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Article

Artificial Intelligence Technology Development and Audit Innovation

Yang Han, Yiwei Deng * and Xiujuan Ran

Hubei Accounting Society Research Group, Hubei Huaren Zhiyuan Accounting Firm (General Partnership), Xiangyang 441005, China

Abstract: Artificial intelligence technology is an important element of stimulate economic vitality, but the artificial intelligence technology resources into the table may face the risk of confirmation and measurement standards to grasp, this poses the challenge to accounting, also challenge the audit, audit how innovation to cope with the development of artificial intelligence technology confirmation and measurement difficulties, practical and theoretical circles in some discussion. Based on the perspectives of audit objectives, audit importance, audit risk and audit procedure.

Keywords: artificial intelligence technology; confirmation; measurement; audit innovation

1. New Requirements for Audit Objectives under Artificial Intelligence Technology

In the era of artificial intelligence, audit is facing new challenges. There is no systematic study on how to determine the audit objectives under artificial intelligence technology. In the classical audit theory, the audit goal is divided into the direct goal and the ultimate goal, in which the direct goal is the direct output of the audit process, and the ultimate goal is the final result of the audit. Under the artificial intelligence technology, the direct goal and ultimate goal of audit will not change, and the artificial intelligence technology puts forward new requirements for the direct goal and ultimate goal of audit.

(1) New requirements of artificial intelligence technology for the direct objectives of audit

The view about what the direct output of audit under artificial intelligence involves legitimacy, responsibility, ethics, transparency, trustworthiness, science, fairness, security, risk and so on. The purpose of the audit is to examine the extent to which potential products comply with established programming standards in a practical environment, while the audit is expected to hold the public and private sectors accountable for the risks that their algorithmic systems may pose, reducing potential risks and improving technical ethics. Qualcomm proposed to introduce a risk assessment mechanism in the social risk review to strengthen the scientific nature and fairness of the review [1]. After the audit model came into being, Wang Yufeng proposed that government audit institutions should focus on four parties in the audit model algorithm: the compliance of the model algorithm, the security of the model algorithm, the risk of the model algorithm, and the transparency of the model algorithm [2]. Therefore, under the artificial intelligence technology, the direct goal of the audit is to improve the audit quality while using the artificial intelligence technology. The birth of artificial intelligence audit is a new type of audit to achieve the direct goal of audit under the technology of artificial intelligence

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* Corresponding: Yiwei Deng (406881492@qq.com)

technology.

(2) The new requirements of artificial intelligence technology for the ultimate goal of audit

Audit comes from the separation of ownership and management right, which aims to reduce the agency cost. Through the verification of the financial statements, profit forecast of the audited unit, internal control and economic responsibility performance. Under the artificial intelligence technology, the value, governance efficiency and purpose of audit can be better realized through algorithm audit. According to Zhang Yongzhong and Zhang Baoshan the system value of algorithm audit is reflected in the following three aspects: first, standardize and supervise algorithm power and maintain data justice; second, to prevent digital risk and deal with the dispersion of algorithm power; third, the control of algorithm alienation, balance the transparent value of algorithm, and the ultimate goal of algorithm audit [3–9]. However, at the present stage, the algorithm audit is still in its initial stage, and the theoretical framework of the systematic algorithm audit goal through the classical audit theory has not yet been formed. The embodiment of the algorithm audit's ultimate goal of reducing the agency cost in the future needs to be continuously improved with the development of technology.

2. New Requirements for the Importance of Artificial Intelligence Technology in the Audit

The importance of audit refers to the severity of the misstatement or underreporting, which will affect the decision of the user of the statement. The determination of the importance level includes two aspects: nature and quantity. After determining the importance level in the audit plan stage, the audit subject should adjust the importance level according to the audit development to reduce the audit risk. At present, the financial audit of enterprises is affected by the network environment, and the work content is becoming more and more complicated. Combined with the development trend of The Times, the use of artificial intelligence technology to carry out the enterprise financial audit work can improve the existing financial level of enterprises and ensure the effectiveness of the audit results.

(1) Improve the audit efficiency, so that the importance level is determined earlier

The effective application of artificial intelligence technology in enterprise financial audit can comprehensively improve the efficiency of data processing. In the financial audit work, the staff needs to analyze a large number of data information, transaction vouchers, contract terms, sales documents and other data closely related to the enterprise finance. In recent years, the enterprise financial audit process is more and more complex, in the process of data verification need to consume a lot of manpower and material resources, the effective application of artificial intelligence technology can ensure the accuracy of the data extraction and analysis process, directly through the artificial intelligence technology calculus to get the final audit results, simplify the auditors data collection and processing time. Artificial intelligence technology with expert analysis system, to verify financial data and data information work, compared with the previous financial statements, ensure the accuracy of financial information, improve the efficiency of enterprise financial audit, avoid repeating tedious work content, make the importance level of determine time earlier, reduce the importance of subsequent adjustment of audit procedures.

