

Accounting Supervision Based on Blockchain Information Technology and Its Operational Requirements

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Abstract: With the social progress and rapid economic development, enterprises should strengthen the supervision and management of accounting work if they want to make steady progress in the increasingly fierce market competition. How to strengthen accounting supervision under the modern enterprise system has become the focus of keen discussion in accounting circles. Blockchain information technology has been widely used in all walks of life. Under this background, the application of blockchain in accounting supervision has become the general trend. Through a brief analysis of blockchain information technology, this paper focuses on the current accounting supervision work, and analyzes the impact of blockchain information technology on accounting supervision work. It is found that the application of blockchain information technology in accounting supervision work has higher value and is worth popularizing.

1. Introduction

With the deepening development of information technology, information users' requirements for data security, confidentiality and authenticity are gradually increasing. In the tide of economic globalization, enterprise financial activities, as a key link in business management, are an important support for realizing diversified development and value creation of enterprises [1]. Under such circumstances, the advanced blockchain information technology should be fully infiltrated, which lays a solid foundation for the normal development of accounting supervision, and also plays a vital role in improving the quality and actual results of accounting supervision. The existing research contents predict the future development trends of virtual accounting subjects, non-sustainable business subjects, electronic money promoting the integration of money flow and information flow from accounting assumptions and accounting objectives, while blockchain information technology has gradually verified the correctness and feasibility of the above judgments and accelerated the transformation process from theory to practical application [2].

Centralized cloud storage of accounting data sets is a continuation of the idea of centralized accounting. Doing a good job of supervision is of great significance for us to standardize accounting behavior and improve information quality. In recent years, blockchain information technology has gradually tested the field of water accounting, and the unique distributed account books possessed by blockchain can be effectively applied to a series of accounting supervision work such as realizing internal compliance declaration of enterprises.

2. Overview of Blockchain and Accounting Supervision

2.1 Block Chain

Distributed storage is the most important feature of blockchain information technology, which is mainly manifested as follows: transactions are composed of different nodes participating together; The concept of blockchain information technology breaks the narrow sense of time and region, and combines and unites data blocks in time sequence through Internet technology. When a block is filled with transaction information, this block will be added to the system account book. The data on the blockchain are interrelated. When a staff member records a specific business in a distributed

account book, each node in the system will be notified, and the data will be successfully recorded only when the data is recognized and recognized by the staff members of other nodes. The trust mechanism is formulated and written into the system in advance in the form of algorithm program, which creates credit, generates trust and reaches consensus for system users, so that system users can trade with confidence without knowing the identity and credit degree of the other party or parties.

2.2 Accounting Supervision

The so-called accounting supervision refers to the inspection, supervision and implementation of the business contents that should be handled according to the law by accounting staff according to the powers conferred by the Accounting Law, applying the contents stipulated in the Accounting Law to specific people and things, and checking the legality, authenticity and effectiveness of economic business matters of the unit. Internal supervision will be restrained by the environment and position, and the effectiveness of supervision is often less than that of external supervision, which is the supervision of accounting firms as we know it, and the procedures and steps involved are also more complicated [3]. Nowadays, the purchase and sale are inconsistent, and the phenomenon of false invoicing and false invoice reimbursement is common. Accounting supervision is sometimes forced by superior leadership or distorted by internal and external environmental factors such as self-interest relationship. Accounting supervision is an inevitable link for every enterprise in China.

3. Application of Blockchain Information Technology in Accounting Supervision

3.1 Application Blockchain Can Provide Real and Reliable Accounting Information

The application of blockchain information technology in enterprise financial system can ensure that every employee in the enterprise can record and check accounting information because of its openness and unchangeable information. Cloud accounting provides public online accounting services through online cloud computing environment, replacing the accounting software originally installed in the organization for computerization. When a block is filled with transaction information, this block will be added to the system account book. Information verification includes grammar checking and conflict recognition [4]. Using automatic script code for intelligent machine contract and automatic transaction can record and generate the same rules for accounts of different nodes. And inform all participants about this block in the network that the block will be added to the chain only when the participants in the network authenticate that the transaction is valid. It can make the accounting work smoothly and ensure the accuracy and reliability of the financial accounting information content of enterprises, which plays a very important role in the continuous development of enterprises in a comprehensive and stable direction.

