

Research Article **Application of Cloud Computing and Information Fusion Technology in Green Investment Evaluation System**

Pengwu Wang

School of Accounting, Harbin University of Commerce, Harbin, 150028 Heilongjiang, China

Correspondence should be addressed to Pengwu Wang; wangpengwu2021@126.com

Received 11 August 2021; Revised 15 September 2021; Accepted 7 October 2021; Published 27 October 2021

Academic Editor: Mu Zhou

Copyright © 2021 Pengwu Wang. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

As an important part of the development of green economy, the green investment evaluation system provides a method to identify the performance of the investment environment and also guides the design of green investment plans. This article is aimed at analyzing the application of cloud computing and information fusion technology in the green investment evaluation system, using empirical analysis, qualitative and quantitative analysis, data integration, and distributed computing algorithms to carry out research. Data acquisition is mainly through cloud platform information fusion, to evaluate the investment subject, investment object, and investment vehicle of green investment. Qualitative and quantitative analysis is mainly through the definition of prerequisites by stipulating certain aspects of green, and the analysis of the country's data changes in a certain time zone. Focus on the qualitative analysis and research on the green benefit attributes of a certain thing. In addition, by analyzing the influencing factors of the investment development status of green industries in different countries, such as green products, green projects, and green funds, it proves that the application of cloud computing and information fusion technology has a huge effect on the green investment evaluation system. Experimental data shows that in the past five years, investment in fixed assets in my country's major industries accounted for the proportion of fixed asset investment in the whole society, and investment in environmental protection and energy supply industries has continued to rise. This upward trend is manifested in the fact that the amount of energy investment is increasing year by year. The development trend is the strongest during the development period and the entry period, and its data grows the most rapidly, while investment in the transportation industry has always been listed in the tables. For the first place in the industry, the highest was 20.84%.

1. Introduction

Cloud computing technology is a key technology to realize the Internet of Things. The computing and storage capabilities of the sensor and other information collection parts in the Internet of Things are relatively weak, and the powerful computing and storage capabilities of the cloud computing center are required [1]. Cloud computing and the Internet of Things will promote each other and develop together. With the advent of the era of big data, a new information environment has been formed with its huge data scale, diverse data, rapid dissemination, and low value density. While bringing development opportunities, it also enables information resource organization and services facing greater challenges. Ultra-large-scale "cloud" has a considerable scale and can obtain various supercapable services through network services, while supporting the operation of different applications and meeting the needs of application and user scale growth, and automated management to greatly reduce the cost of data center management. Based on the characteristics of cloud computing itself, the use of cloud computing technology can avoid the repeated construction of information resources and improve the sharing of information resources. It greatly saves the capital investment of information service subjects, reduces the management and maintenance costs of servers and storage, and reduces the demand for management and maintenance personnel. At present, search engines based on database technology and information retrieval technology are the main information resource organization and service tools. The organization and retrieval of massive information resources on the Internet are mainly done by search engines. However,

poor accuracy of search results, lack of intelligence and interactivity, lack of special search, and single interface are the main problems [2]. As an important aspect of information resource organization, information resource storage also has many problems [3].

In real life, we must face multiple information systems obtained from different angles and different starting points, for example, the reliability, comprehensiveness, novelty, and scientific nature of information, which determine the workload of the information screening and fusion process. For green investment, the needs of investment entities, investment targets, and other multiple entities are also different, and the effects pursued are also different. How to obtain more accurate and high-precision data from these multiple information systems has become a problem we have to face; therefore, people put forward the concept of information fusion [4]. Information fusion is just like the human brain that processes complex information. Humans obtain the information they want from various channels and then use the brain to unify the information for consideration and then draw conclusions for decision-making. The merging method of unfinished information systems is applied to anonymous information systems, and a new binary relationship is established by defining a new degree of similarity, and a merging model is established on this basis. For example, in the data analysis process of this experiment, considering that China and Japan are closer to each other in geographic location and climate, while the United States and the United Kingdom are related to each other for classification and comparison, this is different from the traditional thinking angle. It is the new establishment of a dual relationship [5]. How to fuse less information sources has become the focus of multisensor information integration technology. With the continuous deepening of scientific research, processing large amounts of data in different fields has become more and more important [6].

The research on the application of cloud computing and information fusion technology at home and abroad is mainly concentrated in the fields of information technology such as electronics, communications, computers, and education. Pumchalerm et al. adopt qualitative and quantitative methods for the intelligent cooperative education process management model of cloud computing technology. It uses the opinions of 15 cooperative education experts with ICT experience as a sample group to conduct in-depth interviews and open and closed questionnaires, using a conceptual framework designed to process management model of intelligent cooperative school running based on cloud computing technology [7]. Vithayathil believes that software as a service (SaaS) is an important part of making human machine interfaces (HMI) in the cloud. In its research, the cloud interface compares the project screen of the HMI server in any device with a standard browser and allows the user to monitor any screen object, view and receive alarms, and control it through the appropriate screen object [8]. Information and communication technology (ICT) basically uses ICT tools to store and retrieve information. Appiahene et al. integrate the latest technology into the teaching and learning of ICT. Apply cloud computing to ICT research by sharing IT ser-

