

Impact of Big Data Technology on Audit

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Abstract: As an important part of national governance, audit plays an important role in promoting the healthy development of the economy. In future work, we should achieve the goal of full audit coverage, mainly covering public funds, state-owned assets, state-owned resources and the performance of economic responsibilities by leading cadres. The arrival of the big data era has had a significant impact on the accounting and auditing industry. While data provides a lot of information, it also provides a new quantitative direction. In the context of big data, accounting and auditing staff need to deeply understand the accounting and auditing technology in the context of big data, so as to save a lot of time for auditors, so that they can focus on more critical areas and major aspects, from reducing the risk of fraud and error as much as possible to complete risk aversion, so that the audited accounting information can be more authentic and reliable, thus reducing information asymmetry, It is helpful for information users to make more scientific and reasonable decisions.

1. Introduction

The Internet era has brought about the rapid development of information technology, and massive information is flooding the market, which brings convenience to society and enterprises, but also brings a series of problems, and the management mode of accounting entities has changed. As an important part of national governance, audit plays an important role in promoting the healthy development of economy. The audit subject shall reasonably adjust the organizational structure and audit mode according to its own actual situation, further standardize and informationize the audit management mode, and incorporate plan management, quality management and results management into the audit management system. Because big data technology can improve the market competitiveness of the audit industry to a large extent when such technology is constantly updated[1-2]. Big data establish a data authorization mode, define the scope of authorization, effectively isolate relevant data links through different authorizations, limit data information leakage, and make irregular adjustments as needed to ensure that data are strictly controlled within the specified scope and meet audit requirements. Auditors analyze and process massive data with low single value, and combine business data indicators and requirements to extract valuable information in the visual analysis process, so as to propose an important trend of predictability[3-4].

The advent of the era of big data has had a great impact on the accounting and auditing industry. Data not only provides a lot of information, but also provides a new quantitative direction. This direction has attracted the attention of all kinds of industries, and it is a new way, and audit work is learning and trying to participate in this “technological revolution” without exception. It has promoted the development of accounting and auditing industry in a positive direction, and enabled the related economic activities to continue to prosper[5]. Audit should be able to adapt to the characteristics of big data, make full use of audit thinking and methods, and push itself forward. At the same time, it is necessary to fully understand the meaning of big data while influencing the normalization of audit work. Accountants need to have a deep understanding of accounting and auditing technology, and the reform of accounting will inevitably bring about the reform of auditing methods. No matter the close combination of audit objects and big data, higher requirements are put forward for auditors. Therefore, it helps enterprises and other types of social organizations to

achieve a virtuous circle of production and operation while improving their own business capabilities[6].

2. Impact of Big Data Technology on Audit

2.1 Audit Goal Oriented Change

Auditors should not only understand the data mining mode brought by big data technology, but also make reasonable analysis, objective evaluation and comprehensive software of audit data with the help of big data forest to find the required information in massive data and ensure the smooth completion of audit work. Through the sampling of audit samples, the overall risk situation of the audited entity is investigated in part, and the overall level of its financial statements, various identifications and disclosures of various financial information are properly estimated and guaranteed[7-8]. On the positive side, first of all, in terms of the audit process, the traditional audit process is to audit after the business of the auditee is completed. At the same time, the audit process is not all books and information, but to extract some of them for audit. The application of big data technology can virtually provide a large amount of information and data support for auditors. At present, it has developed into a risk-based data based system based audit model, that is, to audit the internal control and electronic data of the system. The data based audit model is also further changing with the development of big data technology. The impact of big data technology on audit work is mainly reflected in four aspects, as shown in Figure 1.

