Scientific Research Publishing

Open Journal of Accounting, 2020, 9, 31-35
https://www.scirp.org/journal/ojacct
ISSN Online: 2169-3412
ISSN Print: 2169-3404

Research on Challenges and Countermeasures of China Enterprise Auditing under the Background of Big Data

Meng Kang, Fuangfa Ampornstira*

School of Management, Shinawatra University, Bangkok, Thailand
Email: km0518@163.com, *fuangfa.a@siu.ac.th

How to cite this paper: Kang, M., & Ampornstira, F. (2020). Research on Challenges and Countermeasures of China Enterprise Auditing under the Background of Big Data. *Open Journal of Accounting, 9,* 31-35.
https://doi.org/10.4236/ojacct.2020.93003

Received: May 1, 2020
Accepted: July 7, 2020
Published: July 10, 2020

Abstract

With the continuous development of information technology and the popularization of the Internet, the information age represented by big data has arrived, and major enterprises are gradually exploring the road of integration and development with the Internet (AICPA, 2014). Auditing is an important part of the internal control management of an enterprise. Audit supervision and audit analysis and evaluation can help enterprises find problems in service management and business management, which is an important guarantee for the sustainable development of an enterprise. In the context of big data, the auditing work of an enterprise should be innovative in methods and methods. With the help of data platforms and information networks, a more complete and efficient auditing model should be constructed (Bilal et al., 2016).

Keywords

Big Data, Corporate Auditing, Challenges and Countermeasures

1. Introduction

Traditional internal audits of enterprises often have problems such as difficulty in collecting information and data, long auditing time, and cumbersome auditing processes. They cannot fully play the role of audit supervision and audit evaluation (Aslanertik & Yardımcı, 2019). Therefore, we must explore new auditing models based on big data to improve audit efficiency and audit quality. Under the background of big data, enterprises need to recognize the challenges and difficulties faced by audit work, so as to develop more effective response strategies (Xu, 2016).

2. Challenges Facing Corporate Auditing in the Context of Big Data

2.1. Lack of Data Thinking in Audit Work

The primary challenge facing auditing companies in the context of big data is the lack of data thinking about auditing (Cheng, 2019). In other words, auditors lack awareness of big data in the process of auditing, let alone the effective use of big data. In the audit work, the focus of the audit is often on the on-site audit, neglecting the collection and analysis of the basic data, and lacking comprehensive and accurate data as support, which makes the on-site audit work lack directional guidance and there is a large. The blindness of the company does not promptly discover some problems in the internal financial and business aspects of the enterprise. In addition, the staff of the audit department focused more on the collection and arrangement of financial data when collecting relevant audit data. However, due to the dynamic and decentralized characteristics of some business data, it was difficult to collect them, which led to Business data is very imperfect, which is extremely detrimental to performing business oversight and risk assessments.

2.2. Big Data Technology Application Challenges

The advent of the era of big data brings the most intuitive challenge to the auditing of enterprises is the application of technology (Chen & Ju, 2017). The level of technology application directly affects the effective development of auditing. For example, in the process of data collection, there is a large difference between the financial software used by the financial management department of an enterprise and the statistical software used by the business department. The lack of communication between the data makes it more difficult for the audit department to collect the data. In addition, in terms of data storage, the efficiency of the company's back-end database directly affects the analysis and processing of related audit data, and companies often ignore.

The database is regularly cleaned and maintained, and the technology and storage space are not upgraded in a timely manner. In addition, enterprises have certain deficiencies in the establishment of audit data models and specific operation visualization. Technical limitations affect the effective development of audit work.

2.3. Challenges of Auditors' Professional Competence

To meet the challenge of big data, enterprises must form an audit work team with professional capabilities and comprehensive qualities. However, as far as the current situation is concerned, many audit staff are non-computer majors, their understanding and application of big data are relatively lacking, and traditional audit staff is not able to adapt to the big data-based audit model in a short period of time. The technical operations related to information collection and data processing are not proficient enough and need to be improved.

3. Research on the Optimization Strategy of Enterprise Audit Work under the Background of Big Data

3.1. Building a Data-Based Audit Model

In the context of big data, to optimize and innovate audit work, the most important thing is to build a data-based internal audit work model. First of all, companies should establish a more streamlined auditing working group to change the situation of multiple people's participation and cross-authority in the past. This working group focuses on the collection and arrangement of basic data and divides staff through corresponding responsibilities. Data collection within a certain business or within a certain range, so as to provide direction and data support for subsequent audit work. Second, we must pay more attention to the acquisition of business data. The audit department must communicate and coordinate with the business department, improve the audit confidentiality mechanism, ensure the security of business data, and better conduct audit evaluation and risk supervision on this basis (Haddara et al., 2018).