vices based on platforms, software, and infrastructure in the cloud, and focus on the role of cloud computing in ICT research in the education system of Ghana [9]. Cloud computing integrates technology into a hybrid environment of network, virtualization, and cluster environments, creating a new era full of opportunities, thereby making the business highly scalable. However, there are several challenges to be solved, especially safety, which Kumar has listed as one of the most important issues in his research [10]. Attaran's research discussed the potential strategic advantages of the technology, highlighted its evolving technology and trends and its future impact, reviewed the different stages required to deploy the technology, highlighted key adoption factors, and investigated its use in different industries. Potential applications in the use of cloud computing technology will make collaboration between companies easier and may create financial and operational benefits [11]. The distributed information fusion (DIFFUSION) strategy of sharing local information between sensors is one of the key aspects of this intelligent network. Braca et al. use alternative methods of distributed fixed and mobile sensors to form an intelligent network that achieves high performance and has the remarkable characteristics of scalability, robustness, and reliability. In this paper, two DIFFUSION schemes are proposed, in which the information shared between sensors includes (1) contacts generated by the local detection stage and (2) trajectories generated by the local tracking stage [12]. At present, the R&D project "Carbon Neutral Road Technology Development" sponsored by the Ministry of Land, Infrastructure and Transportation of South Korea has been implemented, and sustainable development related to global climate change is being discussed. Noh and Baek proposed a plan to expand the application of these technologies and build a sustainable road system considering the concept of sustainability, in order to obtain the draft of the green road certification system, the design and construction technology of low-carbon and environmentally friendly roads, and the road green road technology investment evaluation system (GTIES), estimating and managing scientific and technological achievements of highway carbon emission research and development projects [13]. Through the above research, it can be found that the research on cloud computing technology and information fusion technology, combined with the green investment evaluation system, compares and analyzes the evaluation elements as a whole, whether it is for the development and establishment of a new system or the improvement and improvement of the existing system. All have great reference significance. However, these studies have focused on cloud computing itself and information fusion technology. It is very vague about how cloud computing and information fusion create value, and the research methods lack innovation, and the experimental data is too single.

Green investment is a new trend in international investment. This paper studies the green investment evaluation system based on cloud computing and information fusion technology. On the basis of introducing the basic principles of cloud computing technology, it discusses the principles of information resource organization and service in cloud

computing. The feasibility of using cloud computing technology to build information resource cloud organization and cloud services was analyzed; an information resource organization and service cloud platform model on the basis of connotation definition, demand analysis, and function realization was built, and a platform for promoting green investment efficient operation mechanism was proposed. Through qualitative and quantitative evaluation of the status analysis, problem analysis, feasibility analysis, model construction, empirical analysis, etc. of the green investment platform, systematically discuss the application of cloud computing and information fusion technology in the organization and service of information resources in the field of green investment. The use of computing technology to obtain and analyze data can make the experimental data more credible. The content of the above experimental arrangements can be combined with the general characteristics of investment differentiation between entities in different countries and can make green investments in my country based on the characteristics of the data. The status quo of development and improvement methods brings certain innovations [14].

2. Application of Green Investment Evaluation System

2.1. Cloud Computing and Green Investment Industry. With the rapid development of network technology and economic technology, companies need to be able to quickly respond to market changes and take innovative measures to understand how to develop in fierce competition [15]. The scientific research and probability orientation of green enterprise investment has just begun. Scientific research is also included in the macrolevel green investment research, from the perspective of green enterprise investment that is closely related to the microlevel. On the other hand, investing in green company projects also is the creation of company clusters by individual companies. Based on the theory of industrial equilibrium development and economic and social development theory, it puts forward the necessity of green industry investment development, pointed out that the development of green industry investment is the industrialization requirement of developing green investment, and further pointed out that the development of green industry investment is not only international. The requirements of development trends are also an urgent need to achieve sound and rapid development of my country's economy-that is, green industry investment can be a good medicine to solve China's economic overheating, overcapacity, resource shortage, and other problems and a new profit growth point for economic development [16]. The implementation of green investment is an international trend. As soon as possible, from a single project investment to a green industry investment, completing the establishment and implementation of the green industry investment evaluation system is an objective requirement put forward by the international situation and an inevitable choice to solve domestic problems. Although the traditional computer system has the characteristics of accurate and fast calculation and judgment, good versatility, easy to use, and can be combined into a network, it still has certain limitations in its ability to play in the face of complex and huge data. The calculation accuracy will also be affected by various factors. As an emerging technology, cloud computing technology is composed of many traditional computer technologies and information technologies. If you only study the cloud computing technology as a whole, you will not be able to get an accurate judgment on the future development of the technology. Therefore, it is necessary to subdivide cloud computing technology into several subtechnologies to conduct a detailed research one by one. The most important thing is to analyze the focus of attention on these subtechnologies by various organizations and countries in the society. Cloud computing is the latest development of information technology. It has also begun to be popularized and applied. Many countries regard it as a typical new technology that drives economic growth in the posteconomic crisis era and occupies the commanding heights of science and technology. It is a new solution to promote enterprise agility to respond to dynamic and complex environments and create value [17].

Green investment is in line with the general trend of economic and social development in the world today and is in line with the strategic national policy of sustainable development, but green investment can not only be a product of ideology but also be reflected in the behavior of economic activities [18]. However, so far, there is very little research on green investment. Research on the green economic chain and corporate social responsibility investment is the requirement and constraint on corporate investment from a microperspective, and they have not integrated various fields to rise to the perspective of green industry for research [19].

