Proceedings of ICEMGD 2024 Workshop: Decoupling Corporate Finance Implications of Firm Climate Action
DOI: 10.54254/2754-1169/102/2024ED0072

Challenges and Strategies for Green Transformation in Logistics Procurement Business: Case Study of SF Express

Xikai Xie[1,a,*]

[1]*Faculty of Logistics, Wuhan Technology and Business University, Wuhan, 430000, China*
a. 21419013@stu.wtbu.edu.cn
**corresponding author*

Abstract: This study explores the challenges and coping strategies logistics enterprises face in green transformation in procurement management operations. By analyzing the current situation of logistics enterprises, it is found that there are many problems in the traditional procurement model, such as focusing on profit and price while neglecting product quality and long-term partnership. At the same time, the cognitive level of logistics enterprises in green logistics procurement is low, and green supplier selection is influenced by price and profit. This study proposes strategies for establishing and improving green procurement management systems and policies, developing green procurement standards, and setting up evaluation mechanisms to facilitate logistics enterprises' transition towards green. Through case analyses, it is found that some enterprises have begun implementing green procurement and achieved positive results. Finally, this study emphasizes that the government has strengthened its policy support and supervision of green logistics procurement to promote logistics enterprises to make greater progress in green transformation.

Keywords: Green logistics, Procurement management, Sustainable development, Environmental awareness

1. Introduction

As times and the global economy continue to evolve, the logistics industry in China's many industry sectors also gradually develop. Economic development is a double-edged sword that, while bringing convenience to society, also affects the homes on which human beings depend for their livelihoods. When humans over-exploit and over-utilize limited natural resources and arbitrarily release harmful gases into the atmosphere, this undoubtedly causes serious environmental pollution problems. At the same time, the logistics companies have not given much thought to the green development direction in traditional procurement by incorporating it into their procurement areas, for example, in the process of purchasing transportation, full truckloads are not transported, and the important condition of roughly matching the space of the truck with the cargo is not well calculated, which leads to an increase in the number of shipments, this will not be conducive to the control of the total cost of logistics for enterprises, which will also be a major blow to the global environment.

Based on the above background, this study takes logistics enterprises in the procurement management business to green transformation as the object of study. By analyzing the current situation and future planning of logistics enterprises in the procurement business, this study summarize a series of shortcomings and areas for improvement in the field of logistics enterprises in

DOI: 10.54254/2754-1169/102/2024ED0072

the procurement business in the future, and at the same time, provide references to the various difficulties that may be encountered in the future, to provide substantive suggestions for the future direction of green procurement in logistics enterprises.

2. Current Situation

The traditional approach of logistics companies in procurement is based on the transaction behavior of buyer and seller, where the buyer delivers to the seller in the form of currency equivalent to the purchased item as a condition for obtaining the corresponding product or service. From the perspective of the overall operational objectives of logistics enterprises, enterprises are generally committed to minimizing the cost of payment in exchange for a greater number of products of higher value to achieve the overall profitability objectives better. However, due to the reality of the interests of the problem, there are often trading disputes between enterprises and suppliers. Profits and prices gradually become the focus of attention of both sides, thus, to a certain extent, diluting the quality of the product and service requirements, and even the partnership between the two sides is not considered. As a result, logistics enterprises have gradually formed a mode of focusing on immediate benefits and ignoring long-term cooperative relationships and goals, which has led to an increase in the frequency of enterprises replacing suppliers for procurement, and the antagonism between enterprises and suppliers has gradually emerged, resulting in blind and duplicated inputs from both enterprises and suppliers and a consequent increase in the total cost of logistics, which is contrary to the original intention of the transformation of the logistics procurement business into a green one [1].

