

Discussion on the Operation of Reverse Logistics in Tourist Destinations

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Abstract: In the context of the construction of “green cultural industry”, this article starts from the actual situation of tourist destinations. Based on the principle and basis of the manufacturer's dominant advantage theory, explore the scientific operation mode of reverse logistics including recycling logistics and waste flow in tourism destinations, in order to reduce the environmental impact of tourism destinations, reduce costs and improve efficiency, and promote the sustainable development of tourism destinations.

1. Introduction

In June 2008, the world's first 24-hour uninterrupted TV channel “Green Planet Environmental Channel” was launched. In January 2010, China Travel Satellite TV also officially became a professional TV environmental protection channel. They advocate the combination of tourism and entertainment with ecological energy conservation, and bring the idea of green environmental protection into the mainstream of society.

2. The Significance of Reverse Logistics in Tourist Destinations

2.1 Reverse Logistics of Tourist Destinations under the Background of Green Culture

Tourism is regarded as an important “low-carbon industry” in the leading position of the tertiary industry [1]. The “Green Cultural Industry [2]” dedicated to the protection of natural ecological environment, as a sunrise industry with low material energy consumption, less environmental pollution, and the most creative sustainable development, mainly emphasizes “green” and “sustainable development”. However, tourism activities themselves need to consume a lot of energy, and the gathering of tourists in tourist destinations will also increase the environmental burden. Some tourism and cultural industries create huge economic wealth and social benefits for the society, but also damage the ecological environment of tourist destinations. Under the background of “green cultural industry”, only by protecting the environment of tourist destinations can sustainable utilization and healthy development be realized.

Based on the characteristics of a wide range of tourist destinations, a large number of tourists, and great social impact, we pay attention to the “flow of objects” in tourist destinations and try to find new ideas for protecting the environment of tourist destinations from the perspective of reverse logistics. It is of great significance to promote low-carbon green production and lifestyles, build positive energy scenic spots with benchmark and demonstration significance, and promote the application of green technologies.

2.2 The Status Quo of the Development of Reverse Logistics

The reverse logistics activities triggered by the movement from the downstream to the upstream of the supply chain are considered to include all resource conservation and regeneration, material replacement and reuse, and waste treatment, as well as the accompanying collection, transportation, inventory management and other logistics activities, with the purpose of re-acquisition Value or treat it appropriately.

The impetus for the rise of reverse logistics research mainly comes from national laws and regulations, and the economic and social ecological benefits of enterprises. Reverse logistics can help enterprises obtain direct and indirect economic benefits including reducing costs, establishing a

green corporate image and improving consumer relations. Many countries have passed legislation requiring companies to withdraw the use of End of Life products. The green image of producing environmentally friendly products has become an important marketing element for enterprises, and has inspired more and more enterprises.

Compared with forward logistics, the operation of reverse logistics is more complicated, requires relatively high requirements for enterprises, and requires a lot of investment. Therefore, most enterprises have not been popularized due to capacity problems. Reverse logistics has high requirements for the flexibility of information systems. Information distortion makes it difficult to balance the demand and supply of reverse logistics. The lack of modern information technology and logistics industry standard guidance by practitioners has also become a bottleneck restricting the development of the reverse logistics industry; The above-mentioned related policies are not perfect and the recycling system is not perfect, and reverse logistics has not yet formed economies of scale, which restricts the use and promotion of recycling technologies.

Since the 1990s, reverse logistics has become a global research hotspot. Research on reverse logistics has mainly focused on network design, cost analysis and reduction, decision-making models, inventory management, information systems, government positioning, corporate measures, remanufacturing systems, etc. [3]. Scholars mostly use qualitative methods to optimize the network structure of reverse logistics by using operations research techniques, and lack the overall grasp of reverse logistics management and operation and in-depth research methods and mathematical models. (For example, Savaskan et al. [4] conducted a comparative analysis on the efficiency of different structures of a reverse supply chain composed of a manufacturer and a retailer); lacked an overall grasp of the management and operation of reverse logistics, and lacked specific environmental and geographic information Under the conditions, the targeted implementation mode of incorporating reverse logistics into the closed-loop supply chain is discussed.

3. The Content of Reverse Logistics in Tourist Destinations

In most closed tourist destinations, the main activities of tourists include entertainment, shopping, traveling, eating, traveling and living. The demand for reverse logistics in tourist destinations is usually brought by the domestic waste that maintains the normal operation of the catering or accommodation industries in tourist destinations, and a very small part comes from other commercial outlets and projects under construction [5].

The paper and wooden packaging bags, glass containers, metals and textiles brought by tourists in tourist destinations still have a certain use value. Reverse logistics activities organize the collection, transportation, and classification of them, and convert them into useful raw materials or Materials and re-enter the production and consumption fields for production or circulation in order to realize the full and effective use of their surplus value. It is usually referred to as the recycling logistics of tourist destinations. Collect, transport, classify and burn or bury wastes such as peels, food residues and other wastes that are no longer of use value and cannot be reused by tourists in tourist destinations during their play, so as to reduce the environmental impact of tourist destinations. The logistics that causes negative impacts are referred to as tourism waste logistics.

