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E-COMMERCE BASED ON BIG DATA ANALYSIS: BRINGING NEW PROBLEMS IN ENVIRONMENTAL LAW

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ABSTRACT

In recent years, e-commerce has penetrated into all areas of the economy and society at a rapid rate, gradually changing the way of life and business operations of Chinese people. It greatly increases the speed of commercial transactions, saves transaction costs, frees economic activities from geographical and time constraints, and improves economic efficiency overall. Compared with traditional business, e-commerce is bound to have a significant impact on the environment. At the same time, the environmental problems brought by e-commerce are also coming, logistics packaging problems, greenhouse gas emissions in transportation, material consumption accounting and so on. Based on the above background, the purpose of this paper is to bring new environmental law problems to e-commerce based on big data analysis. With the rapid development of information technology and network technology, big data has been widely applied and popularized in many industries. Through big data analysis, this paper finds that the most important environmental problems caused by the changes in online retail and traditional business materials consumption are the changes in carbon dioxide emissions. It can be found that under the network retail conditions, according to the online retail data of Taobao, the changes of carbon dioxide emissions of four sampling products and four sampling substances are as follows: the carbon dioxide emissions of plastics have increased by about 76,600 tons, and other carbon dioxide emissions such as aluminum, glass and sheet materials have increased by 23,000 tons, 0.1986 million tons and 0.0597 ten thousand tons. Through this study, the environmental problems brought by e-commerce will have certain reference significance for the improvement of relevant laws in the future.

Keywords: Electronic Commerce, Big Data Analysis, Environmental Issues, Greenhouse Gas Emissions

INTRODUCTION

In the time of e-commerce development, our country is relatively late. Due to the economic foundation, it will inevitably lead to more or less gaps in the development of e-commerce between China and other countries (Bliss et al., 2015). At this stage, China is in the stage of building a socialist characteristic economy. In order to comply with the needs of the times and China's economic construction, there must be many disadvantages in e-commerce. There is no shortage of e-commerce to bring new environmental problems, it is bound to be greatly impacted by the economic and social transformation period (Dai et al., 2015). Now, under the guidance of the socialist core values, we are building a harmonious e-commerce environment on the road of people-oriented and scientific development. This makes the research on environmental issues of e-commerce have practical significance with strong operability (Pravalie, 2016; Qin & Peng, 2016). Nowadays, the situation of science and technology and economic development is difficult to estimate. In the period of structural transformation of economic development, we need to use the countermeasures to solve environmental problems in

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e-commerce as the basis, and to examine a series of problems in virtual economy from a fair and objective perspective (Atsushi, 2017; Rizal & Asokan, 2016).

Environmental protection helps to improve people's quality of life, but the topic of environmental protection has always changed. Since the founding of New China in 1949, environmental protection has been constantly changing, and the main purpose of environmental law is constantly changing. Basic agricultural production, to meet people's basic life, to promote economic development, to meet people's increasing material life (Jia, 2017). Now China's economy has been greatly developed, especially the development of e-commerce has brought new problems to the environment, and the establishment of environmental law has brought new problems (Yan et al., 2015; Lo'ai, 2017; Bo et al., 2017). Many people have feelings about new problems. For example, the development of e-commerce has made production more concentrated, and the pollution caused by the generation has become more concentrated. For example, logistics packaging in e-commerce has brought white pollution, but what new problems do e-commerce bring, and there is no consensus today (Yuan et al., 2016). The main reason is that there is no good way to analyze existing problems, and traditional methods of statistical methods and questionnaires are difficult to analyze this problem (Subramaniyaswamy, 2015; Lawson-Body, Willoughby & Logossah, 2015). The emergence of big data analysis methods provides a new way to solve this problem (Hua, Morosan & Defranco, 2015). This paper analyzes the impact of e-commerce on the environment and the new problems in the way of big data analysis, and summarizes the key points that environmental law needs to solve in the development of e-commerce (Wang, 2016).