(2) Expand the scope of audit and adjust the level of importance

The effective application of artificial intelligence technology can promote the enterprise audit mode innovation and change, make the traditional sampling audit gradually to the overall audit, break the limitations of traditional audit work, artificial intelligence technology in the process of data analysis and acquisition, not affected by the environment and technology level, to conduct a comprehensive audit of comprehensive information. According to the financial management in the process of enterprise development to expand the scope of the audit, effectively prevent financial audit risk, artificial intelligence technology can extract the required data in the massive data, and comprehensive evaluation of data content, timely found the main factors affecting the audit results, clear audit risk source, by expanding the scope of the audit to reduce audit risk, avoid the numerical error in the traditional audit process, and can adjust the importance level.

(3) Real-time information sharing to make the determination of the importance level more scientific and reasonable

In the process of enterprise development, the establishment of artificial intelligence information platform

provides convenience for the development of enterprise financial audit work. Auditors do not need to collect data from various departments of the enterprise, but store the data information into the database of the unified information platform through network communication, so that they can obtain the data required for audit anytime and anywhere, simplify the intermediate process of enterprise audit, and comprehensively improve the audit effect. Effective application of cloud technology through cloud storage database storage space, reduce the complexity of the field audit data retrieval, power is responsible for audit staff quickly document information extraction, improve the integrity and accuracy of audit information preservation, realize real-time information sharing, make the importance level to determine more scientific and reasonable.

3. Audit Risk under Artificial Intelligence Technology

(1) Risk of semantic understanding deviation and information asymmetry

The AI communication routine is set in advance, and there are problems such as inflexible and weak language and emotion, which may make the interrogated personnel appear perfunctory or impatient attitude. If the Mandarin of the interrogated person is not standard, there may be understanding deviation, which will affect the quality of the information obtained. In the audit, the main purpose of man-machine communication is to realize the efficient information exchange between customers and artificial intelligence. However, the audit process of most audit institutions still remains at the use of SQL for data query and the use of spreadsheet software for data screening. Although ChatGPT has improved in the natural language of neural networks, these methods have their inescapable defects, and the ability of robots to recognize dialects and semantics still needs to be improved.

(2) The risk of untrue data and collusion

If the interrogator is familiar with the underlying logic of programming, he may avoid the keywords to make false accounts, so that the growth rate or reduction rate is less than the critical value. If the upload voucher is automatically identified, it may be wrong due to the irregular handwriting of the paper voucher; if the voucher is uploaded manually, the error information may be uploaded due to the negligence and fatigue of the operator. The progress of P diagram technology makes it difficult for artificial intelligence to identify the authenticity of electronic picture vouchers. Both data-driven deviation and human-computer interaction deviation may damage the audit quality and affect the authenticity of accounting information. The designer of the program may also collude with the financial personnel to change the original procedure for personal gain. From a psychological perspective, artificial intelligence lacks the ability to detect lies, microexpressions and other situations. Realizing these requires people's social experience, professional judgment and relevant theoretical knowledge. When the auditees evade, deliberately conceal, and behave abnormally, artificial intelligence often cannot identify. On the premise that audit institutions cannot maintain absolute trust and complete data sharing among all auditees, AI needs to make greater progress in both technology and system if to completely replace auditors to make professional judgment.

(3) the risk of imperfect laws

The newly revised Audit Law of the People's Republic of China and the Regulations on the Advanced Integrated Management of Internet Information Services and other laws and regulations are of great significance for accelerating the construction of a sound legal framework for AI supervision and clarifying the rights and obligations of regulatory agencies. However, in the specific audit projects, some contents have not been included in the category of laws and regulations, which brings troubles to the legal compliance and the definition of power of AI audit mode.

(4) Data security risks

Artificial intelligence audit is based on the data model, and its security risks mainly come from the authenticity and low reliability of the original data, as well as the data leakage caused by viruses or hackers. Due to the different level of national economic development, the construction of digital network and the use of artificial intelligence in different regions are uneven. Various departments and enterprises will not share important information with audit institutions in time out of the consideration of information security, and the problem of information asymmetry will affect the audit. In the era of artificial intelligence, it is difficult to

distinguish the true and false with the huge amount of data, and the privacy is easy to be exposed, which may miss the link or face recognition, leading to the complete disclosure of personal information. Still have may cause the heavy loss of the unit, the enterprise. In the process of data transmission and storage, if hackers break into the internal core database, the possibility of data leakage will increase. For example, if the production process or marketing strategy is leaked, the competitors will imitate its process, reduce the research and development costs, or develop targeted strategies in advance to occupy the market advantage, posing a threat to the company.