The green logistics procurement process mainly consists of determining procurement objectives, selecting green suppliers, selecting products with green qualifications, green transportation modes and green evaluation systems. However, from the point of view of the current social situation, logistics enterprises for the green logistics concept still do not have a thorough understanding of the level of awareness that is still to be improved, which is reflected in the determination of the procurement objectives cannot be based on the reality of the direction of social development to determine the number of demand and the final target range of the delimitation of the direction of the development of enterprises cannot be completely in line with the objectives of the procurement of products. The selection of green suppliers is linked to price and profit, and enterprises tend to select suppliers based on minimizing the cost of payment to obtain higher product value, which undoubtedly hinders the realization of the goal of cooperation between green suppliers and enterprises. Enterprises are still relatively weak in their understanding of green, low-carbon and recycling development, and lack a certain degree of understanding in the selection of suitable and correct products, for example, the quality and quantity of the purchased products and whether they are in line with the direction of the enterprise's development and deviation from the real situation. Green logistics procurement cannot be achieved without the support of green transportation modes. The fuel used in the logistics and transportation process generates large amounts of carbon emissions, which leads to an increase in greenhouse gases and exacerbates climate change. Enterprises' adoption of energy-saving technologies and green transportation modes is not yet up to the expected standard.

Meanwhile, in terms of noise pollution, the noise generated during the logistics transportation process will cause a certain degree of interference with the surrounding environment and people's daily lives, and the enterprises have not been perfected in the use of soundproofing technology and the establishment of restrictions on the time of transportation. In addition, improving logistics and transportation efficiency has been a major problem for logistics enterprises, and there still needs to be a large imbalance in the waste and recycling of resources. Enterprises still need to form a fixed system for developing a green procurement evaluation system, and the requirements and standards are different, making it difficult to measure whether the purchased products align with the development of green direction. In terms of product packaging, traditional plastic packaging materials

DOI: 10.54254/2754-1169/102/2024ED0072

are difficult to degrade. Suppose the long-term accumulation in the soil causes serious environmental pollution. In that case, the enterprise for saving and correctly using packaging materials still needs to meet the requirements in the research and development of green packaging materials, which still need to be improved [2].

3. Problem Analysis

3.1. Green Transport in Logistics Procurement

Social production and life depend excessively on fossil fuels such as oil, natural gas and coal. With the current era's rapid development, China's economic level continues to increase. The use of these fossil fuels based on the total energy consumption in our country accounted for a relatively large amount. If do not strengthen the control of energy consumption in this area, it will have a great irreversible impact on our country and the entire earth's environment. In addition, carbon emission in our country increases with carbon dioxide and some other poisonous gases emitted during the whole process of these fossil fuels' use, which has caused the greenhouse effect to intensify continuously and destroyed the natural balance of the ecological system, which is laws of social system development. Therefore, advocating green, low-carbon and circular development is an inevitable trend. To guide the logistics procurement business to gradually transform to green and gradually achieve the goal of "double carbon" requires the participation of all social personnel and units, especially large industrial enterprises, not only need to lead by example but also need to speed up the change of concepts, and carry out some necessary ideological education and training courses for staff, the conservation of resources and the protection of the environment will always run through the entire logistics activities, this includes procurement, production, transportation, warehousing, sales and recycling [3]. Therefore, under the background of green development, the transformation of the logistics procurement business to green is necessary, and its importance has a far-reaching impact on all logistics activities.

3.2. Significance Amid Green Development

3.2.1. Core Competitiveness of Enterprises

In today's society, in response to the country's social and economic development requirements, the trend of enterprises implementing logistics procurement business to green transformation has gradually been affirmed. Still, the general trend of the future development direction of enterprises is one of the secrets that enterprises can be based on our social environment and stand firm. Each logistics enterprise should have a certain foresight and long-term awareness, should set the future development route and model, formulate long-term development goals, seize the opportunity, and focus on establishing a solid strategic partnership with suppliers who can develop green transformation and environmental protection direction, communicate with each other and share the relevant experience and some necessary measures and systems on green transformation, obtain high-quality resource channels in advance, and learn from each other, as so to promote the continuous improvement of the ability of enterprises in the procurement business to green transformation. At the same time, the international community has indicated strict requirements and standards for some imported products. Therefore, enterprises far ahead in the green transformation of the logistics procurement business can easily occupy the market and obtain a competitive advantage to show a vibrant development force and influence in this field [4].

DOI: 10.54254/2754-1169/102/2024ED0072

3.2.2. Cost, Quality, and Efficiency

Each enterprise chooses the corresponding raw materials, facilities, and equipment within the scope of green environmental protection, gradually reducing the use of fossil fuels and various scarce resources, thereby reducing the operating costs of enterprises. Green transformation can reduce the speed of upgrading to a certain extent, realize the sharing and sustainable use of various resources, and reduce some unnecessary expenses to ease the pressure generated by enterprises in the fierce market competition [5].

