

## Research Article

# Research on Basic Information of Enterprise Electronization under the Background of Big Data

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Ensuring information security is a maintenance process that combines dynamic and static. First of all, you can use a series of protective tools, such as firewalls, operating system authentication, encryption, and so on. At the same time, use some dynamic detection tools. With the rapid development of Internet technology, big data, cloud computing, and other technical terms are no longer strange to people. Today's society is increasingly networked, creating a common platform for big data resource sharing and data communication in various industries. Big data and cloud computing technology have been applied to every field of human life with a strong penetration, resulting in technological innovation in various industries. Under the background of the rapid development of big data and cloud computing technology, the traditional enterprise form has been difficult to cope with the increasingly fierce competitive environment, making the electronic enterprise become the inevitable trend in the development and reform of enterprises in today's world. Electronic enterprises promote the efficient and vigorous development of enterprises, improve the speed, efficiency, and market competitiveness of enterprises, and better adapt to the changes in the market environment caused by big data and cloud computing. With big data and cloud computing as the background, this paper studies and analyzes the inevitability, basic characteristics, existing problems, countermeasures, and other basic information of enterprise electronization, so as to provide theoretical guidance for enterprise electronization. It has the ability to control the dissemination and content of information, ensure the censorship of information, and provide the basis and means of investigation for emerging network security issues.

## 1. Introduction

In recent years, the informatization of enterprises and the socialization of the network have gradually risen, and the corresponding derivatives such as cloud computing, the Internet of Things, and the mobile Internet have also been widely used quickly. In the era of big data, data has the characteristics of "massive, diverse, high-speed, and variable." From a large variety of massive data, through in-depth analysis by means of cloud computing and other means, to find out valuable information for enterprise development and to find new ones, laws and contents are applied to enterprise production, enterprise trade, enterprise planning, etc., to realize scientific management of enterprises and improve the operational efficiency of enterprises. The development of the times requires enterprises to change the

traditional business model and promote the electronic management of enterprises, which not only improves the management efficiency of enterprises but also is an important strategic guarantee for enterprise development [1]. Although "big data" can literally be understood as a large amount of data, it is still impossible to distinguish "big data" from "massive data" and "hyperscale data" only in the dimension of magnitude.

The emerging product "big data" in the IT field is used to rationally plan the market in this field and continuously improve new technologies and products and services. Enterprise electronization refers to the integration of data and information, such as production, operation, and trade of enterprises through advanced technologies such as big data and cloud computing, to realize informatization and digitization of enterprises, improve the operational efficiency of

enterprises, and reduce business risks and industries. Cost improves the overall management level and the ability of continuous operation and improves the comprehensive level of production, operation, management, decision-making, and service, thereby effectively improving the market competitiveness of enterprises. In the twenty-first century, advanced technologies such as big data and cloud computing have strongly promoted the rapid development of society and gradually become an important symbol of social progress [2, 3]. In the era of rapid development and application of technologies such as big data and cloud computing, the level of electronization has gradually become an important criterion for measuring the degree of modernization of an enterprise. Electronic enterprise is an inevitable choice for enterprises to adapt to the development of the times. Electronic technology has developed into an important resource for enterprises. By making full use of this resource, it can greatly enhance the efficiency of enterprises [4]. Accompanied by various information security conferences and big data security forums. While big data brings development opportunities to mankind, it also brings many security problems. There are also many cases that threaten data security.

Enterprises should manage data in an all-around way, not just to achieve the goal of preventing data leakage. Many experts and scholars at home and abroad have conducted much research on the research of enterprise electronization. Putra P. O. H. et al. [5, 6] assessed and critically analyzed a range of research frameworks and assessed the extent to which the nature of SMEs and their ability to provide practical tools for SME transformation were assessed. It provides a multifaceted overview and presents a preliminary concept for integrated e-commerce for the SME framework. Tan Xiao et al. [7, 8] analyzed the problems existing in the information construction of coal enterprises in China and proposed corresponding countermeasures to improve the level of informatization construction of coal enterprises. Lipitakis and Phillips [9, 10] studied the impact of the financial and nonfinancial performance of the organization on e-commerce strategic planning and constructed a conceptual model. The United Kingdom and Greece tested it to verify the scalability and effectiveness of the model. Chen et al. [11, 12] studied the intrinsic influence mechanism of enterprise informatization, IT capability, and innovation ability. Based on the theoretical research, the research results were fully discussed and the countermeasures were proposed. He et al. [13, 14], based on the e-commerce development index system issued by CII, through the status quo investigation and data collection, create an e-commerce development level measurement model, comprehensively apply factor analysis and cluster analysis methods to deeply analyze the development level of China's e-commerce, and put forward relevant countermeasures and suggestions. Bi et al. [15, 16] tested a theoretical model for assessing e-commerce capabilities and value in a rapidly growing small and medium-sized enterprise (SME) environment, providing a preliminary demonstration of the relationship between IT and SME performance evidence. Wei [17, 18] carried out a certain degree of analysis on the application of

computer application technology in enterprise informatization to promote enterprises to strengthen information construction. Although there has been a lot of research on enterprise electronization, the research on basic information of enterprises is not comprehensive and detailed, and there are still some shortcomings. E-commerce companies are developing rapidly, and the development of the small and microloan market with the help of the big data era has attracted close attention from all walks of life. From this point of view, big data is of great significance to the development and competition of enterprises.

