

Research Article

Research on Public Adoption Willingness of “Internet + Government Affairs” in Blockchain Industry

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In view of the low utilization rate of “Internet + government” service users and the weak awareness of public participation, the paper analyzes the influencing factors of “Internet + government” public adoption in the context of the blockchain industry. The empirical research is carried out from three dimensions: perceived trust, environmental characteristics, and public satisfaction; combined with the advantages of application blockchain technology in “Internet + government affairs,” it analyzes the characteristics of public adoption behavior at different stages, builds a process-based “Internet + government affairs” public adoption model, and utilizes methods of factor analysis and structural equations to verify the models, and finally recommendations are provided to boost the public adoption. The research shows that government trust, big data security trust, and blockchain technology advantages have a significant impact on the public’s initial willingness to participate; perceived ease of use, usefulness, and quality of perception directly and positively affect public satisfaction and indirectly affect public continuous willingness to use. The results of the research provide a theoretical basis and data support for continuously improving “Internet + government affairs” quality, to fully realize the value of government affairs services in the blockchain industry.

1. Introduction

With the continuous expansion of blockchain technology in the fields of finance, medical treatment, and government affairs, blockchain has become a hot issue of social concern. In 2018, the State Department issued a notice to deepen the “Internet + government affairs” services, calling for the promotion of the “One Portal, One Door, Once Only” reform of government affairs services, the establishment of a public participation mechanism, and the use of the Internet, big data, blockchain, and other technologies to further enhance the efficiency and grade of government affairs services. In October 2019, blockchain technology was studied at the 18th group learning session of the Political Bureau of the CPC Central Committee; it has been emphasized that blockchain technology will play an important role in the technological innovation and industrial transformation and accelerate the utilization of blockchain technology in various fields and its prospect in industrial innovation.

At present, the state has promoted the construction of blockchain government to a strategic height, requiring the reconstruction of government service processes and government operations, building a holistic and service-oriented government. Governments at all levels take the initiative to learn the principles and technology of blockchain to improve the service quality and efficiency and have introduced policies to encourage the application of this new technology to “Internet + government affairs” and promote public adoption. Public adoption is the main manifestation of the application value of “Internet + government affairs,” which can fully stimulate the motivation of government services and social creativity. Therefore, the factors affecting the public adoption of “Internet + government affairs” in the context of blockchain technology are analyzed, and the challenges faced by “Internet + government affairs,” as well as how to increase the willingness of the public to adopt the services that have important theoretical and practical significance are explored.

2. Research on Public Adoption of “Internet + Government Affairs” and Blockchain

2.1. Related Research on Public Adoption of the “Internet + Government Affairs”. Public adoption refers to the behavior of acceptance and utilization by the general public. Based on the models of technology acceptance, trust theory, and information system persistence, foreign scholars study the factors that affect the behavior of public adoption. Some scholars believe that user trust factors will directly affect public acceptance intention; trust plays a key intermediary role between demand and use behavior [1, 2]. Other scholars believe that public adoption reflects the application value of “Internet + government affairs” services, and the degree of user satisfaction positively affects the public’s willingness to continue to use it; they analyze and find that users’ acceptance, service availability, and users’ experience affect public behavior of adoption, so it is necessary to pay attention to user’s needs to enhance public adoption experience [3, 4].

There are also domestic scholars who combined the localized characteristics of “Internet + government affairs” to analyze public adoption behavior from different perspectives. Zhu and Guo [5] analyzed the key factors influencing the use of mobile government affairs and found that perceived trust and IT self-efficacy can significantly affect public adoption intention. Xu et al. [6] studied the logical relationship between public trust, government service quality and continuance intention. Chen et al. [7] studied the relationship between e-government service quality and user demands and found that information system quality and service quality have a significant positive impact on the people’s intention to use continuously. Qian and Wang [8] analyzed the influencing factors of the public adoption behavior of “Internet + government” and found that the technical advantages and social influence positively affect the users’ initial willingness accept, while perceived usefulness and ease of use indirectly affect users’ willingness to continue using.

