

Retraction

Retracted: Construction of Accounting Internal Control Management Platform Based on IoT Cloud Computing

Wireless Communications and Mobile Computing

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

- [1] L. Song, "Construction of Accounting Internal Control Management Platform Based on IoT Cloud Computing," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 9552118, 13 pages, 2022.

Research Article

Construction of Accounting Internal Control Management Platform Based on IoT Cloud Computing

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The Internet of Things is a network that interconnects all items on the Internet through radiofrequency identification, infrared sensors, global positioning systems, laser scanners, and other sensing equipment according to the agreed communication protocol to achieve intelligent identification, positioning, analysis, monitoring, and management. Internal accounting control is an accounting measure established for the enterprise to identify and analyze the operating conditions and to be responsible for the enterprise assets. Accounting internal control is the core of internal control, and the rational use of internal control theory is conducive to promoting the healthy development of enterprises. According to the control object, it can be divided into financial risk control, operational risk control, human resource risk control, strategic risk control, and information distortion control. This paper is aimed at studying the construction of an accounting internal control management platform based on the Internet of Things cloud computing. How the internal accounting control system adapts to the development of the socialist market economy is the current research focus. In view of the current development status of the control system, this paper combines the internal control with the accounting information system and explores the enterprise management from the strategic management level and the operational management level. This paper mainly builds an accounting big data analysis platform based on cloud computing and believes that the platform should have the function of financial comprehensive analysis. The experiment in this paper found that the actual management cost of the company in 2017 was 2630 million yuan, and the predicted management cost was 2600 million yuan. The gap between the predicted data and the actual data is getting closer and closer, indicating that the prediction platform is effective.

1. Introduction

The Internet of Things has attracted the attention of all countries in the world because of its good economic benefits. At the same time, the Internet of Things has also become an important booster for the recovery of the world economy. The good development of an enterprise requires not only external assistance but also internal management. Therefore, this paper combines IoT cloud computing with internal accounting control management, hoping to promote the development of enterprises through the combination of internal management and external technology.

The internal control system adopts various control methods for the storage and use of property and materials, which can prevent and reduce the damage of property and materials, and prevent the occurrence of problems such as

waste and corruption. The scientific internal control system can reasonably control, coordinate, and evaluate the various functional departments and personnel within the enterprise, to ensure the efficient operation of the enterprise. Correct and reliable accounting data is a necessary condition for business managers to understand the past, control the present, predict the future, and make decisions. The internal control system can effectively prevent the occurrence of errors and malpractices by formulating and implementing business processing procedures, so that the accounting data can be controlled under the condition of mutual restraint.

This paper proposes to implement control from two levels of strategy and operation and use the control method combining result control and behavior to control enterprise risk. This paper points out from the enterprise management level that the main purpose of internal control is to improve

the enterprise's ability to resist risks and promote the realization of the enterprise's long-term goals.

2. Related Work

Scientific management of enterprises helps enterprises to create more value and develop in a more scientific direction. Vakhrushina and Prunenko confirm that the significance of domestic and management accounting processes is objectively increasing in the context of the economic crisis. They identified the likelihood and manner of inclusion of processes of management accounting into internal control processes and concluded that some of the existing duplicated processes were finally confirmed to be in line with the principles ensuring success of the implementation thereof [1]. The knowledge economy puts forward higher requirements for accounting information resources of enterprises. Wei designed and implemented the enterprise accounting management platform based on data mining. First, he designed the accounting information implementation process to meet the needs of the enterprise and conducted relevant inspections of the platform. The results show that the enterprise accounting platform constructed by the experiment can realize most of the functions of accounting and financial management and provide a certain basis for the financial management decision of enterprises. Practice has proved that the platform can be effectively applied to accounting work and is feasible [2]. In response to the management requirements, Mikhenko analyzes the behavior of the internal environmental elements of the enterprise, formulates management solutions, and improves the effectiveness of its behavior. The high quality of the solution is provided by the information model, which is a highly adequate image of the specific object being controlled, and the ability to control the volume of the device to fully perform its inherent function. In this case, the digital transformation of the analytical process is based on its own information platform and should use breakthrough digital technologies. The study uses methods such as system analysis to summarize modern concepts of economic systems management, the development of digital technologies, and their introduction into the management decision-making process [3]. As a management tool, accounting serves management and ensures the connection between the operating system and the entity's administrative management system. Ciuhureanu emphasizes that management accounting systems involve the internal management of a business and provide managers with important information in several interrelated areas: forecasting, costing and analysis, coordination, decision-making, control, and evaluation. He begins by highlighting the necessity and usefulness of management, accounting information for management, and through a selective study of a sample of 301 subjects, aims to analyze the opportunities for providing information through management accounting systems. He came to a series of conclusions based on established associations [4]. Ponomareva and Slinykov present research on the formation of accounting and control systems that provide information and analytical support for management objectives. In forming strategically oriented financial indica-

tors, the company's cost of capital occupies a fundamental position. According to the research results, the information and analysis of the developed accounting and control system support the company's market management objectives and its business processes are integrated with other management systems in a parallel automated manner [5]. Crespo-Perez understands the convergence of cloud computing, machine learning, and IoT as a framework for decision support system development, and to develop this framework, he analyzed and synthesized 35 research articles from 2006 to 2017. The results show that when the amount of data is large, computational algorithms and sophisticated analytical techniques are required. The IoT combines a large amount of data accumulation and data mining to improve the learning of business automatic intelligence [6]. There is currently no unified way to represent, share, and understand IoT data. Antunes et al. discusses the limitations of current storage and analysis solutions, points out the advantages of semantic methods for context organization, and extends unsupervised models to automatically learn word categories. The scheme is evaluated on the Miller-Charles dataset and the IoT semantic dataset extracted from popular IoT platforms with a correlation of 0.63 [7]. Although these theories have explored IoT cloud computing and internal accounting control to a certain extent, the combination between the two is less and not practical.