3.2. Building a Big Data Information Processing Platform

Under the background of big data, the audit work of enterprises must have a corresponding big data information processing platform as technical support. The main functions of this platform include data collection, data analysis and processing, the establishment of audit models, problem research, data storage, and so on (Choi et al., 2016). Among them, unified audit software can be designed based on this big data platform, so that the financial department and related business departments can perform centralized data upload, which can greatly shorten the time of data collection and ensure the comprehensiveness of data collection. In the data analysis and processing stage, the powerful computing power of big data can be used to more accurately capture data nodes and improve accounting efficiency (Poziemski & Baudot, 2019). Then, by constructing a visual data model for audit analysis and evaluation, the problems existing in the enterprise can be discovered more intuitively, and accurate verification can be realized.

Based on the existing information technology, the researchers implement the big data audit processing model from the modules of big data mining, big data integration, big data storage, and big data analysis. The construction of the model is shown in **Figure 1**.

Big data processing process mainly includes data collection, data preprocessing, data storage, data processing and analysis, data display/data visualization, data application, and other links, among which data quality runs through the whole process of big data, and each data processing link will have an impact on the quality of big data.

The big data acquisition process is usually one or more data sources, these data sources include homogeneous or heterogeneous databases, file systems, service interface, etc., are susceptible to noise data, loss of data values, conflict, etc. For large data sets collected preprocessing, to ensure the accuracy of the large

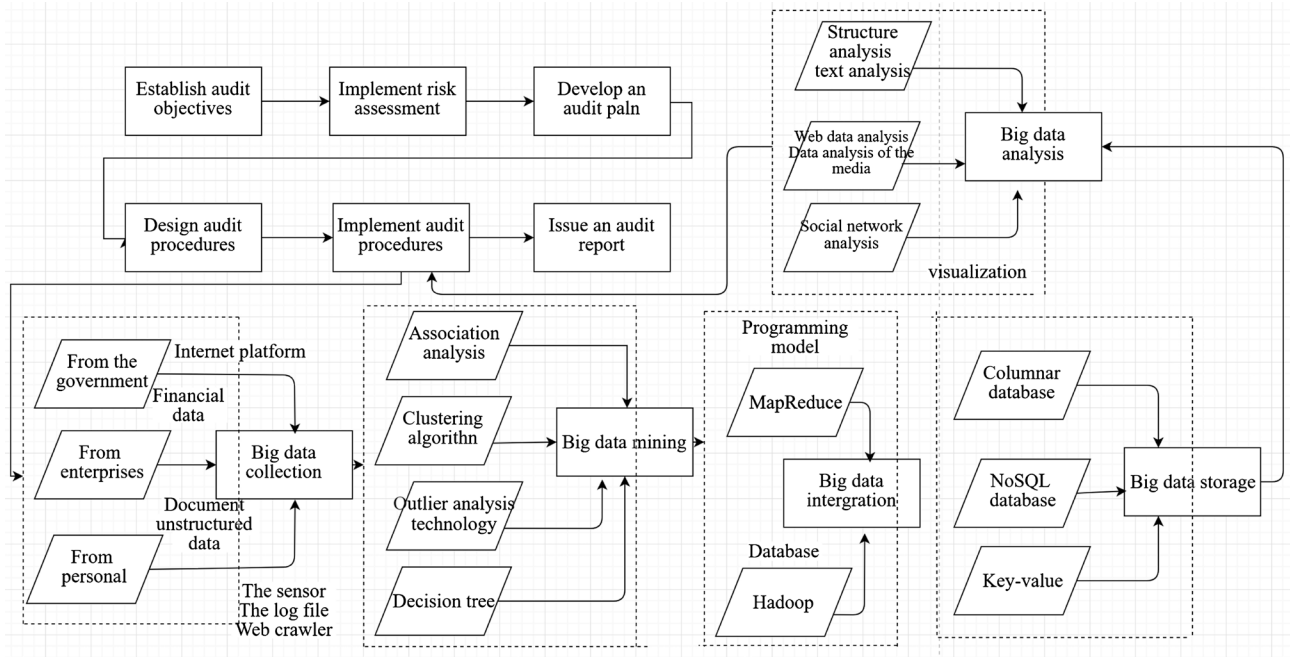

Figure 1. Big data audit platform.

data analysis and prediction results and value (Roussy et al., 2020).

