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Retraction

Retracted: Control of Material Procurement Cost of Enterprises under the Background of the Low-Carbon Economy

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This article has been retracted by Hindawi, as publisher, following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of systematic manipulation of the publication and peer-review process. We cannot, therefore, vouch for the reliability or integrity of this article.

Please note that this notice is intended solely to alert readers that the peer-review process of this article has been compromised.

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

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

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

References

[1] Y. Ma, "Control of Material Procurement Cost of Enterprises under the Background of the Low-Carbon Economy," *Advances in Materials Science and Engineering*, vol. 2022, Article ID 5643665, 12 pages, 2022.

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Research Article

Control of Material Procurement Cost of Enterprises under the Background of the Low-Carbon Economy

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With the increasing prominence of global warming and serious resource consumption, the low-carbon economy has become a new growth point for the world economy and is widely recognized by all sectors of society. Purchasing cost control management is generally regarded as an applied management discipline with important theoretical, operational, time, and management roles. Due to China's rapid economic development, high energy consumption, heavy pollution, and high emissions have resulted in catastrophic environmental damage. In recent years, the public's awareness of environmental protection has increased, and the requirements for enterprises to reduce pollution and energy consumption have increased, and environmental issues have become more and more important in China's economic development strategy. Based on the background of a low-carbon economy, this article studies the energy consumption of company's buildings and weights the suppliers of building raw materials. The maximum value, CI value, and CR value of the quality factor were 7.3379, 0.0566, and 0.0429, respectively.

1. Introduction

The rapid development of science and technology has improved human's ability to understand and shape nature, but it has also weakened the relationship between humans and nature, resulting in increasingly intensified conflicts between the ecological environment, natural resources, and economic and social development. Climate change has become a major challenge that threatens human survival and development and has attracted great attention from all countries. Climate change with global warming as the main feature has led to a series of natural disasters, threatening the survival of all living things, and is a serious crisis for human survival and development. In this case, reducing greenhouse gas emissions has become an important tool to deal with the crisis, which has given birth to a low-carbon economy.

Observations and theoretical studies have proved that the main reason for changes in greenhouse gas concentrations is inappropriate human activities. Global warming is caused by the massive consumption of fossil energy in pursuit of maximum economic profit. To solve this problem, theoretical research must be carried out from the perspective of economy, people's ideas, production, and lifestyle. Economically speaking, on the one hand, it is necessary to study low-carbon technologies to improve energy efficiency and optimize the energy structure. On the other hand, it is necessary to study policies and measures to encourage greenhouse gas emission reduction and, at the same time, to solve the externality problems brought about by politics, environment, and society.

The innovation of this article is that it starts from the relevant theories of procurement cost management and systematically summarizes the relevant content of procurement cost, strategic cost, and value chain cost management. In the supply chain management environment, strategic suppliers are identified through supplier evaluation, and strategic partnerships are established to integrate the supply chain of the industry and further optimize resource allocation. All parties involved are beneficiaries, enhancing the competitive advantages of both parties and reducing procurement costs, which is conducive to the healthy development of the entire supply chain.

2. Related Work

Regarding the low-carbon economy, relevant scientists have done the following research. On the basis of a low-carbon economy, Lou et al. proposed a coordinated operation model of EV and system aiming at minimizing power generation cost, CO_2 emission cost, and V2G service subsidy. The new model comprehensively considers the relevant constraints such as electric vehicle driving demand, carbon emission quota, and carbon trading mechanism. A case study based on a test system demonstrates the rationality and effectiveness of the model [1]. Chen studied the performance impact of e-commerce, international hotel chains, local hotel chains, and green certification on carbon emission reduction of international tourism hotels. Over enough time, the environmental and economic performance of green-certified hotel groups have improved. According to the recommendation of the operation policy, the international hotel chain group and e-commerce outperformed the local hotel chain, and he discussed how to maintain the continuous improvement of the low-carbon performance of the hotel industry [2]. Faerber et al. outlined how current distribution network pricing can be modified to enable the transition to smart grids in a low-carbon economy. He highlighted multiple trade-offs between innovative pricing approaches and regulatory principles, which may be addressed by political decisions on how to recover or socialize costs. Privacy legislation serves as an enabler for new approaches to network governance and potentially reduces costs for consumers. This suggests that the focus of future network pricing should be on the services and functions provided by the grid rather than the commodity electricity itself [3]. Dou built a cone model, focusing on the analysis of basic factors such as low-carbon technology innovation, carbon emissions trading, carbon finance, and low-carbon policies, to provide a theoretical basis for low-carbon economic practice. The results show that low-carbon technology innovation is the foundation of low-carbon economic development, and carbon emission trading is the key to low-carbon economic development. The development of a low-carbon economy requires corresponding conditions such as carbon finance and low-carbon policies [4]. Duarte et al. assessed the dynamic paths and medium-term environmental impacts of certain consumer-oriented measures using a dynamically computable general equilibrium model. They assessed the dynamic impact of more efficient technologies on electricity consumption and the use of transportation services in terms of both environmental and economic effects. The findings confirm the role of technological improvements in delivering positive outcomes for the environment, as well as the importance of the rebound effect across the economy. Through a detailed study of energy use resulting from increased household energy consumption efficiency, the reduction in per capita emissions is consistent with economic growth [5]. Winiewski and Kistowski assessed the role and importance of agriculture and rural areas in the development of a low-carbon economy at the local level based on the concept of sustainable development. Based on model solutions developed during the implementation of the low-carbon development pilot project, they diagnosed the possibility of maintaining or improving carbon dioxide absorption capacity and reducing greenhouse gas emissions from agricultural land and soil. They determined the specific goals, operating principles, and the main body of low-carbon rural development of the low-carbon economy [6]. Holm et al. examined how vocational education and training and higher education can be enablers of a green and low-carbon economy. They chose three main areas: decentralized renewable energy production, use of organic by-products, and improving the energy efficiency of properties. Results were presented at workshops where green economy knowledge supply chains in selected areas were developed. It is important to discover collaborations between different fields and educational levels, as new skills often appear at the interface [7]. The above studies provide a detailed analysis of the application of a low-carbon economy and corporate material procurement costs. It is undeniable that these studies have greatly promoted the development of the corresponding fields. We can learn a lot from methodology and data analysis. However, there are relatively few studies on corporate material procurement costs in the field of low-carbon economy, and it is necessary to fully apply these algorithms to research in this field.