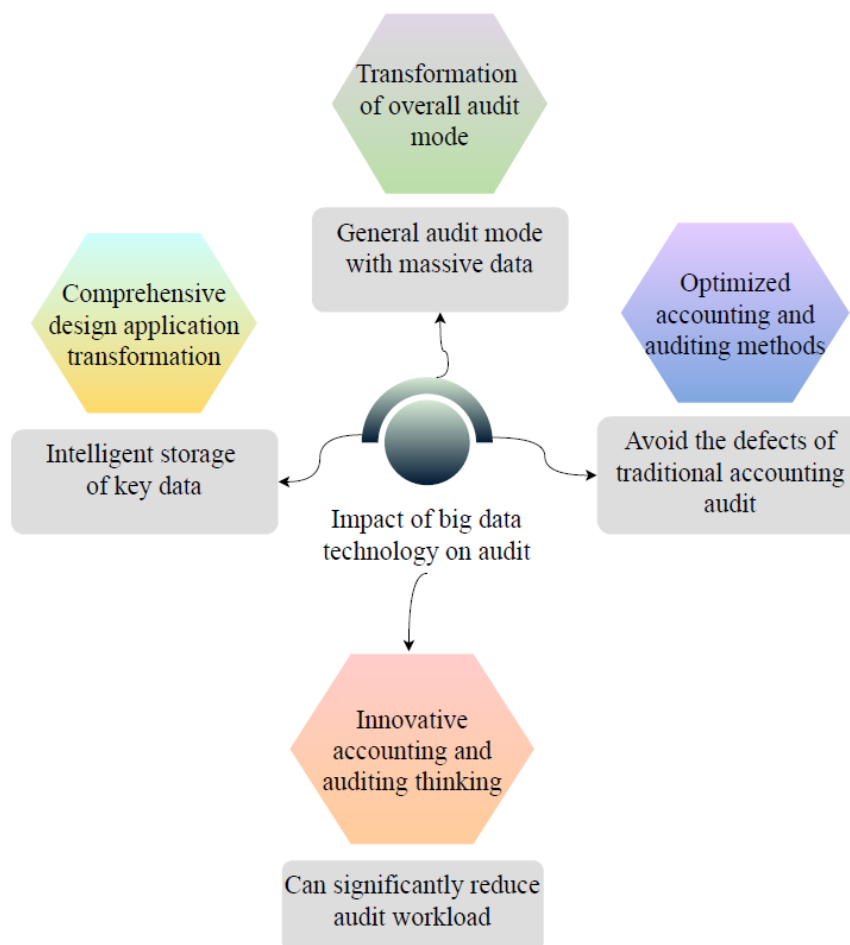


Fig.1 Impact of Big Data Technology on Audit

Risk oriented audit requires auditors to identify all kinds of systematic errors, human errors and fraud of the auditee as far as possible. However, it can break through the time and space constraints, so that the most basic procedures of audit sampling, correspondence, inventory, etc. can be replaced. During this period, with the advantage of big data storage, analysis, mining and other aspects, it can

not only provide accurate data help for audit work, but also transform the traditional audit mode into an overall audit mode with the help of massive data[9]. With the development of big data technology, many audit institutions begin to conduct continuous audit on audit units. That is, they can analyze the data given by real-time investigation, so that staff can quickly obtain the required data from the information system to avoid delays caused by time. Thus, it can save a lot of time for auditors, so that they can focus on more critical areas and major aspects, from reducing fraud and error risks as far as possible to complete risk aversion, so that the audited accounting information can be more authentic and reliable, thus reducing information asymmetry, and helping the information users to make more scientific and reasonable decisions.

2.2 Change of Audit Work Mode

Under the big data technology, off-site audit has become the main audit mode, which promotes the development of audit structure towards networking and flattening, and then forms a specialized audit technical team to provide data support for auditors. Cloud computing and blockchain in the era of big data make accounting information not only independent within audited units, but also shared, and the reduction of audit duplication also requires auditors to change from information collection and audit evidence acquisition to information analysis and mining[10]. Many audit institutions have insufficient understanding of the fact that the audit information is digitized, which leads to many auditors unable to complete a large number of numeration tasks. Auditors should learn more audit knowledge and skills with the help of big data technology, and then make audit plans according to the actual situation of audit objects, and really apply their thinking to the audit field. Because of the huge amount of data contained in big data technology, and its own technical means are not particularly mature, many data platforms have not yet been set up, which leads to a lot of data scattered, and it is impossible to do centralized and effective audit work.

Auditors are not only required to have a certain grasp of financial knowledge, but also to be able to use computer technology to process massive data and find out the problems from a large number of complex relationships, so as to carry out risk prevention and risk response. In short, the big data technology has not been fully developed and needs to be built. Improve the informatization and intellectualization of traditional audit management, use informatization means to track the progress of audit work in real time, and make corresponding audit plans at the same time.

