data? First, to build a good network environment, second, to establish and improve the accounting legislation under the Internet, and build a complete reward and punishment system. Third, improve the comprehensive quality of accounting personnel, cultivate professional and technical personnel, fourth, make full use of big data technology to establish an accounting information system, fifth, establish a special accounting information release and analysis center.

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