As global attention to environmental issues grows, countries have even transplanted environmental law and policy innovations from countries with different legal and cultural traditions, which blur the boundaries that traditionally separate domestic and international law from public and private law. Vpercival explored how climate change has spawned new litigation strategies to seek polluter liability or global damage and the growth of private litigation to compensate multinational corporations for damage caused by transnational corporations abroad. Vpercival concluded that as globalization continues to blur the traditional distinction between international and domestic law and between private and public law, the standard of responsibility is therefore, as countries strengthen their own domestic liability standards to correct environmental damage, countries accept foreign countries. The willingness of plaintiffs and foreign companies to file a lawsuit is due to the fact that global harm is more likely to come from "bottom-up" private initiatives rather than multilateral treaty negotiations (Vpercival, 2016). Van believed that environmental issues are an ongoing emergency. Cognitive characteristics of serious environmental problems - the fact that we cannot reliably distinguish between benign policy choices and options that may lead to environmental disasters is the same as in emergencies. This means that, like in emergencies, environmental issues pose a fundamental challenge to the rule of law: they reveal the need for unrestricted administrative discretion. Discretion is widely condemned as a fundamental flaw in Canadian environmental law, which undermines environmental protection and the rule of law itself. Through the conceptual framework of environmental emergencies, Van criticized the current understanding of environmental law discretion and proposed how to reduce environmental problems from income and expenditure (Van Zeben, 2016). Chen researched found that developing countries will promote the next wave of consumerism. E-commerce has brought a new way of delivering products and services to these countries. This is because the cultural environment of developing countries is different from that of western countries. It is becoming an attractive way to conduct business and consumption. It helps accelerate the economic growth of these countries. In this virtual environment, trust becomes more and more important and becomes a vital success factor. Organizations that master this knowledge, commercial suppliers or entrepreneurs will gain a competitive advantage and survive the next wave of business (Chen, 2016). In the past few decades, research on the use of e-commerce by small businesses has attracted a great deal of attention and has focused on manufacturing, distribution and services. SMEs use e-commerce technology and its online business to provide more advantages for the advancement. Research in

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the retail sector of SMEs has also re-adjusted its implications for the economy. Different studies have adopted different models and theories for the adoption of e-commerce. Xiong attempted to discuss a conceptual model with multiple influencing factors, called technology, organization and environment, and sub-factors to better understand e-commerce adoption procedures. The proposed model is adapted from the framework of Tornatzky and Fleischer 1990 and explains the effective methods used in e-commerce. Much research has been done on e-commerce and other technology adoptions. However, most of these studies were conducted in developed countries. Developing countries are making slow progress in adapting to the global digital market (Xiong & Zhang, 2018). The Uzoka study attempts to comprehensively study the development of e-commerce in Botswana in developing countries, where the economy is very good and well managed. The Uzoka study shows that environmental factors affecting e-commerce adoption include Internet marketing factors and customer/logistics factors. Although security is a problem, it is not statistically important because other factors, especially organizations (such as management support, information availability, and communications) can affect an organization's intent and ability to adopt e-commerce. The size and gender of the company also influence the intent and ability to adopt e-commerce (Uzoka, Seleka & Khengere, 2017).

Through big data analysis, this paper finds that the most important environmental problems caused by the changes in online retail and traditional business materials consumption are the changes in carbon dioxide emissions. It can be found that under the network retail conditions, according to the online retail data of Taobao, the changes of carbon dioxide emissions of four sampling products and four sampling substances are as follows: the carbon dioxide emissions of plastics have increased by about 76,600 tons, and other carbon dioxide emissions such as aluminum, glass and sheet materials have increased by 23,000 tons, 0.1986 million tons and 0.0597 ten thousand tons.

PROPOSED METHOD

The Theoretical Basis of Big Data

Big Data Basic Research

In-depth study of big data related knowledge must be carried out in three aspects:

1) Basic theoretical knowledge learning: The popularization of theoretical knowledge is the basis for understanding big data. Firstly, it needs to understand the definition of big data in the whole industry from the characteristics and evolution background of big data, and understand the hardware resources needed to use big data technology. And other prerequisites that must be met to explore the results of the development of big data, related features, and the direction of evolution.
2) Research on technical principle: Due to the emergence of big data, it is a technology evolution and transformation from the perspective of itself. Technology is the basis of data analysis for big data, and the means of implementation, from cloud computing, database distributed operation processing, storage technical requirements and analytical models to illustrate the principle of the entire operating process of big data.
3) Practical application of big data theory: The ultimate goal of learning big data is to practice and apply. In this paper, innovatively combine spam SMS interception system and big data analysis, in the process of practice, the data will be acquisition, analysis, calculation, and storage rely on big data platforms to output more accurate strategic results.