3. Construction Method of Accounting Internal Control Management Platform Based on IoT Cloud Computing

3.1. IoT System. RFID is an easy-to-operate, simple, and practical application technology, and the external environment can be ignored during its use [8]. For example, short-range RF products are not afraid of harsh environments such as oil stains and dust pollution and can replace barcodes. With the development of the Internet of Things, the way of information collection has also changed from manual collection to the current automated collection. The current IoT perception technology is mainly radiofrequency identification technology, which combines radio broadcasting technology and radar technology. Radiofrequency identification technology first appeared in aircraft radar detection technology, mainly for military operations [9]. With the continuous deepening of scientific research and technology, radiofrequency identification has also been gradually applied from the military field to the Internet of Things field. Generally speaking, a complete RFID system includes four parts: tag, antennas, management system, and reader [10, 11], the basic working principle of the radio frequency identification system: the electronic tag enters an effective magnetic field, and if it receives a special radiofrequency signal launched by the reader through the transmitting antenna, the electronic tag is activated. Therefore, the energy obtained by the induced current will send the encoded information stored in the chip through the built-in radiofrequency antenna, or actively send a certain frequency signal. The receiving antenna of the reader receives the reflected

microwave synthesis signal, and after decoding by the antenna regulator, the valid information is sent to the central information system for related data processing. The central information system recognizes the code of the tag according to the code, makes the corresponding processing and control according to different settings, and finally sends out an instruction signal to the control reader to complete the corresponding read and write operations, as shown in Figure 1.

The antenna of the radiofrequency identification system is responsible for receiving and transmitting radiofrequency information, and the role of the antenna in this process is to convert the received electromagnetic wave information into a current signal, or convert the current signal into an electromagnetic wave and send it out [12, 13]. In this process, the energy emitted by the antenna will form an electromagnetic field, which has a certain effect on the identification of the electronic tag, and the electromagnetic wave magnetic field formed is the scale range of the reader. However, the number of antennas in the RFID system needs to be analyzed in detail [14].

The electronic tag in the RFID system consists of a chip and an antenna [15]. The data information of the target object exists in the electronic tag, and its existence form can be in a read-only state or a compatible state. During the operation, the reader sends a signal and the tag receives it, and the electronic tag converts the electromagnetic wave information into DC power [16, 17]. The specific situation is shown in Figure 2.

The main purpose of the RFID reader is to “communicate” with the electronic tag and receive the control commands issued by the system [18]. The transmission frequency of the RFID system is controlled by the reader, and the range of information communication is also limited by the reader [19]. From the perspective of the structure of the reader, it can be divided into a reading device and a writing device, as shown in Figure 3.

IoT is a network-based and service-oriented integrated message treatment technics. It has enabled a quantum leap not only in the communication methods among individuals but also among people and things. In a word, IoT technology has turned the whole world into a whole [20]. Networking, materialization, interconnection, automation, perception, and intelligence are the basic characteristics of the Internet of Things. Despite the powerful functions of IoT, the basis of IoT is still the Internet, only that IoT has been expanded and extended on the basis of the Internet. From the current research progress, IoT may be classified into sensing level, application level and web level, illustrated in Figure 4.

The job of the recognition layer is to identify the target. In what process web-based sensitive or identifier devices will be engaged, the exact target detection can be achieved only with the cooperation of multiple technologies.

The application layer consists of data acquisition and supervision and power consumption control. The managed architecture covers accounting and administrative features. In summary, the application tier is the technique of combining IoT technologies with the rest of the domain to get a new kind of clever settlement.

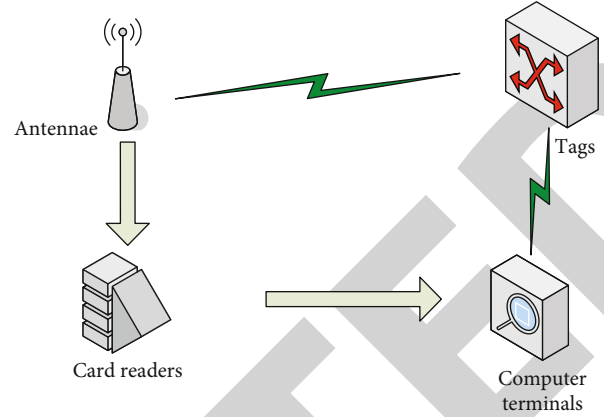


FIGURE 1: RFID system architecture.

The IoT technology is the heart of IT. In the field of IoT, all entities can talk to every other and just share messages through IoT technology with the help of the below features. It connects any item to the Internet through information sensing equipment and according to the agreed protocol and conducts information exchange and communication, to realize a network of intelligent identification, positioning, tracking, monitoring, and management.

- (1) Transportability IoT technology enables information delivery by complying with protocols
- (2) Integrated perceptibility, IoT has the ability to self-organize and break technology dependency
- (3) Automatic control, which is intelligently managed through the use of fuzzy knowledge technology
- (4) Intelligent processing, using data processing technology to process the raw data and transmit it to the user

3.2. Distributed Algorithms. The distribution optimization problem can be traced back to the early 1980s, but due to technical problems, it has not been developed much until the rise of networking in recent years, and distribution optimization has reappeared. Distributed optimization is the task of effectively realizing optimization through cooperation and coordination among multiple agents and can be used to solve large-scale and complex optimization problems that are incompetent for many centralized algorithms. Some scholars have proposed a distributed convex optimization algorithm based on gradually reducing the step size and discussed the constraints at the same time. Figure 5 is a schematic diagram of a distributed storage structure.

Multiagents can be divided into the directed graph and undirected graph. The function expression of a directed graph can be expressed as

$$C_{hf} = \begin{cases} 1, & (h, f) \in \alpha, \\ 0, & \end{cases} \quad (1)$$

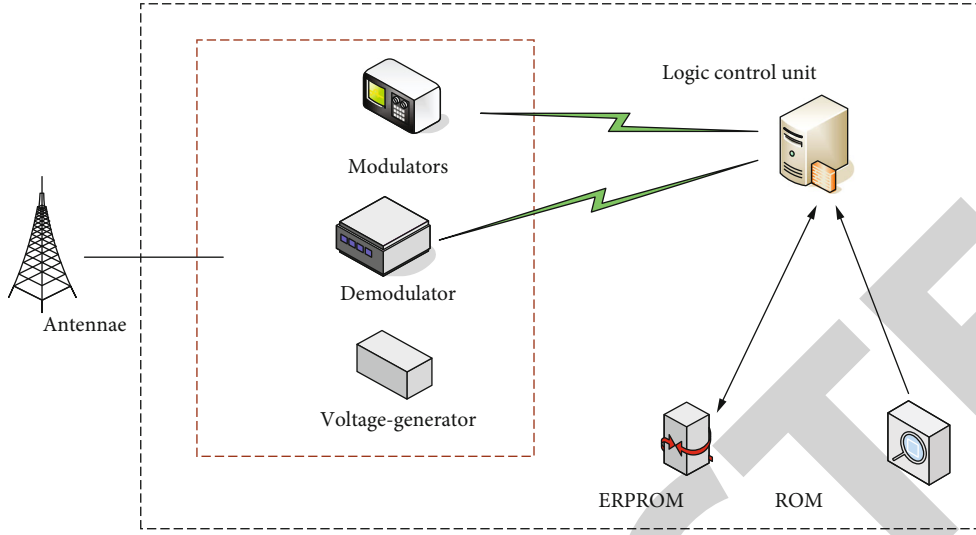


FIGURE 2: Electronic tagging.