Taking big data as the meeting point, the data generated from various new-generation information technology applications will be brought together, and the unified and comprehensive processing, analysis, and optimization of data from different sources will help to deeply improve the user experience. At the same time, it can excavate huge commercial value, economic value, and social value. Enterprise electronization is not only the need for enterprise development but also a key force for enterprise innovation. For enterprises, enterprise electronization has gradually become a vital component of the company's international strategic layout and effectively promotes the development and progress of the company's scale, efficiency, market advantage, culture, and work mode. Electronization is an important metric for the internationalization and modernization of traditional enterprises, and it is the boost for the rapid and all-round development of SMEs (Small and medium enterprises). Since the establishment of the Ministry of Industry and Information Technology, the state has vigorously promoted and promoted the promotion of electronic information technology. The electronization of enterprises has become the only way for enterprises in the new era to flourish. In recent years, with the development of emerging Internet technologies such as big data and cloud computing, the development of traditional enterprises has suffered a huge impact. In the face of an increasingly competitive environment, traditional companies must be electronically adapted to the new environment. The ever-changing Internet technology is triggering a storm that has revolutionized all aspects of traditional businesses. With the comprehensive development and application of big data, cloud computing, and other technologies, the demand for electronization of traditional enterprises continues to increase. In the context of big data, cloud computing, and other technologies, this paper studies the basic information of the inevitability, basic characteristics, difficulties, and countermeasures of enterprise electronization and provides theoretical guidance and suggestions for the electronic transformation of traditional enterprises.

## 2. The Inevitability of Enterprise Electronization in the New Era

*2.1. The Development of Big Data Technology Is the Main Driving Force for Enterprise Electronization.* The new opportunities brought about by big data technology and the prospect of electronization have an unstoppable temptation for enterprise development. Under the traditional enterprise

model, it is not easy for companies to develop their own business radiation range for the whole country. It is even more unrealistic to go deep into the world market. And enterprise electronization can help companies to meet these requirements easily. In short, the rapid development of Internet technology has brought a new market competition environment for enterprises. Technologies such as big data and cloud computing integrate enterprises and customers into their application systems and utilize information sharing and real-time interactive functions to minimize unnecessary links in the middle, improve operational efficiency, and achieve open and transparent information, thus constructing an open market environment [19, 20]. In this open market environment, the distance between the company and the customer becomes very close, making the competition between enterprises become open competition for customers. Various companies can compete in this open market regardless of the size of their operations. This hinders the market monopoly of some enterprises and forms a multipolarized form of competition. Especially for small and medium-sized enterprises, this is a rare opportunity for development [21]. Media technology has liberated the geographical space constraints of business operations and broke the geographical restrictions of traditional enterprise markets. The concept of geography can no longer hinder the development direction of the enterprise and the scale of the market. Customers and enterprises can conduct trading activities without leaving the house. Enterprise electronics can enable companies to reach potential customers around the world, and the market opens up to areas that were previously inaccessible. This open and transparent market competition environment has undoubtedly provided many enterprises with new development opportunities and become a great driving force for traditional enterprises to carry out electronization. The influencing factors of e-commerce system acceptance are shown in Figure 1.

At present, human beings have fully entered the era of informationization. Modern information technologies such as the popularization of the Internet, computers, the maturity of network communications, and breakthroughs in data management are rapidly infiltrating all fields of society.

$$\begin{aligned} \rho &= (\beta + \pi)h\tau_K, \\ \psi_n &= (\mu + \delta)\delta\lambda H\vartheta_M + \frac{(n + \theta)\phi HS_M}{V_B C}, \\ \beta &= \frac{K}{S - \theta(-L\phi_M/G_B C)}, \end{aligned} \quad (1)$$

$\rho$  represents the development parameters of the Internet,  $\psi_n$  represents the challenges encountered in the development process, and  $\beta$  represents the speed.

The Internet occupies an important position in the market economy, plays a leading role in the economy, and has a strong guiding role in economic innovation, thereby stimulating the production vitality of the whole society  $J(N)$  and promoting economic development.

$$\begin{aligned} J(N) &= N \sum_{F=0}^{\infty} (\sqrt{N})^2 \lambda_n, \\ B_S &= B_0 \left( \frac{M}{K_S} \right)^4 \frac{L}{1 - \kappa(-L\omega_M/L_B T)}, \\ Q_{aS} &= Q_0 \left( \frac{L}{\lambda_S} \right)^4 \frac{\kappa}{\exp(J\varphi_M/L_B H) - 1}. \end{aligned} \quad (2)$$

The sum of the distance traveled to visit  $n$  points is equal to the following:

$$\begin{aligned} M(N) &= \sum_{k=0}^{N-1} D(K)x(L - H), \\ z &= 2 \sum_{j=2}^n c_1. \end{aligned} \quad (3)$$