2.2. Research on Application of Blockchain to e-Government.

At present, the application of blockchain technology in the field of “Internet + government affairs” is still in its preliminary stage, mainly focusing on theoretical research and practical application [9, 10]. In terms of theoretical research, due to the low transparency of government information and the low participation in public government affairs, the public’s trust in the government is low, which has damaged the image of the government to a certain extent. The application of blockchain to government trust construction can promote more transparent, safe, and reliable government information. Through the blockchain point-to-point technology, it can effectively avoid the inefficiency and distortion of government information in the process of layer-by-layer transmission and satisfy the public’s value trust in the government’s ability and willingness to optimize public service [11, 12]. In terms of practical research, Marc

[13] believes that the application of blockchain technology to the field of e-government, such as citizenship authentication, integrity management, cadre personnel file management, and so on, will help increase the interactive experience and increase user stickiness and improve the relationship between the government and the public, also stimulating the government to provide efficient and high-quality services to the public. Wang and Lu [14] combed the application of blockchain technology in social governance and public affairs and believed that blockchain technology will innovate the management mode of government data and the mode of government governance while also facing the challenges from the current system arrangement and technical supervision. Ren et al. [15] analyzed the application of blockchain technology in foreign government departments, for example, Russia, the USA, Australia, and other countries, and pointed out that we should pay attention to the problems of security and confidentiality, universal type, and large file data storage in the application of blockchain and put forward corresponding solutions.

In summary, the existing literature mainly discusses the application of blockchain technology in government affairs and social management and provides a certain theoretical application basis for the research, but there are still two shortcomings: First, most of the existing literature analyzes information sharing system, governance path, public responsibility mechanism, and other issues at government level, but there are few concerns about the user level of “Internet + government affairs” service. Since public adoption is an important manifestation of the value of the “Internet + government affairs” application, it is urgent to introduce blockchain technology to promote public participation, which means innovative “Internet + government affairs.” Second, the existing research does not fully understand the multidimensional characteristics of the Internet + government adoption mechanism of public adoption and does not clearly define the psychological characteristics of different stages of public initial acceptance and continuous use. Given blockchain technology application determines the level of “Internet + government affairs” and becomes an important factor affecting the public’s willingness to adopt, this article combines with the application advantages of blockchain technology, to analyze the influencing factors of “Internet + government” adoption under the background of blockchain technology, and puts forward the use of this technology to strengthen the construction of government big data security, as well as to build an integrated “Internet + government affairs” big data sharing platform, while constructing a healthy collaborative participation model from the multiple parties.

3. A Construction of the Public Adoption Model Based on the Blockchain Technology

3.1. Analysis on the Convergence between Applying Blockchain Technology to “Internet + Government Affairs” and Public Adoption. The technical characteristics of blockchain, such as decentralization, openness and transparency, privacy protection, and traceability, have the advantages of being

applied to “Internet + government affairs”; this will help enhance the sense of identity and experience of public participation. The following analyzes the main points of convergence between blockchain and “Internet + government” public adoption in terms of the level of public data demand, the multicenter level of public participation, and the level of government trust.

3.1.1. Level of Public Demand for Big Data. Although the government holds a large number of data resources in society, the openness of “Internet + government” data is low due to the barriers of interests between the departments, regions, and industries, as well as the poor communication with each other [2, 5]. This situation cannot meet the public’s demand for the big data sharing. The distributive storage of the blockchain enables each participant in the network can read and store data, and public data updates can be uplinked to the entire network and realize data exchange and sharing between different regions and industries, as well as between the government and the public. At the same time, through blockchain peer-to-peer technology, “Internet + government affairs” can enable the public to obtain more personalized and precise information services.

3.1.2. Multicenter Level of Public Participation. The technical characteristics of the blockchain are suitable for multistate, multilink, and multiparty participation and coordination. On the one hand, the decentralization of the blockchain can realize the multicenter participation of “Internet + government affairs” and make all subjects in an equal position, which has changed the once absolute central state of the government in the administrative system [16, 17]. On the other hand, the consensus mechanism of the blockchain requires all entities to follow the mutual agreement and fulfill their obligations, jointly manage and coordinate the entire “Internet + government” network system, and jointly maintain and supervise the security of data, to form an orderly and autonomously coordinated system. By organizing a government network, the role and function of the public have changed from passive participation to active participation.