With the continuous development of information technology, the rise and rapid development of new concepts and new things such as cloud computing, Data Center (DC), and Internet of Things, the era of big data has come unexpectedly, and we are everywhere around our work, study, and life. Occupy a very important role.

Big data has four characteristics: Volume, Variety, Velocity, Veracity. The first is that the amount of data is very large. On this basis, the diversity of data is reflected. 80% of the new data is not derived from traditional data types. It is necessary to manage and analyze these new data according to the original model. Again, the speed requirements are very high, and it is

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necessary to quickly process and analyze large amounts of dynamic new data. Finally, big data is authentic, and this feature allows them to use advanced mathematical tools and algorithms, combined with the integration of various big data, to create more useful value.

Big data refers to the process of calculating, processing and analyzing data through ordinary software under the small storage resource pool and small computing power. It needs powerful storage space, super computing power and intelligent mathematical calculation model to process massive and super large-scale data sets, with diversified data forms, including structured, semi-structured and unstructured data, more and more diversified data, is about to become the mainstream data of the analysis object. The result of big data analysis has stronger insight ability, intelligent learning potential regularity, and can capture stronger decision-making power.

The use of big data must constantly update algorithms and other computing models. As long as the application of big data architecture to store, manage and analyze information and further mine useful content, it is necessary to innovate the software technology level, because the traditional data analysis mode is suitable for structured data types, and for flow data and unstructured data types, it is necessary to update the software algorithm and other technologies. Therefore, the evolution of big data must keep pace with the times of technology and meet the requirements of various scenarios of current applications. In the data center, with cloud computing as the mainstream trend, these forms are diversified, seemingly unrelated data begins to be associated and calculated. Through the continuous iterative update of artificial intelligence algorithm and big data technology, big data gradually creates more value for people.

Common Big Data Technology

1) Hadoop

Hadoop is mainly composed of HDFS and Map Reduce. It is a widely used and mature distributed computing system. Its principle is data distributed storage. The operation program is sent to each data node for separate operation (map), and then the operation results of each node are combined into one (reduce) to generate the final results. The system adopts the mainstream Hadoop architecture, which is a simple software framework. The business layer application written by it can run on a large cluster composed of thousands of servers, and can process the data set of the upper TB level in parallel. The architecture has balanced operation performance, integrated a variety of data processing capabilities, and used a reliable, efficient and scalable method for data analysis.

The core subproject of Hadoop is the distributed file system HDFS, which is the basis of data storage and access of the whole Hadoop platform. HDFS has high fault tolerance, provides high throughput to access the data of the business layer, and can store massive data, on which it carries the operation of MapReduce, HBase and other sub modules. In the past 10 years after its birth, Hadoop has become the first choice for many enterprises to implement cloud computing and big data with its characteristics of simple, easy-to-use, efficient, free and rich community support.

MapReduce is a distributed data processing model and another core sub project of Hadoop. By calling and encapsulating a set of general programming development libraries, developers can deploy applications in the distributed cluster environment without involving in the specific details of the distribution and output the operation results. The core idea is parallel computing, which improves the efficiency of data analysis through parallel computing of multiple devices. Using map, a task to be completed is divided into several smaller subtasks, which are distributed to several nodes for calculation in the same way. Using reduce to summarize the results of subtask calculation to get the final results.

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2) **HBase Database**

The database selects HBase non-relational database, which is mainly based on key-value mechanism. It is a distributed, column storage non-relational database. The traditional relational database is based on the c/s architecture. Although it has been improved by multiple versions, it can realize pooled database clusters to a certain extent, but it cannot handle more and more massive and unstructured data. HBase is a scalable and highly available distributed NoSQL database based on the Hadoop platform. It supports massive unstructured data processing and supports MapReduce parallel running, batch computing and point query.

(3) **Big data Analysis Steps**

The big data analysis method consists of six basic steps:

1) **Visual Analysis**

Regardless of whether the subject of data analysis is an expert in the field or an ordinary user, the first requirement for data analysis is data visualization. Visual analysis enables more intuitive analysis and processing of data, allowing users to find results from the data itself.

2) **Data Mining Algorithm**

Visualization can be seen, and the main body of data mining is the machine. Data mining, data segmentation, and outlier analysis are used to mine data mining information. These data processing methods not only process the data in terms of quantity, but more importantly, occupy the speed advantage of processing the data.

3) **Predictive Analysis Capabilities**

Data mining enables data analysts to fully grasp the data, while predictive analysis is the data analyst's prediction and judgment of the future development trend of the data based on visual analysis and data mining.