The resulting distance saving value  $s(i, j)$  can be calculated as follows:

$$s(i, j) = 2c_{11} + 2c_{1j} - (c_{1i} + c_{1j} + c_{ij}). \quad (4)$$

Per-service perceived performance values for each dimension:

$$Q = \frac{1}{M} \sum_{i=1}^m p w_i. \quad (5)$$

### 2.2. The Urgency of Electronization of Traditional Enterprises.

In today's environment, traditional enterprises facing great threats also want to change and open up new living environments. In the tide of Big data and cloud computing technology, the Internet has challenged the traditional enterprise model, and the relationship between the enterprise and the customer and the relationship with the cooperative enterprise has undergone tremendous changes. The form of competition between enterprises has also become more open, and it has also produced many new ways of competition and competitiveness. Under such external pressure, many traditional enterprises are facing an unprecedented impact, and many shortcomings within traditional enterprises are clearly exposed. In order to improve operational efficiency and acquire new competitive quantities, traditional enterprises must promptly explore enterprise survival strategies in the new environment, and electronization is undoubtedly the best choice. The electronic trading platform is shown in Figure 2. The rapid development of information technology has promoted the process of information globalization, and information plays an important role in social and economic development. Information technology has penetrated into all walks of life in our society and affects each of us. At the same time, because of its important value, information has evolved into an important factor of production in our production process.

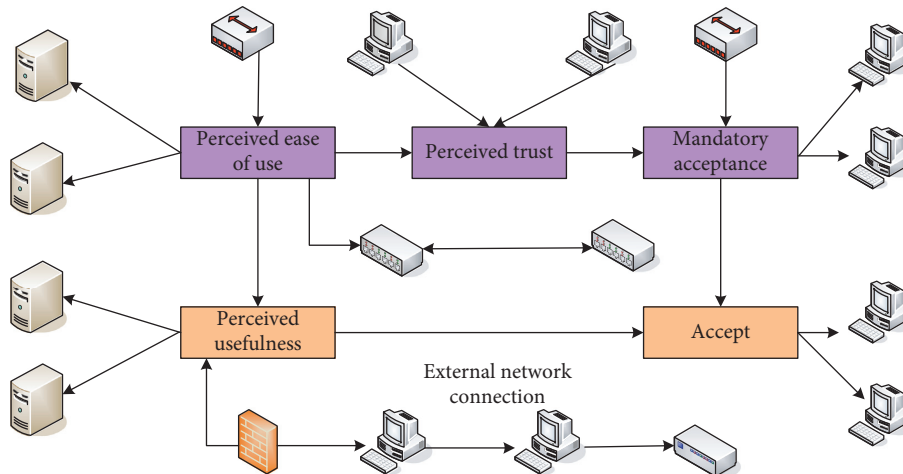


FIGURE 1: The influencing factors of e-commerce system acceptance.

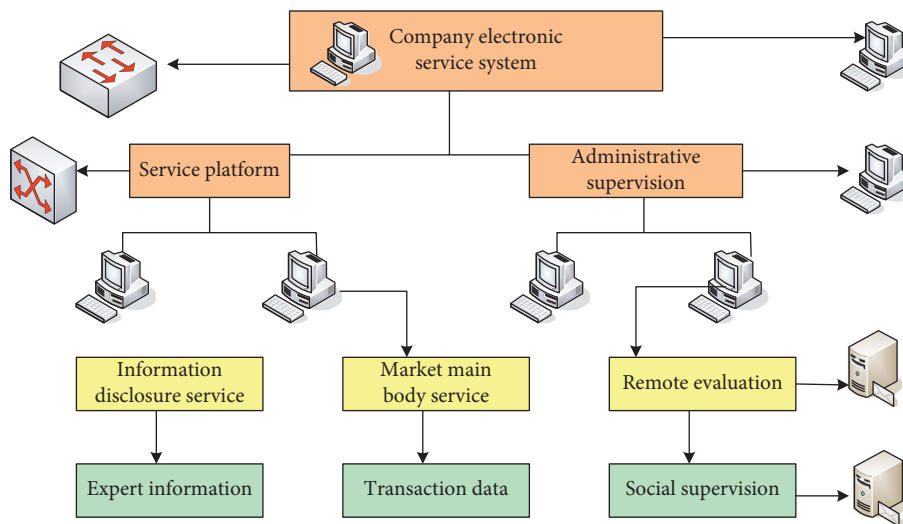


FIGURE 2: The electronic trading platform.

**2.3. Enterprise Electronization Is the Requirement for Enterprises to Participate in International Competition.** The current trend of global economic integration has become increasingly apparent, and information technology plays a very important role in the process of economic globalization [22]. With the development of Internet information technology such as big data, cloud computing, the management and management of multinational corporations have undergone tremendous innovation, which has caused a great impact on China's economic market. With the continuous invasion of multinational corporations, Chinese enterprises must change their traditional modes of operation, implement enterprise electronization, gradually integrate into the international market, participate in the distribution of international resources, and seize the international market share. Traditional enterprises must realize that information resources are the lifeline of enterprises, and they must have stronger capabilities in collecting, processing, processing, and disseminating information in order to obtain better competitive advantages and seize market opportunities.