The pre-processing of big data mainly includes data cleaning, data integration, data reduction and data transformation, which can greatly improve the overall quality of big data and reflect the quality of big data processes. Data cleaning technology includes data inconsistency detection, noise data recognition, data filtering and correction, which is conducive to improving the consistency, accuracy, authenticity, and usability of big data (Liu, 2018).

3.3. Improving the Comprehensive Quality of Audit Staff

To further improve the efficiency of audit work under the background of big data, it is necessary to lay the important foundation of talents and set up a team of auditors with a high level of information literacy.

On one hand, we must optimize and adjust the structure of audit talents, increase the proportion of technical talents in the audit department, recruit relevant computer professionals, assist companies to optimize the big data platform and provide guidance to the original audit staff (Guo, 2019a). On the other hand, enterprises should train auditors on a regular basis so that they can adapt to the big data audit work mode as soon as possible, improve auditors' information literacy and big data computer technology application capabilities, and improve work efficiency (Guo, 2019b).

4. Conclusion

In the context of big data, corporate auditing must open up new ground, build an auditing model that is based on data, supported by platforms, and guaranteed by talents, improve audit quality, and lay an important foundation for the healthy

development of enterprises. Only by using a modern audit model, constructing an audit platform, and vigorously cultivating high-quality audit talents can we meet the needs of China's current market economy. Due to the limited ability of the author, the implementation and application of the construction of the big data audit platform are yet to be tested.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

AICPA (2014). *Reimagining Auditing in a Wired World (White Paper)*. Now York: American Institute of Certified Public Accountants.

Aslanertik, B. E., & Yardımcı, B. (2019). A Comprehensive Framework for Accounting 4.0: Implications of Industry 4.0 in Digital Era. In *Blockchain Economics and Financial Market Innovation: Financial Innovations in the Digital Age* (pp. 549-563). Berlin: Springer. https://doi.org/10.1007/978-3-030-25275-5_27

Bilal, M., Oyedele, L. O., Qadir, J., Munir, K., Ajayi, S. O., Akinade, O. O., Pasha, M. et al. (2016). Big Data in the Construction Industry: A Review of Present Status, Opportunities, and Future Trends. *Advanced Engineering Informatics, 30,* 500-521. https://doi.org/10.1016/j.aei.2016.07.001

Chen, W., & Ju, J. N. (2017). Big Data Audit: Status and Development. *Chinese Certified Public Accountant, No. 12,* 77-81.

Cheng, X. Y. (2019). Challenges and Resolution Strategies Faced by Enterprise Auditing under the Background of Big Data. *Enterprise Reform and Management, No. 7,* 172-173.

Choi, T. M., Chan, H. K., & Yue, X. (2016). Recent Development in Big Data Analytics for Business Operations and Risk Management. *IEEE Transactions on Cybernetics, 47,* 81-92. https://doi.org/10.1109/TCYB.2015.2507599

Guo, G. M. (2019a). Challenges and Resolution Strategies Faced by Enterprise Auditing under the Background of Big Data. *Finance and Accounting Study, No. 27,* 170-171.

Guo, Z. S. (2019b). Challenges and Resolution Strategies Faced by Enterprise Auditing in the Background of Big Data. *Economist, No. 9,* 130-132.

Haddara, M., Su, K. L., Alkayid, K., & Ali, M. (2018). *Applications of Big Data Analytics in Financial Auditing—A Study on the Big Four*.

Liu, L. W. (2018). Research on Challenges and Countermeasures of Audit Work Innovation under the Background of Big Data. *China Business Review, No. 6,* 157-158.

Poziemski, E., & Baudot, L. (2019). When Enough Is Enough: The Use of Stopping Rules in Auditor Determinations of Evidence Sufficiency. *SSRN Electronic Journal.* https://doi.org/10.2139/ssrn.3341726

Roussy, M., Barbe, O., & Raimbault, S. (2020). Internal Audit: From Effectiveness to Organizational Significance. *Managerial Auditing Journal.* https://doi.org/10.1108/MAJ-01-2019-2162

Xu, X. L. (2016). Problems in Internal Control and Internal Audit of Public Institutions and Solutions to Them. *Taxation, No. 3,* 152.