3.2 Reflect the Security of Enterprise Financial Operation

Blockchain protects the security of transactions through digital anti-counterfeiting technology and digital signature. For example, the registration and transfer of accounting assets should be completed by manual operation, and a lot of labor costs need to be paid, resulting in time cost. Blockchain information technology can realize point-to-point asset registration and transfer of accounting practice, which not only saves costs but also improves operational safety. Enterprises build alliance chains with consumers, suppliers, other companies in the same industry and alliance partners in other related industries to share information and achieve a win-win situation. The influence between nodes will form a nonlinear causal relationship through the network. The maintenance node needs to maintain the data information existing in the actual operation of the system [5].

In this paper, a two-valued dependent variable Logit model based on panel data is established.

Dependent variables are capital operation behavior of internal capital market, existence of capital operation in internal capital market of listed companies. When internal capital operation exists, that is, whether the listed company has related party transactions within the time range, Mode1=1, otherwise Mode1=0 Table 1 shows descriptive statistical results of existence and transaction volume of internal capital market operation of listed companies.

Table 1 Descriptive Statistical Results of the Existence and Transaction Volume of the Internal Capital Market Operation of Listed Companies

Sample	Variable	Sample number	Mean value	Median	Maximum value	Minimum value	Standard deviation
All samples	Mode1	260	0.8552	1.02	1.52	0.00	0.33
	Mode2	260	0.04	1.43	2.33	0.00	0.20
State holding	Mode1	180	0.78	1.02	1.52	0.00	0.37
	Mode2	180	0.07	1.01	2.01	0.00	0.21
Private holding	Mode1	70	0.96	1.02	1.52	0.00	0.17
	Mode2	70	0.21	1.27	2.81	0.00	0.29

The obstacles of accounting supervision are that the responsibilities of supervision work are not clearly defined, and the functions of supervision work cannot be effectively confirmed. Some enterprises outsource financial work, which also creates greater obstacles to supervision. In the system, only the private information content between the trading parties is encrypted, while other information content is open to all personnel. On the one hand, the encryption algorithm of blockchain ensures the security of fund payment; on the other hand, because the private key can only be held by the transaction party, it can also ensure the identity of the transaction party. The private chain can be used to record and transmit information within the enterprise. Because the private chain is only open to the enterprise, users can not be anonymous in the process of using it, so the enterprise can effectively supervise and control the implementation of various activities. It can realize the immediate audit by the head office after the audit by the branch, and automatically enter the vouchers, thus reducing the intermediate express delivery time and saving expenses, increasing the reimbursement efficiency of travel expenses by 70%, and improving the efficiency of accounting and accounting treatment.

3.3 Applying Blockchain to Play a Comprehensive Budget Management

Comprehensive budget is not just financial data, but a series of collections that plan, coordinate, organize and control enterprises around goals and strategies, relying on budget management. By generating and updating the circulation records, the information can be updated and stored in a timely and effective manner, and at the same time, the shared account book has traceability. The core of decentralization is mutual trust and sharing, and blockchain realizes credit transactions without intermediary through consensus mechanism and smart contract. Consensus means that most nodes agree with the validity of the transaction, and the transaction can be endorsed and confirmed by each participant. Blockchain information technology can reduce the financial personnel's changes and interventions on the contents of financial accounts through its unchangeable characteristics, and fundamentally eliminate the problem that senior leaders require changes in accounts in enterprises [6]. A new block needs to pass the consistency algorithm before it can be added to the system account book of the credit node, and then the credit node propagates it to all credit nodes. All nodes in the system need to strictly abide by the relevant principles in the specific transaction process, and can not cheat, so there will be no trust problems.