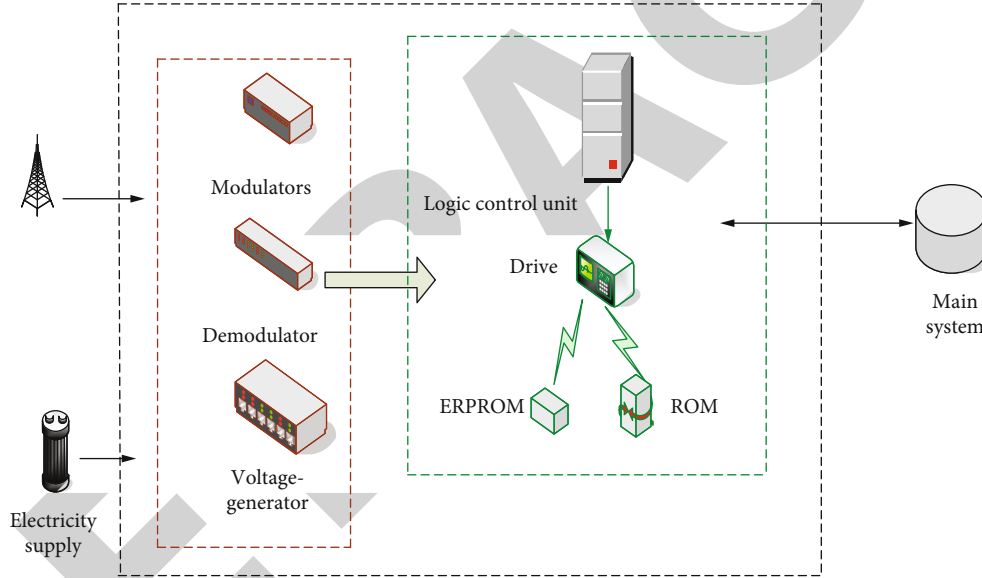


FIGURE 3: Structure of the reader.

where C_{hf} represents the weight of the directed edge and h, f represent the directed node.

$$\begin{aligned} k_{hl}(h) &= \sum_{f=1}^l C_{hf}, \\ k_{out}(h) &= \sum_{f=1}^l C_{hf}, \end{aligned} \quad (2)$$

The in-degree matrix is $K_{hl} = [k_{hf}]$, and the out-degree matrix is $K_{out} = [k_{fh}]$. When $K_{hl} = K_{out}$, we consider it to be a weighted flat map.

The dynamic formula of a multiagent system composed of multiple agents can be expressed as:

$$s_a(k) = y_i(k), \quad (3)$$

where $s_a(k)$ is the state of agent a and $y_a(k)$ is the control law to be designed. The cooperation of multiple agents to solve a multidimensional optimization problem can be expressed as

$$\min_{a \in W^j} g(a) = \sum_{k=1}^h g_k(a). \quad (4)$$

Because the calculation formula is too complicated, it can be solved separately in the actual application process.

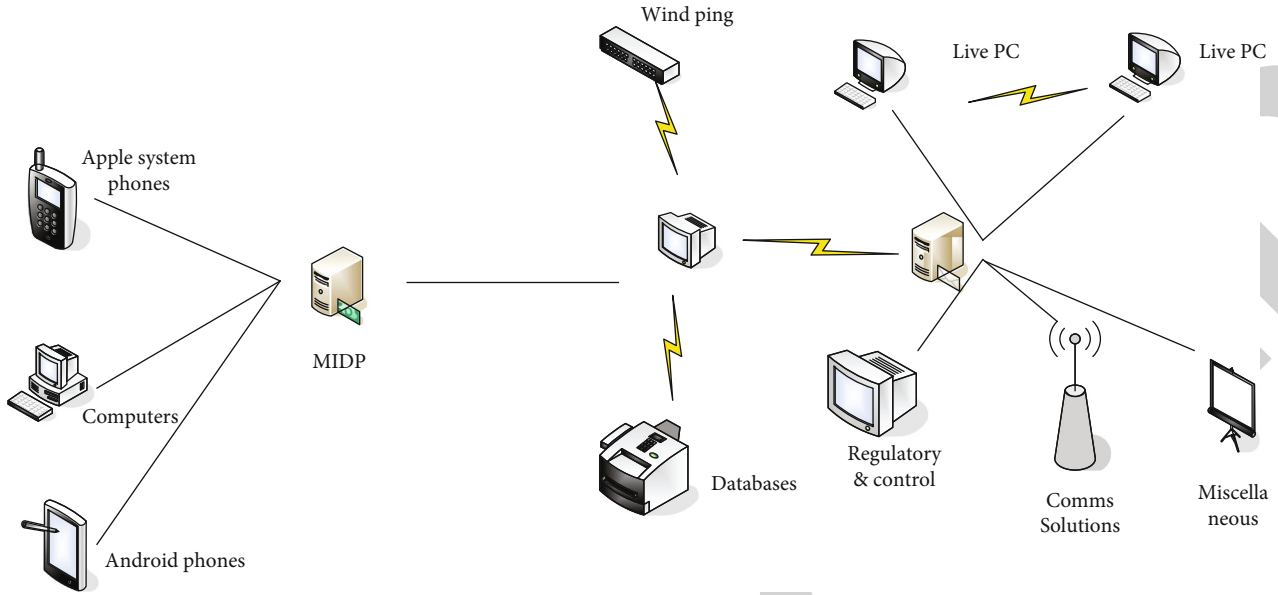


FIGURE 4: Internet of Things platform architecture diagram.