4) **Semantic Engine**

The unstructured and diversified characteristics of current data have led to new challenges in data analysis. Therefore, advanced data analysis tools are needed to extract, parse and judge data. Based on this, a semantic engine is generated, which can intelligently rely on documents to extract relevant information.

5) **Data Quality and Data Management**

Data quality and data management are best practices in the management arena. According to the established process and using professional tools for data processing, the quality of the results obtained will not deviate from the preset goals.

6) **Data Storage, Data Warehouse**

The data warehouse is a relational database established to facilitate multidimensional analysis and multi-angle display of data stored in a specific mode. In the design of business intelligence system, the construction of data warehouse is the key, the basic premise of realizing the intelligentization of business system, the key person who integrates the data of business system, and supports business intelligence with data extraction, soil transformation and loading

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(ETL). The normal operation of the system, while supporting the definition of different topics for data query and system access, for the multi-computation joint data analysis and data mining to build a basic platform.

E-commerce and Environmental Issues

E-commerce has become an indispensable behavioral carrying method for people's daily life, which points the way to the transformation of the traditional economy and the direction of development. As the application of network technology in commercial trade, e-commerce has the advantage of low cost, high efficiency, high accuracy, high security and fast speed. During the period, electronic network companies were born in large numbers, and traditional enterprises began to merge with e-commerce. However, due to the virtual nature of the network, anonymity and even anarchy in some cases, due to the lag of payment methods, low network security, and serious lack of social ethics, on the Internet-based e-commerce platform, some ethical issues are more serious in business than in traditional business. In the development of e-commerce, these ethical issues have become the bottleneck. E-commerce is embodying its own increasingly critical infrastructure platform, summarizing various transactions and survival and customer information, while at the same time affecting our consumption behavior to a large extent and changing the shape of the company. Greatly promoted the progress and development of China's social economy.

EXPERIMENTS

Big Data Platform Construction

Applying existing resources to build a big data platform on the cloud resource pool. The system adopts the mainstream Hadoop architecture. It is a simple software framework. The business layer application written by it can run on a large cluster of thousands of servers. The terabyte data set can be processed in parallel at the same time. The architecture has balanced computing performance and integrates multiple data processing capabilities to perform data analysis in a reliable, efficient, and scalable way.

Hadoop's core sub-project is the distributed file system HDFS, which is the basis for data storage and access of the entire Hadoop platform. HDFS is highly fault-tolerant, provides high throughput to access data at the business layer, and can store massive amounts of data. It carries the running of sub-modules such as MapReduce and HBase.

The database selects HBase non-relational database, which is mainly based on key-value mechanism. It is a distributed, column storage non-relational database. The traditional relational database is based on the c/s architecture. Although it has been improved by multiple versions, it can realize pooled database clusters to a certain extent, but it cannot handle more and more massive and unstructured data. HBase is a scalable and highly available distributed NoSQL database based on the Hadoop platform. It supports massive unstructured data processing and supports MapReduce parallel running, batch computing and point query.

MapReduce is a distributed data processing model and another core sub-project of Hadoop. By calling and encapsulating a common set of programming development libraries, developers can deploy applications to distributed clusters without having to deal with the specific details of the distribution. In the environment, and output the result of the operation. The core idea is parallel computing. It improves the efficiency of data analysis by parallel computing with multiple devices. It uses Map to divide a task that needs to be completed into several smaller subtasks, and distributes it to several nodes for calculation using the same method. The results of the summary subtask calculations yield the final result.

MapReduce can be divided into two functional modules: Map (Map) and Reduce (Simplified). The main calculation principle is shown in Figure 1:

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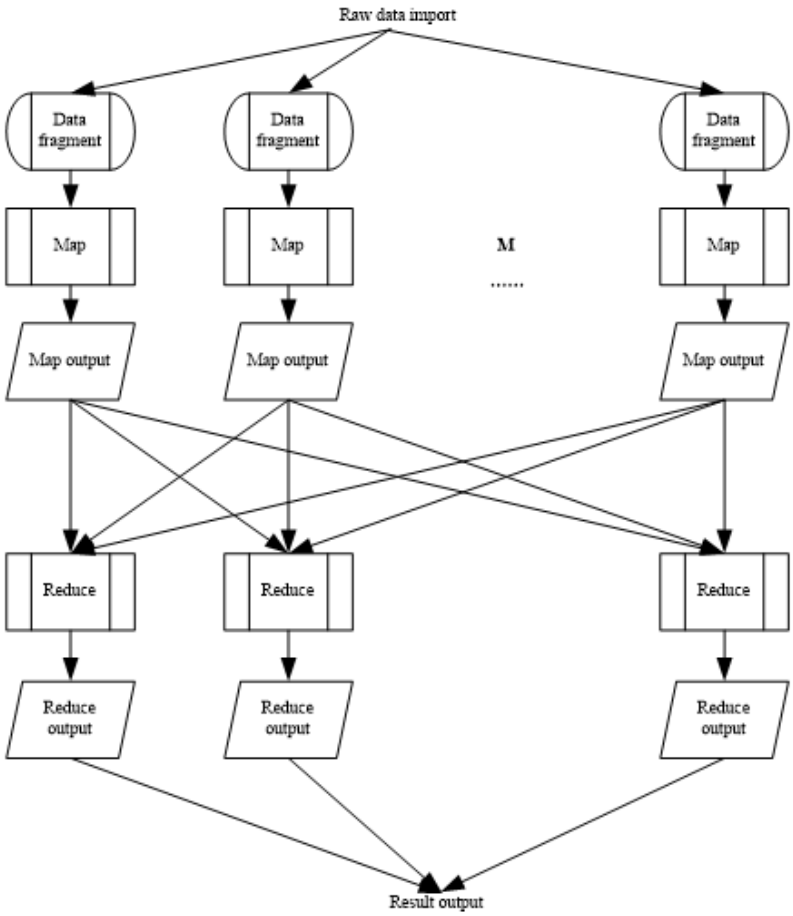

FIGURE 1
ANATOMY OF THE MAPREDUCE PRINCIPLE

System Docking Joint Adjustment

The system interface refers specifically to the data transmission interface between the big data analysis platform and each data collection and result output system, and performs online data collection and processing. The big data will be related to e-commerce logistics data, transportation data, packaging data, business data, The system of business ordering data collects massive user behavior data, and the policy data analyzed by the big data platform is transmitted to the big data processing system, and is imported into the system for screening in real time.

The solution uses the SFTP method to connect two NEs. Sftp is a secure file transfer protocol. In the transmission process can be encrypted transmission, sftp has some functions similar to ssh, it does not have a separate daemon itself, it is more like a client connection program, very safe and reliable.

The method first needs to obtain all the files in a directory as a data list for each migration, and then use a multi-threaded manner for data migration, each thread migrates a file, and then parses the file name to obtain the target storage location. The migrated file is written to the target address, and finally the interception system reads the file and imports the keyword and blacklist database.

Bayes SMS Research

The NaiveBayes-based classifier is a parameterized classifier that is the classifier with the lowest probability of classification errors among various classifiers. It is based on the condition that each classified evidence feature is independent of other evidence features. Its design method

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is one of the most basic statistical classification methods. The classification principle is to obtain its posterior probability by using the Bayesian formula through the prior probability of a problem. This is the probability calculation of which category is classified into the problem. In the result, the maximum is selected. The class that tests the probability is the class to which the problem belongs.

We use $P(C_i)$ to represent the prior probability of the C_i variable (before the training sample data, the initial probability of C_i is assumed), and $P(D_j)$ is the prior probability of the sample data D_j to be trained, by calculating the content of the short message (training sample data) is the probability $P(C_i|D_j)$ of spam or normal text messages, which is classified as the most probable category. And we are not sure about the exact distribution probability of the evidence, so we use the NaiveBayes algorithm, assuming that all D_j evidence features are independent of each other.

The principle of classification by NaiveBayes is as in formula (1):

$$P(c_i|d_j)=\frac{P(c_i)P(d_j|c_i)}{P(d_j)} \quad (1)$$

For example, the content of a question D is sliced and expressed as a feature vector, where d_j is a slice word in the question $D=(d_1,d_2,...d_j...d_n)$.

Because the application scenario is divided into two types: environmental problems and other problems, *i=1, 2* assumes that *i=1* is another problem, and *i=2* is an environmental problem. The class conditional probability of the problem $P(D|C_i)$ is as follows (2):

$$P(D|c_i)=\prod_{j=1}^{n}P(d_j|c_i) \quad (2)$$

According to the Bayesian formula, when judging whether the problem D is an environmental problem, it is necessary to judge the size of $P(C_1|d_j)$ and $P(C_2|d_j)$, and when $P(C_1|d_j) < P(C_2|d_j)$, it is an environmental problem. According to the above derivation, in the case where both $P(d_j)$ and $P(C_i)$ are constant, $P(d_j|C_1) < P(d_j|C_2)$ is an environmental problem.