Most tourist destinations are located in natural areas with better climate and environment, and the population density is low, and there are not many permanent residents. The bio-energy reserves are sufficient, which provides more favorable conditions for the ecologically sound treatment of waste; compared with cities , The types of reverse logistics products produced by tourists in tourist destinations are more single and less difficult to deal with; tourist attractions with fee types mostly rely on engineering measures or rely on natural geographical locations to adopt closed management forms, and all tour and service facilities are included in In the closed area, more controllability is added to the energy flow and material circulation within the tourism ecosystem.

4. Construction of Reverse Logistics Operation Mode in Tourist Destinations

4.1 Construction Background

In recent years, under the wave of green cultural industry construction, many government departments have raised reverse logistics to a new level. The Chinese government has proposed a number of laws and regulations such as the Law on the Prevention and Control of Environmental Pollution by Solid Waste and the Management Measures for the Prevention and Control of E-waste Pollution to guide enterprises and other market economy entities to increase environmental awareness and promote the construction and development of reverse logistics.

4.2 Principles and Theoretical Basis of Construction

Reverse logistics in tourist destinations starts from the competitive strategy of maintaining the environment of tourist destinations, taking into account the cost and profit of enterprises, pursuing minimal resource consumption, minimal impact on the environment, reducing processing time, realizing rapid customer response, reducing reverse logistics costs in the supply chain and increasing profits.

Studies have shown [6]: After quantitative analysis and comparison of the number of products recycled in reverse logistics and the manufacturer's maximum profit, it is found that when the recycling of waste products can obtain profits, the manufacturer's recycling and the seller's recycling. In the four different operation modes of manufacturer processing, consortium recycling and third-party recycling, manufacturers can directly recycle and process waste products to recycle more waste products and maximize profits in the supply chain; while recycling and manufacturing through sellers. The effect of the business processing model is the second. And in the process of the cooperative game of reverse logistics activities, the profit distribution ratio of the leading enterprise and the subordinate enterprise is always 2:1; at the same time, as the number of participants in reverse logistics increases, the greater the loss of the entire reverse logistics recovery chain; but the greater the cooperation relationship. Closer, the greater the number of recycling and maximum profit of the dominant company.

4.3 Construction of the Operation Mode of Reverse Logistics in Tourist Destinations

Circular economy can achieve a win-win situation for economic development and environmental protection. While improving production efficiency, it can minimize resource consumption and environmental impact. As a node in the reverse logistics closed-loop supply chain, tourist destinations are mainly the areas where sales and consumption links occur. The reverse logistics products produced are mainly recyclable logistics containing recyclable products and waste logistics with non-recyclable garbage as the main body. Each link and node in the supply chain has its own characteristics, and its advantages and disadvantages are different. Whether to include them in the logistics loop of the closed-loop supply chain and what role they play are the core of our discussion.

4.3.1 Constructing the Design of Reverse Logistics System in Tourist Destinations

The reverse logistics operation mode of tourist destinations is further developed on the basis of the traditional forward logistics mode. While developing forward logistics, namely "purchasing-manufacturing-entity distribution-consumption", reverse logistics formed by recycling of waste products and recycling of renewable resources will form the basis of "green collection of raw materials-ecological design-cleaner production-green consumption". "Recycling and reusing" recycling logistics operation mode effectively integrates forward logistics and reverse logistics.

Combined with the specific actual situation of the implementation of reverse logistics in tourist destinations, this article proposes the basic structure of the operating mode of reverse logistics in tourist destinations (see Figure 1).

4.4 Constructing Reverse Logistics Operations in Tourist Destinations

In Figure 1, recyclable items and non-recyclable garbage generated by consumers in tourist destinations are processed through different reverse logistics channels.