3. Control Methods of Enterprise Material Procurement Cost

3.1. Low-Carbon Economy. A low-carbon economy refers to a form of economic development under the guidance of the concept of sustainable development, through technological innovation, institutional innovation, industrial transformation, new energy development, and other means, to minimize the consumption of high-carbon energy such as coal and oil, reduce greenhouse gas emissions, and achieve a win-win situation for both economic and social development and ecological, environmental protection. Low-carbon economy combines the concepts of low-carbon and economy. It is understood literally that lower-carbon (greenhouse gas) emissions mean that in the process of economic development, companies must do their best to minimize or stop their reliance on carbon-containing fuels, for example, by improving energy efficiency, strengthening technological self-innovation, and developing new energy. The economy maintains the sustainability of development and the stability of economic growth in the process of implementing the low-carbon path [8, 9]. That is to say, the emerging concept of the low-carbon economy cannot exclude long-term economic growth, and its concept of sustainable development that takes into account social and environmental benefits undoubtedly represents the form of future economic development. The starting point of a low-carbon economy is to count carbon sources and footprints. There are three important sources of carbon dioxide, the most significant of which is thermal power emissions.

A low-carbon economy is a form of economic development that follows the principle of sustainable development, with the characteristics of "three highs and three lows." The three highs refer to high efficiency, high performance, and high benefits, and the three lows refer to low pollution, low energy consumption, and low emissions. From an economic point of view, a low-carbon economy is a macroeconomic production mode that increases the cost of

carbon emissions as a constraint. Under the guidance of the concept of a low-carbon economy, economic development should follow the combination of economic benefits and environmental benefits. The realization of economic benefits requires that the GDP growth rate in the implementation of a low-carbon economy should be greater than zero, that is, to achieve positive economic growth. The realization of environmental benefits requires reforms and innovations from multiple perspectives such as technology, system, energy, and finance [10]. For countries with different development levels, there are certain differences in the realization scale of a low-carbon economy. Developed countries need to follow the development goals of an absolute low-carbon economy, while developing countries should take relative low-carbon development and ensure economic growth as the basic goal. Figure 1 shows a schematic diagram of low-carbon economic activities and their mechanisms.

The realization of a low-carbon economy is closely related to the adjustment of the industrial structure and the innovation of industrial technology. The primary industry agriculture and the tertiary industry service industry have low-carbon emission levels. The secondary industry, including industry, construction, and other industries, consumes a lot of energy and is the main source of carbon emissions. The development of the industrial structure is generally in line with the economic level of the country. For developed countries, the tertiary industry has become the main body of their economic structure, and the secondary industry with high energy consumption and high-carbon emissions can be transferred to developing countries. However, for developing countries, due to the need for economic development, it is necessary to stimulate the growth of the national economy through industrial development, so the adjustment of their industrial structure is carried out gradually and limitedly [11–13]. In the reality of China, the development of the tertiary industry should be encouraged under the premise of taking into account economic development. At the same time, it will carry out technological innovation for the development of industrial industries with high energy consumption and comprehensively utilize various technologies of environmental protection and energy saving, such as clean coal technology, carbon dioxide capture, and storage technology, and carbon neutral technology, which are used in various industries such as energy-saving vehicles, green buildings, environmental protection facilities, energy-saving materials, and environmental protection recycling. At the same time, it will increase the use of clean energy, replace the combustion of coal, oil, and other energy sources, and reduce carbon dioxide emissions. Figure 2 shows the haze situation in some cities.

Carbon finance is a general term for various financial activities, mechanisms, and systems aimed at reducing greenhouse gas emissions [14]. It mainly includes investing and financing carbon emission rights trading and related financial derivatives. Carbon finance is a financial market resulting from the combination of low-carbon economy-related industries and financial capital. By conducting market transactions, on the one hand, the total amount of carbon emissions is controlled, and on the other hand, economic value is created for enterprises with carbon credits [15, 16]. Carbon finance has two definitions: narrow and broad. The carbon financial market, in the narrow sense, mainly refers to the carbon emission rights trading market, including the general carbon spot market and its derived carbon futures and carbon options. The standard it defines is that the subject matter of the transaction is a direct carbon credit or carbon emission right. In a broad sense, the carbon financial market refers to various investment and financing activities to achieve carbon emission reduction, so it covers a wide range. Investment, consultation, guarantee, financing, and credit related to low-carbon economic projects all belonging to the broad scope of carbon finance [17–19]. A low-carbon economy means not only that the manufacturing industry should accelerate the elimination of energy-intensive, high-polluting backward production capacity and promote energy-saving and emission-reducing scientific and technological innovation but also that the public should be guided to reflect on which habitual consumption patterns and lifestyles are bad hobbies that waste energy and increase pollution, so as to fully explore the huge potential of energy-saving and emission-reducing in the service industry and consumer life. One of the important ways to shift to a low-carbon economy and lifestyle is to quit the hobby of "convenience consumption" at the cost of high energy consumption.