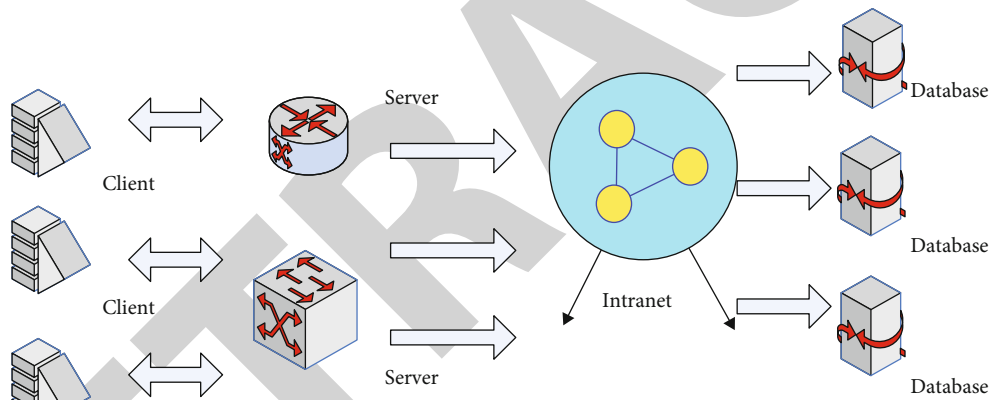


FIGURE 5: Distributed storage structure.

A single part gets a cost function, and the agent can jointly update its state with each part.

The basis of Bayesian classification is probabilistic reasoning, that is, the process of deriving unknown variable information from known variable information.

$$P(C|x_1, x_2, x_3, \dots, x_n) = \frac{P(C)P(x_1, x_2, x_3, \dots, x_n|C)}{P(x_1, x_2, x_3, \dots, x_n)}. \quad (5)$$

Bayesian probabilistic models assume that each feature $x_j (i \neq j)$ is conditionally independent of other features, namely,

$$P(x_i|C, x_j) = P(x_i|C), i \neq j. \quad (6)$$

Therefore, the categorical variable of the conditional distribution of C can be obtained, namely,

$$P(C|x_1, x_2, x_3, \dots, x_n) = \frac{1}{C} P(C) \prod_{i=1}^n P(x_i|C). \quad (7)$$

If the gait data is divided into two categories, using the Bayesian formula, it can be expressed as

$$P(w_j|x) = \frac{P(x|w_j)P(w_j)}{P(x)}. \quad (8)$$

It is possible to obtain completely equivalent decision rules. There are two forms of these two minimum error

Bayesian classification methods; one is the posterior probability form, namely,

$$P(w_1|x) > P(w_2|x). \quad (9)$$

The other is a class of conditional probability density forms, namely,

$$P(x|w_1)P(w_1) > P(x|w_2)P(w_2), \quad (10)$$

$$g_{hf} = \begin{cases} -c_{hf}, h \neq f, \\ k_{hm}(h), h = f, \end{cases} \quad (11)$$

where $g(hf)$ represents a directed graph matrix, (μ, A, B) represents the probability space of variables, μ represents the basic event, A is a subset of μ , and B is the probability. $Y = (y_{cx})$ represents the continuous uniform Markov process transition rate matrix. We can generalize it to the following function expression:

$$B\{\alpha_{v+z} = d | \alpha_v = c\} = \begin{cases} 1 + y_{cx}z + f(z), c = z, \\ y_{cx}z + f(z), c \neq z, \end{cases} \quad (12)$$

Among them $y_{cx} = -\sum_{c \neq x} y_{cx}$, $y_{cx} \geq 0$, $\lim_{z \rightarrow 0} f(z)/z = 0$. For discrete Markov process, its transition probability matrix can be expressed as

$$g_{cx} = B\{\alpha_{v+z} = d | \alpha_v = c\}, v \in M, \quad (13)$$

where g_{cx} represents the Markov transition probability matrix.

The compact form of the closed-loop system composed of multiagent distributions can be expressed as

$$H = -\varepsilon G(\varphi_v)H - \alpha \nabla f(H) - M, \quad (14)$$

$$M = \alpha \varepsilon H(\varphi_v)H. \quad (15)$$

Among them $H = |h_1, \dots, h_m|^v$, $M = |m_1, \dots, m_n|^v$.

When the derivative of the closed-loop system is zero, we get

$$G(\varphi_v)H^* = 0, \quad (16)$$

$$M^* + \partial \nabla f(H^*) = 0. \quad (17)$$

To make the system distribution reach the optimal level, related researchers proposed a distributed optimization algorithm under the continuous Markov switching topology:

$$\varphi_d = -\varepsilon \sum_{f \in C_d} k_{df}(\phi_0)(t_d - t_f) - \alpha \nabla j_d(t_d) - \kappa_d, \quad (18)$$

$$\kappa_d = \alpha \varepsilon \sum_{f \in C_d} k_{df}(\phi_0)(t_d - t_f), \quad (19)$$

where α, ε represent the constant. If $\alpha < 1$, β satisfies the following conditions, it can be expressed as

$$i_1 = \alpha \bar{\kappa} - \frac{\eta \alpha^2 v^2}{2} > 0. \quad (20)$$

3.3. Overview of Cloud Computing. Cloud computing is a SERVICE delivery model that provides ubiquitous, on-demand network access to a configurable pool of shared computing resources. These resources include computing resources, network resources, and storage resources. The cloud computing model has nine characteristics: IT capabilities are provided as services, user self-service, network access, open service access interfaces, resource aggregation into pools, continuous service updates, elastic expansion, automated management, and resource usage metering. Cloud computing is a disruptive technology that has the potential to enhance collaboration, agility, scalability, and availability and potentially reduce costs through optimization and efficient computing. Cloud computing has advantages that traditional IT architectures do not have. First, cloud computing can improve resource utilization. The on-demand acquisition of cloud computing ensures the effective allocation and use of resources, while the elastic expansion mode ensures the recovery and reuse of resources. Therefore, the utilization rate of resources is effectively improved. The industrial system of cloud computing consists of cloud computing service industry, cloud computing manufacturing industry, infrastructure service industry, and supporting industry. The cloud computing service industry is used to utilize cloud service resources to provide services to cloud computing consumers. According to the different types of services provided, the service modes of cloud computing can be divided into three types: software as a service, platform as a service, and infrastructure as a service.