3.1.3. Level of Public Trust in the Government. The prerequisite for the public to accept the “Internet + government affairs” service is to trust the government. The government can only obtain public trust if it does a good job in the security of government data management and the protection of users’ privacy. The government data transmitted in the blockchain industry has strong security and reliability [18]. The blockchain asymmetric encryption algorithm has the function of verifying the source of the data and protecting the data security; the blockchain hashing algorithm can protect data privacy and prevent the data leakage effect. At the same time, the blockchain point-to-point technology can prevent the distortion and lag of government data and ensure the consistency and integrity of the data. Based on the consensus of the blockchain protocol, a trusted network with

multiparticipant can be constructed, breaking the traditional government administration layer-by-layer model and directing the information to relevant entities for execution; therefore the applicable rules of the blockchain coincide with government trust.

3.2. Assumption Analysis. Based on the characteristics of decentralization, transparency, tamper-proof traceability, security, and reliability of blockchain technology, this paper analyzes the behavior of public adoption from the aspects of public perception trust, external environmental impact, and user satisfaction and divides the process of public adoption into initial acceptance intention stage and continuous use intention stage.

3.2.1. Perceived Trust. Based on the above literature analysis, the premise of public acceptance of government services is the trust in the government, and the establishment and maintenance of government trust requires the openness and transparency of government information [5]; the tamper-proof, transparent, and credible criteria of blockchain are compatible with public perceived trust. Perceptual trust is mainly analyzed from two influencing factors: government trust is a subjective cognition of public serviceability and value judgment of government credit. Government trust depends on public trust in the government code of conduct and network recognition [6]. Big data security trust refers to public trust in Internet information security, privacy protection, and legal norms.

In summary, the following research hypotheses are put forward:

TG: factors of government trust positively affect the public’s initial willingness to accept

TI: factors of trust in big data security positively affect the public’s initial willingness to accept

3.2.2. External Environment. Research shows that the external environment affects public adoption, and the external environment includes social factors and blockchain technical factors. The social environment includes the influences, which comes from the preference of people around, and affects user’s participation behavior; meanwhile, such behavior is also influenced by the government incentive and the means of network propaganda [16]. Blockchain technology is an evolution and iteration based on Internet technology. It combines the encryption algorithm and the consensus mechanism to form a new technical concept. That by using blockchain technology to expand the social influence of the “Internet + government affairs” will improve the enthusiasm of the public to adopt the service [14]. Given the above discussion, the following research hypotheses are proposed:

SI: social factors positively affect the public’s initial willingness to accept

TS: factors of blockchain technical positively affect the public’s initial willingness to accept

3.2.3. Aspect of User Satisfaction. The decentralization of blockchain realizes the multicenter participation of “Internet + government affairs”; it changed the traditional absolute central state of government in social governance and makes each subject in a relatively equal position. This helps promote interaction between the government and the public, which improves user satisfaction [1]. User satisfaction could be analyzed from three factors such as perceived ease of use, perceived usefulness, and perceived quality: perceived ease of use refers to the public perception about the convenience of the service platform [14]; perceived usefulness refers to the intelligence interaction brought by blockchain technology, which improves the affairs’ efficiency [8]; and perceived quality includes government the quality of information, service, and system, which specifically covers the accuracy and timeliness of the service, as well as whether the improved intelligent service tools and methods can meet the public needs [6].

Based on the above analysis, the following assumptions are put forward:

PU: factors of perceived usefulness directly affect public satisfaction and indirectly affect public intention to use continuously

PE: factors of perceived ease of use directly affect public satisfaction and indirectly affect public intention to use continuously

PQ: factors of perceived quality directly affect public satisfaction and indirectly affect public intention to use continuously

US: satisfaction directly and positively affects the public’s intention of continuous use

3.3. Research Model Building. Scholars define and explore the process of public adoption. Limayem et al. [19] and others divided the adoption process into preadoption stage and postadoption stage based on the information system. The preadoption stage is mainly the user’s initial acceptance cognition, while the post adoption stage is mainly the user’s continuous use tendency. Lan [20] discussed the psychological characteristics of public adoption of mobile government based on the process and believed that in the initial stage, it is the key for the public to accept and be willing to participate in mobile government services, and when the public accepts services, they always expect the mobile government to provide various reliable services continuously and stably for a long time. Some scholars believe that continuous use intention will be affected by factors such as satisfaction, perceived ease of use, service quality, comparative advantage, and special computer self-efficacy [21, 22]. To sum up, according to the different psychological characteristics of the public adoption process, the author divides the adoption model into the initial acceptance stage and the continuous use stage.

