# A review of Tourism Supply Chain based on the Perspective of Sustainable Development

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# Abstract

In this paper, the theory of traditional manufacturing supply chain management is applied to the study of tourism supply chain. Based on the view of sustainable development, a large-scale relevant literature review concerning tourism supply chain and sustainable supply chain is performed, in which current situation and deficiency are reviewed. In order to solve the problem, this paper tries to discuss and establish a new sustainable supply chain pattern, in which tourist attractions are taken as core enterprises. Furthermore, this paper tries to find an optimization strategy to do facilitate long-term sustainable development of tourism and improve the tourism industry profitability and competitiveness

Keywords: tourism supply chain, sustainable development, core enterprise

# 1. Introduction

As the environment problem is becoming increasingly serious, the concept of sustainable development springs up, which is put into the research of supply chain management by a growing number of scholars and they devote to the coordination and optimization of economic, social and environmental benefits. In the early research of tourism supply chain, travel agencies are core enterprises having the function of comprehensive coordination. (Wang Kewen, Xu Huiqi, 2012). However, as travel ways change and e-commerce platforms develop, travel supply chains have had more problems, in which travel agencies are considered as cores. Based on the perspective of sustainable development, tourism supply chain development and tendency are revaluated and tourism supply chain of scenic areas is built as the core enterprise in this paper. In the next step, suggestions and strategies for scenic areas to have a role to play are introduced, so as to optimize the sustainable tourism supply chain structure. Discussing the development, design, marketing and service of the sustainable development strategy will be beneficial for the implementation and operation of sustainable tourism supply chains, which will do facilitate long-term sustainable development of tourism.

# 2. Supply Chain and Tourism Supply Chain

Based on the supply chain of traditional manufacturing, scholars put forward the concept of tourism supply chain in combination with tourism' s comprehensive features. In order to regard the whole service process of tourism as the collaboration system, resources share of enterprises in chain is emphasized on one hand. On the other hand, integral application of internal and external resources is underlined, which can reach the maximum utility (Stephen Hare wood, 2008). Foreign researches concerning tourism supply chain have gradually focused on economic globalization, IT development and sustainable development etc.

#### 2.1 Concept of sustainable supply chain

Based on the idea of green supply chain, the research of sustainable supply chain management was started in 1990s by Drumwright who suggested that enterprises should have the sense of social responsibility. In other words, enterprises should focus on social efficiency when they pursue economic efficiency and organize procurement, manufacturing and consumption in accordance with supply chain management ideas of sustainable development and environment protection (1994). Carter and Rogers proposed that sustainable supply chain management is a strategy integration of organization' s social, economic and environmental objectives, thereby increasing long-term benefits between enterprise and supply chain (2008).

## 2.2 Concept of tourism supply chain

As a net composed by suppliers, operators, tourists and other relevant organizations, tourism supply chain purchases various resources that the tourism industry requires and transfers to core service and support, which will be finally provided to tourists (Wang Xifang, 2012). The existence of tourism supply chain is determined by the comprehension of tourism products; single travel agency cannot supply all products and services, which can only be realized by the coordination of various relevant enterprises.

## 2.3 Features of tourism supply chain

When compared with traditional manufacture industry supply chain, tourism supply chain is characterized by complexity, high risk and difficulty in quality control (Yang Li, 2013). (1) Complexity: the comprehension of tourism products leads to the complicated process of supply chains and every process emphasizes quantity and quality coordination, allocation and reasonability of resource utilization. (2) High risk: tourism is a high correlation industry; relevant factors are irreplaceable and complementary. (3) Uncontrollable quality: the service quality of catering, accommodation and transportation suppliers is facing the challenge and it is difficult for travel agencies to coordinate semi-finished tourism products and control product quality.

### 2.4 Situation and problems of tourism supply chain

Domestic tourism supply basically satisfies the needs of tourists. However, the rationality of allocation still needs be optimized. Tourism products always lack specialties and innovations, which has caused intensive market competition and thus over-supply occurs. On the other hand, in-depth tourism, experiential products and high class supplies are insufficient. Individual travelers are growing very fast and they can obtain information and arrange their own trips on the internet. Based on the tourism supply chain ideas, an increasing number of scenic spots build comprehensive marketing and reception systems; from their own e-commerce platforms, they get in touch with their tourists directly and supply them with accommodation, catering and entertainment. Meanwhile, travel agencies have gradually lost their leading positions in the market. In addition, diversified tourism supply chains have adapted personalized tourists' requirements.

Regarding travel agencies as the core, traditional tourism supply chains mainly undertake the work of resources integration, organization and coordination and they are the cement of various relevant enterprises. During the actual operation, travel agencies are provided with complicated default risks and they are hard to respond to market changes. At the same time, travel agencies pay attention to short-term benefits and ignore the reception ability of scenic spots, which will result in the damage to the environment and have an influence on tourists' experiential contentment. In other words, as travel ways transfer and e-commerce develops, competition occurs between travel agencies and suppliers and the problems of travel agencies' low operation efficiency and lack of ability to coordinate and integration become increasingly apparent.

#### 3. Towards a sustainable tourism supply chain

#### 3.1 Sustainable tourism

As the key factor of tourism economic development, tourism resources are limited and nonrenewable; the environment cannot recover any more once destructed. Two concepts are involved in sustainable tourism. On one hand, tourism planners need to develop and manage tourism activities from the perspective of long-term development. On the other hand, tourists should reduce the damage to the environment while traveling. The main content covers the ecological awareness of the tourism industry, environment protection during the process of development and utilization; scenic spots' living quality improvement and economy increase. Moreover, tourists have the responsibility to protect the culture and environment of scenic spots, support educational and medical programs; reduce the damage to ecological environment and choose low-carbon transportation.