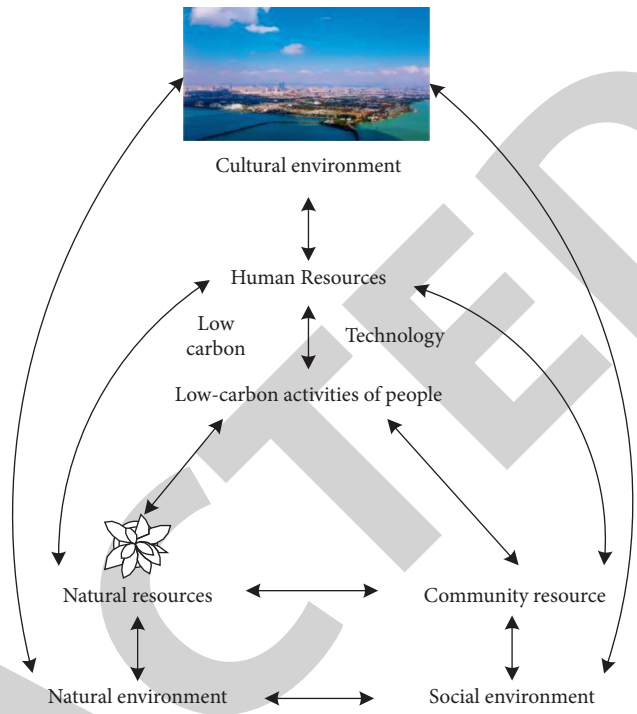

Figure 1: Schematic diagram of low-carbon economic activities and their mechanism of action.

The global climate resource is a typical public good, and production companies emit carbon dioxide into the environment but do not need to pay for this behavior, resulting in the lack of restrictions on greenhouse gas emissions. Due

(a) (b)

Figure 2: Smog in some cities.

to the difficulty of supervision and control, simply using political means or coercive means cannot solve the global carbon emission control problem. Introducing the theory of public goods, we can depublic goods of climate resources and convert them into nonpublic goods by pricing carbon dioxide emission rights [20]. Carbon emission rights that become nonpublic goods can be used for trading, making carbon emission rights exclusive and competitive. With the fluctuating transaction price of the market mechanism, for production enterprises, carbon emission rights become one of the costs of production and need to be included in cost accounting. This avoids the waste of resources, limits the excessive emissions of high-polluting enterprises, compensates for the technology development cost of low-carbon energy-saving industries, and realizes the low-carbon economic development route of controlling carbon emissions, energy conservation, and emission reduction [21].

$$W_{\text{mat}} = \sum_{u=1}^{b} a_u \times L_u \times (1 - x_u),$$
$$W_{\text{tran}} = \sum_{u=1}^{b} S_u \times a_u \times L_{\text{tran}}, \tag{1}$$

W_{mat} is the carbon emissions in the production stage of building materials; a_u is the the amount of building materials; L_u is the carbon emission factor of building materials; x_u is the recovery factor of building materials.

$$W_{\text{cons}} = W_{\text{mac}} + W_{\text{pro}},$$
$$W_{\text{max}} = \sum_{u=1}^{a} (R_{\text{max}\,u} \times E_{\text{mac}u} \times W_{\text{mac}u}), \tag{2}$$
$$W_{\text{pro}} = \sum_{v=1}^{b} \left(E_{\text{day}u} \times R_{\text{tot}v} \times L_{\text{ene}yv}\right),$$

W_{cons} is the carbon emissions in the construction phase; a is the type of machinery required for the project; $R_{\text{mac}u}$ is the the total number of workbench shifts; b is the number of temporary measures.

$$W_{\text{utili}} = \left(\sum_{u=1}^{b} R_{\text{ener}u} \times L_{\text{ener}u} \right) \times N, \tag{3}$$

W_{utili} is the carbon emissions in the operation phase; N is the service life of the building; L_{eneru} is the carbon emission factor of energy.

$$W_s = W_{\text{dis}} + W_{\text{di s.tran}} + W_{\text{rec}y},$$
$$W_{\text{dis}} = \sum_{u=1}^{b} W_{s.u} \times L_{s.u}, \tag{4}$$
$$W_{\text{rec}} = a_{\text{tot}} \times x_{\text{rec}} \times \left(L_{\text{rec.pro}} - L_{\text{rec.mat}}\right),$$

W_s is the carbon emissions at the disposal stage of buildings; $L_{s.u}$ is the carbon emission factor of construction; x_{rec} is the recycling ratio of materials.

$$T_x = \frac{\overline{T}_d + \overline{T}}{2} + \frac{1/b\sum_{u=1} T_d + \overline{T}}{2},$$
$$T_g = \frac{\overline{T}_h + \overline{T}}{2} = \frac{1/b\sum_{u=1} T_h + \overline{T}}{2}, \tag{5}$$

$\overline{T}$ is the average limit; T_d is the advanced average.

$$w = m_0 + cm, \tag{6}$$

w is the indicator matrix; c is the regression coefficient; m, m_0 are the influencing factors.

$$W_d = \overline{V} + Z_x D, \tag{7}$$

Z_x is the standard normal distribution probability density value.

$$T_Z = \sum_{u=1}^{b} (T_u \times P_u),$$
$$T_X = \sum_{u=1}^{b} (T_u \times K_u), \tag{8}$$

T_Z is the total annual building energy consumption of the building; T_X is the building heating energy consumption.

$$\frac{1}{2} c_{lu} v_u \Delta m_u = g_1\left(e_{1,x} - e_1\right) + \frac{\delta_1}{\Delta m}\left(r_2 - r_1\right),$$

$$\left(\frac{1}{2} c_{lu} v_{u-1} \Delta m_{u-1} + \frac{1}{2} c_{lu} v_u \Delta m_u\right) \frac{dr_u}{d\tau} = \frac{\delta_{u-1}}{\Delta m_{u-1}}\left(r_{u-1} - r_i\right), \tag{9}$$

c_{lu} is the certain pressure and heat capacity of the differential layer; v_u is the density of the differential layer; r_u is the node temperature.

The development and realization of a low-carbon economy are inseparably related to carbon finance. First of all, the realization of related technologies to promote the development of a low-carbon economy requires financial support and assistance. The related technologies to develop a low-carbon economy have large investments, high costs, and a long investment recovery period. Promoting the development of a low-carbon economy requires financing through the role of financial leverage to promote the development of a low-carbon economy. Taking carbon emission rights trading as an example, enterprises that implement low-carbon technologies can implement energy conservation and emission reduction to obtain carbon emission indicators, and relevant indicators can be converted into economic benefits through trading, thereby improving the source power of enterprises to develop low-carbon related technologies [22].