According to the behavior characteristics of the public accepting “Internet + government affairs” under the background of blockchain technology, we choose variables such as government trust, big data security trust, social influence,

blockchain technology advantage, perceived ease of use, usefulness, and perceived quality as influencing factors of public adoption, based on technology acceptance model, information system continuous use model, and trust theory to construct a model of public adoption “Internet + government affairs” under the background of blockchain technology, as shown in Figure 1.

According to the theoretical model of technology acceptance and the theoretical basis of continuous use of information systems, the influencing factors of different psychological stages of public adoption on “Internet + government affairs” are analyzed: the initial willingness to accept is analyzed from the aspects of perceived trust and external environment, and the willingness to use continuously is analyzed from the aspect of satisfaction.

4. Public Adoption of Empirical Analysis

4.1. Questionnaire Design and Data Collections. The questionnaire is divided into two parts: the first part is demographic variables, including gender, age, education, and occupation. The public’s willingness to adopt analysis includes two psychological stages: the initial willingness to accept and the willingness to continue to use. The sample of the questionnaire survey comes from the members of social groups and social organizations such as enterprises, governments, schools, and hospitals in different regions of Anhui Province. The subjects involved different sex, occupation, and educational level, asking the subject to show his/her attitude to the problems. Most of these social members have the experience of logging in to the e-government platform. The second part adopts Likert five-point scale: “1” not interested, “2” not concerned, “3” agreed, “4” initial acceptance, and “5” continuous use. A total of 1,925 questionnaires were distributed; after eliminating invalid questionnaires, 1,873 valid questionnaires were finally recovered. The effective recovery rate is about 94%. In the valid sample questionnaire, in terms of gender, 57% are men and 43% are women. In terms of educational background, 62% have bachelor degree or above. In the occupational distribution, the company’s employees account for 45% and other social organizations account for 28%.

Definition of influencing variables: through Anhui government mobile service platform “Wanshitong,” the paper studies the influencing variables of public adoption from the aspects of trust perception, external impact, and user satisfaction. The definitions of each variable are as follows.

Measurement of Perceived trust includes two variables: government trust and security trust in big data environment; External environment measurement includes two variables: social impact and blockchain technology advantage; User satisfaction includes three variables: perceived ease of use, perceived usefulness and perceived quality.

4.2. Empirical Analysis. The empirical analysis uses SPSS and LISREL statistical tools to process the questionnaire data and analyzes the degree of influence of the variables in the

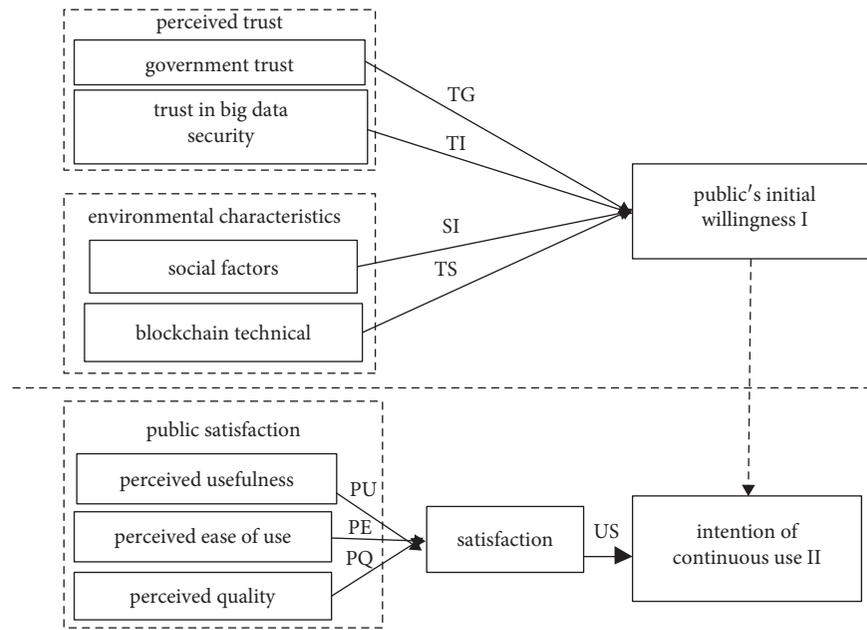


FIGURE 1: Public adoption model design.

participating model, through the structural equation path coefficient. For reliability, validity, and factor analysis, the correlation between hypothetical variables has to be verified.