2.2. Cloud Computing Technology. The information resource organization and service platform based on cloud computing technology is an intelligent, personalized, one-stop service platform for the big data environment [20]. The cloud storage model requires a large amount of Internet data to be processed, coupled with the data access generated by the platform's support for mobile devices, which brings a high load to the platform. The cloud computing platform model is shown in Figure 1. The platform has big data storage and processing functions, and cloud providers need to provide server clusters and memory clusters to have super storage and computing capabilities. These are the infrastructure-as-a-service modules of cloud computing [21]. The central cloud platform divides data services into national and regional services. National services include the data retrieval of the higher education system, foreign language periodical network, and joint catalogues, and regional services include data storage, higher education system software services, and foreign language periodical network software service. Because "cloud computing" has changed the computing power and the mode of software use, using the existing knowledge base, the data set to be processed is determined by the classification of the universe object and the situation where the partition falls into the data object to determine the approximate area. Parallel computing digital mining is usually used to mean that multiple parts of a program run on multiple processors on a computer at the

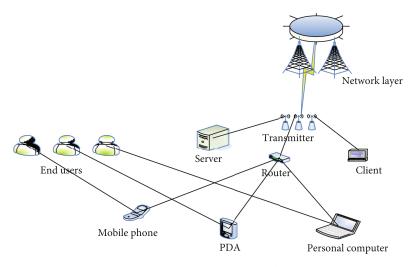


FIGURE 1: Cloud computing platform.

same time, and the uncertainty of the data object to be studied is described by the approximate area. Computing power has a great impact on system operating efficiency, accuracy, and reliability. Virtualization technology can integrate a large number of scattered, underutilized computing powers into computers or servers with high computing loads to achieve unified scheduling of resources across the entire network. It is used, so as to achieve high efficiency in multiple calculations such as storage, transmission, and calculation [22]. In the research of cloud computing technology, network link data is collected as basic data. Use special monitoring, social network analysis, and other methods to extract network links between multiple business entities and countries. It has achieved the six milestones of cloud computing technology for enterprises [23]. The different attribute knowledge of each division of the investment industry is regarded as a single node in different grids. The utility model of the distributed data collaborative processing process of cloud computing can be expressed as

$$W = k_i \sum_{i=1}^{\alpha} \left\{ \sin a_{i-1} - \beta \frac{k_i^{1+i}}{a+1/(\alpha+\beta)} \right\},$$

$$K_i = \left[\sum_{i=0}^{\alpha} \beta_{a-1}(a)^{1/i} \right].$$
(1)

sin a_{i-1} represents the *i*th node in a typical partition, and k_i^{1+i} is the replacement elasticity value of a single processor. Each area block of investment is input as a whole data node and aggregated according to the different characteristics, but there are three common factors, namely, the investment object, the investment subject, and the effect that the investment can obtain. A compound function calculation that organizes data according to the server cluster of the cloud provider and the internal domain of the software is as follows:

$$N_{x}^{i} = \frac{R_{i}(x) - e_{i}}{\sum_{i=1}^{N_{i}} R_{i}(x)/2^{i+1}},$$

$$D_{l} = (1 - \eta)h \left[\frac{H_{i+1} + \pi_{i+1}(L_{i+1})}{1 + I_{l+1} - \eta^{i+1}}\right],$$
(2)

which represents the number of data selected by H_{i+1} to enter a single program, and its calculated value is determined by η^{i+1} . If the data aggregation of this process is denoted as G(e), then there is

 \mathbf{D} () $-\alpha$

$$G(e) = MI_O^{\nu}(1-E)\phi_i \sqrt{\left(1 + e_{i=1}^{i-1}\right)e^{\alpha}}.$$
 (3)

M is the domain of the cloud computing platform information system, and the set of node attributes constituting the information function is *E*. Green products, green industries, green projects, and green funds have different impacts on different domains, but there are data nodes that overlap between their values. These overlapping parts are attribute combinations. Part of the similarity is recorded as the approximate value judgment attribute. An approximate value evaluation of decision information system is produced by the combination of attribute and form:

$$f(v) = \frac{\sum_{(a \in \gamma)} \left| \gamma(b_i^0) \right|}{\frac{a_i a + 1}{\longrightarrow}} \int (1 - e) \gamma, \qquad (4)$$
$$F_v : T_v = \frac{\vartheta A(R_{i-1})^{1-\omega} (H_{i-1})^{\omega-1}}{\min rh}.$$

 F_{ν} , T_{ν} represent the missing value and the complete value of the approximate value.

The accuracy and ambiguity of cloud computing are also measurable [24]. Suppose there is a being order information (x, y, z, and u), compare the internal advantages of the relationship and shrink it into a set:

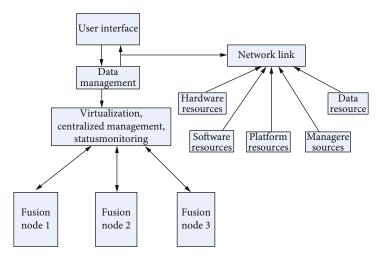


FIGURE 2: Information fusion process.

$$\begin{aligned} \forall_{\tau}^{\prime} A(s) &= \bigwedge_{(x,y,z,u)} \left\{ A(x) \colon y(|u|^{2}, z) < 1 - \zeta \right\}, \\ \forall_{\tau}^{\prime} \max s &= \lor_{(x,y,z,u)-1} \left\{ A(x,y) - |A|^{i-1}(z,u) \right\}. \end{aligned} \tag{5}$$

 \wedge represents the upper approximation of the order information sets, and $\lor_{(x,y,z,u)-1}$ represents the lower approximation of the order information set. Max *s* is the descriptability when the degree is *S*.

2.3. Information Fusion Method. With the advancement of computer technology, microelectronics technology, and network communication level, information integration technology has developed rapidly [25]. The embodiment and application of the theory of industrial equilibrium development can enhance the application of information fusion technology. The economy is proportionally restricted and supports development. Computer technology and other technologies are used to maintain the balanced development of the industry and form a balanced development situation. At present, the construction of national knowledge is one of the most important tasks of social construction, and information integration technology is a trivial technology in modern information writing. In general, multisource data integration has obvious advantages over homologous data integration, because many different sensors can capture multiple characteristic data to improve the accuracy of the integration results. An important condition for data-level integration is that the sensor types must be the same in order for data-level integration to be used for system computing power and network communication speed. Information fusion is a theory and method that uses multisensor, multilevel data and subjectively obtained information to make judgments, decision-making, and practical activities. The purpose is to obtain more accurate and valuable information than using a single sensor or decentralized use of multilevel data [26]. Information fusion is a process of information enhancement and systematic optimization. The flow chart of information fusion is shown in Figure 2.

