

Enterprise green logistics packaging transformation in the context of dual carbon goals: taking Alibaba as an example

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Abstract

This article aims to study how enterprises can achieve green logistics packaging under the "dual-carbon" target. Taking Alibaba as an example, this article analyzes its development strategy and practices in green logistics packaging, explores the green collaborative development under the "Scope 3+" concept, and aims to provide policy suggestions for enterprises in various parts of the industrial chain. This study uses comprehensive materials and data to propose policy suggestions for the green transformation of courier packaging within enterprises, providing reference and reflection for the industry.

Keywords

Double carbon goals; Logistics packaging; Greening; Scope 3+; Alibaba.

1. Background and research purpose

1.1. Proposal and significance of dual carbon goals

In recent years, global climate change has become increasingly severe, and low-carbon and environmental protection have become the consensus and action direction of most governments and enterprises in the world. In order to promote global climate governance, governments around the world have proposed emission reduction targets, the most eye-catching of which is the "dual carbon targets" proposed by China.

The "dual carbon goals" refer to the goal of reaching the peak of carbon dioxide emissions in the whole society by 2060 and achieving carbon neutrality by 2060. The proposal of this goal not only plays a demonstration role in achieving global low-carbon development, but also plays an important role in China's own sustainable development and international influence.

As China's largest e-commerce company, Alibaba Group not only needs to assume social responsibilities, but also needs to create value in a sustainable way and promote China's sustainable development. Faced with the requirements of the "dual carbon goals", Alibaba focuses on promoting green packaging and logistics to make a positive contribution to the sustainable development of the enterprise [1].

Alibaba's exploration of green logistics packaging transformation can not only promote and implement the country's emission reduction goals, but also achieve the company's own sustainable development goals. At the same time, Alibaba's successful experience and practical results also provide reference and inspiration for other companies.

1.2. The necessity and challenges of corporate green logistics packaging transformation

As one of the important measures to deal with environmental protection and achieve sustainable development, the transformation of corporate green logistics packaging has become an inevitable choice for corporate transformation, upgrading and sustainable development. From an internal perspective, promoting green logistics packaging

transformation can effectively reduce logistics costs, improve corporate resource utilization and operational efficiency, and enhance product quality and competitiveness. From the perspective of the entire industry chain, promoting the transformation of green logistics packaging can reduce environmental pollution and resource waste, and promote environmental protection and sustainable development. Therefore, it is very important for enterprises to transform their green logistics packaging.

However, the transformation of corporate green logistics packaging also faces a series of challenges. First of all, the transformation of green logistics packaging requires continuous optimization of technology and processes, and continuous updating of equipment and technology, which requires huge investment and continuous research and development. Secondly, the transformation of green logistics packaging requires extensive and in-depth cooperation and coordination with all parties in the supply chain. It is necessary to fully consider the interests and needs of all parties to achieve coordinated development. Third, the transformation of green logistics packaging needs to comply with the requirements of policies and regulations, requires good communication and cooperation with relevant government departments, and at the same time needs to ensure its operational specifications and legality. Finally, the transformation of green logistics packaging requires a good handling of the relationship between cost, efficiency and environmental protection, and a balance point needs to be found to coordinate the interests of all parties [2].

2. Alibaba's development strategy for green logistics packaging

2.1. Definition and principles of green logistics packaging

Green logistics packaging refers to packaging that uses renewable or recyclable materials during the logistics process, and carries out green transformation through measures such as simplifying packaging design, reducing the use of packaging materials, and increasing the recycling rate of packaging materials, thereby reducing the impact on the environment. impact, reduce resource consumption, and improve logistics efficiency and sustainability. Its principles include the following points:

Sustainability principle: Green logistics packaging should start from the perspective of sustainability, use renewable materials as much as possible, promote the recycling and reuse of packaging materials, and reduce the generation of packaging waste and its impact on the environment.

Compliance principle: Green logistics packaging should comply with relevant national and regional laws, regulations, standards and industry norms, and avoid the use of toxic, harmful and polluting substances.

2.2. The development history of Alibaba's green logistics packaging

Alibaba is China's largest e-commerce platform. As a leader in the global supply chain, Alibaba has been committed to promoting the digital and intelligent development of the global supply chain and has achieved remarkable results in the fields of green packaging and logistics.