4.2.1. Reliability Analysis. Cronbach's alpha internal consistency coefficient was used to test the reliability of the sample data. When the CITC value is less than 0.5, the retention CITC value is greater than 0.6. The Cronbach's alpha value of initial acceptance intention is 0.921, and the value of Cronbach's alpha continuous use intention is 0.924, which indicates that the sample data has good reliability. The results of public initial acceptance and continuous use reliability analysis are shown in Table 1.

4.2.2. Validity Analysis. The validity analysis of the questionnaire mainly adopts content validity and structure validity. This questionnaire is designed based on a large number of literature reviews and refers to the most widely used technology acceptance model, trust theory, and information system continuous use model in the field of mobile government so as to ensure that each question in the questionnaire has a clear basis. Moreover, the questionnaire accepted the modification suggestions of e-government experts, survey object developers, and promoters and made better modifications according to the presurvey results. The rigor of the questionnaire development process ensures the effectiveness of its content, that is, the questionnaire has high content validity.

The questionnaire structure validity analysis is mainly tested by factor analysis. Firstly, Bartlett's spherical test is used to determine whether the data are suitable for factor analysis. Then KMO (Kaiser-Meyer-Olkin) and Bartlett spherical tests were used to test the validity of the questionnaire data. KMO initial acceptance was 0.949; Bartlett spherical test chi-square values are 4,357 (degrees of freedom 190). A constant

willingness KMO use was 0.927; Bartlett chi-square value of the spherical test is 7,937 (820 degrees of freedom). The results are shown in Tables 2 and 3; Bartlett sphericity test in the table is 0.000. The results show that the questionnaire data are relevant, and factor analysis can be carried out.

The principal component analysis method is used to verify the factor analysis, delete the factors load with a value greater than 1 or less than 0.5, and make the questionnaire data with good convergence validity. The factor load of initial acceptance intention is shown in Table 4. The factor load of continuous use intention is shown in Table 5. The factor load coefficients of all variables in the table are greater than 0.5, meeting the minimum numerical requirements put forward by the academic community through verification, which fully shows that the questionnaire used in this study has good convergence validity and differential validity, that is, the questionnaire has good structural validity.

4.2.3. Structure Model Analysis. Using the structural equation model and the software tools LISREL to analyze the path coefficient on each potential variable of public adoption intention, and then the influence value in the public adoption of the "Internet + government" model is obtained, as shown in Figure 2.

The fitting effect was evaluated by the relevant indexes in the structural equation: the relevant indexes included the canonical fitting index (NFI), the comparative fitting index (CFI), the value-added fitting index (IFI), the non-normal fitting index (NNFI), the approximate root-mean-square residual (RMSEA), and the adjusted goodness of fit index (AGFI). The fitting index of the public adoption model is shown in Table 6. Because each evaluation index meets the critical value requirement, it is proved that the test results of this model are effective.

TABLE 1: Reliability analysis of public acceptance of initial acceptance and continued use.

	Variable	Cronbach's alpha	Items	Overall
Initial acceptance	Government trust	0.785	3	0.921
	Big data security trust	0.830	3	
	Social impact	0.695	4	
	Blockchain technology advantage	0.828	4	
	Initial acceptance intention	0.704	3	
Continuous willingness to use	Accessibility	0.836	3	0.924
	Usefulness	0.762	3	
	Perceived quality	0.736	4	
	User satisfaction	0.735	3	
	Continuing use intention	0.740	3	

TABLE 2: KMO and Bartlett tests at the initial acceptance stage.

Kaiser–Meyer–Olkin measure of sampling adequacy		0.949
Bartlett sphericity test	Approximate chi-square	4,357.296
	df	190
	Sig.	0.000

TABLE 3: KMO and Bartlett tests during the continuing use phase.

Kaiser–Meyer–Olkin measure of sampling adequacy		0.927
Bartlett sphericity test	Approximate chi-square	7,937.058
	df	820
	Sig.	0.000

TABLE 4: Principal component factor load at the initial acceptance stage.

Potential variables	Item	Factor load
Government trust	TG1	0.726
	TG2	0.703
	TG3	0.701
Social impact	SI1	0.745
	SI2	0.740
	SI3	0.626
	SI4	0.744
Initial use intention	IU1	0.764
	IU2	0.702
	IU3	0.784
Big data security trust	TI1	0.842
	TI2	0.813
	TI3	0.797
Blockchain technology advantage	TS1	0.804
	TS2	0.793
	TS3	0.826
	TS4	0.815

Path analysis and validation with the structural equation model (see Table 7). The significance level of each factor in Table 7 on the public adoption intention is less than 0.05, indicating that these factors have a significant impact on the public adoption intention. The table shows that factors of government trust, big data security trust, and blockchain technology advantage directly and positively affect the public initial willingness to adopt; factors such as perceived ease of use, usefulness, and perceived quality directly and positively affect public satisfaction and then indirectly affect the public willingness of continuous use.