DISCUSSION

Analysis of E-commerce Development

Under the background of the implementation of the national information network strategy, the rapid development of several major mobile operators, and the blossoming of major e-commerce network platforms, the purchasing power of young consumer groups has grown by leaps and bounds, and the online retail market share has been increasing, and the penetration rate of online shopping is increasing year by year. The China Industrial Research Institute predicts that by 2020, China's online retail sales will exceed 10 trillion, accounting for 14.9% of the total retail sales of consumer goods, and the penetration rate of online shopping users will reach 64.0%. as shown in Figure 2.

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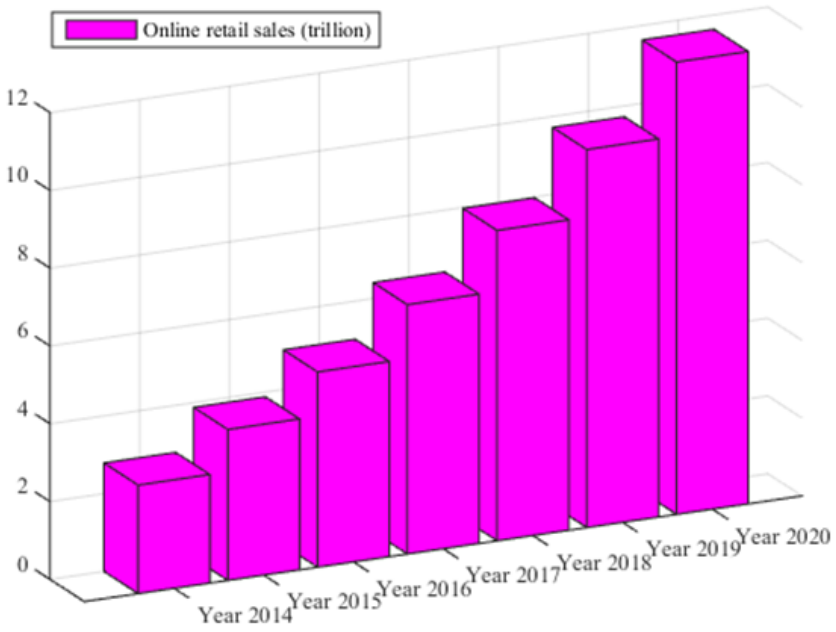

FIGURE 2
SIZE OF ONLINE RETAIL SALES IN CHINA FROM 2014 TO 2020

After more than a decade of development, the role of e-commerce has become more than just a tool for companies to reduce costs, improve efficiency, and open up markets. It has profoundly affected all aspects of social life. As a new industry, the rise of the e-commerce service industry has met the needs of hundreds of millions of consumers for shopping, changing the way people live and consume; in the impact on other industries, e-commerce is driving logistics and processing. At the same time as the development of related industries such as payment, it also assists in the optimization, upgrading and transformation of traditional industries.The penetration rate of China's online shopping in 2014-2020 is shown in Figure 3.