First of all, Alibaba advocates the concept of green logistics packaging, introducing the concept of green packaging into the global procurement system starting in 2014, and clarifying the principles of green logistics packaging [3]. Alibaba's green logistics packaging principles include: giving priority to recyclable logistics packaging; using environmentally friendly materials and technologies to reduce pollution and waste; minimizing the use of packaging materials when designing logistics packaging; increasing the utilization rate of logistics packaging; Strengthen the supervision and management of the use and recycling of logistics packaging, etc.

Secondly, Alibaba has achieved the popularization and promotion of green logistics packaging. Taking the 2019 "Double 11" shopping carnival as an example, Alibaba promoted a total of 1 billion pieces of green logistics packaging, accounting for 80% of the total logistics packaging volume. Alibaba's strict management and supervision of the use of logistics packaging ensures the promotion and application of green logistics packaging.

Finally, Alibaba has strengthened its cooperation with logistics brands to promote the industrialization of green logistics packaging. Alibaba has cooperated with first-line logistics brands such as SF Express, YTO, and STO to apply green logistics packaging concepts and practices nationwide. At the same time, it also cooperates with biodegradable material manufacturers and packaging design companies to promote green packaging production and design, helping logistics companies improve the content of green logistics packaging.

In short, Alibaba's practical experience in the field of green logistics packaging fully demonstrates the company's awareness of social responsibility and environmental protection, and has played a positive role in promoting the development of global green logistics.

2.3. Alibaba's successful experience in green logistics packaging

Alibaba's successful experience in green logistics packaging is mainly reflected in three aspects: first, it has carried out diversified green logistics packaging design and innovation, giving full play to the role of environmentally friendly materials and new technologies in packaging design; second, it has established a complete green logistics packaging management and monitoring system, strictly controlled the use and recycling of packaging materials, and ensured the sustainable development of packaging. Finally, we actively carried out public welfare environmental protection publicity and education, and advocated users to jointly participate in green logistics packaging actions to form a It has achieved good social response and brand image [4].

2.3.1. Diversified green logistics packaging design and innovation

Alibaba has given full play to the role of environmentally friendly materials and new technologies in packaging design, and actively carried out green logistics packaging design and innovation. In terms of packaging materials, Alibaba uses a large number of environmentally friendly materials, such as degradable materials, recycled materials and recycled materials, to reduce the impact on the environment. In terms of packaging design, Alibaba meets the needs of different user groups and improves user experience through diversified design styles and methods. For example, Alibaba's "Green Easy" packaging uses environmentally friendly materials and a detachable design to facilitate users' recycling. It also provides a variety of packaging forms such as express box storage boxes, shopping bags and shrink packaging to ensure the safety of the packaging. Diversity and personalization.

2.3.2. Complete green logistics packaging management and monitoring system

Alibaba has established a complete green logistics packaging management and monitoring system to control the use of packaging materials from the source and ensure the sustainable development of packaging through strict control of production, transportation, warehousing and recycling. Specifically, Alibaba has established green logistics packaging management specifications and standards, including specific requirements for green material procurement, packaging design, packaging labeling and recycling, and clarified the responsibilities and obligations of each link [4]. At the same time, Alibaba has established a packaging management and monitoring information system to realize real-time monitoring and control of packaging volume.

2.3.3. Public welfare environmental protection publicity and education

Alibaba actively carries out public welfare environmental protection publicity and education, and encourages users to participate in green logistics packaging actions, which has formed a

good social response and brand image. Alibaba promotes the concept and significance of green logistics packaging through various channels, such as advertisements, promotional videos, public welfare activities and media features, and guides users to pay attention to and participate in green logistics packaging actions. For example, Alibaba and the "China Women's Development Foundation" launched the "Green Women's Action Plan", calling on female users to participate in green logistics packaging actions by giving away green easy packaging, and calling on more public welfare organizations and caring enterprises to participate in environmental protection causes. At the same time, Alibaba also carried out public welfare activities such as "environmental protection charity sales" and donated the proceeds to environmental protection organizations and public welfare undertakings.

To sum up, Alibaba has actively explored green logistics packaging, fully utilized the role of environmentally friendly materials and new technologies in packaging design, established a complete green logistics packaging management and monitoring system, and actively carried out public welfare environmental protection publicity and education. . This series of measures has laid a solid foundation for Alibaba to achieve sustainable development, improve its brand image and user experience, and establish a good social image and brand image.