4.3. Discussion of Results. Analyze the path coefficient of the structural equation: the factor path coefficient of government trust is 0.32, and the factor path coefficient of big data security trust is 0.46. The above results show that the factors of government trust and big data security trust positively directly and positively affect the public initial willingness to adopt. This shows that in the process of social governance and provision of public services, whether government behavior is open and transparent and whether government big data is safe and reliable, will not only affect the public's trust in government functional departments but also affect the

TABLE 5: Principal component factor load during continuous use.

Potential variables	Item	Factor load
Accessibility	PE1	0.889
	PE2	0.792
	PE3	0.821
Perceived quality	PQ1	0.769
	PQ2	0.721
	PQ3	0.729
	PQ4	0.854
Continuing use intention	CU1	0.882
	CU2	0.771
	CU3	0.679
Usefulness	PU1	0.748
	PU2	0.818
	PU3	0.781
User satisfaction	US1	0.744
	US2	0.838
	US3	0.836

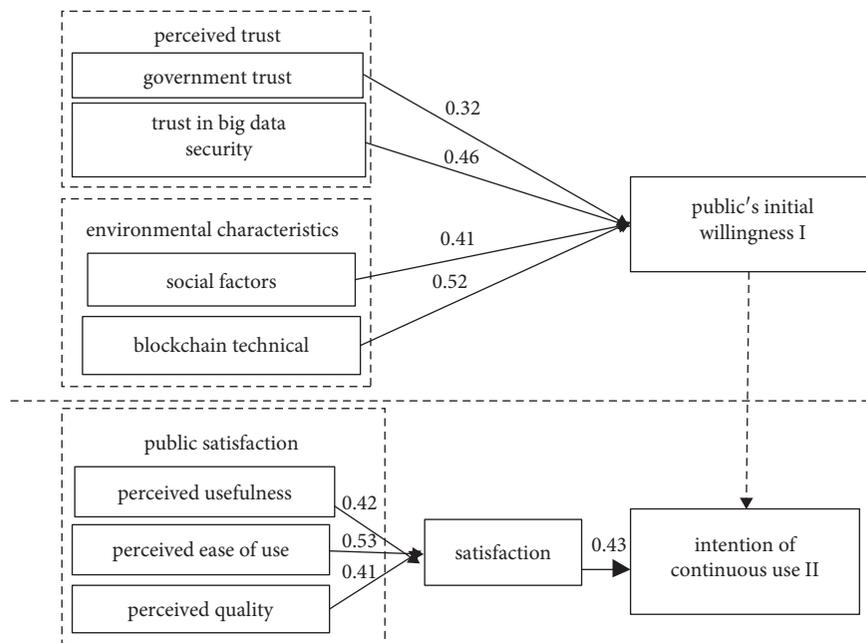


FIGURE 2: Public adoption path coefficient. Note: *** $p < 0.001$, ** $p < 0.01$, and * $p < 0.05$.

TABLE 6: Participation in model fitting indices.

	NFI	CFI	IFI	NNFI	RMSEA	AGFI
Standard values	>0.90	>0.90	>0.90	>0.90	<0.08	>0.80
Initial acceptance	0.95	0.94	0.98	0.95	0.075	0.85
Sustained willingness to use	0.92	0.91	0.96	0.93	0.071	0.87

TABLE 7: Path analysis and verification results of the structural equation.

Assumption	Relationship	Path	Significance level	Results
H1 assumption	TG- > IU	0.32	0.008	Support
H2 assumption	TI- > IU	0.46	0.000	Support
H3 assumption	SI- > IU	0.41	0.003	Support
H4 assumption	TS- > IU	0.52	0.000	Support
H5 assumption	PU- > US	0.42	0.002	Support
H6 assumption	PE- > US	0.53	0.000	Support
H7 assumption	PQ- > US	0.41	0.003	Support
H8 assumption	US- > CU	0.43	0.001	Support

public's trust in Internet network security. The public will not accept and use "Internet + government affairs" services unless they trust the government and government network environment. By using the characteristics of blockchain technology to innovate government services such as decentralization, openness, transparency, and traceability, the government can realize the openness, transparency, and credibility of information resources and can also restrict power in the process of multiparty collaborative participation.