**2.4. Enterprise Electronization Can Improve the Core Competitiveness of Enterprises.** Enterprise electronization is a necessary means for enterprises to adapt to the ever-changing market environment. In the information age, the market is changing rapidly. The development, production, production, listing, and service rhythm of products are accelerating. The product life cycle is greatly shortened, and the production methods of enterprises have also changed. It has been reduced from the traditional production mode of large quantities and small varieties. The production mode of batch and multivariety changes. Customer demand determines the survival of the company. Meeting the increasingly individualized needs of customers with the best quality, the shortest time, the lowest cost, and the most perfect service is the premise and basis for the survival of the company. Understanding, analyzing, transforming, developing, guiding, and realizing user needs has become the focus and difficulty of corporate work. With the acceleration of global economic integration, any enterprise will face the most powerful competition and challenges from the industry, the

local domain, and even world-class enterprises, as well as the opportunity to develop its potential customers in the global park. In a sense, information resources are more important than material resources in a strategic sense. The competitiveness of enterprises depends to a large extent on the information competitiveness of enterprises. Electronic construction has become the best choice and the only way for enterprises to gain competitive advantage.

### 3. Basic Characteristics of Enterprise Electronization

In the context of big data, the electronic strategy of enterprises needs to use new information and thinking to carry out new layouts and construction. In addition, with the more convenient cloud computing technology resources to enhance the competitiveness of enterprises and complete the electronization of enterprises. The widespread popularity of big data technology and its applications has had a profound impact on traditional enterprise models, and corporate electronization has gradually evolved toward externalization. Enterprise electronization is not only for internal employees but also for customers at the end of the enterprise industry chain. In the process of enterprise electronization, although the influence and factors of the industry type and enterprise scale are different, different enterprises have different understanding and construction of electronization, but enterprise electronization generally has the following basic characteristics.

*3.1. Deep Integration of Mobility, Socialization, and Enterprise Applications.* Under the influence of the big data technology revolution, diverse Internet application forms make information exchange updates simple and fast and change the communication forms of enterprise managers, internal employees, and external partners, thus further impacting corporate decision-making, marketing, procurement, and many other aspects. Technical approach. Smartphones are currently the most important mobile terminal. In the global smart market in 2018, smartphone shipments were 1.49 billion. Combine it with the electronization of the enterprise and realize the characteristics of its mobile socialization and deep integration with enterprise applications. The popularity of smart phones has greatly improved the level of mobilization and socialization of enterprises, making mobile enterprise applications occupy an important position in enterprise electronization. Mobile enterprise applications have become the main direction of future business innovation. In particular, mobile terminal applications developed using Internet technologies such as big data and cloud computing have become an important part of enterprise electronization [23]. The use of mobile terminal applications can realize information exchange and mobile office within the enterprise and also realize the interaction and interaction between enterprises and consumers, thereby improving the scope of influence of enterprises. In addition to smart phones, mobile terminal devices that

can meet enterprise-level applications are also gradually diversified, driving the development of enterprise electronic forms toward flatness and transparency, and traditional corporate boundaries are broken.

*3.2. Increased User Experience.* As big data and cloud computing technologies are widely used in enterprise processes. Enterprise electronization has also produced new features. The content provided by enterprise electronic applications has changed. It is no longer just to provide products. Enterprise services have become the key content of enterprise electronic applications, and the importance of user experience has been increasing. For example, when building an ERP system, enterprises can increase the user experience, increase the interaction function, facilitate the collection of employees' suggestions, and increase the cohesiveness of the enterprise. At the same time, research and develop a supporting mobile application system to provide users with convenient communication channels and convenient decision-making tasks. The rapid delivery further enhances user satisfaction [24]. What kind of technology is used? As long as the enterprise electronization realizes the integration of internal processes and the user experience satisfaction is improved, the effectiveness of the enterprise electronization will be obvious.

*3.3. Digitization of Enterprise Information.* Digitization of enterprise information is an important part of the enterprise's electronic structure. Data services are mainly represented in the integration and availability of data. Due to the rise of the Internet, massive data has grown exponentially, data sources and data types have been continuously enriched, and the impact on corporate decision-making is increasingly dependent on data, not only depends on the company's operational production data but also on mobile applications, web pages, etc. Consumer behavioral information in public Internet platforms is closely related. That is to say, in the multiterminal and multiformat environment of Internet, the data to be processed by enterprise electronization will continue to increase, including not only the production data of various workflows within the traditional enterprise but also online social platforms, mobile commerce applications, news. The information in Internet application platforms such as information, the degree of digitization of enterprise information is deepening, and it is even more important in the electronization of enterprises. The rapid development of the Internet has made the scale of available data expand rapidly. Therefore, it is necessary to clean and filter huge data, analyze the data attributes and data sources in detail, and explore the inherent relationship implicit in the deep data. The auxiliary decision-making system is formed for the data with the value of use, and the intelligent decision-making of the enterprise is realized [25, 26]. The key to the electronization of traditional enterprises lies in the use of the value of information resources in business operations and business development.

**3.4. Technical Service Capabilities Extended to the Industrial Chain.** In the era of big data, with the increasing influence of consumers on enterprises, enterprise electronization should not only meet the needs of internal functional departments and employees but also meet the needs of external commercialization and expand enterprise electronic services from the inside to the outside. Build and integrate the entire industry chain platform [27]. Therefore, in the process of enterprise electronization, enterprise informatization will be incorporated into business services and provide external service delivery. According to the survey, 77% of CIOs' current work focuses on "integrating and optimizing systems," exploring how to build industry chain informatization and provide external services for the entire industry chain.