3. Alibaba's practical experience in green logistics packaging

3.1. Specific applications of Alibaba's green packaging

In the process of green logistics packaging transformation, Alibaba actively promotes the specific application of green packaging. It is mainly manifested in the following aspects.

3.1.1. Create a diversified green packaging product line

Alibaba has established a diversified green packaging product line in the transformation of green logistics packaging, providing enterprises with various types of green packaging product choices. At present, Alibaba's green packaging products include more than a dozen varieties such as degradable plastic bags, bare packaging, and recycled cartons. These products can not only meet the packaging needs of enterprises, but also effectively reduce the environmental protection costs of enterprises.

3.1.2. Promote biodegradable plastic bags

Alibaba has achieved remarkable results by promoting biodegradable plastic bags in its green logistics packaging transformation. Biodegradable plastic bags are plastic bags that can decompose in the natural environment. Their decomposition products have little impact on the environment and can effectively reduce the environmental protection costs of enterprises.

Alibaba uses a variety of methods to promote degradable plastic bags, including providing training and guidance to enterprises and providing free degradable plastic bags to enterprises. So far, Alibaba has successfully promoted hundreds of millions of degradable plastic bags, becoming the leader in the application of degradable plastic bags in China.

3.1.3. Use bare packaging

Alibaba advocates the use of bare packaging, which means reducing or eliminating the outer packaging of goods and reducing the amount of packaging used. Bare packaging can not only effectively reduce the company's environmental protection costs, but also reduce the environmental pollution caused by packaging waste. As an e-commerce platform, Alibaba has played an active role in promoting naked packaging [5]. At the same time, Alibaba also uses green packaging as the main means of logistics packaging, such as recycled cartons, environmentally friendly sacks, etc., to provide enterprises with sustainable logistics packaging solutions.

3.2. Alibaba's practical results of green logistics packaging

Alibaba has achieved remarkable practical results in the transformation of green logistics packaging, which not only contributes to environmental protection, but also enhances corporate image and brand value. This section will introduce the practical results of Alibaba's green logistics packaging from four aspects: packaging material reduction, recyclability, promotion and application, and reduction of carbon emissions.

3.2.1. Packaging material reduction

Alibaba has taken a variety of measures to reduce packaging materials, including optimizing packaging design, improving transportation efficiency, and encouraging buyers to use electronic invoices. The most representative one is the "naked package" project, which encourages merchants to send goods to consumers in the smallest packaging. Alibaba uses technical means to manage and monitor bare packages from packaging design, packaging materials, warehouse management and other aspects, which not only reduces logistics costs, but also reduces environmental pollution.

3.2.2. Recyclable

Alibaba actively promotes recyclable packaging materials, such as cartons, plastic pallets, etc., to reduce the use of disposable packaging materials. At the same time, Alibaba has also launched a packaging recycling and reuse project to collect, organize and reuse recyclable packaging materials, realizing the recycling of packaging materials.

3.2.3. Promotion and application

In order to promote the application of green logistics packaging, Alibaba promotes the concept of environmentally friendly packaging on the platform and encourages merchants to use green logistics packaging. Alibaba also popularizes relevant knowledge about environmentally friendly packaging to consumers, guides consumers to choose environmentally friendly packaging products, and jointly promotes the popularization and application of green logistics packaging.

4. Green coordinated development under the Scope 3+ concept

4.1. Definition and impact of the "Scope 3+" concept

"Scope 3+" means that companies should also pay attention to carbon emissions within their own direct supply chain, indirect supply chain and product use and disposal, as well as other environmental impacts generated by the company. This concept emphasizes the environmental protection responsibilities and obligations of enterprises throughout the entire industry chain and life cycle. It aims to promote enterprises to actively explore sustainable development models in practice and strengthen collaboration between enterprises and their suppliers, customers, society and other parties. Jointly promote green development.

The impact of "Scope 3+" on the transformation of enterprises' green logistics packaging mainly includes the following aspects:

First of all, the "Scope 3+" concept strengthens the company's environmental responsibility and collaborative spirit. In the process of green logistics packaging transformation, enterprises need to consider their own environmental responsibilities and social responsibilities for ecological environment protection, as well as the interests and needs of supply chain partners, and actively collaborate with all parties to jointly promote green logistics packaging transformation [7-9].