Secondly, the existence of the carbon financial market makes the mechanism arrangement of energy conservation and emission reduction for enterprises more flexible. For enterprises with different production characteristics in different industries, carbon emission reduction has different costs. When the cost of independent carbon emission reduction is higher than the transaction cost of carbon emission rights, enterprises can simplify the emission reduction process and achieve emission reduction goals through the transaction of carbon emission rights. When the cost of independent carbon emission reduction is lower than the transaction cost of carbon emission rights, enterprises can use their own low-carbon technology to obtain financial benefits. As an effective financial tool, carbon finance realizes the spontaneous adjustment of the market so that different types of enterprises can achieve emission reduction goals through appropriate channels, reduce the contradiction between industrial development and low-carbon emission reduction, and promote the harmonious development of the low-carbon economy [23].

Finally, the existence of a carbon financial market is the economic motivation for realizing the path of low-carbon development. Through the construction of the carbon trading mechanism, carbon assets have a unified measurement standard and have become one of the components of the cost-benefit measurement of enterprises. Through the pricing and circulation of carbon assets that can be used for trading, the financial capital and the real economy are linked. Through the existence of the carbon financial market, carbon emission reduction has become a standardized financial tool, which can effectively measure the development effect of a low-carbon economy and open up the channel for low-carbon technology to create economic value. As a result, the development path of the low-carbon economy is transformed from voluntary or compulsory behavior of enterprises or individuals to capital-oriented market behavior, which has irreplaceable value for promoting the rapid development of the low-carbon economy. Figure 3 shows the low-carbon economic development model framework.

The concept of a low-carbon economy and its good construction expression can be mainly started from four aspects. (1) The change of basic concept shows that social members have a good acceptance of the term low-carbon economy because factors such as economy, environment, and national policy orientation make people have a better life concept and are willing to pursue a better way of life. This way of life is based on the characteristics of three highs and three lows, and it is reflected in the change of the basic concept of the enterprise, that is, the company's members and relevant stakeholders. (2) Policy orientation and institutional innovation: the low-carbon economy has put forward requirements for the social and national systems and policies to realize the transformation of the industry. It is necessary to convert high-carbon emissions in the industry into low-carbon emissions as much as possible, and the decomposition into enterprises is mainly reflected in the characteristics of environmental protection, greenness, and safety in the enterprise system. (3) Development of new energy: this feature shows that the low-carbon economy requires that the solution to the energy crisis should be based on increasing scientific research efforts to develop new energy sources and to minimize the use of nonrenewable energy sources or energy consumption. This is reflected in enterprises as appropriate investment in scientific research to open up new market channels. (4) Technology innovation: this proposes to the society actively innovating technologies including energy saving and emission reduction, which can not only improve the efficiency of energy utilization and reduce pollution emissions but also improve their own image and thus enhance the competitiveness of enterprises. The development of a low-carbon economy is closely related to people's living habits and the environment. Its rapid development can promote the generation of new technology standards and the improvement of advanced culture, the transformation of national industries, and the thinking of enterprises on the concept of a low-carbon economy, which will enable enterprises to obtain more opportunities and sustainable development space.

3.2. Enterprise Material Procurement Cost. Strategic management is the use of strategy to manage the entire enterprise and is a series of business management operations that combine daily business decisions with long-term planning decisions. Enterprises must strengthen strategic awareness, strategic thinking, and strategic management. The so-called procurement specifically refers to the purchase of certain products or services from external enterprises (also what we usually call suppliers) in order to meet the needs of daily operation and sustainable production and development in

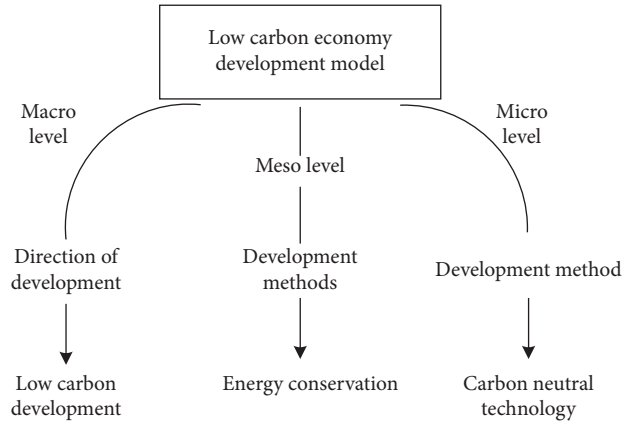

Figure 3: Low-carbon economic development model framework.

the course of business operations. The so-called procurement cost refers to the related expenses involved and incurred by the enterprise in the procurement process, including labor costs, machinery costs, material costs, logistics costs, and corresponding sales management fees. To a certain extent, procurement cost is an indispensable factor in the procurement process of production and living materials, and it is a very important measure and standard in the process of production and operation. Therefore, when an enterprise controls its own costs, especially its procurement costs, in addition to controlling its own raw materials, it also needs to consider other costs incurred in the process of raw material procurement, including labor and sales management costs. The so-called procurement cost control, that is to say, in the entire process of purchasing raw materials, reducing the size of procurement costs for corporate procurement activities, is the first issue that needs to be paid attention to in corporate procurement cost control. In order to achieve these goals, enterprises can adopt various modes of procurement, including commissioned customization, third-party outsourcing procurement, and commissioned processing procurement. Its fundamental purpose is to reduce costs, improve efficiency, and provide high-quality and low-cost raw materials for the production and operation of enterprises [25].