3.2.3. Green Practices and Societal Environmental Awareness

While strengthening the green transformation of procurement business, enterprises gradually establish and improve the green procurement management mechanism, extending to actively explore the implementation of green energy saving and environmental protection mode to the whole society, which can not only promote the discussion of green environmental protection issues in the whole society, enhance the level of awareness but also affect the technical innovation of facilities and equipment of enterprises. Guide enterprises to change the inherent concept, strengthen the research of green production technology, and devote themselves to the goal [6].

3.2.4. Corporate Social Image

Enterprises implement green transformation in procurement management, which reflects their responsible performance to the whole society from the side and also conforms to the long-term goals of the national policies related to the sustainable development of resources and environmental protection. This can improve enterprises' image in society, influence, and credibility and promote the sustainable development of their reputation and brand value [7]. It helps enterprises establish a good social image, but it can also effectively prevent environmental damage and waste of resources.

3.3. The Challenges of Green Development in Logistics Procurement Transformation

From the current situation, China’s green low-carbon cycle development level and China’s economic development level are not coordinated enough, the whole society’s level of understanding is not high enough, equipment and facilities and production process problems have become the main obstacles to the transformation of large enterprises to green, at the same time, to enhance the procurement management staff of green environmental protection transformation awareness is also needed to face many challenges, it is also a big problem to realize the organic linkage and coordinated development of the upper, middle and lower reaches of procurement management, which leads to the basic construction of green transformation is still relatively weak [8].

3.4. Strategies for Scientific Green Transformation in Logistics Procurement Amid Green Development

3.4.1. Green Procurement Management Systems and Policies Establishment and Improvement

Various policies and systems are the guarantee and important basis to ensure its smooth implementation. Enterprises need to use these relevant policies to manage the division of tasks and clear each staff's work scope. It should coordinate relations between various fields, strengthen communication and mutual assistance and cooperation in work, and form synergy [9].

DOI: 10.54254/2754-1169/102/2024ED0072

3.4.2. Evaluation Mechanisms for Green, Low-Carbon, and Circular Development

On this basis, enterprises should conduct various investigations and evaluations from all aspects of the procurement field, gradually from a hierarchical differentiation system, promote the best selection, and actively advocate the provision of green transformation resources and experience sharing to help them smoothly implement green transportation projects. In addition, the enterprise should also regularly return to the procurement field if the relevant conditions need to be met to carry out field visits, according to the specific situation, to control the reasonable planning of the scope of promotion [10]. Enterprises can also hold technical exchanges, share experiences, and participate in training activities related to green transformation, guide enterprises to continuously improve processes and products in procurement management, and gradually promote their development in the direction of green transformation.

3.4.3. Green Procurement Standards Establishment

The establishment of green procurement standards needs to strengthen the synchronization of resource recycling and digital information management and build a green distribution network to lay a solid foundation for realizing green transformation of procurement management [11].

4. Case Analysis

In 2022, SF Express will focus on saving resources and protecting the natural environment, increasing scientific and technological strength in the enterprise's operating system, and actively building a sustainable green procurement business model. At the same time, SF Express also extends the concept of green development to the industrial chain, which can drive upstream and downstream partners to work together to accelerate low-carbon transformation in various fields, achieve the goal of green development, and build a zero-carbon future. Its key data are reflected in that the annual greenhouse gas emission intensity is reduced by 2.1% compared with 2021, the carbon footprint of the single express is reduced by 4.2% compared with 2021, and the use of 47,000 tons of base paper and 150,000 tons of plastic is reduced through green packaging technologies such as lightweight and reduction. More than 26,000 new energy vehicles are being procured and transported. This year's renewable energy generation was based on a breakthrough, adding to the smooth progress of green procurement.