3.4. Overview of Internal Control. Although the internal control thought appeared in China in the Shang and Zhou dynasties, the systematic research on internal control thought started relatively late. From the perspective of China, internal control can be divided into ancient internal control—emerging period; contemporary internal control—planned control, mainly referring to the control system of planned economy; modern internal control—adaptive control. In fact, China did not formally apply the internal control theory until after its accession to the WTO. With the continuous in-depth exploration of the internal control idea, countries around the world also have some differences on the internal control theory. Taking the United States as an example, they believe that internal control needs to pay attention to the goals of the enterprise, and China believes that internal control needs to protect the safety of assets. Reasonable use of internal control theory can prevent employees from irregular behavior, protect enterprise property safety, prevent enterprise risks, and make enterprises develop in a more scientific direction. Internal control is a systematic project, which requires the cooperation of multiple departments and multiple control methods. Internal control is a dynamic process. Internal control is not only

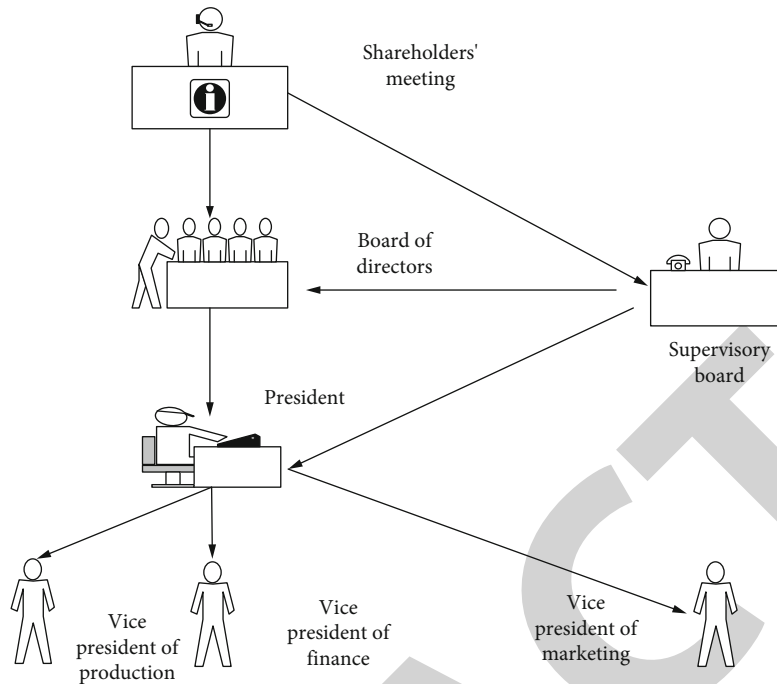


FIGURE 6: Organizational structure of enterprise internal control.

affected by the external environment, market, government, etc. but also by the internal corporate culture, organizational structure, and organizational scale. Changes in the environment will inevitably require internal control to be adjusted accordingly. Figure 6 shows the organizational structure of the internal control of the enterprise.

4. Construction Experiment of Accounting Internal Control Management Platform Based on Internet of Things Cloud Computing

4.1. Experimental Parameters. This paper discusses the construction of the accounting internal control management platform of the Internet of Things cloud computing; therefore, this experiment needs to rely on IoT, and the hardware of the system with various sizes may also have various impacts on the operation. Table 1 shows the parameters of our hardware for this simulation.

4.2. Internal Accounting Control Structure. The goal of corporate governance is to ensure that the company operates in the correct and favorable direction, to prevent directors, managers, and other senior executives from doing behaviors that endanger the interests of shareholders out of their own selfishness, so that the company can achieve maximum benefits. The main goal of internal accounting control is to standardize accounting behavior, ensure the authenticity of accounting information, eliminate hidden dangers, and prevent and timely discover and correct errors and fraudulent behaviors, to protect the safety and integrity of the unit's assets and ensure the implementation of relevant national laws, regulations and internal rules, and regulations of the

unit; its basic goal is still to ensure the realization of the company's goals. Therefore, corporate governance and internal accounting control are unified in the realization of corporate goals.

According to the data in Table 2, this experiment illustrates the shareholding situation of a large enterprise in city C. According to the specific data in Table 3, when the company was listed, S Group held 5.2 million shares, accounting for 42% of the total shares. Transportation enterprise B holds 615,000 shares, accounting for 5% of the total shares. The trading company holds 610,000 shares, accounting for 4.95% of the total shares. D chemical group holds 455,100 shares, accounting for 3.7% of the total shares. Among the top five shareholders of the enterprise, the fifth is the individual shareholder, which holds 159,900 shares, accounting for 0.13% of the total shares. According to the shareholding data of shareholders, S group has the largest number of holdings, has the absolute right to speak in the company, and has no other similar major shareholders, which will lead to decision errors and is not conducive to the normal operation of the company.

4.3. Evaluation of Cost-Benefit Indicators. A large enterprise in city C built an accounting big data analysis platform based on cloud computing and improved it before the trial. The details are as follows.

According to the data in Table 3, the accounting big data analysis platform using cloud computing has brought different degrees of influence to enterprises. From the perspective of platform development, before the construction of the cloud computing accounting big data analysis platform, software development costs 500,000 yuan, and software maintenance costs 120,000 yuan; after the cloud computing

TABLE 1: System parameters.

Systems	Memory	Hard disk	Mainframe
Domain controller	3G	30G	2 core
Attendance system operating environment	3G	30G	1 core
V center server	6G	30G	2 cores
Database server	3G	30G	2 cores
ESXI server	3G	30G	2 cores

TABLE 2: Description of the shareholding of a large company in City C.

Shareholder information	Number of listed shareholdings	Shareholding
S group enterprises	52000000	42%
B transport enterprise	6150000	5%
A trading company	6100000	4.95%
D chemical group	4551000	3.7%
U (individual)	159900	0.13%

accounting big data analysis platform is built, it will cost 260,000 yuan for software development and 110,000 yuan for software maintenance. According to the data, it can be seen that accounting big data analysis platform of cloud computing greatly reduces the software cost. Judging from the report, it took 15 days to sort out the report before the platform was built, and the accuracy of the report was 67%. Collating the report requires the participation of the entire team. After the platform is built, it takes 2 hours to organize the report. The accuracy of the report is 96.9%, and the platform can automatically complete the report. According to this situation, the accounting big data analysis platform of cloud computing reduces the workload of staff and improves the accuracy of reports. From the perspective of financial analysis, the financial analysis before the platform construction was concentrated on the surface, and each analysis took about 7 days, and the analysis accuracy was maintained at about 72%. After the platform is built, the financial analysis is concentrated in the deep layer, and each analysis is carried out in real time, and the analysis accuracy is maintained at about 98%. According to the data, the cloud computing accounting big data analysis platform can carry out in-depth analysis, shorten the analysis time, and improve the accuracy of the analysis.