Specifically, the influencing factors of enterprise procurement cost mainly include the following aspects: determine the specific type of enterprise procurement activities. That is to say, whether the raw material procurement activities of enterprises occur regularly or only one time. If the company's raw material procurement activities are frequent, then the company should formulate a corresponding procurement plan according to its current type of procurement activities. On the contrary, if it is only a one-time procurement activity, the enterprise should also formulate a specific procurement plan for one-time procurement [26]. And according to the constant changes in the company's procurement activities, it continuously adjusts the plan to achieve a good interaction between the company's procurement plan and the type of procurement and specifically measures the relationship between the company's raw material procurement quantity and the total cost. This factor is mainly a factor that must be considered for the needs of the bargaining game in the process of purchasing activities. Only when the procurement quantity of the enterprise matches the procurement cost, the procurement activity of the enterprise is highly efficient; otherwise, it is inefficient [27]. The cooperation relationship between enterprises and suppliers is related to the size of the procurement cost. Only by long-term cooperation between the two can a long-term cooperation relationship and a long-term cooperation mechanism of sharing risks be established, thereby improving the cooperation relationship and cooperation efficiency between the two, preventing the procurement activities of enterprises from being affected by the external market environment. According to the theory of the whole life cycle, any product must go through a complete life cycle from survival to extinction—initial growth period, growth period, maturity period, and extinction period. In different life cycles, the production demand of enterprises for raw materials is different, which requires enterprises to constantly analyze their own life cycle stages and explore a scientific and reasonable demand cost structure [28]. Figure 4 shows the specific steps of procurement cost control optimization.

Enterprises can use a variety of different methods to optimize and control their procurement costs. These control strategies specifically include management and control of raw material shipping and miscellaneous costs, forecasting of raw material purchase prices, raw material storage costs, and raw material out-of-stock costs. To a certain extent, procurement cost is an indispensable factor in the procurement process of production and living materials, and it is a very important measure and standard in the process of production and operation [29–32]. Therefore, when an enterprise controls its own costs, especially its procurement costs, in addition to controlling its own raw materials, it also needs to consider other costs incurred in the process of raw material procurement, including labor and sales management costs. Changing its cost management methods through changes in purchasing methods, specifically, companies can outsource the procurement of raw materials so that companies can concentrate on doing what they are good at. In this case, the enterprise's procurement management model can be further deepened.

The value chain is the process of value creation that can be carried out in the process of enterprise operation. In the process of production and operation, the company conducts a series of activities such as product design and production, sales, and after-sales. It is mainly divided into two categories: basic activities and auxiliary activities [33]. After years of development, the value chain view has gradually developed and matured and has become an important basic theory to guide enterprise management innovation. The value chain diagram is shown in Figure 5.

Basic activities include input-output and after-sales activities. It mainly includes the logistics of purchasing goods, not only the process of supply chain management but also strengthening the cooperative relationship between supply chains, including the collection and storage of various materials, and the activities of checking and receiving

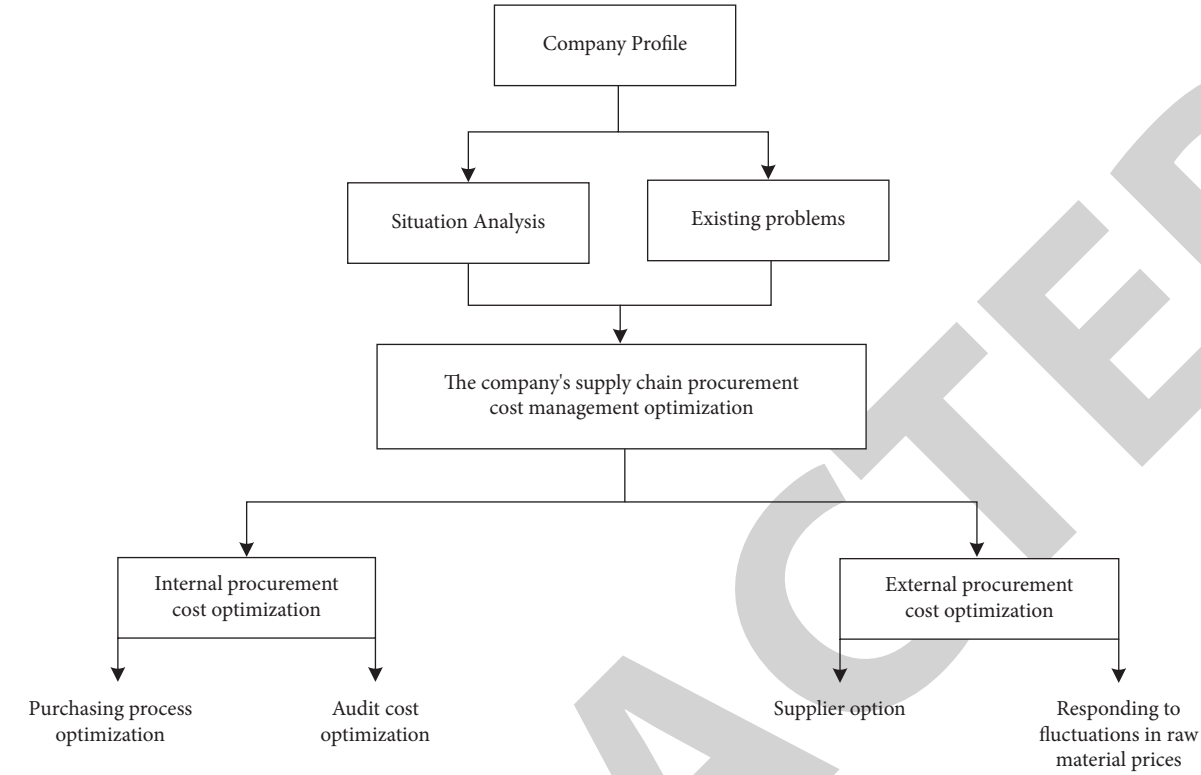

Figure 4: The specific steps of purchasing cost control optimization.