**3.5. Technology Light Asset Model Transformation.** With the development of the Internet, information communication is becoming more and more convenient, the social division of labor is further refined, services provided outside the enterprise are becoming more and more abundant, and intermediate products and services that need to be solved within the enterprise are becoming less and less. Therefore, the resources that need to be purchased within the enterprise are gradually replaced by an external supply. This means that more and more assets in the electronic process of the enterprise are provided and delivered by independent third parties. Therefore, the electronic process of enterprise in the Internet era will gradually prefer the light asset model. Taking the information technology hotspot cloud computing as an example, using a cloud service project provided by a third party to pay a fixed cloud service fee every month, you can enjoy a full set of cloud services including network dedicated line equipment, infrastructure, operation, and maintenance services. The light asset model eliminates electronic construction investment and long-term maintenance fees. In addition to the "light asset" of visible assets, the light asset model can also be expressed as "light asset" of human resources [28]. Due to the cloud computing-based information technology management model, information technology personnel are relatively concentrated in a certain area and no longer separate. Therefore, talent management will realize a centralized management mode in the electronic process of the enterprise, which will optimize the integration of human resources and achieve intensive human capital.

## 4. Problems in the Electronic Process of Enterprise

**4.1. Insufficient Understanding of Enterprise Electronic Construction.** Some enterprises have not fully understood electronic construction and have not paid enough attention to electronic construction of enterprises. They mistakenly believe that the long-term development of enterprises does not require electronic construction. Some business managers are accustomed to experience management methods and are not aware of the impact of electronic construction on enterprises. In the era of big data technology, the

information determines the future and destiny of the enterprise. Without electronic construction, enterprise development will certainly develop slowly and will not last long [29].

**4.2. Basic Work Cannot Meet the Needs of Electronic Construction.** On the one hand, the internal indicator system of the enterprise is not uniform, which brings great trouble to electronic construction. The indicator system is necessary for business management and is an important foundation for the company. Some internal products, materials, and equipment are not uniformly coded, and the grassroots departments have to deal with the data reports of different departments. The channel data of the indicators of the upper management departments are not the same, which seriously affects the accuracy and authenticity of the information. Secondly, the enterprise information collection channel is relatively backward, resulting in incomplete information. Traditional market research lacks innovation, cannot guarantee the timeliness and accuracy of information, and affects the reliability of information [30].

**4.3. Enterprises Pay Insufficient Attention to Management and Restructuring in the Process of Electronic Construction.** Some enterprises have an insufficient understanding of the role and significance of management and reorganization in the process of electronic construction. China's current enterprise management model needs to be improved. Although it has a strict hierarchical system and detailed characteristics of labor division, the functional departments are independent and lack each other. The issue of communication and collaboration cannot be ignored. Without good cooperation, it will cause wasteful internal friction and enthusiasm for employees. The lack of information exchange, affecting the efficiency of information transmission, has a great negative effect, unable to meet the needs of market customers. Second, the company did not grasp the essence of electronic construction. The essence of enterprise electronic construction is to enhance the competitiveness of enterprises through management and restructuring. Most of the electronic construction of enterprises ignores the change of management mode, so it has not achieved good results [31].

Two weeks after the questionnaires were distributed, the questionnaires were collected. In the process of inputting, the questionnaires were preliminarily tested for validity, and the invalid data (questionnaires that were not completely filled out, questionnaires that were filled in hastily) were excluded. The specific recovery results are shown in Table 1.

The sample statistics of the valid questionnaires are made, and the results are shown in Table 2.

In addition to the user behavior, the reliability test value of the factors affecting the perceived ease of use is relatively low, which does not affect the reliability of the questionnaire, but it is necessary to make simple corrections on the ease of use of information technology, trust in the system, technology trust, and mandatory acceptance. Cronbach's Alpha reliability test is shown in Table 3. Cronbach's coefficient is a

TABLE 1: The specific recovery results.

Questionnaire	The number of questionnaires issued	Number of returned questionnaires	Number of valid questionnaires
Network distribution	500	390	354
Paper questionnaire	100	60	40
Total	600	450	394

TABLE 2: The sample statistics of the valid questionnaires are made.

Questionnaire	Options	Frequency
Gender	Male	180
	Female	204
Age	Under 20	12
	20–25 years old	228
	25–30 years old	96
	30–35 years old	23
	36+	23

TABLE 3: Cronbach’s Alpha reliability test.

Options	Frequency	Cronbach’s alpha	Number of items
Accept	Use behavior	0.210	2
	Information technology	0.735	4
Perceived ease of use	Management technology	0.704	2
	Work hard to expect	0.672	2
	System functions	0.921	12
Perceived usefulness	Performance expectations	0.782	3
	Social influence	0.822	3

set of commonly used methods to measure the reliability of psychological or educational tests. It overcomes the shortcomings of the partial halving method and is the most commonly used reliability index in social research. It measures the reliability of a set of synonymous or parallel “sum.”