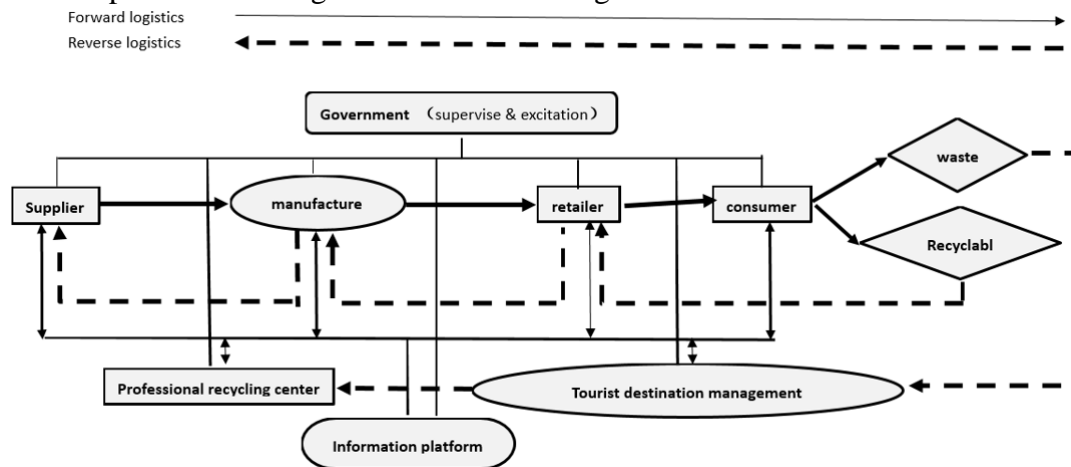


Figure 1 reverse logistics operation diagram of tourist destination

4.4.1 Recyclable Logistics in Tourist Destinations Adopts a Collaborative Operation Mode Led by Manufacturers and Subordinated by Sellers

Since the leading processing mode of manufacturing enterprises is more in line with the green economy requirements of closed supply chains, and is more conducive to the implementation of extended responsibilities of producers, manufacturers, as the core enterprises of the closed-loop reverse logistics supply chain, have an impact on the entire life cycle of products, especially recycling and recycling. And the final disposal is responsible. Manufacturers incorporate in product design that affects the recycling price, recycling quantity, and recycling effort of waste products, and organize the implementation of reverse logistics, which is conducive to achieving economic benefits and maximizing profits. In practice, tourist destinations are mostly closed-end management. Tourism companies have invested in management and coordination functions in the closed-loop supply chain. Under the organization, coordination and management of the tourism destination management center, the mature sales network of tourist destinations can be combined with the recycling network. Due to the overlap, sellers have more convenience and advantages in the recycling of items. Combined with the consideration of the scale effect and cost control of reverse logistics, the cooperative operation form of manufacturer-led and seller-subsidary is more in line with the operational needs of recyclable logistics in tourist destinations.

The core manufacturing company takes the lead and is responsible for the overall design, and the tourist destination seller as a subsidiary company undertakes the work of collection, summarization, classification, storage and integration. Under this mode of operation, the sellers will collect, sort, sort, and store the recyclable items in the tourist destinations according to the manufacturer's design and requirements, and store them for a short period of time. Then, the recyclable products will be recovered in batches according to the plan. Send it back to the manufacturer node, and the manufacturer will re-enter the directly usable items into the production process for recycling, and the unusable items will also be sent back to the raw material supplier node according to the planned and batched forward logistics. Re-enter the supply chain cycle for processing and recycling.

4.4.2 Tourism Waste Logistics Adopts the Cooperative Operation Form of Tourism Management Center and Professional Logistics Recycling Enterprises

Regarding the non-recyclable garbage generated by consumers in tourist destinations, the main purpose of waste logistics is to collect, sort, process, package, transport, store and send them to special treatment sites for harmless treatment. Prahinki [7] et al. qualitatively pointed out that outsourcing reverse logistics to a third party can reduce costs and improve operational efficiency and service levels. Therefore, as a core enterprise, the tourism management center, through the

management mechanism of closed tourist attractions, refers to environmental systems and environmental regulations, formulates requirements and rules for manufacturers, sellers, and consumers, and uses its own environmental sanitation management system. Carry out waste recycling, sorting, and temporary storage. At the same time, it cooperates with professional recycling centers to transfer waste to professional recycling companies for harmless treatment and then turn waste into resources. The tourism management center is the core leading enterprise and cooperates closely with professional recycling enterprises to achieve a profit ratio of 2:1, and the economic effect of maximizing the number of recycling and profit.

4.4.3 The Role of Government Departments and Supply Chain Information Platforms

In the reverse logistics system of tourist destinations, government departments have always been responsible for the supervision and incentive functions of various implementation entities. The information platform on the supply chain also runs through all the nodes and links of the closed-loop supply chain of forward logistics and reverse logistics, tracking the flow of material resources in the supply chain to support real-time information sharing among nodes, reducing costs, and improving reverse Logistics efficiency, and necessary statistics and analysis, so that all parties can adjust their plans in time to meet the needs of sustainable development.

5. Conclusion

In the context of green culture construction, in view of the recyclable logistics and waste logistics caused by the main domestic wastes in tourist destinations, combined with the reality that tourist destinations are mostly closed-end management, the manufacturer is led and the seller is the subsidiary company. The coordinated recyclable logistics form and the third-party waste logistics form led by the tourism management center in cooperation with professional recyclable companies have established a reverse logistics operation mode for tourism destinations. Implementation of tourism enterprises to participate in the reverse logistics operation of the “closed loop” supply chain, and harmoniously interact with the logistics industry, in order to realize the recovery and reuse of resources and the sustainable development of tourism destinations.

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