At present, the methods of information fusion mainly include Bayesian estimation, statistical decision-making method, and rough set theory [27]. In this study, a linear filtering system is used to perform statistics on the signal characteristics of information fusion, and the constraints are firstly applied.

$$\begin{bmatrix} r_{11}^{a} \\ (r_{12} - r_{21})^{a} \end{bmatrix} b = 0,$$

$$x \begin{bmatrix} r \\ s \\ 1 \end{bmatrix} = j[r_{1} r_{2} r_{3} s] < r_{ij}^{s}.$$
(6)

The estimation of each signal element in the matrix is optimized, and the optimal estimation is

$$L(s, t_i, r_i, 1) = \frac{1}{\sqrt{2\pi}} \sum_{r=1}^{1} s \sum_{t=1}^{r} \sigma/\nu^2,$$

$$l = \sqrt{(t-r)_{ij}} \frac{-1}{\sum_{i=0}^{s-1} (s+t)}.$$
(7)

Using the self-adaptive characteristics of data, the relative transformation of information is carried out, and the transformed position information is

$$\Delta s^{2} = \min_{\Delta t} \frac{1}{3} \left[f(t) + \int (t_{i+1}) \Delta t \right]^{2},$$

$$(\chi(s), \chi(t)) = \langle \gamma(1, s), \gamma(1, t) \rangle = \rho(s, t).$$
(8)

 $\chi(s)$ is the output signal, which is transformed into relative position $\chi(t)$. The position loss value and the target loss value are

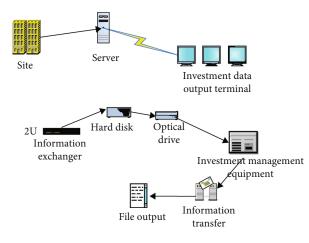


FIGURE 3: Application model of information fusion and cloud computing in green investment.

TABLE 1: Comparison of the total green investment rate, total investment contribution rate, and total investment pull rate between my country and the United States, Japan, and the United Kingdom in the past 5 years.

Country	Investment rate	Investment contribution rate	Investment pull rate
China	127.972	87.16	15.93
US	109.46	72.14	10.75
Japan	121.84	85.18	13.71
UK	109.54	69.94	9.07

$$I(r, s, t) = \frac{1}{m} (I(r, s) + \mu I(r, s, t)),$$

$$I(r, s, t) = \sum_{r \notin I}^{S-1} \sum_{\{R_{i+1}, S_{i+1}, T_{i+1}\}} (s_i^r, t_{i+1}^r).$$
(9)

Among them, μ is the number of matches between the loss value and the actual value, and *I* is the crossvalidation. The information enhancement of information fusion technology is calculated [28], and the dimension with the largest enhancement probability is calculated by the following formula:

$$S' = b \max_{g} \rho \left(\stackrel{\bullet^{i}}{x} = 1 \int \kappa(s) \right),$$

$$Z' = \sum_{i=1} (r, s) + \delta \sum_{j=1}^{1} t \left(z_{i+j}^{j-i} \right) + f(z).$$
(10)

Z contains the size of the weight of each dimension of information fusion, $\kappa(s)$ represents the initial function value, and δ represents its weight. The reconstruction of information fusion involves the multimodal problem of data, which can be expressed as

$$p(t) = \sum_{a=1}^{h} \sum_{b=1}^{i} l \left\{ \max_{l} \vartheta_{a,b} \right\} |a-b|,$$

$$f(a,b) = \exp -\left(\frac{||a-b||^{2}}{2\theta^{2}}\right) (a',b').$$
(11)

(a', b') represents the modal model of the saved data [29].

3. Experiment Arrangement and Development

3.1. Experimental Content

- Related content of fixed asset investment in my country's main industries
- (2) The status and influencing factors of green investment development, a detailed analysis of green investment from all aspects of the four fields of green products, green industry, green engineering, and green funds
- (3) Summarize the current domestic and foreign research status of cloud computing technology and its application in business intelligence and in-depth study of cloud computing-related technologies and business intelligence-related theories, including cloud computing platforms, massive data storage and processing technologies, data warehouses, and data mining method
- (4) Comparative analysis of the evaluation elements of the evaluation system (evaluation object, evaluation institution, evaluation stage, evaluation method, and evaluation index system) and then specific evaluation indicators of China, the United States, Japan, and the United Kingdom, such as the total green investment rate. The total investment contribution rate is compared with the total investment pull rate, and the differences and causes are analyzed and discussed

3.2. Cloud Computing and Information Fusion Technology and Green Investment Evaluation System. A large number of network applications and users have generated huge data storage. Cloud computing is only a change of analysis platform, and data mining is an improvement of analysis tools. When a variety of complex applications are running on it, cloud computing can maximize resource utilization, and different applications can be isolated without interfering with each other. Distributed computing and cloud computing technology are regarded as the third revolution in the information industry. Making computing services similar to public services such as water, electricity, and gas, with on-demand access and on-demand payment, is the main form of social informatization in the future. It is also the main carrier of the country's future information strategy security and has broad prospects for development. In order to solve the main problems existing in the construction of statistical informatization, including the serious waste of statistical information resources, the security of statistical data

Journal of Sensors

TABLE 2: The proportion of fixed asset investment in my country	y's main industries in fixed asset investment in the whole society in the
past 5 years.	