In the statistical analysis table of basic data, it is found that the e-commerce used by this group is mainly personal system, and the ratio of enterprise and personal e-commerce systems is 0.635 and 0.818, respectively. More than half of the people have contacted or used this type of e-commerce system, so it is feasible to analyze the influencing factors of enterprise acceptance behavior. E-commerce acceptance behavior is shown in Figure 3.

Figure 4 shows the rapid growth in the number of consignees and consignors, the number of inquiring customers, the number of foreign agents, and the number of carriers (shipping companies, airlines).

The influencing factors in this study have a high structure, and the mutual independence of the influencing factors is relatively low. In order to support the research purpose, the structural validity test of the influencing factors should be carried out to provide a basis for determining the construction of the model. The tests of KMO and Bartlett are shown in Table 4. When the sum of squares of simple correlation coefficients between all variables is much larger than the sum of squares of partial correlation coefficients, the KMO value is close to 1. The closer the KMO value is to 1, the

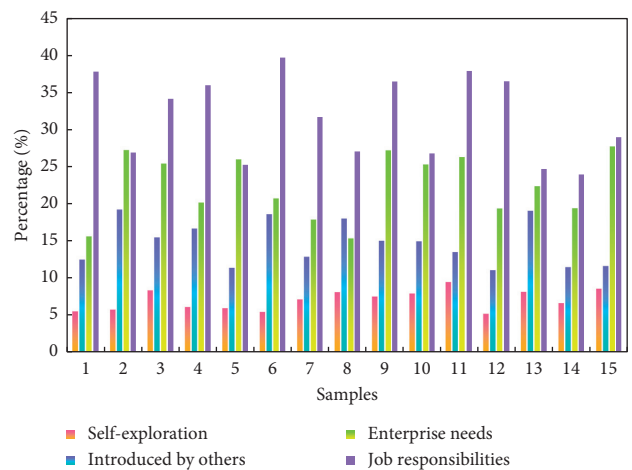


FIGURE 3: E-commerce acceptance behavior.

stronger the correlation between variables, and the more suitable the original variables are for factor analysis.

Only two coefficient values are higher than 0.6, so it is concluded that the internal correlation of the perceived ease of use variable is low. User management has a strong correlation with website technology, department management has a weak correlation with website technology, network technology, and data technology, while the correlation between user management and department management is 0.506, and the correlation between effort expectation and



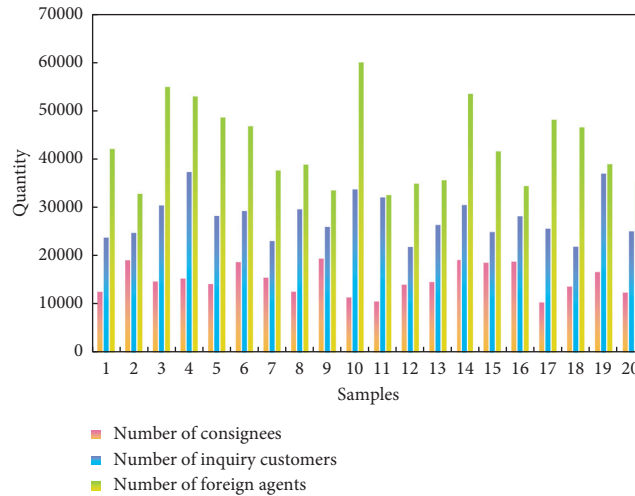


FIGURE 4: Rapid growth in the number of consignees and consignors, the number of inquiring customers, the number of foreign agents, and the number of carriers (shipping companies, airlines).

TABLE 4: The tests of KMO and Bartlett.

Perceived ease of use	KMO metrics	Number of items	
		Df	Sig
Perceived usefulness	0.700	28	0.000
Perceived trust	0.702	153	0.000
Mandatory acceptance	0.800	36	0.000
Perceived ease of use	0.767	15	0.000

TABLE 5: The correlation analysis of primary indicators.

Correlation	1	2	3
Website technology	1.000	0.502	0.761
Network technology	0.214	0.314	0.531
Data technology	0.467	0.409	0.543
User management	0.502	1.000	0.506

department management is high. Therefore, the primary factors of perceived ease of use are adjusted, and the influencing factors of perceived ease of use are divided into user-perceived usefulness and organization-perceived usefulness. The correlation analysis of primary indicators is shown in Table 5.

The rapid development of the Internet has promoted the networking of e-commerce and computer applications and set off an upsurge of Internet thinking, making it inevitable for freight forwarders to choose the e-commerce market. The relationship between the size of netizens and the penetration rate of the Internet is shown in Figure 5.

In fact, compared with personal computers, cloud computing is more reliable because cloud service providers are taking safe and effective measures all the time to ensure cloud services, such as multiple copies of data, fault tolerance, and homogeneity of computing nodes. Cloud computing features are shown in Figure 6.