4. New Requirements for Audit Procedures under Artificial Intelligence Technology

(1) Audit preparation stage

At this stage, audit institutions should first establish a data sharing mechanism with the auditees, and obtain relevant financial data and business data through the intelligent financial platform. Secondly, audit institutions should combine the business characteristics and risk characteristics of the auditees, and use big data analysis technology to conduct a preliminary assessment of their financial status and internal control, identify high-risk areas, and determine the audit focus. Finally, the audit institutions should set up a professional and compound intelligent audit team, formulate detailed audit plans, and clarify the audit objectives, scope, procedures and methods.

(2) Audit implementation stage

At this stage, audit institutions make full use of the intelligent audit platform, using big data analysis, machine learning and other technologies, to automatically collect, clean and integrate massive financial data, and build an audit data warehouse. Based on the data warehouse, audit institutions carry out multi-dimensional and multi-angle data analysis, identify potential risk points such as misstatement and fraud through abnormal point detection, correlation analysis and other methods, and use visualization technology to generate intuitive analysis reports. At the same time, audit institutions apply natural language processing technology to intelligently analyze unstructured data such as contracts and invoices, extract key information, and assist audit judgment. In the process of implementation, audit institutions should also combine expert knowledge base and audit algorithm model to compare and verify audit evidence to improve the reliability of audit conclusions.

(3) Audit report stage

At this stage, audit institutions use the intelligent audit platform to automatically generate standardized audit report templates to ensure the consistency of the report format and content. Based on the natural language generation technology, the key information such as the data analysis results and risk point identification in the audit implementation stage is automatically filled into the report template to improve the efficiency of report preparation. At the same time, audit institutions apply intelligent audit algorithm to automatically check and verify the report content, identify errors, omissions or contradictions, and improve the quality of the report. In the process of report generation, audit institutions should also consider the information needs of different stakeholders, and use data visualization technology to present audit findings in the form of charts and dashboards, so as to improve the readability and communication of the report.

(4) Follow-up work stage of the audit

At this stage, the audit institution should establish an intelligent tracking mechanism to automatically monitor the rectification of the problems and suggestions raised in the audit report, and urge the audited units to complete the rectification work in time through the system early warning and prompt. At the same time, audit institutions should make full use of the intelligent audit platform to systematically collect and analyze the data, process and results of the previous audit work, summarize the audit experience, optimize the audit model and algorithm, and realize the continuous evolution and iteration of the audit ability. In addition, audit institutions should also pay attention to the mining and dissemination of audit value, use big data analysis technology to dig deep into audit findings, identify industry trends, common problems, etc., and form audit insights and consulting suggestions.

5. Conclusion

The audit goal established by enterprises is the main basis for the audit work, and also the important link of the audit process. Traditional audit work requires auditors to allocate workflow according to the audit objectives, and play the role of checking and filling the gaps. With the continuous expansion of the operation scale of enterprises, the audit workflow design has ushered in the reform and innovation. First of all, it is necessary to judge the authenticity of the data statements. The application of artificial intelligence technology can quickly carry out this work. In the context of the application of artificial intelligence, the purpose of enterprise audit is to reduce audit risks, ensure the accuracy of audit results, provide rich information for audit, reduce audit risks and improve audit quality.

This paper discusses the challenges and opportunities brought by AI technology to the audit field, and analyzes the impact and new requirements of AI technology on audit from four aspects: audit objectives, audit importance, audit risk and audit procedures. Artificial intelligence technology is a double-edged sword. The auditor can use artificial intelligence technology, and the auditors can also use artificial intelligence technology. The objectives, importance and new requirements of audit procedures under artificial intelligence technology are clarified, and the audit subject can make full use of artificial intelligence technology to improve audit efficiency, reduce costs, expand the scope of audit, prevent risks, and simplify the audit process. At the same time, it also puts forward the risks that artificial intelligence technology may face in the audit, including semantic understanding deviation, false data, imperfect law and data security problems. In terms of audit procedures, the document details how to optimize audit work at the stages of audit preparation, implementation, reporting and follow-up work. Overall, although AI technology brings the possibility of innovation in the audit field, it also needs to pay attention to and address the accompanying risks and challenges to ensure the quality and efficiency of audit work.

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