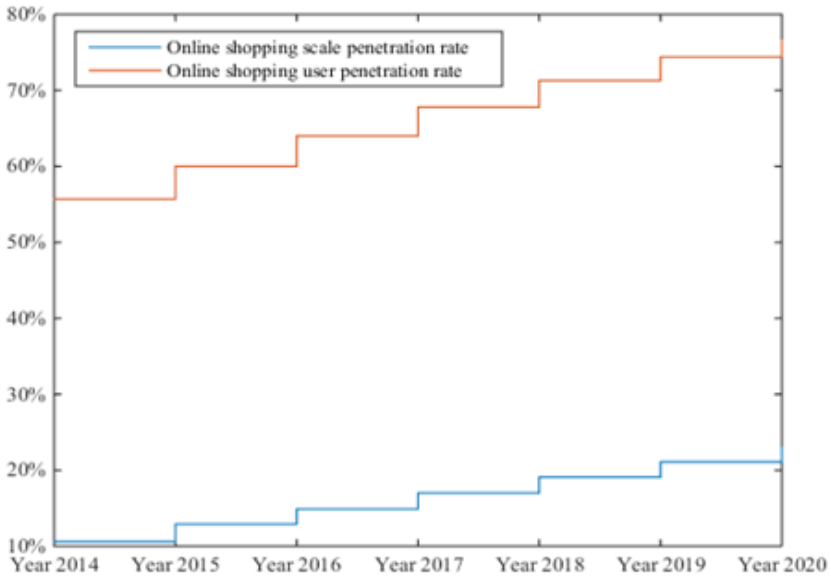

FIGURE 3
CHINA'S ONLINE SHOPPING PENETRATION RATE FROM 2014 TO 2020

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The big data results show that the popularity of online shopping users is increasing year by year, and the penetration rate in 2019 is significantly higher than that in 2014 (P<0.01); and the penetration rate of online shopping in China is increasing year by year, and the penetration rate in 2019 is much higher than that in 2014 (P<0.01), so China's scale penetration rate and online shopping user penetration rate were statistically significant.

Analysis of Environmental Problems Brought by E-Commerce

Through the data model analysis of the big data platform, the effective environmental problem strategy is regularly sent to the e-commerce system by FTP to bring the environmental problem to the system for accurate matching and interception. Evaluate whether the environmental problem strategy is optimal, and the hit rate and accuracy need to be considered together. The hit rate refers to the ratio of the number of hits to the number of problems in the environmental law in the authentication process, matching the content of the full amount of environmental law. Accuracy refers to the fact that the content of the designated e-commerce problem is an environmental problem, and the probability of misjudging the normal environmental problem is minimized. The higher the index, the better. The hit rate needs to be combined with the accuracy rate. The unilateral pursuit of high hit rate has no meaning to the system.

The environmental impact of e-commerce on 2020 under big data analysis is shown in Table 1.

Table 1
ENVIRONMENTAL IMPACT OF E-COMMERCE IN 2020

	Total cargo transportation	**Total passenger transportation**	**Private car transport**	**Total energy consumption**	**Renewable energy share in electricity**
Online shopping	×	√	…	…	–
Video conference	–	√	√	√	–
Video product	√		–	√	–
Application in waste management	–	–	–	–	–
Intelligent transportation system	×	×		×	–
Application in energy supply	–	–	–	…	√
Application in device management	–	–	–	√	–
Application in the production line	√			√	–

According to this big data study, the impact of e-commerce development on total energy consumption is reduced, which is conducive to increasing the proportion of renewable energy in the power supply, and can also reduce passenger traffic and reduce the use of private cars. These are the positive effects of e-commerce on the environment. However, e-commerce will also have a negative impact, including increased cargo transportation and increased non-recyclable waste

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generation. However, due to future uncertainties and data reasons, there will be some deviations in the prediction results, as shown in Figure 4.

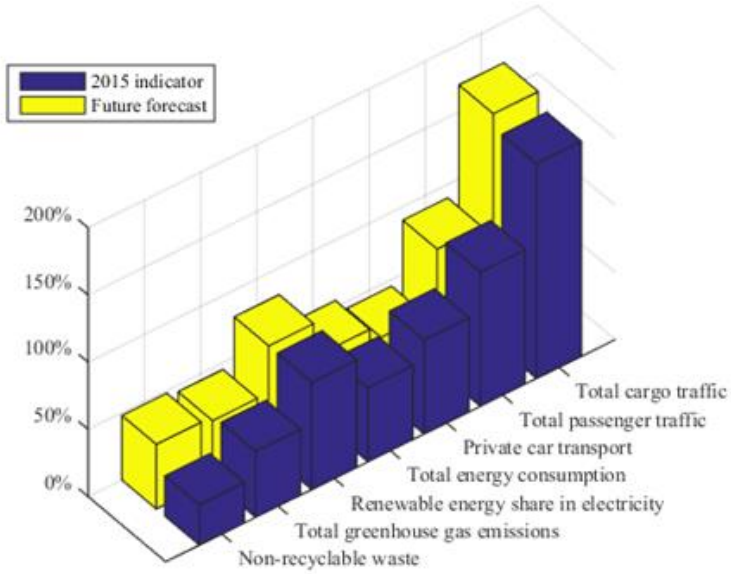

FIGURE 4
ENVIRONMENTAL INDICATOR SIMULATION RESULTS

Through big data analysis, we found that the changes in CO2 emissions caused by changes in online retail and traditional business materials can be found. In 2015, under the network retail conditions, according to Taobao's online retail data, four sampled products were consumed by four sampled materials. The change in carbon dioxide emissions is that the carbon dioxide emissions of plastics have increased by about 76,600 tons, and other carbon dioxide emissions such as paper, aluminum, glass and sheet materials have been reduced. As shown in Figure 5.