5. Construction of Accounting Internal Control Management Platform Based on IoT Cloud Computing

5.1. Test Analysis of Cloud Computing Accounting Big Data Analysis Platform. Accounting data is a collection of unprocessed numbers, letters, and special symbols expressed in the form of “documents, certificates, accounts, and tables” in the processing of accounting matters. In fact, the most important thing in big data analysis is financial analysis. Using the accounting big data analysis platform to analyze the

company’s financial affairs can clearly see the company’s development status.

According to the data in Figure 7, the assets of an enterprise in city C in June were 4,000,000 yuan, and the liabilities were 320,000 yuan; in July, the assets were 4,080,000 yuan, and the liabilities were 3,54,830 yuan. In August, the assets were 4,102,160 yuan, and the liabilities were 365,450 yuan; in September, the assets were 4,105,670 yuan, and the liabilities were 368,560 yuan. In October, the assets were 4,156,750 yuan, and the liabilities were 385,610 yuan; in November, the assets were 4,106,530 yuan, and the liabilities were 386,120 yuan. According to the data, the asset level of the company in 6 months is relatively stable, and it has basically maintained a stable upward state. However, from the perspective of liability, although the overall difference is not large in terms of data, its growth rate is greater than that of assets, indicating that the company needs to adjust its strategy.

Looking at the company’s operating profit margin, the growth was 36.7% in June and 32.3% in July; the growth was 15% in August and 4.6% in September; growth was 30.4% in October and 20.4% in November. Looking at the company’s return on assets, the growth rate was 6.7% in June and 7% in July; the growth was 2.8% in August and 7% in September; growth was 12.5% in October and 6.9% in November. According to the data, the company’s operating profit and asset income fluctuated greatly, the overall development in August and September was poor, and the development in June, July, and October was better. This shows that the company should change its development strategy in the summer.

According to the data in Figure 8, the company’s sales in different regions will be different. In the district A, the sales revenue is 3.15 million yuan, and the company’s revenue in the same period is 4.86 million yuan. In district B, the sales revenue was 1.96 million yuan, and the company’s revenue in the same period was 2.83 million yuan. In district C, the sales revenue was 2.74 million yuan, and the company’s revenue in the same period was 2.91 million yuan. In district D, the sales income is 2.8 million yuan, and the company’s income in the same period is 7 million yuan. In district E, the sales revenue was 2.11 million yuan, and the company’s revenue in the same period was 2.91 million yuan. In district F, the sales income was 2.74 million yuan, and the company’s income in the same period was 3.56 million yuan. According to the data, although the sales in district D are generally good, the sales situation is poor compared with the same period, so district D should change its strategy.

TABLE 3: Comparative analysis table before and after platform application.

Projects		Comparative analysis		Conclusion
		Before	After	
Platform costs	Development	500,000	260,000	Reduce software costs
	Maintenance	120,000	10,000	
Statements	Time	15 days	2 hours	Improves efficiency
	Accuracy	67%	96%	
	Workload	Whole group	Automatic	
Financial analysis	Levels	Surface	Deep	Improve analysis accuracy
	Time	7 days	Real time	
	Accuracy	72%	98%	

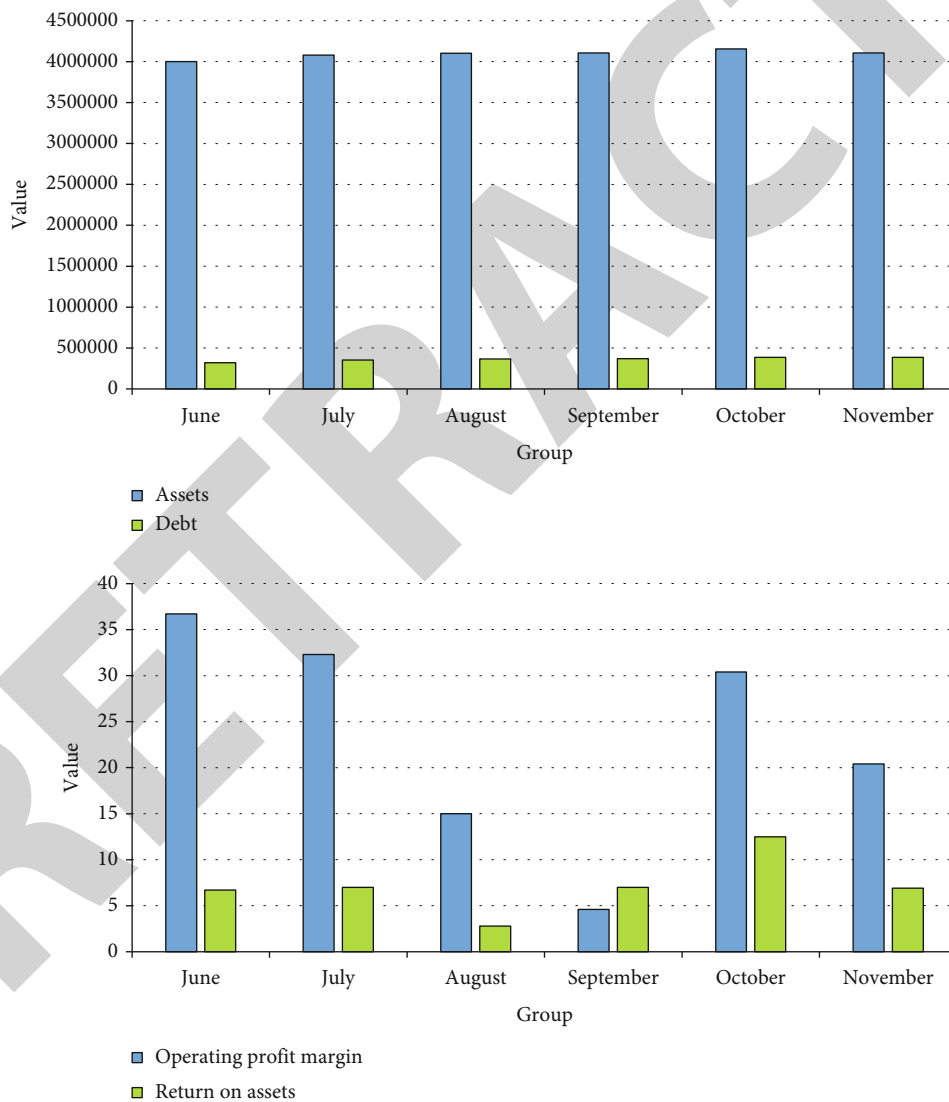


FIGURE 7: Financial analysis situation.