In devoting	Time					
Industry	2016	2017	2018	2019	2020	
Total investment in fixed assets	100	100	100	100	100	
Environmental protection industry	6.91	8.93	9.42	11.7	16.9	
Mining industry	7.13	8.39	6.97	8.92	8.88	
Energy supply industry	7.54	9.76	10.59	15.01	13.27	
Construction industry	7.23	9.79	8.39	12.21	13.49	
Transportation	20.84	17.61	19.47	20.12	16.54	

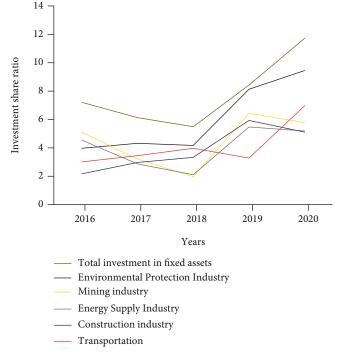


FIGURE 4: The ratio of investment in fixed assets in my country's major industries to GDP in the past five years.

services and storage, the lack of unified data management in the deployment of application systems, and the lack of unified planning and management of statistical information system resources, using cloud computing and information fusion technology to obtain valuable data, it analyzes and compares data, information, knowledge, and wisdom to identify the knowledge assets in the organization and give full play to the leverage of knowledge assets to help companies gain competitive advantages. For this reason, this article adds the concept of knowledge base to the existing data integration method, thereby abstracting the business logic from the complex data, which is more conducive to the use of users and the management of information. The business logic of cloud computing is mainly to determine certain standards in supporting applications in the investment environment. These standards are integrated and supervised according to the regional blocks of different green investments and then organized in the way of data integration during the application process. Although environmental protection investment, as a part of green industry investment, cannot fully reflect the overall situation of green investment, it has a decisive effect on green investment. Exploring the evaluation system of green investment is conducive to perfecting the theory of economic and social development, conducive to perfecting the theory of industrial equilibrium development, and conducive to the development of related ideas and practices into a complete emerging discipline. The operation model of cloud computing and information fusion technology is shown in Figure 3.

Use cloud computing and information fusion technology to collect data on the green investment evaluation system between my country and the United States, Japan, and the United Kingdom in the past five years. Table 1 shows the total green investment rate and total investment contribution between my country and the United States, Japan, and the United Kingdom in the past five years. Table 2 shows the proportion of fixed asset investment in my country's main industries in the total fixed asset investment in the

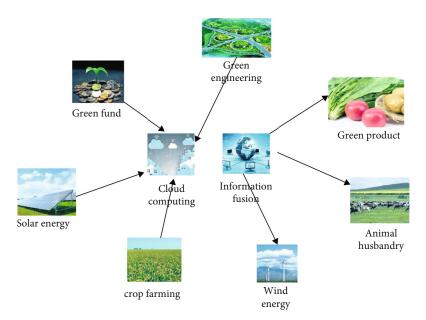


FIGURE 5: Green investment simulation diagram.

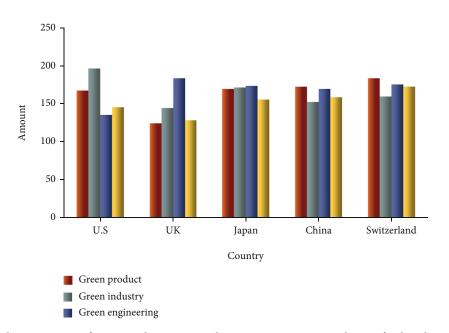


FIGURE 6: Development status of green products, green industries, green projects, and green funds at home and abroad.

whole society in the past five years; Figure 4 shows the proportion of fixed asset investment in my country's major industries in the total domestic product in the past five years. For the proportion of values, all data has been statistically checked many times.

From the data analysis in Tables 1 and 2, it can be concluded that my country's total green investment rate, total investment contribution rate, and total investment pull rate in the past five years ranked first, followed by Japan. In the past five years, my country's investment in fixed assets in major industries accounted for the proportion of investment in fixed assets in the whole society. The investment in environmental protection and energy supply industries has continued to rise; and the investment in the transportation industry has always been among the industries mentioned in Table 2. The highest is 20.84%. In the statistics of the proportion of investment in fixed assets in my country's main industries in the past five years, the total investment in fixed industries reached the lowest in five years in 2018, the mining industry accounted for the highest proportion in 2019, and the environmental protection industry has been continuously investing funds. In order to conduct a more detailed research, sort out the relevant data on green investment. Cloud computing and information fusion technology are simulated in green investment-related industries, as shown in Figure 5.

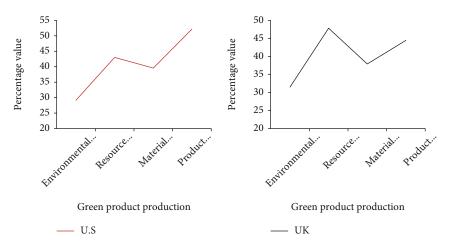


FIGURE 7: Analysis of green product production in the US and the UK.

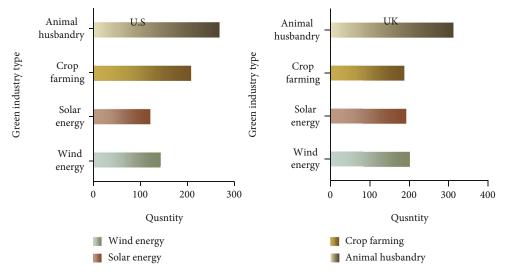


FIGURE 8: Green industry comparison between the US and the UK.