Secondly, the "Scope 3+" concept brings new technological and management changes. In the transformation of green logistics packaging, new technologies represented by green technologies such as carbon neutrality, ecological design, and sustainable utilization will

become an important support for enterprise transformation. At the same time, companies need to strengthen supervision and enforcement of management systems to ensure the sustainability and effectiveness of green logistics packaging transformation.

Thirdly, the "Scope 3+" concept will promote corporate innovation and development. In the process of implementing the "Scope 3+" concept, enterprises need to continuously explore and innovate green logistics packaging technologies and models to improve their competitiveness and market share. At the same time, companies also need to provide customers with more environmentally friendly, high-quality logistics packaging products and services to meet market demand and promote the green development of the industry.

In short, the "Scope 3+" concept is an important engine for promoting the transformation of enterprises into green logistics packaging, and is a new problem and challenge that enterprises must face and respond to in the process of achieving sustainable development. Only by actively responding to these challenges and exploring new ways and models of green development can enterprises seize the opportunity in future competition and achieve sustainable development.

4.2. Principles and practices of green coordinated development

With the acceleration of the transformation of green logistics packaging, green collaborative development has become an important way for enterprises to promote green logistics packaging. Green collaborative development refers to a collaborative development model that achieves the goal of green logistics packaging through the cooperation and collaboration of various stakeholders under the concept of "symbiosis, co-creation, and win-win" [10-13]. The principles of green coordinated development include:

Shared vision: All stakeholders must jointly trust, recognize and support the company's green logistics packaging goals and form a common vision and direction.

Fair sharing: In the construction of green logistics packaging, all stakeholders must follow the principle of fairness, share risks and results, and form a collaborative development pattern of mutual benefit and win-win for all parties.

Knowledge sharing: In the transformation of green logistics packaging, knowledge sharing is the key to achieving sustainable development. All parties should continuously improve the technical level and management capabilities of green logistics packaging through communication and sharing of information.

Collaborative innovation: The transformation of green logistics packaging requires the support of innovative thinking and innovative methods. All stakeholders need to form an innovative cooperation model to achieve collaborative innovation and create common green logistics packaging products and technologies through joint research and development, intellectual property protection and other means.

Environmental protection: The goal of green logistics packaging is to protect the environment. All stakeholders need to fully consider the principles of environmental protection in collaborative development and achieve environmental protection by reducing waste and developing recyclable materials.

Based on the above principles, enterprises can implement the following practices:

Establish a green logistics packaging alliance to attract participation from various stakeholders and form an extensive partner network.

Establish special funds for green logistics packaging to support the research, development and practice of various green logistics packaging projects.

Establish a green logistics packaging technology exchange platform to promote communication and cooperation among various stakeholders and share innovative technologies and advanced management experience.

Promote the standardization of green logistics packaging, establish a unified standard system, and standardize the design, production, use and recycling process of green logistics packaging. Promote the concept of green logistics packaging and enhance consumers' knowledge and awareness of green logistics packaging through publicity and education.

In short, green collaborative development is an important way for enterprises to promote the transformation of green logistics packaging. It requires in-depth cooperation among all stakeholders under the principles of sharing, innovation, and environmental protection to achieve the goal of sustainable development.

5. Policy recommendations

5.1. Suggestions for the enterprise itself

In the context of the dual carbon goals, enterprises need to transform and upgrade to achieve green and sustainable development. Alibaba's practical experience in green logistics packaging transformation provides a reference for other companies. The following are suggestions for businesses themselves:

- (1) Establish a target responsibility system for green logistics packaging. Clarify the company's goals in green logistics packaging, and establish a responsibility system within the company to ensure the completion of the goals.
- (2) Increase investment in green logistics packaging. Enterprises need to invest more funds and manpower to improve the research and development and application level of green logistics packaging to achieve sustainable development.
- (3) Strengthen the research and development of green logistics packaging technology. Enterprises should strengthen the research and development of green logistics packaging technology, work hard in material selection, packaging design and packaging production, and continuously improve and perfect the existing green logistics packaging technology.
- (4) Promote the application of green logistics packaging. Enterprises need to strengthen the application of green logistics packaging in the production, transportation and sales processes, improve packaging recyclability and reusability, and reduce resource waste and environmental pollution.
- (5) Establish a green logistics packaging evaluation system. Enterprises should establish a comprehensive green logistics packaging evaluation system to evaluate the company's green logistics packaging practices, discover problems in a timely manner and take effective measures.
- (6) Strengthen the promotion of green logistics packaging. Enterprises should strengthen the promotion of green logistics packaging, improve the environmental awareness of employees and consumers, and encourage everyone to participate in the practice and promotion of green logistics packaging.
- (7) Join green logistics packaging partners. Enterprises should actively join green logistics packaging partners, participate in the formulation and popularization of green logistics packaging standards, exert their influence and demonstration role, and jointly promote the development of green logistics packaging.

In short, enterprises need to strengthen investment and research and development in green logistics packaging, strengthen the application and promotion of green logistics packaging, establish a green logistics packaging responsibility system and evaluation system, and work with other partners to promote the development of green logistics packaging and achieve sustainable development.

5.2. Policy recommendations to enterprises in various parts of the industrial chain

In the process of promoting the transformation of enterprises into green logistics packaging, the efforts of a single enterprise are not enough and need to be promoted jointly by all parts of the industry chain [14]. Therefore, this chapter will put forward corresponding policy suggestions for enterprises in different industrial chain links to promote the green coordinated development of the entire industrial chain.

5.2.1. Raw material suppliers

Raw material suppliers are the first link in green logistics packaging, and their quality and environmental protection directly affect the subsequent production and use of green logistics packaging. Therefore, we make the following policy recommendations to raw material suppliers:

Promote environmentally friendly materials. The government should promote environmentally friendly materials, encourage raw material suppliers to use environmentally friendly materials, and at the same time strengthen the technological research and development and production of environmentally friendly materials to promote further innovation and promotion of environmentally friendly materials.

Optimize supply chain management. Raw material suppliers should strengthen communication and cooperation with downstream companies, optimize supply chain management, and work together to reduce the probability of raw materials and products that do not meet environmental protection requirements, thereby promoting the popularity of green logistics packaging.

Strengthen environmental awareness building. Raw material suppliers should strengthen the environmental awareness of employees, enhance environmental awareness, and establish a sound environmental management system to comprehensively promote the green development of enterprises.

5.2.2. Manufacturing companies

Manufacturing enterprises are the core manufacturing link of green logistics packaging. For manufacturing enterprises, we put forward the following policy suggestions:

Promote environmentally friendly and efficient production technologies. The government should strengthen technological research and development support for manufacturing companies, promote environmentally friendly and efficient production technologies, and establish standards for environmental protection and quality management to promote the transformation of manufacturing companies into green production models.

Enhance the design and innovation capabilities of green logistics packaging. Manufacturing enterprises should continuously improve the design and innovation capabilities of green logistics packaging, develop a variety of environmentally friendly materials, reduce the use of harmful resources, and at the same time realize resource utilization by reducing packaging weight, designing reasonable packaging structures, and recycling and reusing packaging as much as possible. of saving and recycling.

Optimize production processes and reduce waste emissions. Manufacturing enterprises should strengthen full life cycle management, optimize production processes, reduce waste emissions, achieve pollutant reduction and resource recycling, follow green production principles, and promote the development of green logistics packaging.

5.3. Feasibility analysis of green logistics packaging transformation

As global environmental awareness continues to increase, more and more companies are beginning to focus on the development of green logistics packaging. This can not only reduce

the negative impact of enterprises on the environment, but also improve the social image and market competitiveness of enterprises. Alibaba's successful experience in green logistics packaging shows that green logistics packaging is feasible and has positive significance for enterprises, society and the environment [15]. This chapter will analyze the impact of green logistics packaging transformation on enterprises from a feasibility perspective.

5.3.1. Economic feasibility of green logistics packaging transformation

The transformation of green logistics packaging requires investment, but it can also bring certain economic benefits. First of all, green logistics packaging can reduce logistics costs. Traditional packaging materials are generally plastics, paper, etc. These materials are relatively expensive, disposable, and have low recycling rates. Green logistics packaging uses renewable materials, has high circulation utilization rate and relatively low cost. Secondly, green logistics packaging can increase the added value of products. Because green logistics packaging is environmentally friendly and sustainable, it can be recognized and sought after by consumers, thereby increasing product added value and market competitiveness. Finally, green logistics packaging can improve the company's social image and brand value, thereby bringing more business opportunities and partners.