3. Countermeasures and Suggestions for Big Data Audit Development

3.1 Innovative and Advanced Big Data Audit Methods

Under the traditional audit mode, auditors usually obtain audit evidence by means of physical inventory, checking account books, sending letters for confirmation, etc. The audit ability is limited by manpower and time. More and more enterprises are upgrading their financial systems. A series of financial processes from original vouchers to financial statements are completed in the information system. It is increasingly difficult for auditors to obtain audit evidence from a “clean” account book. Improve the understanding of big data to learn more audit experience. Audit institutions should provide big data technical training for auditors to promote the smooth development of accounting and auditing work with the help of big data. The innovative ideas of audit work are shown in Figure 2.

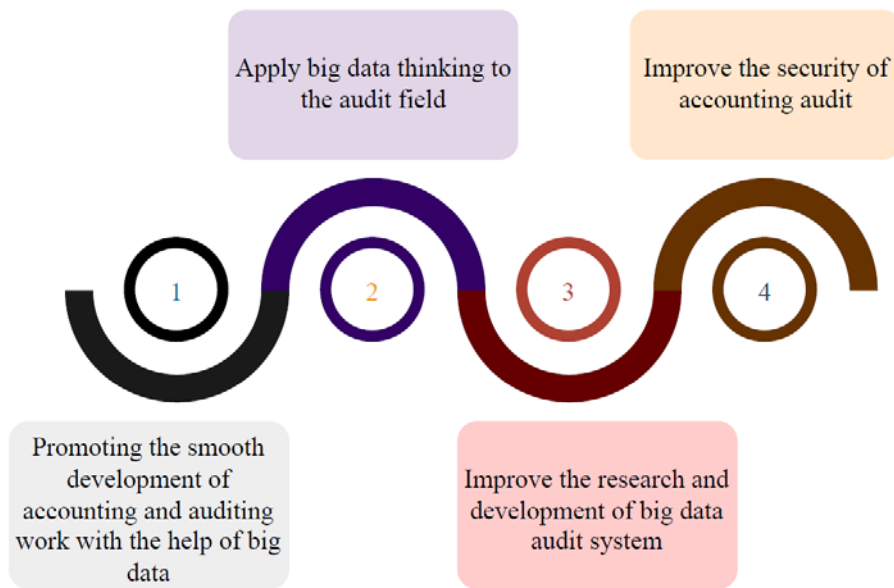


Fig.2 Innovative Ideas of Big Data Technology on Audit Work

The premise of in-depth big data audit is to do a good job in data security. If there is no security, there will be no use. First of all, audit institutions should formulate a comprehensive big data management system, including data management, personnel management, authorization management and equipment management. Innovative audit methods require auditors to make the following three efforts:

① Actively change thinking, instead of looking at the current audit work from the past, department should focus on establishing the professionalization of data analysts, and implement the appointment system for positions with higher professional and technical requirements.

② Actively learn big data technology. This kind of learning doesn't need to reach the professional depth level, but focuses on the application level. Being familiar with big data technology can help auditors to innovate big data audit methods in the future. Further improve the continuing education of auditors and the training system of different posts and levels, and strengthen the construction of education and training platform.

③ Improve the mode of audit management. At present, there is still a certain gap between audit management and the requirements of big data technology in most audit subjects in China. To a large extent, the audit work is still in the form of on-site audit, and remote audit and continuous audit are not fully utilized.

Enterprises should correctly understand the difficulty of audit work. To realize the effective application of big data in audit work, it is necessary for enterprise leaders to master relevant audit knowledge and realize scientific analysis of data information. It can effectively solve the long-standing problems of "resource barrier" and "information island" in the audit process. At the same time, it can also deepen the extensive application of information resources among horizontal departments, and maximize the role of data center as resource pool and distribution center.

3.2 Develop a Unified Big Data Audit Specification

At present, there is no unified standard for auditing, and auditors lack corresponding guidance when carrying out their work. Therefore, when faced with data collection scope, data standardization, data security and other issues, more time and energy should be spent to solve them. The audit subject shall reasonably adjust the organizational structure and audit mode according to its own actual situation, further standardize and informationize the audit management mode, and incorporate plan management, quality management and results management into the audit management system. Each audit institution needs to try to change its view on emerging Renji, and fundamentally agree with this approach. Because big data technology can improve the market competitiveness of the audit industry to a large extent when such technology is constantly updated.