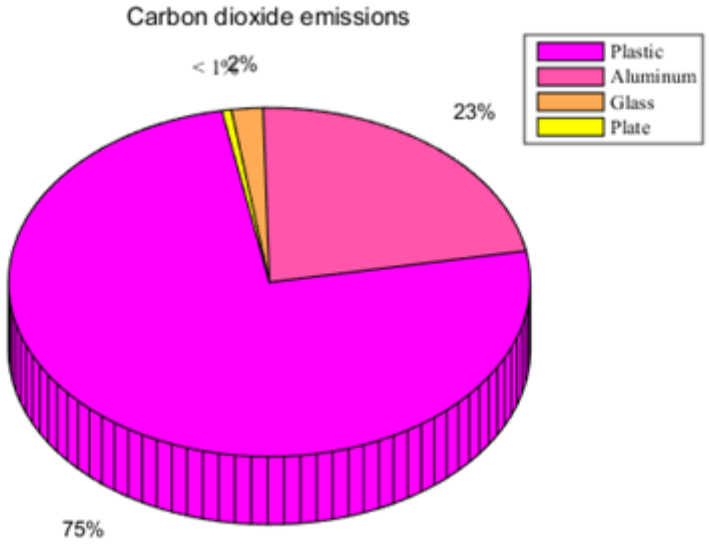

FIGURE 5
CARBON DIOXIDE EMISSIONS FROM SAMPLED MATERIALS

From the perspective of big data analysis, e-commerce has greatly promoted the improvement of labor productivity and commodity circulation efficiency, and the reduction of

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commodity circulation costs, which is conducive to the reduction of production input. At the same time, e-commerce contributes to the construction of a credit society and encourages enterprises to improve product quality. E-commerce will also promote the development of the second-hand market and extend the life cycle of goods. However, the drawbacks brought by e-commerce are inevitable. E-commerce has brought many new problems to the environment. The most important thing is the increase in greenhouse gas emissions.

CONCLUSION

The main body of the socialist market economy with Chinese characteristics is diversified. E-commerce is an important part of the national economy and social informationization. The advancement of science and technology and the rapid development of the economy have promoted the rapid development of the national economy informatization, which has made e-commerce an indispensable economic operation mode in life practice. The research in this paper finds that the realization of green development of low-carbon and environmental protection requires the government, industry enterprises and consumers to shoulder their responsibilities and work together to gradually reduce the pressure of resource consumption and environmental protection while achieving healthy and stable development.

The paper analyzes the environmental problems brought by e-commerce through big data, mainly the increase of greenhouse gas emissions. In today's urban pollution, vehicles have become the main source of mobile pollution, and reducing traffic volume has fundamentally reduced pollution sources. E-commerce has completely changed the structure of commodity circulation channels, directly looking for purchase targets on the Internet, performing performance price comparisons, implementing the most economical procurement actions, and maximizing one-time purchases, shortening the production cycle by 20%-25%. However, with the rapid development of e-commerce, e-commerce has become the most important way of shopping for people, which has correspondingly increased the number of merchandise transportation, and increased air pollution, coupled with the rapid increase in sales of e-commerce, the original manufacturers of goods, the quantity has also increased rapidly, and the emissions of these industrial pollutants have also increased accordingly. The use of network direct sales to replace the indirect round-trip batch-zero trading model has improved transaction efficiency, but it has also increased the logistics energy consumption and the additional environmental pollution that may arise from unreasonable flow.

Based on big data, this paper analyzes the new problems brought by e-commerce to environmental law. It is the focus of transforming economic growth mode, improving comprehensive ability, realizing system innovation and striving to build a good atmosphere for further development of e-commerce under the requirements of scientific development concept. Actively promoting the construction of enterprise informatization, promoting and applying e-commerce, accelerating the process of national economy and social informatization, and implementing the leap-forward development strategy are the inevitable requirements for the development of e-commerce, it is the necessary preparation to realize the characteristic road of e-commerce development under the condition of socialist market economy with Chinese characteristics.

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