This research mainly focuses on data analysis on green products, green industries, green projects, and green funds and analyzes the status of green investment. Up to now, the development status data of green products, green industries, green projects, and green funds at home and abroad are shown in Figure 6, mainly for China, the United States, Japan, Switzerland, and the United Kingdom.

The data collected by cloud computing takes into account various aspects such as green products, green industries, green projects, and green funds. It analyzes clustering algorithms and analyzes and compares data, information, knowledge, and wisdom. This can facilitate data management and planning. According to the data in Figure 6, the green industry in the above five countries has received the most attention and development in the United States; among the five countries, Switzerland ranks first, while the UK ranks last; and the green engineering UK ranks first. China is in a type with green products, green industry, green projects, and green funds which are all taken care of, and each field develops in a balanced manner. Secondly, we make comparisons based on the different levels of attention each country has to green investment in various industries. For green products, this experiment compares the United States and the United Kingdom in terms of environmental protection rate, resource utilization, material recovery rate, and product quality, as shown in Figure 7.

The data shows that the priority of the abovementioned factors of green products in the United States is ranked as product quality > resource utilization rate > material recovery rate > environmental protection rate; the priority of the appeal factors for green products in the United Kingdom is ranked as resource utilization rate > product quality > material recovery rate > environmental protection rate. Among them, the product quality of green products in the United States is higher than that of the United Kingdom, and the United States is at a relatively disadvantage in terms of environmental protection rate, resource utilization rate, and recycling rate. To this end, a comparative study of the green industries in the United States

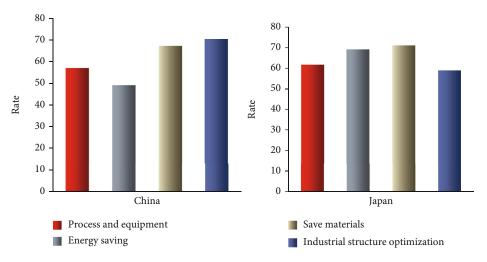


FIGURE 9: Green engineering development in China and Japan.

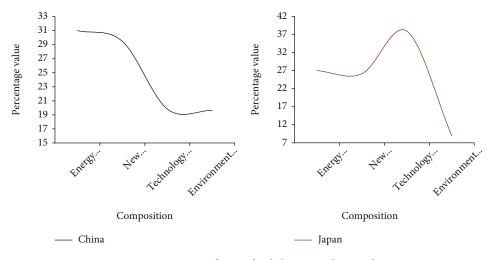


FIGURE 10: Comparison of green funds between China and Japan.

and the United Kingdom mainly centered on the four major industries of wind energy, solar energy, plantation, and animal husbandry for data processing, as shown in Figure 8.

The above statistics show that, overall, the UK has more wind energy, solar energy, and animal husbandry industries than the US, and the US only surpasses the UK in farming. After comparison, it is found that the animal husbandry industry has the largest gap between the two, followed by wind energy. The development of green engineering has always been paid attention. According to the status quo of the development of green engineering in China and Japan, statistics are carried out around technology and equipment, energy saving, material saving, and industrial structure optimization, as shown in Figure 9.

The industrial structure rate of China's green engineering is as high as 70%, and the technology and equipment, energysaving rate, and material saving rate are at a disadvantage compared with Japan. The comparison of green funds between China and Japan focuses on data analysis on the components of green funds, such as energy conservation and emission reduction, new energy, technological content, and environmental optimization, as shown in Figure 10.

The composition ratio of China's green funds is energy saving and emission reduction > new energy > technology content > environmental optimization; the composition ratio of Japan's green funds is technology content > energy saving and emission reduction > new energy > environmental optimization. Therefore, China's green fund investment is mostly in energy-saving and emission reduction industries, while Japan's green fund investment is most in technology. Industries with a high degree of investment concern mark the focus of the country's policy preference. Regardless of the type of investment, it is focused on the development of green industries. China's investment in new energy is likely to be balanced with the energy-saving and emission-reduction industries. The best development is to balance the gaps between industries. We have also made statistics on the reasons for the status quo of green investment development presented by the above data, as shown in Figure 11.

Figure 11 mainly analyzes the influencing factors of green investment in different periods, such as investment

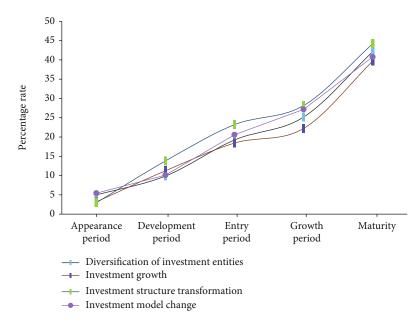


FIGURE 11: Analysis of influencing factors of green investment.

subject, investment amount, investment structure, and urgency of investment mode. On the whole, the investment entities are diversified, the investment amount is growing rapidly, the investment structure is constantly changing, and the investment model is constantly changing. The development trend is the strongest in the development period and the entry period. Refer to the green investment evaluation system (as shown in Table 3, the highest score is 60) to evaluate the investment subjects, investment objects, and investment vehicles of green products, green industries, green projects, and green funds, as shown in Figure 12.

Among green investments, the investment subject of green funds has the highest evaluation, the investment objects of green projects and green industries are at the same standard, and the investment vehicle evaluation of green industries reaches 9.