According to the latest survey data from the National Bureau of Information Technology Statistics, more than 97% of foreign-funded enterprises have achieved informatization. Among them, more than 100 large companies have realized paperless, that is, office automation and many multinational companies have realized virtual office. In contrast, nearly 50% of SMEs are not equipped with computers. Less than 20% of businesses have a website. Large enterprises with more than 500 employees have initially achieved informatization. There is a big gap between the

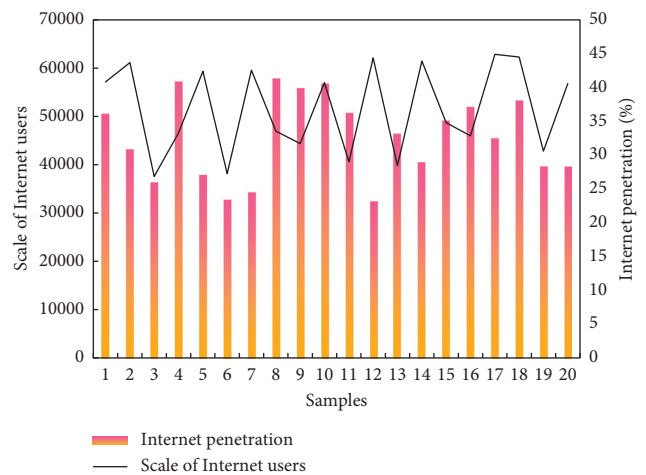


FIGURE 5: The relationship between the size of netizens and the penetration rate of the Internet.

informatization of domestic enterprises and developed countries. The comparison of information status of domestic and foreign enterprises is shown in Figure 7.

### 5. Countermeasures for the Electronization of Traditional Enterprises

5.1. Clearly Determining the Direction of Electronization. Traditional enterprises of any nature will eventually become electronic, with different approaches and methods. Maybe going electronic will not necessarily succeed. However, if



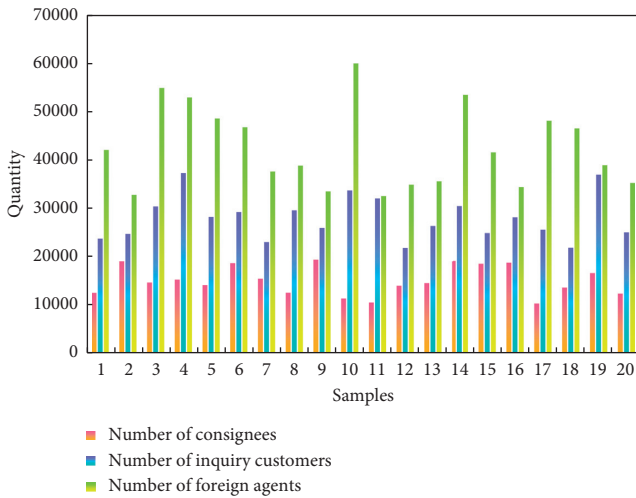


FIGURE 6: Cloud computing features.

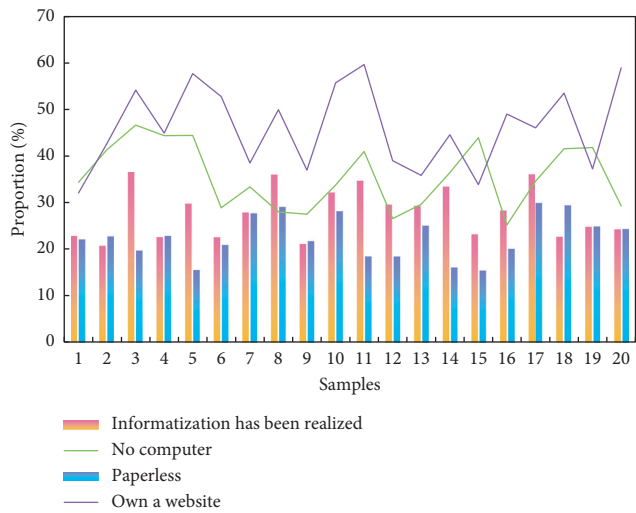


FIGURE 7: The comparison of information status of domestic and foreign enterprises.

you are not self-styled and do not go electronization, it is tantamount to sitting still and eventually being eliminated by society. In the inevitability analysis of the former enterprise electronization, we can clearly recognize the urgency and necessity of enterprise electronization. Many business leaders have seen this and are doing a variety of useful explorations, which is very gratifying. Although the road to exploration is long and sturdy, as long as you have this awareness, you may progress and succeed. There are also some business leaders who have felt that the times have changed and they are in crisis. However, due to the lack of understanding of Big data and cloud computing, the new economy is not very good, thinking that its own business has nothing to do with electronization. This kind of corporate thinking is very dangerous. In the wave of the new era of big data, traditional enterprises should seize the opportunity and move toward electronic. In particular, those enterprises that are still immersed in the traditional world and who are

indifferent to the Internet and information age should reform their corporate forms and carry out an electronic layout of enterprises to adapt to the challenges and impacts of the new era.

5.2. *Fully Developing the Electronic Construction of Enterprises.* We should regard enterprise electronization as an opportunity for enterprises to carry out technological innovation in all aspects, improve the efficiency of enterprise operation, and save enterprise cost. In the electronic construction of enterprises, it is not only to establish a corporate website but to start from the internal management of the enterprise and to deepen the electronic thinking into all aspects of the enterprise process. Correctly determine the relationship between the various parts, make electronic one step by step, and achieve significant benefits. The key part of the traditional enterprise to complete the electronic construction is to realize the electronization in the internal management mode of the enterprise. Specifically, it is to use big data technology and cloud computing technology to carry out intelligent and digital innovations in traditional production and management modes. On this basis, we will fully realize the electronization of enterprises, optimize internal operation processes, improve enterprise management efficiency, and achieve management innovation.