The path coefficient of social influencing factors is 0.41, which indicates that it has a certain influence on the public's initial willingness to adopt. The coefficient of the technical path factor of blockchain is 0.52: it shows that the technical advantage of blockchain has a significant effect on the public's initial willingness to adopt. Blockchain technology is an evolution and iteration based on Internet technology; it combines the encryption algorithm and a consensus mechanism to form a new technical concept. With the help of the new application technology of blockchain, the social influence of the "Internet + government affairs" service can be upgraded; the relationship between the public and the government can be improved; and the initiative of the public to adopt "Internet + government affairs" service can be improved as well.

The path coefficient of perceived ease of use factor is 0.53; the path coefficient of usefulness factor is 0.42; and the coefficient of perceived quality factor is 0.41: it shows that perceived ease of use, perceived usefulness, and a perceived quality factor directly and positively affect public satisfaction and indirectly affect public willingness to use continuously. The intelligent algorithm of blockchain can optimize the process of government service and promote the diversification and refinement of public service, playing an active role in government services such as patent protection, notarization, education, logistics, medical treatment, personal credit, and so on.

5. Research Conclusions and Suggestions

This article analyzes the influencing factors of public adoption willingness in the context of blockchain technology, explores the characteristics of "Internet + government affairs" public adoption behavior from a multidimensional perspective, and proposes countermeasures to boost "Internet + government affairs" public adoption: on the one hand, using blockchain technology to strengthen the security construction of government information platforms and big data to enhance public trust, and on the other hand, using blockchain's decentralization to achieve a multicenter collaborative participation mechanism and enhance the public's enthusiasm for adopting social governance.

5.1. Strengthen the Construction of Government Information Platforms and Big Data Security to Enhance Public Trust. Information security in the era of big data is one of the important factors affecting public adoption. Through empirical analysis, it is shown that government information

platforms and big data security trust factors have a significant impact on public adoption. If the public believes that government information platforms and big data environments are safe, they will actively adopt the services. During the process of using blockchain technology to perfect the service of "Internet + government affairs," the government needs to strengthen the security of public privacy and government big data platform. On the one hand, the government constructs a unified "Internet + government affairs" data entry through the blockchain intelligent protocol technology and brings government institutions, financial institutions, regulators, audit institutions, and other institutions into the blockchain ecosystem to realize the open sharing of government affairs' big data within a certain scope. On the other hand, the government should establish the application system standard by utilizing blockchain technology to manage government affairs data; make use of its technical characteristics, such as non-tampering, asymmetric encryption ability, data traceability, and so on; formulate an "uplink" data standard and quality requirement; verify and encrypt the "uplink" government affairs data; improve the security performance of government database; and reduce the risk of being attacked and leaked out. At the same time, using blockchain distributed storage technology to strengthen the construction of government big data so that each participant in the government network can read and store data in time, and any update of data will be synchronized to the whole network.

5.2. Construct a Multicenter Cooperative Participation Mode to Realize the Benign Interaction between Multiple Subjects. According to the previous empirical analysis, public satisfaction procedures affect public adoption. The traditional government structure presents a pyramidal organizational structure, and its information transmission is promoted from top to bottom, layer by layer. Through multilayer transmitting and filtering, the information may lead to a distortion, which cannot be transmitted to the principal part of each organization timely. With the blockchain's technical characteristics, such as the decentralization and distributed structure, it is possible to establish a point-to-point (peer to peer) data exchange network between government, agency, main body, and public, effectively avoid repeated collection and processing of data, reduce unnecessary intermediate links between the parties, improve the efficiency and governance level of government affairs execution, and realize the interaction and connectivity between the participating subjects of "Internet + government." At the same time, through the multicenter participation in the process of social governance, the once absolute central state of the government in "Internet + government affairs" will be changed, which make each subject in a relatively equal position. Each node in the data exchange network represents a different subject department, assuming it is the education department, the supervisory department, the public security department, the finance department, the tax department, the security department, the cultural department, and so on. Each subject department is granted public and private keys,

which means each department can obtain the authority of network information transmission and processing, such as data reading, data query, data storage, and data verification, and the security of their sensitive information transmitted in the network is guaranteed. Furthermore, through the blockchain consensus mechanism, each participant can achieve a common agreement: to jointly manage and coordinate the network system of “Internet + government affairs,” jointly supervise and maintain the security of data, and jointly fulfill respective obligations, thus spontaneously forming a standardized and ordered government network, which changes the public role from initial passive participation to active participants.