Judging from the company’s overall sales, the company’s actual sales in June were 15.83 million yuan, accounting for 103% of the month’s sales. The company’s actual sales in July was 16 million yuan, completing 110% of the month’s

sales. The company’s actual sales in August was 14.93 million yuan, completing 113% of the month’s sales. The company’s actual sales in September was 17.3 million yuan, completing 112% of the month’s sales. The company’s actual

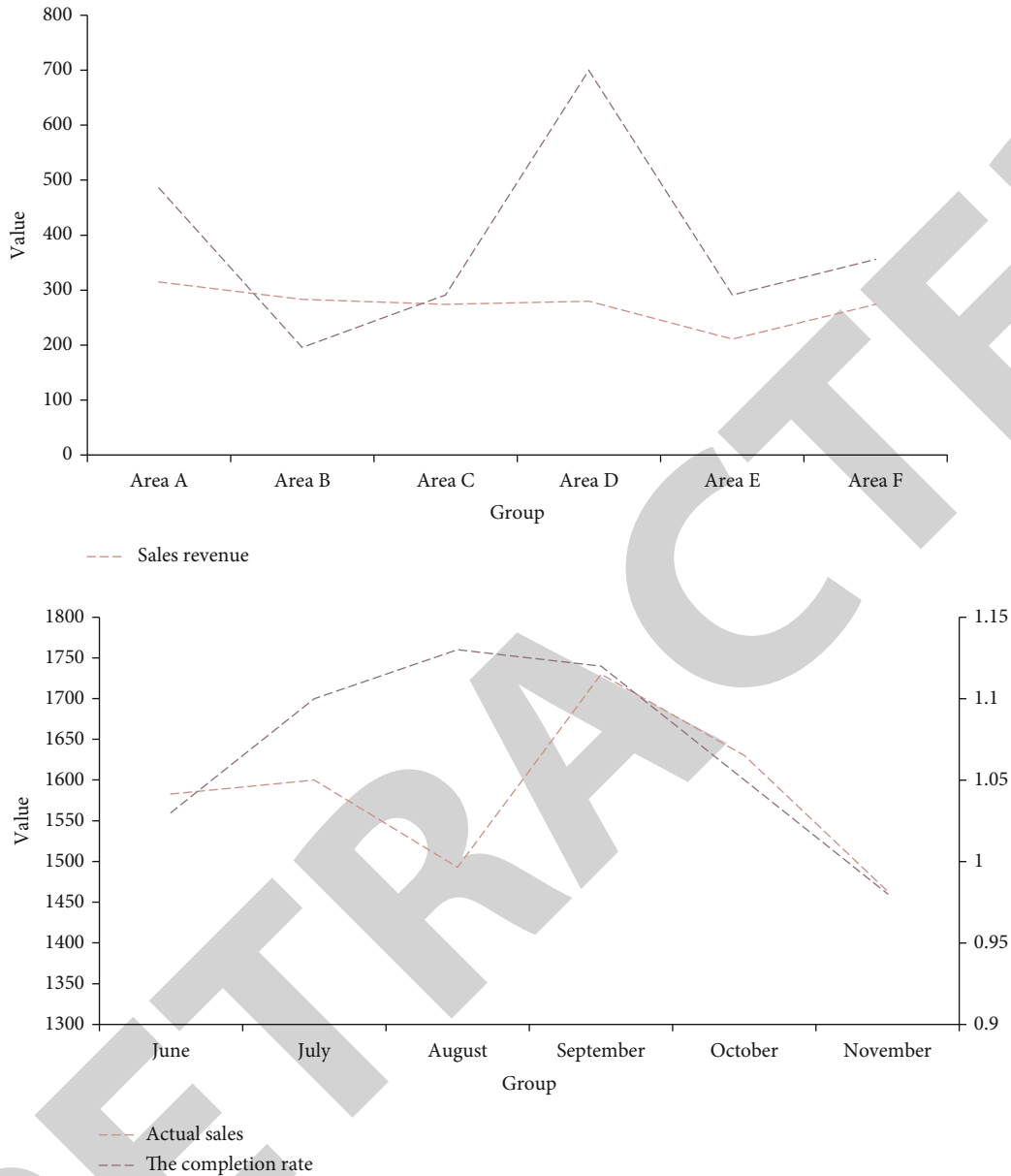


FIGURE 8: Schematic representation of the company’s sales.

sales in October was 16.3 million yuan, completing 105% of the month’s sales. The company’s actual sales in November was 14.63 million yuan, accounting for 98% of the month’s sales. According to the data, the company’s sales have basically met the expectations, indicating that the company’s basic strategy is correct, but it is too conservative.

5.2. *Financial Forecast Function.* To analyze the prediction function of the accounting big data analysis platform, we conducted an experiment on it, and the details are as follows:

According to the data in Figure 9, from the perspective of operating income, the actual income in 2012 was 27,000 million yuan, and the predicted income was 25,479 million yuan. The actual revenue in 2013 was 27,964 million yuan, and the forecast revenue was 28,963 million yuan. The actual revenue in 2014 was 35,789 million yuan, and the forecasted

revenue was 36,890 million yuan. The actual revenue in 2015 was 57,869 million yuan, and the forecasted revenue was 56,782 million yuan. The actual revenue in 2016 was 78,951 million yuan, and the forecast revenue was 77,541 million yuan. The actual revenue for 2017 was 80,154 million yuan, and the forecast revenue was 80,000 million yuan. According to the data, the difference between the operating income forecast and the actual forecast income is small, indicating that the accounting big data analysis platform is effective.

In terms of operating cost, the actual operating cost in 2012 was 19,850 million yuan, and the predicted operating cost was 19,953 million yuan. The actual operating cost in 2013 was 20,000 million yuan, and the forecast operating cost was 22,156 million yuan. The actual operating cost in 2014 was 25,000 million yuan, and the forecast operating



FIGURE 9: Financial forecasting functional analysis.

cost was 26,450 million yuan. The actual operating cost in 2015 was 31,450 million yuan, and the forecast operating cost was 30,453 million yuan. The actual operating cost in 2016 was 43,250 million yuan, and the forecast operating cost was 42,360 million yuan. The actual operating cost in 2017 was 57,480 million yuan, and the predicted operating cost was 57,000 million yuan. According to the data, it can be seen that the gap between the predicted value and the actual value of the big data analysis platform is constantly narrowing, indicating that the big data analysis platform is effective.

5.3. Predictive Analysis of Operating Costs. Operating costs refer to all costs of the daily needs of the enterprise, includ-

ing the cost of goods, wages, management expenses, and sales expenses. This part of the expenditure will have an important impact on the enterprise.