5.3. *Thinking in an Electronic way of Thinking.* As previously analyzed, in the current Internet development environment, enterprise development needs to face many threats, and we cannot consider all the situations in advance. Traditional corporate thinking is conservative, and it is accustomed to thinking clearly, so companies often spend a lot of time and managers in decision-making. In the Internet field, the time cost is the most important and precious, far exceeding capital, income, and talent. Although there are many situations in the process of enterprise electronization, if we are afraid of not trying, we will certainly be eliminated by the times and the market. We can learn from the experience of successful people, which can reduce the risk of exploring adventures. Do not be afraid to try enterprise electronization. Only practice can determine the effectiveness. Conservative companies are destined to be eliminated by homeopathic companies. This is an era full of opportunities and challenges. If enterprises cannot adapt to the thinking of the new era, they will be eliminated by the times.

5.4. *Starting from Reality.* It is necessary to base on the national conditions and the actual situation, analyze the actual situation of the enterprise itself, and explore and establish an electronic road that is applicable to the enterprise's own situation. Different types of businesses and scales of operations have different electronic opportunities and methods. In the process of enterprise electronization, we must consider the sensitivity of each enterprise type to big data technology and explore the best time and method of electronization. Enterprises must make electronic development plans suitable for their own enterprises according to

their actual conditions and determine the electronic form adopted by their own enterprises. Enterprises should decide the way and steps of electronic construction based on their actual needs. For some SMEs, if they just want to put relevant content about their own business on the Internet and provide corresponding network functions for people to browse, trade, and contact, then companies only need to establish their own corporate website portal. For some large enterprises, electronic construction needs to consider a relatively large number of aspects, complex technology, and high cost, and it takes a lot of time and manpower to carry out maintenance and management after completion, and it is not suitable for small and medium-sized enterprises.

*5.5. Making Full Use of the Internal and External Advantages of the Company.* Enterprises should try their best to realize their electronic transformation as quickly and efficiently as possible with all available external forces. Some companies are still in good shape, and some resources, capital, or brand advantages should be fully utilized when starting electronic construction. There are still many companies that have a high degree of informatization and should make full use of their internal information systems to enable enterprises to connect with the Internet as soon as possible. It can be said that in the process of e-commerce operation, the most important thing is the goal. Technology is not an obstacle. It is closely integrated with the IT industry. With the help of external technical forces, the company's own technical level can be quickly improved. Some SMEs can also consider using some websites that provide Internet services for enterprises to get online or e-commerce as soon as possible. In addition, the emerging technology can be used for strategic planning of electronic transformation to improve electronic efficiency.

## 6. Conclusion

Enterprise electronization is an inevitable trend of corporate strategic development and a long-term systematic process. Enterprises have transformed their traditional operating models and used advanced technologies such as big data and cloud computing to explore the potential value of enterprise data and industry data, better plan and layout the development of enterprises, and at the same time introduce enterprise resources into enterprises more quickly and effectively. To solve the problem of resource allocation of enterprises, rationally allocate enterprise resources, and operate the enterprise in a more fair, transparent, and convenient mode, which greatly improved the level of modern management capability of enterprises. By using big data and cloud computing means, it can provide fast and accurate information for enterprises, improve the correctness of enterprise management decisions, promote rapid and stable development of enterprises, and better stand in the fierce market competition environment. In addition, the basic characteristics of enterprise electronization, such as mobilization, deep integration of social and business applications, increased emphasis on user experience,

digitization of asset values, expansion of technical service capabilities to industrial chains, and transformation of technology light asset models, require enterprises. We must grasp the mainstream of the times, keep up with the wave of emerging technologies in the era, combine big data and cloud computing technologies to carry out electronization, and advance in the fierce competitive environment.

In the big data context, the necessity of electronic electronics in traditional enterprises is not to be doubted. The new opportunities brought about by cloud computing technology, and the prospect of electronization have an unstoppable temptation for enterprise development, which is the main driving force for the electronization of enterprises. In today's information era, the survival of traditional enterprises faces enormous threats. Traditional enterprises urgently need reforms to adapt to the new living environment. Electronic enterprise is the best choice and the only way for enterprises to participate in international competition and nominate the core competitiveness of enterprises.

At present, many enterprises still have many objective problems in the electronic process, such as insufficient understanding of enterprise electronic construction, basic work cannot meet the needs of information construction, and enterprises pay insufficient attention to management and restructuring in the process of electronic construction. These problems have seriously hindered the healthy and sustainable development of enterprises. On this basis, with big data and cloud computing as the background, this paper fully analyzes the problems of the above-mentioned enterprise electronization and proposes countermeasures for electronic enterprises. This countermeasure is to clearly determine the direction of electronization, fully develop electronic construction, think in an electronic way of thinking, start from reality, and make full use of the internal and external advantages of the enterprise.

This paper studies and analyzes the basic information of enterprise electronization, summarizes the necessity, basic characteristics, and existing problems of enterprise electronization, and proposes new countermeasures for enterprise electronization. This research hopes to make a contribution to promoting the development of electronic enterprises.

## Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

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