5.3.2. Social feasibility of green logistics packaging transformation

The transformation of green logistics packaging can reduce the negative impact of enterprises on the environment, thereby enhancing social image and brand value, and gaining recognition and support from society. Green logistics packaging can reduce the emission of greenhouse gases such as carbon dioxide, reduce pollution to air and water resources, and contribute to environmental protection. In addition, green logistics packaging can stimulate social enthusiasm for green consumption, promote the popularization and promotion of environmental protection concepts, and promote the development of a sustainable economy [16].

5.3.3. Environmental feasibility of green logistics packaging transformation

Green logistics packaging transformation can effectively reduce negative environmental impacts. On the one hand, because green logistics packaging uses degradable materials, it reduces the pollution of land resources and water resources. On the other hand, green logistics packaging uses renewable materials and achieves resource conservation and environmental protection through recycling. In addition, green logistics packaging also has lower carbon dioxide emissions during the production process, which can reduce greenhouse gas emissions and thereby contribute to global climate change.

In short, the transformation of green logistics packaging is economically, socially and environmentally feasible for enterprises, and can bring many positive effects. Therefore, in the context of global environmental protection and sustainable development, companies should follow Alibaba's example, actively promote the development of green logistics packaging, and contribute to achieving dual carbon goals and creating a better home.

6. The significance and inspiration of Alibaba's green logistics packaging

6.1. The significance and value of green logistics packaging

As global environmental problems become increasingly serious, reducing carbon emissions has become a global consensus and important issue. As a feasible carbon reduction measure, green logistics packaging has gradually gained significance and value.

First of all, green logistics packaging has significant environmental significance. Traditional logistics packaging often uses materials that are prone to pollution, such as plastics, cardboard, etc. The acquisition and manufacturing process of these raw materials can have a negative impact on the environment. In contrast, green logistics packaging uses degradable or recyclable

materials, which can not only alleviate environmental pollution, but also promote resource recycling and ecological environment protection, and achieve sustainable development.

Secondly, green logistics packaging can enhance the brand image and competitiveness of enterprises. With the improvement of consumers' environmental awareness, more and more consumers regard environmental protection factors as an important consideration when purchasing goods. How to reduce the use of packaging, reduce the pollution of materials, and improve the recyclability of materials have become important criteria for consumers to evaluate a company's environmental image. Therefore, choosing green logistics packaging can not only enhance corporate image and credibility, but also bring new consumer groups and market share.

In addition, green logistics packaging also has important value in reducing corporate costs and improving efficiency. By using green materials such as light, degradable, and recyclable, the weight and material costs of logistics packaging can be reduced, the operating costs of enterprises can be reduced, and the profits of enterprises can be improved. At the same time, promoting the innovation of green logistics packaging in terms of media, size, shape, etc. can realize the "integrated" design of logistics packaging and items, improve logistics efficiency and safety, shorten logistics time and process, and promote more efficient and efficient logistics operations. Convenient, safe and green.

Finally, the promotion and application of green logistics packaging can promote the realization of the country's and enterprises' goals in carbon emission reduction and sustainable development. As a global issue, reducing carbon emissions involves cooperation and efforts from all aspects of government, business and society. As an effective carbon emission reduction measure, the application and promotion of green logistics packaging can not only achieve the company's own environmental protection goals, but also inject new impetus and vitality into the development of society and the national environmental protection industry, and promote the development of the economy, environmental protection and society. Coordinated development.

To sum up, as an important carbon emission reduction measure, green logistics packaging has its significance and value not only in terms of environmental protection, but also in terms of corporate image, competitiveness, cost-effectiveness, logistics efficiency and national development. It deserves further research, promotion and application.

6.2. Inspiration from Alibaba's green logistics packaging

As one of the world's largest e-commerce platforms, Alibaba's practical experience in the transformation of green logistics packaging has great reference significance for other companies. The following is the inspiration for Alibaba's green logistics packaging.