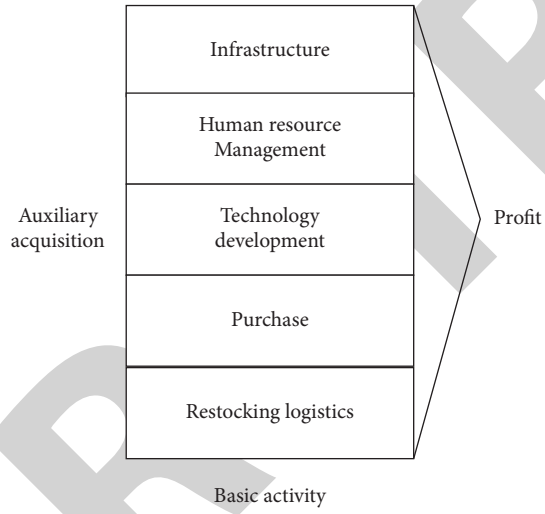

Figure 5: Value chain diagram.

warehouses. Production includes the process of producing and processing materials, including the entire process from raw materials to product cost. Shipping logistics includes all activities required to collect, store, and distribute finished products. Sales involves stimulating consumers to buy products through various guiding activities, including advertising marketing, and channel marketing and conducting product sales activities through pricing and promotion. After-sales service includes both the process of maintaining products and services and enhancing value formation through services, including repair and maintenance, as well as the development of service activities such as maintenance [34].

4. Control Experiment of Material Purchasing Cost in Enterprises

Business office buildings refer to buildings that provide office space for some business activities. They are located in relatively advantageous geographical locations. Most of them are located in the central business district and adopt unified property management. The energy consumption of commercial office buildings refers to the energy consumption input from the outside during the operation of heating, cooling, ventilation, air conditioning, and lighting, as well as the energy consumption of office equipment and elevators to maintain the building environment and building functions. Figure 6 shows the total global carbon emissions in recent years and the carbon emissions from the construction industry in recent years. From the data in Figure 6, it can be seen that it is imminent to reduce the carbon emissions of buildings, especially the carbon emissions of commercial office buildings that occupy a certain share of the buildings.

The dynamic energy consumption calculation method refers to the calculation method of hourly building energy consumption in order to meet the environmental requirements such as indoor temperature and humidity under the condition of hourly changes in meteorological parameters, personnel density, and heat source. The dynamic energy consumption calculation method is based on dynamic energy consumption simulation. It can improve the accuracy of

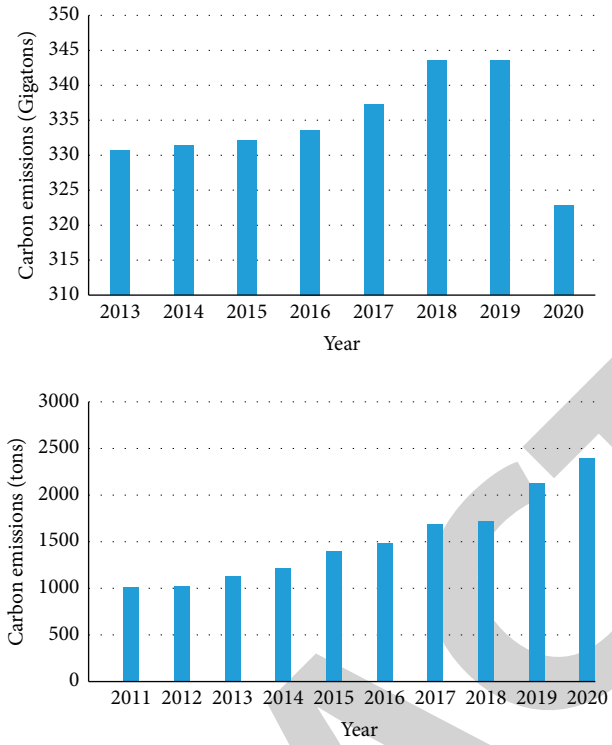

Figure 6: Total global carbon emissions in recent years.

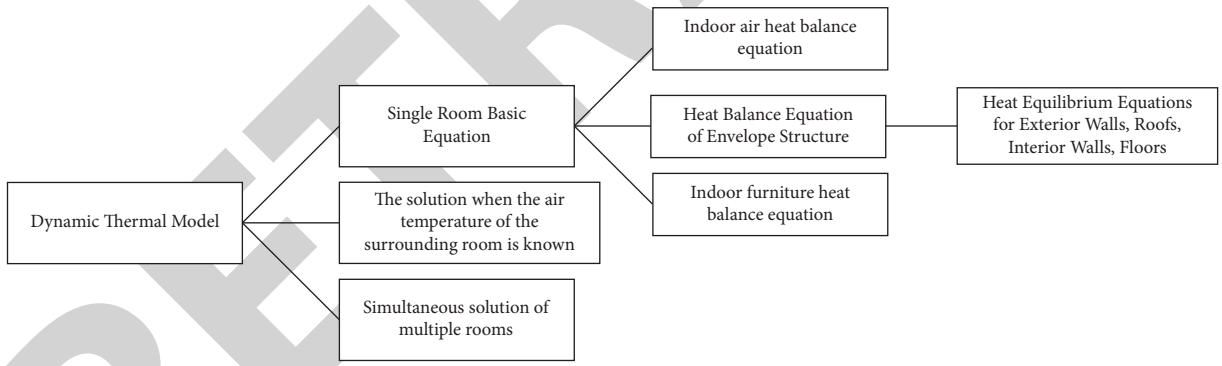

Figure 7: Dynamic thermal model system.

energy consumption calculation, but the premise is to establish a complex heat transfer equation. The dynamic thermal model system is shown in Figure 7.

The air conditioning heating and air conditioning cooling of a commercial office building in a certain province share the same system, which provides central cooling and heating for the building. Therefore, the energy consumption of building heating and air conditioning is all included in the electricity consumption, and it is not easy to calculate the heating energy consumption separately. For commercial office buildings that are heated using municipal heat network heat exchange or boiler heating, it is easier to calculate the heating energy consumption separately. For heating in this way, the heating energy consumption can be calculated separately. Tables 1 and 2 show the basic information about commercial office buildings in the province.