4. Discussion

Analyze data from different aspects of different green investment types, and compare and analyze between countries, between influencing factors, and between investment entities. The data provided are all mining and processing through the application of cloud computing and information fusion technology. This argument proves that the application of cloud computing and information fusion technology has great value. Cloud computing is an emerging mode of work. Through cloud computing, software, applications, and services can be provided for green investment, which reduces the cost of software and applications and can efficiently and conveniently meet the different needs of system enterprises at different stages of development. Therefore, cloud computing can solve the information problems of SMEs in terms of cost, information, technology, etc. and meet the unique and sensitive needs of SMEs in the development of green investment. This research establishes a cloud

TABLE 3: Quantitative and pricing evaluation methods to establish an investment evaluation system.

	T 11 (NC: 1.11	
Evaluation item	Excellent	Middle	Poor
Develop a comprehensive investment operation process management manual	10	5	0
Clear division of labor and regular training	10	5	0
Investment evaluation level	10	5	0
Effective reward, punishment, and supervision mechanism	10	5	0
Emergency response system for emergencies	10	5	0
Other	10	5	0

service selection index system, uses a nondistributed approach to evaluate different green investments in different countries, and verifies the feasibility of cloud computing and information fusion technology in green investment evaluation. In order to promote the further development of modern energy management systems, people are building energy cloud platforms to solve the common problems of equipment access, data storage, and service management in the energy management system and reduce the development and maintenance costs of energy management systems. The research on the development of green investment has solved a series of problems including the above. Based on the integration of Internet of Things technology and cloud computing technology, this research provides safe, reliable, meticulous, and timely data storage services for green investment-related energy management and realizes the analysis and processing of massive energy data. It strengthened the interconnection between the green investment management system and the Internet.

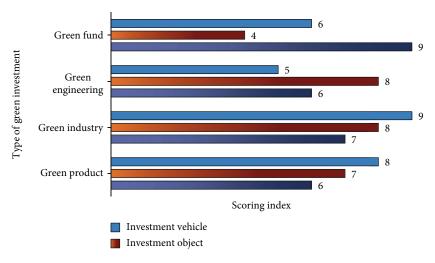


FIGURE 12: Evaluation of investment subjects, investment objects, and investment vehicles of different investment projects.

5. Conclusion

This experiment takes cloud computing service user companies as the research object and discusses the effect of cloud computing and information fusion technology on green investment companies, in order to achieve the purpose of filling the current research gaps in the field of cloud computing technology to a certain extent. The practice in the field of green investment in my country provides scientific guidance and constructive suggestions. The current green development of society has to deal with standardized and produce modulation for the connection between social development and the natural environment. Green investment economy is a sustainable development model based on the interests of present and future generations. In the current economic development, the scale of the economy must adapt and be active under the control of resource regeneration and environmental sustainability. It is necessary to consider both the development and utilization needs of contemporary people's resources and the viability of future generations. Continue to use the rules. The strategic height of green investment under the new normal has gradually increased. In order to promote my country's energy saving and emission reduction work and build a two-oriented society, it is of far-reaching significance to popularize the concept of green finance and green investment and to study the relationship between them and the optimization of industrial structure. Compared with the traditional investment concept, its distinguishing feature is to consider the quality of the human ecological environment. According to the analysis of experimental data, the structure and direction of regional environmental protection investment are unreasonable, and there are significant regional differences in environmental protection investment benefits, and there is an imbalance between various regions. Giving play to the important role of green finance and green investment in the process of optimizing my country's industrial structure can promote the practice of scientific development concepts and further implement the concept of sustainable development. The scientific development concept advocates

improving the economic development model, optimizing the industrial structure, and building a two-oriented society. The orderly expansion of the green industry also relies on the stable development of green finance and green investment, which in turn promotes the continuous optimization of green finance and green investment, and ensures the sustainable development of the financial investment industry itself.

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.

Acknowledgments

This work was supported by 2020 Heilongjiang philosophy and social sciences research and planning project "Research on the sustainable deepening path of mixed ownership reform of Heilongjiang Province under the perspective of sharing economy" (20JLE361), 2019 Heilongjiang natural science research planning project "Research on driving system innovation, financial governance and enhancing the development vitality of state-owned enterprises in Heilongjiang Province" (LH2019G018), 2021 Harbin University of Commerce graduate innovation research support project "Impact of green innovation on sustainable growth of energy enterprise performance and improvement path under the goal of carbon peak and carbon neutralization" (YJSCX2021-691HSD), and General project of NSFC "Research on Green Governance Mechanism and policy guarantee of landscape village integration from the perspective of Rural Revitalization" (21BJY189).