6.2.1. Take the initiative to face environmental pressure

As the global carbon neutrality goal gradually moves forward, companies have to face environmental pressure. At the same time, on environmental protection issues, consumers, suppliers, government regulators and other aspects will make demands on enterprises, which require enterprises to respond proactively. Alibaba has done a particularly good job in this regard. Not only does it proactively advocate green logistics, but it also strives to promote the transformation of all links in the industry chain and achieve a comprehensive green transformation.

6.2.2. Achieve a win-win situation for environmental protection and economy

In the process of green transformation, Alibaba adheres to the principle of "win-win for environmental protection and economy" and continuously improves logistics efficiency, energy conservation and environmental protection through technological innovation, research and development of green packaging materials and other means. At the same time, Alibaba's

investment in green logistics has not brought a huge cost burden to it. On the contrary, the transformation of green logistics has made Alibaba's logistics costs more competitive.

6.2.3. Give full play to the advantages of the enterprise network platform

As one of the world's largest e-commerce platforms, Alibaba has a huge supply chain system, logistics network and global customers. Alibaba leverages these advantages of the company's network platform to promote the transformation of green logistics, actively guide suppliers, logistics service providers and customers to join the ranks of green transformation, continuously expand transformation benefits, and achieve a virtuous cycle of green transformation.

7. Conclusion and outlook

7.1. Research conclusion

This study summarizes the following conclusions through the analysis of Alibaba's green logistics packaging development strategy:

First of all, Alibaba has formed its own unique green logistics packaging strategy in the development of green logistics packaging, including the principles of "paper-based, reusable, and recyclable". This green logistics packaging strategy is an important foundation for building a green logistics system, and it also provides other companies with experience and ideas that can be used for reference.

Secondly, Alibaba has encountered multiple challenges in the process of green logistics packaging transformation, such as changes in traditional concepts, updates and upgrades of technology and equipment, and coordination of logistics networks. However, Alibaba has achieved sustainable development through active exploration and practice, continuously optimizing and improving the green logistics packaging system.

Finally, this study puts forward a series of suggestions and measures, including suggestions from the enterprises themselves, policy suggestions to enterprises in various parts of the industrial chain, and feasibility analysis of green logistics packaging transformation. These suggestions and measures will help promote the transformation of enterprises into green logistics packaging and promote the green coordinated development of the industrial chain.

7.2. Research prospects

In the context of dual carbon goals, green logistics packaging transformation has become the only way for enterprise development. This article takes Alibaba as an example to analyze the strategies, experiences and practices of corporate green logistics packaging transformation. However, the practice of green logistics packaging transformation faces many challenges and problems that need to be further explored and solved.

First of all, the biggest challenge faced by enterprises in the transformation of green logistics packaging is cost. The cost of green logistics packaging is usually higher than that of traditional packaging. Some companies believe that its investment and cost are too high and it is difficult to get a return in the short term. Therefore, how to balance the economic benefits and green development of enterprises requires further research and solutions.

Secondly, enterprises still need to face the problem of industrial chain cooperation when promoting the transformation of green logistics packaging. The coordinated development and joint promotion of production, logistics, sales and other links are crucial to the green logistics packaging transformation of enterprises, and cooperation and communication between enterprises need to be further deepened.

Third, the uncertainty of the policy environment also affects the transformation of enterprises into green logistics packaging. The formulation and implementation of policies will directly

affect the investment and development of enterprises, but changes and adjustments in policies will also create uncertainty and impact on the green logistics packaging transformation of enterprises. Therefore, the stability and predictability of the policy environment are crucial to the green logistics packaging transformation of enterprises.

Finally, with the development of science and technology and changes in the market, the transformation of green logistics packaging will face new challenges and opportunities. For example, the introduction of new materials and new processes will further reduce the cost of green logistics packaging. At the same time, the application of smart logistics technology will also provide more data support and application scenarios for enterprises' green logistics packaging transformation. Therefore, companies need to pay more attention to technology and market changes, and promptly adjust and update strategies and practices for green logistics packaging transformation.

To sum up, in the context of dual carbon goals, the transformation of corporate green logistics packaging has become an inevitable trend. Enterprises need to comprehensively consider strategies, practices, policies and other aspects to gradually promote the transformation of green logistics packaging. At the same time, in the face of new challenges and opportunities, companies need to continue to innovate and adjust strategies to achieve the goal of green and sustainable development.

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