The use of data analysis technology can not only reveal the fraud that has occurred, but also improve the overall prediction ability and prevent possible fraud risks in the future. Both the objectives and personnel of audit will change deeply, so auditors need to make changes in their applications to adapt to the changes of the times and follow up the pace of informatization. The audit countermeasures under big data are shown in Figure 3.

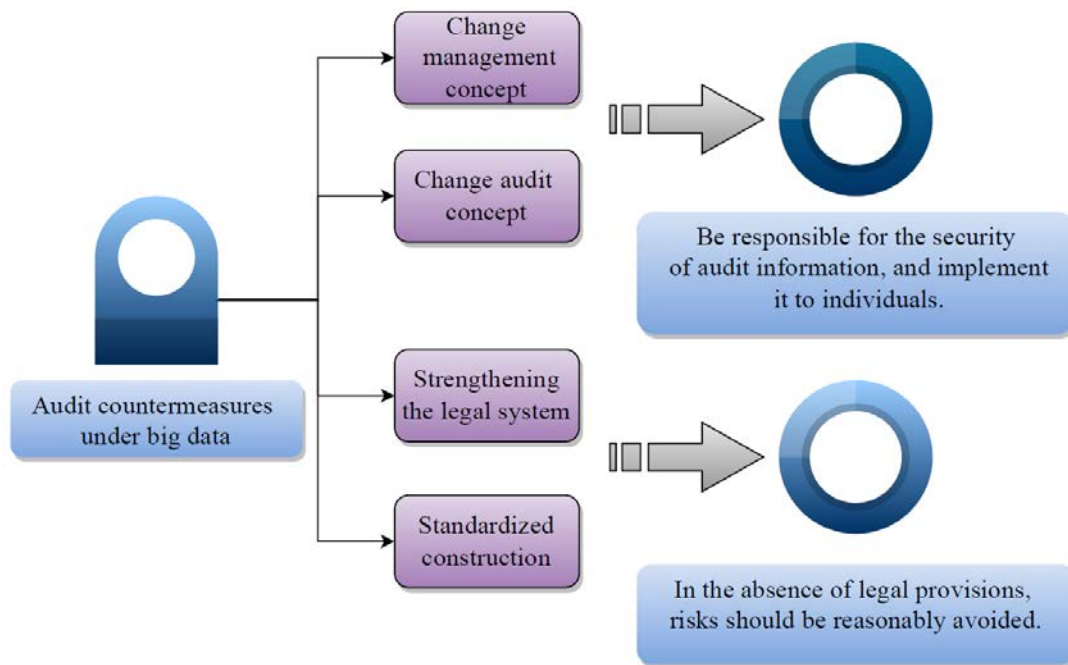


Fig.3 Audit Countermeasures under Big Data

Establish a data authorization mode, specify the authorization scope, effectively isolate the relevant data links through different authorizations, restrict the leakage of data information, and make irregular adjustments according to the needs, so as to ensure that the data can meet the audit needs while being strictly controlled in the specified scope. Auditors analyze and process massive data with low single value, and extract valuable information in the process of visual analysis in combination with business data indicators and requirements, so as to put forward predictive important trends. It is very important to standardize every audit institution, and it is also of great significance to establish the legal status of this technology.

Finally, the training of auditors is the most important thing. Make a reasonable plan for the specific use of data. In addition, enterprise audit departments should pay more attention to audit work, set a long-term development goal, improve their ability to analyze information and data, and improve the efficiency of enterprise audit work.

4. Conclusions

Big data technology not only boosts the development of audit informatization, but also brings challenges. How auditors change their audit thinking, adapt to the audit mode, and closely integrate big data technology with their daily work is the key issue of audit. The promotion of big data technology puts forward higher requirements for audit work. Only by making full use of various data can we truly improve the market competitiveness of various industries. In the audit environment, audit methods, audit processes and other aspects of the completion of new innovation. The application of information technology has opened up a new way for audit work, making financial audit methods more complete and diversified. It is necessary to improve the understanding and working ability of local people, maximize the use of accounting and audit resources, and give full play to the advantages of big data technology, It is both an opportunity and a challenge for financial fraud audit. The function of auditors is becoming more and more important, and they should actively use new tools and means generated by big data to make financial fraud no secret.

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