In 2023, SF Express will have a clearer plan for understanding the direction of green development. Fulfilling social responsibilities and helping high-quality sustainable development has gradually become one of the signature slogans of SF Express, which is mainly reflected in promoting low-carbon transportation and actively introducing more than 29,000 new energy power stations, and renewable energy generation reached more than 7.3 million KWH in the first half of the year alone; In the practice of green packaging, the use of plastics was reduced by about 77,500 tons, the use of base paper was reduced by about 21,000 tons in the first half of the year. Over 1.25 million circular packaging boxes "Fengduobao" were used, while 19 million times were recycled. In terms of revenue share, compared with 2022, SF Express has improved its income level in effective express, express, intra-city express, economic express, cold transport and medicine, especially in time-sensitive express, which has increased its profit by 7.2%, which is undoubtedly inseparable from the green logistics development mode adopted by enterprises in procurement. SF Express actively takes green logistics as its development direction. To ensure that the total cost of logistics is reduced while maintaining steady profit growth and promoting the smooth implementation of sustainable development.

DOI: 10.54254/2754-1169/102/2024ED0072

5. Conclusion

Under the dual pressure of many external factors and the enterprise's own needs, the trend of logistics enterprises in the procurement management business to green transformation is inevitable. Therefore, logistics enterprises need to consider the total cost of logistics and environmental factors fully in the future to develop gradually in a green direction. From a global perspective, enterprises should prioritize environmental factors and gradually move toward green development goals through reasonable improvement methods, followed by the total logistics cost. Based on this research can enhance the understanding level of logistics enterprises for green development to a certain extent to better play the demonstration and leading role of large enterprises, establish the wind vane of green procurement, lead the concept change, and gradually promote the logistics procurement market to maturity and success. Finally, although this study mainly analyzes the ideas on the green transformation of logistics procurement, there is still a lack of relevant laws and regulations, and a strong guarantee has not been formed. In the future, relevant policies and systems should be used to guide more enterprises to develop green gradually. The government can also support and intervene, increase the punishment of enterprises for polluting the natural environment, and give full play to the incentive and constraint mechanism to promote the smooth implementation of the green transformation of logistics procurement.

References

[1] *Li, Xi. (2023) Challenges and Countermeasures of Green Supply Chain Purchasing Management. China Bidding, 2023(12), 150-152.*

[2] *Li, Bebe. (2017) Research on procurement management strategy under green logistics. Journal of Liaoning Administrative College, 2017(02), 38-41.*

[3] *Tian, Chen. (2024) Research on cost control strategy in logistics procurement. China Logistics and Purchasing, 2024(02), 112-113.*

[4] *Meng, Fugang. (2023) Exploration of logistics procurement management in modern enterprise development. Logistics Engineering and Management, 2023, 45(05), 119-121.*

[5] *Teixeira Cassia Regina Bianchini, Assumpção Andre Luis, Correa Andre Luiz, Savi Antonio Francisco, & Prates Glaucia Aparecida. (2018) The contribution of green logistics and sustainable purchasing for green supply chain management. Independent Journal of Management & Production, 9(3), 1002-1002.*

[6] *Kuzmin Oleh Ye., Telishevska Olha B., & Ovcharuk Vadym V. (2017) Foreign Experience in Formation and Management of Procurement Logistics Costs of Enterprises. Problemi Ekonomiki, 4, 289-295.*

[7] *Letunovska, Nataliia, Offei, Felix Amoako, Junior, Prince Amoh, Lyulyov, Oleksii, Pimonenko, Tetyana, & Kwilinski, Aleksy. (2023) Green Supply Chain Management: The Effect of Procurement Sustainability on Reverse Logistics. Logistics, 7(3).*

[8] *Zhao, Rong, She, Jiamin, & Jia, Yunyan. (2023) Research on the new mode of green development of express packaging under the goal of "double-carbon". Environment, Resource and Ecology Journal, 7(6).*

[9] *Zhu, Ronghua. (2023) Exploring innovative strategies for green logistics management in the context of low-carbon economy. Academic Journal of Business & Management, 5(25).*

[10] *Kurbatova, S. M., Aisner, L. Y., & Mazurov, V. Y. (2020) Green logistics as an element of sustainable development. In IOP Conference Series: Earth and Environmental Science (Vol. 548, No. 5, p. 052067). IOP Publishing.*

[11] *Guo, H. (2020) Research on green logistics development in Guangdong province from the perspective of sustainable development. In IOP Conference Series: Earth and Environmental Science (Vol. 546, No. 2, p. 022037). IOP Publishing.*