Tables 3 and 4 show the basic information of municipal thermal commercial office buildings.

The software can present hourly meteorological parameters (temperature, humidity, solar radiation, wind speed, wind direction, etc.) and ensure that the daily values of each item are close to the source data. After the meteorological simulation, the statistical values of each meteorological element and the hourly meteorological data of the city were calculated. As shown in Figure 8, the annual temperature distribution and direct solar radiation intensity

Table 1: Basic information on commercial office buildings.

Serial number	Completion time	Construction area	User count	Building energy efficiency standards	Air conditioning method
1	2019	22000	485	Not energy-efficient	Chiller
2	2018	18700	350	Not energy-efficient	Split air conditioner
3	2012	5800	600	Not energy-efficient	Chiller
4	2012	10000	200	Not energy-efficient	Chiller
5	2015	20815	256	Not energy-efficient	Chiller

Table 2: Annual building energy consumption.

Year	Air conditioning area	Power consumption	Natural gas consumption	LPG consumption
2018	16158	49.72	18.18	850
2019	16158	48.25	16.07	930
2020	16158	42.83	10.4	950

Table 3: Basic information on municipal thermal commercial office buildings.

Serial number	Completion time	Construction area	User count	Building energy efficiency standards	Air conditioning method
1	2004	51460	2500	Not energy-efficient	Split air conditioner
2	2018	16877	350	Not energy-efficient	Chiller
3	2016	12000	300	Not energy-efficient	Chiller
4	2005	39000	500	Not energy-efficient	Chiller
5	2003	50000	1000	Not energy-efficient	Chiller

Table 4: Annual building energy consumption.

Year	Air conditioning and heating area (m^2)	Power consumption	Natural gas consumption	Hot water
2018	51540	242	48.18	26.21
2019	51540	230	46.7	26.75
2020	51540	182	40.4	24.87

statistics are shown. The annual temperature is below 0°C for a total of 875 hours, and the year-round temperature is above 25°C for a total of 234 hours.

It can be seen that the construction of commercial office buildings consumes a lot of energy. When enterprises purchase building materials and energy supply materials, they can make improvements and build an importance judgment matrix to analyze the data. It is scored by buyers with many years of purchasing experience and experts in supplier selection, based on the average score obtained by the expert group. As shown in Figures 9 and 10, the indicator weights and CR values under the supplier evaluation factor are shown. It can be seen that the weights are all less than 0.1, and the consistency test passes.

According to the idea of strategic cost management, it is necessary to strengthen supplier cost analysis, conduct peer review activities with competitors, and control procurement costs. The main purpose is to carry out the main management and control of competitors in order to achieve a dominant competitive position in price control factors. The management and control of the company's procurement are mainly carried out by the internal management department. If the procurement cost is to be fully controlled, it is not enough to rely solely on improving the internal management methods. In practice, it is necessary

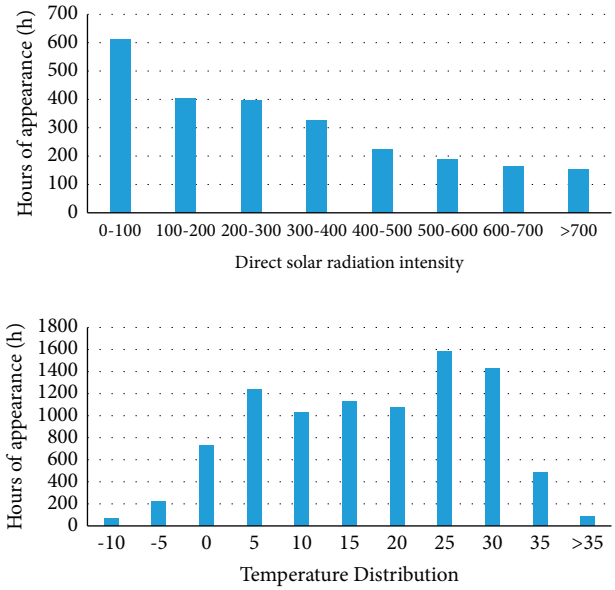

Figure 8: Statistical chart of direct solar radiation intensity.

to conduct a comprehensive analysis of the supplier's products, understand its relevant information, understand the supplier's product cost according to the relevant

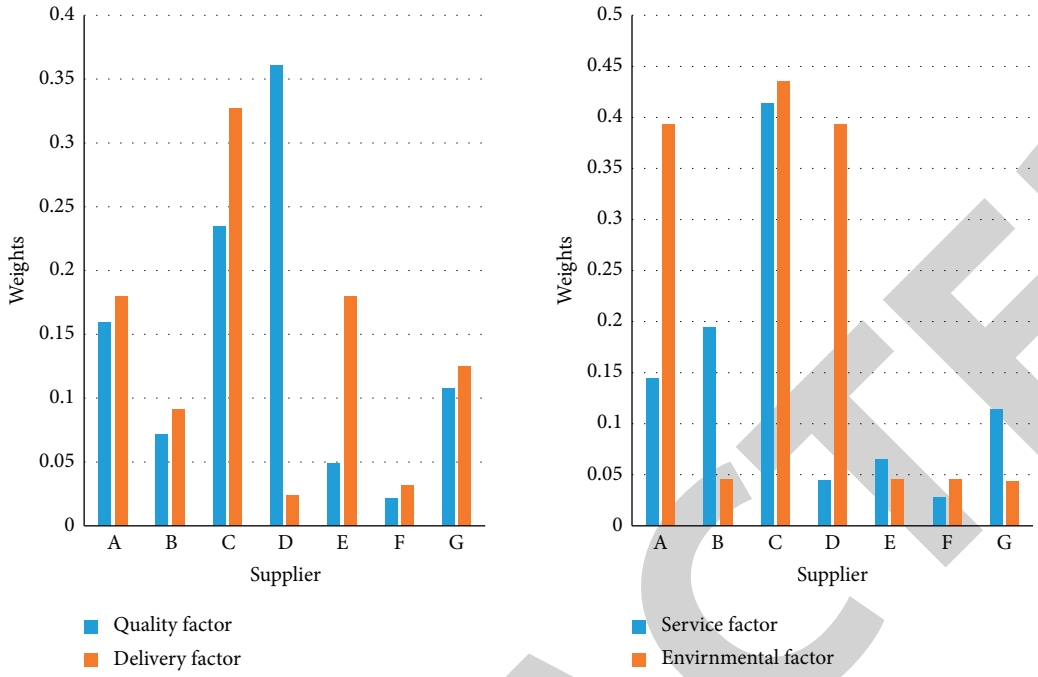

Figure 9: Weights of indicators under supplier evaluation factors.