References

- M. Schmack, G. Ho, and M. Anda, "Technical evaluation of simple condenser devices for a bubble column desalinator," *Desalination and Water Treatment*, vol. 57, no. 40, pp. 18573–18587, 2016.
- [2] I. Attiya and X. Zhang, "Cloud computing technology: promises and concerns," *International Journal of Computer Applications*, vol. 159, no. 9, pp. 32–37, 2017.
- [3] Z. Li, "Application of a resource-sharing platform based on cloud computing technology," *Agro Food Industry Hi Tech*, vol. 28, no. 1, pp. 2205–2209, 2017.
- [4] O. Kopishynska, Y. Utkin, A. Kalinichenko, and D. Jelonek, "Efficacy of the cloud computing technology in the management of communication and business processes of the companies," *Polish Journal of Management Studies*, vol. 14, no. 2, pp. 104–114, 2016.
- [5] M. Zhou, X. Li, Y. Wang, S. Li, Y. Ding, and W. Nie, "6G multisource information fusion based indoor positioning via Gaussian kernel density estimation," *IEEE Internet of Things Journal*, vol. 8, no. 20, p. 15117, 2021.
- [6] Y. Liu, X. Fan, C. Lv, J. Wu, L. Li, and D. Ding, "An innovative information fusion method with adaptive Kalman filter for integrated INS/GPS navigation of autonomous vehicles," *Mechanical Systems and Signal Processing*, vol. 100, pp. 605–616, 2018.
- [7] S. Pumchalerm, P. Nilsook, and N. Jeerungsuwan, "Intelligent cooperative education process management model on cloud computing technology for higher education institutes in Thailand," *International Journal of Information and Education Technology*, vol. 6, no. 10, pp. 791–794, 2016.
- [8] J. Vithayathil, "Will cloud computing make the information technology (IT) department obsolete?," *Information Systems Journal*, vol. 28, no. 4, pp. 634–649, 2018.
- [9] P. Appiahene, B. Yaw, and C. Bombie, "Cloud computing technology model for teaching and learning of ICT," *International Journal of Computer Applications*, vol. 143, no. 5, pp. 22–26, 2016.
- [10] R. Kumar, "Aggregation of SOA and cloud computing: a recent emerging technology," *International Journal on Data Science and Technology*, vol. 2, no. 1, pp. 5–8, 2016.
- [11] M. Attaran, "Cloud computing technology: leveraging the power of the internet to improve business performance," *Journal of International Technology & Information Management*, vol. 26, no. 1, pp. 112–137, 2017.
- [12] P. Braca, R. Goldhahn, G. Ferri, and K. D. LePage, "Distributed information fusion in multistatic sensor networks for underwater surveillance," *IEEE Sensors Journal*, vol. 16, no. 11, pp. 4003–4014, 2016.
- [13] K. S. Noh and J. D. Baek, "Suggestions of the construction and management for sustainable highways," *Ecology and Resilient Infrastructure*, vol. 3, no. 3, pp. 156–161, 2016.
- [14] M. Zhou, Y. Wang, Z. Tian, Y. Lian, Y. Wang, and B. Wang, "Calibrated data simplification for energy-efficient location sensing in internet of things," *IEEE Internet of Things Journal*, vol. 6, no. 4, pp. 6125–6133, 2019.
- [15] Q. Zhou, P. Jiang, X. Shao, J. Hu, L. Cao, and L. Wan, "A variable fidelity information fusion method based on radial basis function," *Advanced Engineering Informatics*, vol. 32, pp. 26– 39, 2017.
- [16] X. Zhou and P. Jiang, "Variation source identification for deep hole boring process of cutting-hard workpiece based on multi-

source information fusion using evidence theory," *Journal of Intelligent Manufacturing*, vol. 28, no. 2, pp. 255–270, 2017.

- [17] H. Wu, X. Dang, L. Wang, and L. He, "Information fusionbased method for distributed domain name system cache poisoning attack detection and identification," *IET Information Security*, vol. 10, no. 1, pp. 37–44, 2016.
- [18] H. Li, Y. Song, and C. Chen, "Hyperspectral image classification based on multiscale spatial information fusion," *IEEE Transactions on Geoscience & Remote Sensing*, vol. 55, no. 9, pp. 5302–5312, 2017.
- [19] Z. Ming and Z. Jiang, "Reciprocating compressor fault diagnosis technology based on multi-source information fusion," *Chinese Journal of Mechanical Engineering*, vol. 53, no. 23, pp. 1–8, 2017.
- [20] Y. Xu, L. Gui, and T. Xie, "Intelligent recognition method of turning tool wear state based on information fusion technology and BP neural network," *Shock and Vibration*, vol. 2021, no. 8, Article ID 7610884, 2021.
- [21] X. Wei, "A classification method of tourism English talents based on feature mining and information fusion technology," *Mobile Information Systems*, vol. 2021, no. 8, Article ID 5520079, 2021.
- [22] S.-B. Tsai, Y.-M. Wei, K.-Y. Chen, L. Xu, P. du, and H.-C. Lee, "Evaluating green suppliers from a green environmental perspective," *Environment and Planning B-Planning & Design*, vol. 43, no. 5, pp. 941–959, 2016.
- [23] Y. Zhou, L. Chang, and B. Qian, "A belief-rule-based model for information fusion with insufficient multi-sensor data and domain knowledge using evolutionary algorithms with operator recommendations," *Soft Computing*, vol. 23, no. 13, pp. 5129–5142, 2019.
- [24] C. C. Oniga, D. Mocuta, S. Cristea, and Ş. Jurcoane, "Economic efficiency of conversion of classical fish farm in organic by use of wastes fish in green houses," *Romanian Biotechnological Letters*, vol. 25, no. 6, pp. 2174–2179, 2020.
- [25] S. Ghosh, V. K. Yadav, V. Mukherjee, and P. Yadav, "Evaluation of relative impact of aerosols on photovoltaic cells through combined Shannon's entropy and data envelopment analysis (DEA)," *Renewable Energy*, vol. 105, pp. 344–353, 2017.
- [26] J. Y. Wang, Q. W. Zhai, Q. Guo, and Y. Z. Tao, "Study on water environmental carrying capacity evaluation in Taihu Lake Basin," *China Environmental Science*, vol. 37, no. 5, pp. 1979–1987, 2017.
- [27] L. Chen and P. Han, "The construction of a smart city energy efficiency management system oriented to the mobile data aggregation of the Internet of Things," *Complexity*, vol. 2021, no. 2, Article ID 9988282, 2021.
- [28] P. Albertario, "System of self-financing strategy for the policies aimed at the eco-innovation in the productive sectors," *Procedia Engineering*, vol. 3, no. 1, pp. 8–11, 2016.
- [29] Z. Zhong, X. Zhang, and X. Yang, "Benefit evaluation of energy-saving and emission reduction in construction industry based on rough set theory," *Ecological Chemistry and Engineering S*, vol. 28, no. 1, pp. 61–73, 2021.