5.3. Build a Multidimensional “Internet + Government Affairs” Big Data Sharing Platform to Meet Public Needs. Empirical analysis shows that the factor of perceived ease of use significantly affects public adoption, so it is necessary to apply blockchain technology to construct a multidimensional “Internet + government” big data sharing platform. Firstly, blockchain technology is used to integrate data resources between different departments, industries, and regions; these data resources are connected to the “Internet + government” data exchange network and then the uplinked government data are made accessible to all social subjects. This will realize the sharing of “Internet + government” data resources, especially information closely related to people’s livelihood, such as household registration, medical care, pension, social security, education, convenience, and so on. Secondly, the blockchain technology is used to improve the infrastructure of “Internet + government affairs”; the service flow is optimized; and an interconnected, efficient, and cooperative blockchain government net is established. This will gear up the openness, transparency, standardization, and ordering of government data operation and effectively improve public acceptance. Finally, blockchain technology is used to provide a personalized government service platform targeting for different sections, based on the type of users, such as classifying individuals and legal persons, to set up a series of special services: administrative approval, convenience services, sunshine government affairs, and so on; meanwhile, in the process of implementation, improving the user experience is focused to increase public initiative adoption. At the same time, by using blockchain technology to improve service efficiency, let special people can also perceive the intelligent and characteristic services of government platforms, such as one-stop intelligent question answering service, intelligent voice navigation, intelligent external call service, and so on. Only upon experiencing the convenience and ease of use of the government service platform can the public be willing to accept and continue to use the “Internet + government affairs” service.

As a new concept and subversive technology, blockchain has a profound impact on the concept, mechanism, and system in traditional government service. The government has improved the efficiency and transparency of the “Internet + government affairs” service through the

application of blockchain technology. At the same time, government services are facing multiple challenges of standardization, ordering, and security. Therefore, the government should use blockchain technology to strengthen the construction of government big data security to enhance public trust. On the other hand, it is necessary to change the traditional government service mode, realize the mechanism of multiagent cooperative participation, and then improve the efficiency of government service, to enhance public participation in social governance initiatives. The application of blockchain technology to “Internet + government affairs” for public adoption requires not only the improvement of the blockchain network architecture, data transmission specifications, and policy guarantees but also the strengthening of the publicity of blockchain technology and increasing the use of blockchain technology. Only by researching and developing, strengthening the team-building of blockchain technology talents, and creating an application atmosphere for blockchain technology can we maximize the application value of blockchain technology.

6. Research Deficiency and Prospect

Artificial intelligence technology drives industrial change and has a profound impact on the concept, mechanism, and system of traditional government service. Through the application of artificial intelligence technology, the government not only improves the efficiency of mobile government services but also makes the public willing to accept and continue to use mobile government services. This paper analyzes the characteristics of public adoption behavior from a multidimensional perspective and explores the influencing factors of public adoption intention under the background of artificial intelligence. The research results show that strengthening the construction of mobile government information security is conducive to enhancing public trust, making use of the advantages of artificial intelligence technology is conducive to improving the public experience, and building an integrated mobile government intelligent service platform is conducive to promoting public adoption.

Due to the limitations of the research environment and conditions, this paper still has the following deficiencies: first, although the sample has involved the public of different occupations, different ages, and different levels of education, the limitation of the sample size is inevitable, and the universality of the research results needs further empirical test. Second, the research data is mainly cross-sectional data, which is difficult to study the relationship between variables from the time dimension. The advantage of using blockchain technology to improve the quality of government service is an important content of deepening the reform of “Internet + government services” and puts forward new requirements and challenges for relevant theoretical research and practical exploration. This paper only carried out a small amount of work on this topic. In the later stage, we should also study the impact and validity of relevant variables such as public participation and information disclosure. At the same time, the vertical time-series research has to be

strengthened to improve the systematicness and integrity of the research.

Data Availability

The simulation data, model, and related hyperparameters are included within the paper.

Conflicts of Interest

The author declares no conflicts of interest.

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