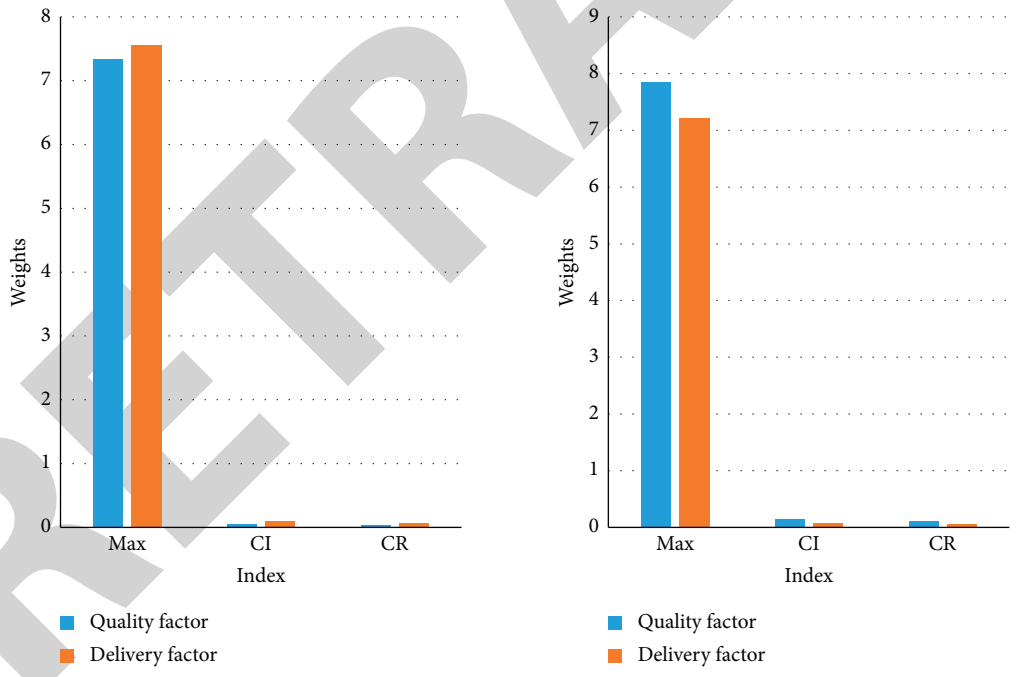

Figure 10: CR values for supplier evaluation factors.

information, and then point out the main direction of controlling the procurement cost. For the overall optimization and management of the procurement business, the corresponding management process technology is adopted, and the corresponding business management is continuously revised, thereby ensuring the improvement of the corresponding management capabilities and the clarification of job responsibilities and the improvement of the procurement management efficiency.

5. Discussion

Through the development of supplier management inventory and early intervention work, the coordination between suppliers and enterprises can be ensured, and the ability can be effectively shared, thereby providing certain conditions for reducing procurement costs, thus achieving win-win cooperation between suppliers and enterprises. Setting up special institutions to carry out corresponding project

tracking and services, especially in the process of research and development, can carry out comprehensive technical updates, strengthen mutual information communication and coordination between supply chain enterprises, and speed up the implementation of projects. In terms of products, material approval has been focused on, and acceptance management has been strengthened in terms of quality. The quality assurance work is mainly completed by the supplier, which has passed the relevant quality approval and inspection and supervision procedures to ensure the quality level of the materials. The supplier's production conditions and quality control system have become an important prerequisite for material quality management.

Improving customer management effect can improve supplier relationships and actively establish strategic partnerships between suppliers. The procurement personnel of enterprises not only need to strengthen the price control of material procurement but also actively strengthen the alliance of strategic partners. Through mutual cooperative production and management, we actively compress the production cycle and the production cost of products, seize the market more quickly with the lowest price, and achieve a win-win situation. It should actively build strategic partnerships with suppliers, improve the stability of material supply through stable cooperative relationships, and at the same time, through the establishment of cooperative relationships, extend the payment period, and maximize the interests of the strategic alliance from the overall situation. This kind of strategic partnership can save the company a lot of human resources and material resources and play a great role in controlling procurement costs.

6. Conclusion

Low-carbon economy is an ecological economy based on market activities. Its development requires the support of certain institutions, and it is necessary to strengthen human survival and development capabilities to achieve a state of self-sufficiency and self-realization, achieve comprehensive resource conservation, and reduce the social costs and overall benefits of human survival and development. Therefore, the study of developmental patterns should be an integrated process, the result of overlapping and intersecting across disciplines, requiring holistic thinking and a systematic approach to achieve holistic impact. This article proposes to actively build a strategic partnership with suppliers and improve the stability of material supply through stable cooperative relationships. At the same time, through the establishment of cooperative relationships, the payment period is extended, and the interests of the strategic alliance are maximized from the overall situation. In terms of raw material procurement, since China Telecom's media procurement market has just started, in the process of specific case studies, there is a lack of corresponding authoritative measurement standards, and it is difficult to carry out effective cost optimization and comparative analysis. These issues need to be further studied and discussed on the basis of continuous study and practice and on the premise of perfecting the system. Future research on the evaluation system of corporate culture must be strengthened and based on the practice of corporate development.

Data Availability

No data were used to support this study.

Conflicts of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as potential conflicts of interest.

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