According to the data in Figure 10, the actual management expenses of the company in 2012 were 1500 million yuan, and the predicted management expenses were 1086 million yuan. In 2013, the company's actual management expenses were 1589 million yuan, and the forecast management expenses were 1580 million yuan. The company's actual management expenses in 2014 were 2013 million yuan, and the forecast management expenses were 1993 million yuan. In 2015, the company's actual management expenses were 2265 million yuan, and the forecast management expenses were 2196 million yuan. In 2016, the

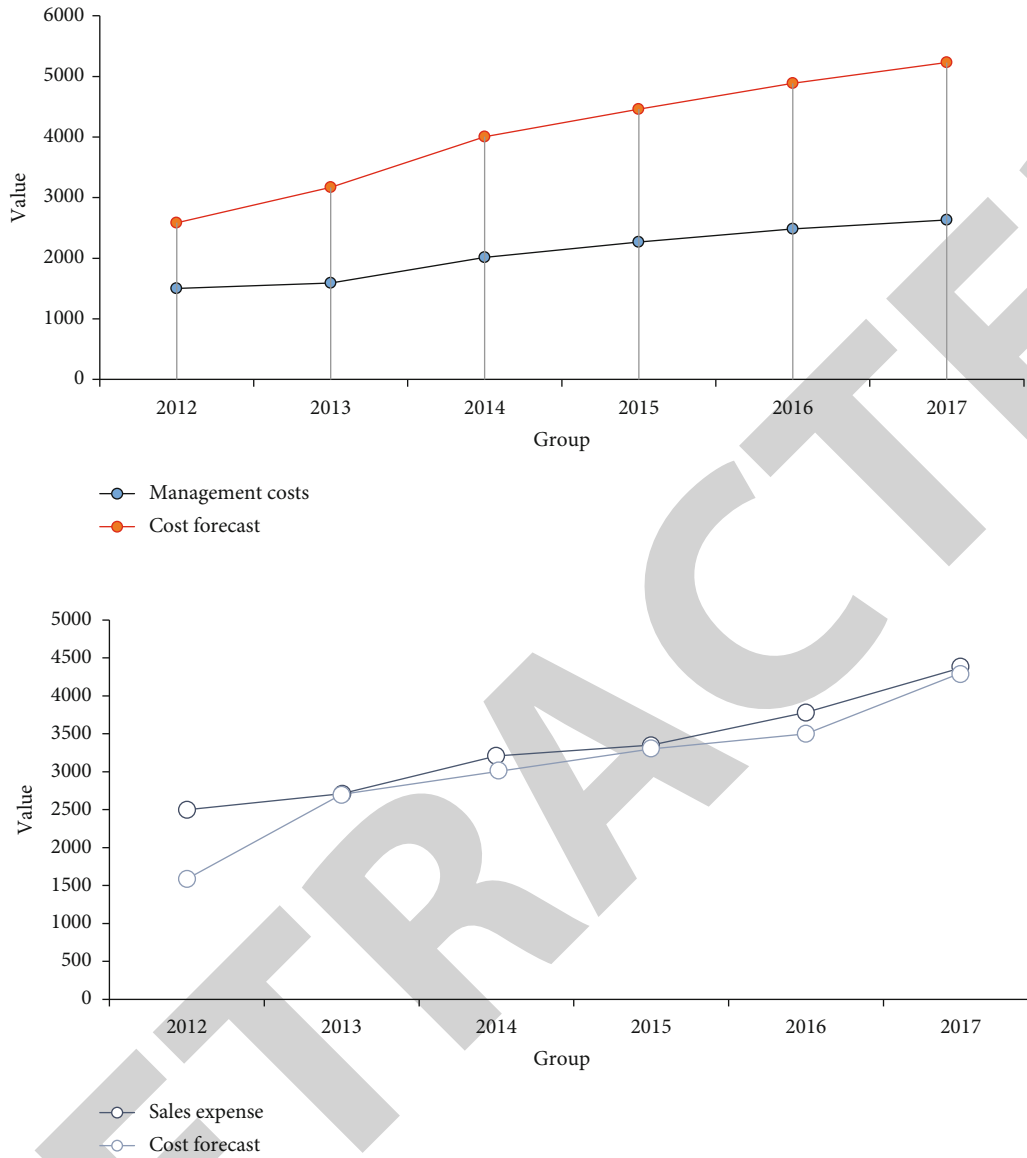


FIGURE 10: Operational cost forecast analysis.

company’s actual management expenses were 2486 million yuan, and the forecast management expenses were 2400 million yuan. In 2017, the company’s actual management expenses were 2630 million yuan, and the forecast management expenses were 2600 million yuan. According to the data, the prediction value of the big data analysis platform had a large gap in 2012, and then, the gap gradually narrowed, indicating that the platform’s management cost prediction ability is relatively accurate.

In terms of selling expenses, the actual selling expenses of the company in 2012 were 2500 million yuan, and the predicted selling expenses were 1590 million yuan. In 2013, the company’s actual sales expenses were 2710 million yuan, and the predicted sales expenses were 2700 million yuan. In 2014, the company’s actual sales expenses were 3210 million yuan, and the predicted sales expenses were 3000 million yuan. In 2015, the company’s actual sales expenses were 3350 million yuan, and the predicted sales expenses were

3300 million yuan. In 2016, the company’s actual sales expenses were 3780 million yuan, and the predicted sales expenses were 3500 million yuan. In 2017, the company’s actual sales expenses were 4370 million yuan, and the forecast sales expenses were 4300 million yuan. According to the data, although the predicted value of the platform fluctuates, the difference is constantly shrinking, indicating that the accuracy of the platform’s sales expense prediction is constantly improving.

6. Conclusions

With the development of science and technology, especially the promotion of Internet of Things technology, the combination of enterprise management and technology has become a common phenomenon today. Internal factors are the fundamental factors for the development of things, so the development of enterprises should not only rely on

external technology but also innovate internal management. This paper is aimed at exploring the construction of the accounting internal control management platform of the Internet of Things cloud computing, hoping to jointly promote the development of enterprises through internal and external factors. Although some achievements have been made in this paper, there are still some deficiencies: (1) Due to the limited level of individuals, the research on cloud computing technology mostly stays at the surface. (2) This paper only roughly constructs the accounting big data analysis platform from the perspective of the decision-making needs of enterprise managers and does not explore from many aspects.

Data Availability

Data sharing is not applicable to this article as no datasets were generated or analyzed during the current study.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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