3.4 Strengthen the Tracking Ability of Accounting Supervision

The application value of blockchain information technology is that it can monitor the accounting tracking and management work in real time, and it can be retrieved at any time and has unchangeable characteristics, which has a very clear meeting effect on the tracking demand of accounting supervision work. The accounting concept of blockchain is decentralization and self-

organization, and accounting and data storage are decentralized. It can better deal with the deficiencies and defects in accounting supervision of enterprises, let more people participate in the audit process of enterprises, effectively enhance the actual recognition of supervision by enterprises, and ensure the smooth development of accounting supervision. The existing bookkeeping form is that both parties to the transaction, the bank and the auditor each have a set of account books. This form of accounting is independent accounting, which has the disadvantages of opaque data, low efficiency and high cost. Enterprises can improve the flexibility and applicability of blockchain by independently defining the consensus mechanism of blockchain, the permissions and capabilities of nodes and other rules. Blockchain information technology has successfully solved the transaction trust problem, which is the most appropriate technical path to reduce the operating cost of enterprises.

4. Further Thinking on the Application of Blockchain Information Technology

4.1 Improve the Transparency and Efficiency of Accounting Information

Blockchain information technology can not only build a shared information platform to reflect the company's performance well, but also provide massive information resources for enterprises, which can effectively restrain the information asymmetry in the transaction process. Today's market competition is very cruel. Some low-quality employees will do some illegal things and issue some false certificates in the face of interests, which can't really play the role of supervision. The lag of financial information will bring great pressure to the supervision department. In addition, the lack of accounting responsibility consciousness of school executives sometimes requires their staff to operate in a black box, which will undoubtedly bring obstacles to the accounting supervision work. This proves that the essence of accounting legislation lies in strengthening the internal legal supervision of accounting work, that is, restricting power with power. If the objective fact that the legal status of accounting supervision is not recognized, it is tantamount to denying the Accounting Law. It is necessary for the government itself to carry out the accounting supervision of enterprises, clarify the responsibilities of various posts and departments, carry out the accounting supervision of enterprises quantitatively and regularly, especially strictly inspect the trivial accounts and contracts of enterprises, and promote the improvement of the functions of government departments.

4.2 Improve the Government's Supervision Ability

The government's supervision and management work is the foundation of guiding the accounting supervision work, and it also affects the quality of accounting supervision work in essence. Blockchain information technology can enhance the government's ability of supervision and management. The developers of blockchain information technology platform combine accounting standards and accounting systems with accounting informationization and management software procedures to analyze, design, develop and run computer accounting information systems. The accounting treatment on the platform requires higher uniformity of accounting standards. In addition, when the relevant personnel are specifically divided, their actual responsibilities should also be made clear, and they should be involved in regular training activities to effectively enhance their overall awareness of supervision. On the one hand, it can improve the supervision level of relevant government departments; On the other hand, it can also ensure the overall refinement of supervision work [7]. By reducing illegal activities such as tax payment, blockchain information technology can reduce tax evasion, which is of great significance and value to the openness and transparency of enterprise accounting supervision.

4.3 Promote the Realization of Useful Accounting Objectives for Decision-Making

Decision-making usefulness view emphasizes that accounting information should face all information users who have close interests with enterprises, such as investors, creditors and

government, and provide useful accounting information to help them make decisions. Therefore, it is the key to ensure the authenticity of accounting information to make clear the main position of accounting responsibility of the unit responsible person. As the unit responsible person, she should be responsible for the authenticity and completeness of the accounting work and accounting data of the unit. Make the society's recognition of accounting supervision work improve, further increase the number of supervisory staff and improve the rationality of accounting supervision work. When the accounting information provided by accountants involves personal interests, the dilemma of accounting ethics arises. Using blockchain information technology to manage accounting data such as certificates, accounts and tables in the form of electronic files can realize the safe storage of accounting data and the classified management of complex data, effectively improve the security and confidentiality of accounting data management, and optimize the workflow of enterprise financial activities.

5. Conclusion

With the rapid development of science and technology, blockchain information technology has developed rapidly. Applying this technology to the accounting supervision of enterprises can strengthen the internal management and control of enterprises. To a great extent, blockchain can solve various problems faced by enterprises in the process of accounting supervision, such as lack of responsibility consciousness, false accounting information, low supervision efficiency and so on. Due to the irreversibility and time postmark function of blockchain information technology, the monitoring of cloud accounting information distortion will no longer become an important concern. Compared with the enterprises themselves, we should constantly strengthen the system and expand the investment in manpower. Only by doing these well can we ensure the authenticity and effectiveness of the information as much as possible, and finally ensure the healthy and effective development of our economic construction.

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