# 3.2 Tourism E-commerce

E-commerce development, net platform construction and mobile APP popularity have changed the way to deliver and obtain information and had a great affect on enterprises' management strategies of tourism supply chains. In addition, the core of the supply chain has been transferred. The deal of tourism has been realized without time and space limitation and travelers can deal with suppliers directly, so as to obtain overall

information. For those tourism enterprises, collecting and analyzing travel information is beneficial for making scientific decisions, understanding tourists' requirements, improving products and services and enhancing overall travel experiences.

# 3.3 Green Tourism Supply Chain

Building green tourism supply chain requires to examine and evaluate the manufacturing process of various enterprises in the supply chains. Accordingly, the source to the disposal can be coordinated and controlled in a green supply chain. Combining tourism supply chain, the evaluation index should cover tourism materials' design, maintenance, marketing and consumption (Zhang Shuhai, 2007).

# 4. Optimization strategies of sustainable tourism supply chain

With the popularity of sustainable development perspective, the society focuses more on environment problems and sustainable development becomes enterprises' inevitable choice.

# 4.1 Building tourism supply chain with scenic spots as core enterprises

Research concerning sustainable supply chain management demonstrates that through contact and coordination, core enterprises play a leading role in supply chain operation. There are two major features: 1.acting as the information exchange center, logistics center, financing center and planning center in supply chains; 2.having a certain influence, attraction and fusion faculty. According to the above points, it can be said that the scenic spot can be the core enterprise. Besides, regarding the scenic spot as the core can change supply chain structure and process and optimize manufacturing and service process, which will benefit supply chains' overall competition.

In addition, scenic spots have a direct impact on rational and sustainable development process. With the popularity of information technology and environment protection awareness, the research direction of tourism supply chains gradually focuses on globalization, IT and sustainable development. Under the background of globalization, new tourism middlemen participate in and national policy continuously opens inbound and outbound tourism and perfects; under the condition of informatization, IT promotes tourism information management systems, transportation information collection and utilization and APP development. Therefore, according to former scholars' theory, sustainable tourism supply chain is built in this paper, which regards scenic spots as the core, as illustrated in the following image:

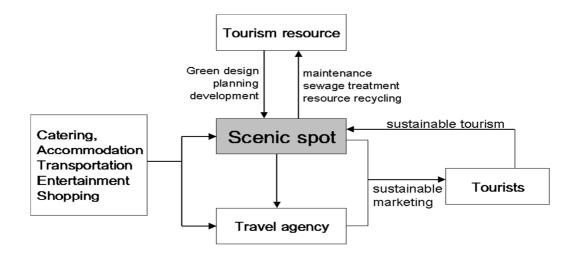


Figure1. Sustainable tourism supply chain with scenic spots as core enterprises

- 4.2 Optimization strategy of scenic spots as the core of tourism supply chain
- 4.2.1 Scenic resources development and management
- (1) Scenic spot development and exploiting: bring scene protection institutions into decision-making teams, such

as Cultural Relics Bureau and Environment Bureau; obey the principles of protection before development and reasonably plan scenic spot resources development.

(2) Scenic spot design and construction: focus on environment protection while constructing the infrastructure, including the design of roads and catering & commerce facilities. Enterprises should perfect sewage treatment systems and pay attention to green design and environment education infrastructure constructions (Lu Ke, 2006).

(3) Scenic spot management and maintenance: during the daily operation management, enterprises should take the bearing and reception capacity of the scenic spot into consideration, control the number of tourists and make maintenance plans for resources, facilities and landscape.

## 4.2.2 Marketing and interactivity of scenic spot

(1) Sustainable marketing of scenic spot: tourism enterprises are required to have social responsibilities. Besides, perfect information service network of tourist service center positively. By means of official website, promote products and establish good destination image.

(2) Constructing e-commerce platform: transfer the core of supply chain from the travel agency to the scenic spot. Attract tourists through online interactivities, which can also help suppliers understand tourists' needs; provide pre-sale service, preferential information and product package optimization, as well as other ways to attract tourists to create sales opportunities. Meanwhile, reduce the propaganda cost of the entrusted agency; update relevant accommodation, catering, transportation information for self-service travel and individual group to provide full and accurate information.

(3) Sustainable tourism consumption: strengthen consumption education on tourists; reduce tourism resources destruction in the whole tourism activities. On the other hand, respect and protect the custom culture of the tourism spot.

4.2.3 Enhancing supply chain flexibility

(1) Guided by tourists' demands: collect and analyze tourists' demands and feedback, design products with high quality and satisfaction, pay a quick response to demand changes, reach the balance of demand and supply and increase tourists' satisfaction for supply chains.

(2) Break the barriers between administrative regions: make tourism planning and strategy from the perspective of integrity; integrate tourism products and resources through the cooperation between regions, so as to avoid parity tourism products. Build sustainable tourism supply chains; create a good environment of information and communication, so as to improve profitability and participation.

# 5. Conclusion

The concept of sustainable development is the inevitable choice of supply chains management. For tourism industry, all the enterprises in the supply chains should be responsible for travel resources protection and long-term development coordination. Based on the perspective of sustainable development supply chain, a number of optimization strategies are suggested for green consumption in this paper, which includes tourism resources development and design, daily operation management, product marketing and culture promotion. Besides, these practices can further examine the research in the future and improve the situation of core enterprises, so as to reach the balance of economic efficiency and environment protection. Also in further research can discuss the mobile e-commerce marketing and integrating method of scenic spot, which to enhance profit capacity and supply chains' competitiveness, and then promote tourism' s sustainable development.

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