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## **IMPACT OF SUPPLY CHAIN MANAGEMENT IN SUSTAINABLE DEVELOPMENT OF TOURISM- A STUDY ON SANTINIKETAN**

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### **ABSTRACT**

In this paper, we address the relationship between the supply of products from firm level to different tourist spot to increase the availability of the product as per demand base and the impact of Supply Chain Management (SCM) in the context of Tourism. The impact of SCM in case of manufacturing industry has been researched over few decades, but the study in the case of service industry like Tourism is very limited. While doing so, we have studied the supply chains of tourism for Santiniketan with a special attention to sustainability factors. The current work emphasizes on the enhancement of the local tourism through uninterrupted activities of SCM, developing the socio-economic structure of the tourism through flow of proper SCM. We concentrated on the development of the home-stay approach in tourism by providing all the necessities with home like atmosphere and home like food through the proper logistic channel. Basically Sustainable Supply Chain Management (SSCM) encloses the trend to use purchasing policies and practices to facilitate sustainable development at the tourist destination. Here, we focused on the characteristics of tourism products, and identified and explored core issues and tried to redefine the concepts of Tourism Supply Chains (TSCs) and Tourism Supply Chain Management (TSCM). The present work examines the challenges of environmental aspects of sustainability for the service sector logistics- encapsulating the activities of tour operators and suppliers, such as accommodation, transport, food and craft and other activities across the whole supply chain and recommendations are made for maintaining the sustainability.

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**Keywords:** Supply Chain Management, Tourism Supply Chains, Tourism industry, Sustainable Supply Chain Management.

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### **1. INTRODUCTION**

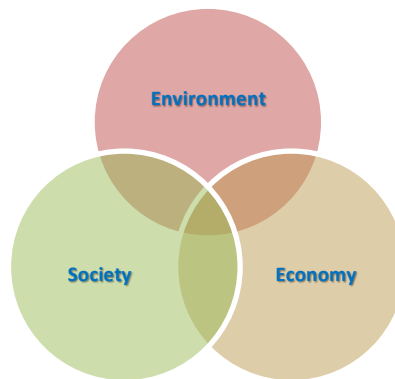
The Business Strategies of any enterprises changes according to the change with the market condition. This leads to a continuous change in the field of Production and Operations Management. As a result, a new customer-centric strategy has been developed. It replaced old enterprise-centric strategy and opened up a series of new areas in production and operations management in the 1990s such as Product Lifecycle Management (PLM), Enterprise Resource Planning (ERP), Customer Relationship Management (CRM) and Supply Chain Management (SCM).

"Tourism denotes the temporary, short term movement of people to destination outside the place where they normally live and work and their activities during their stay at these destinations". SCM is a long-standing concept and is an important management ideology and method in production and operation management. "Supply chain management (SCM) is the process of planning, implementing, and controlling the operations of the supply chain as efficiently as possible. Supply Chain Management spans all movement and storage of raw materials, work-in-process inventory, and finished goods from point-of-origin to point-of-consumption". ([wikipedia.com](http://wikipedia.com)). Initially, SCM dealt with the logistics management between organizations only. Later the concept has been changed and SCM started focusing different scenarios using complex approaches, rather than simple profit maximization or cost minimization. For example, the concept of sustainable development has integrated with SCM which create many new trends in the academic field like Sustainable Supply Chain Management (SSCM). SSCM adds sustainability into existing SCM process to consider social, economic and environmental impacts of business activities.

Research on SSCM has so far focused on manufacturing industry (Green et al., 1998; Zsidisin, 1998; McIntyre et al., 1998; Young and Kielkiewicz-Young, 2001; Min and Galle, 2001; Zhu and Sarkis, 2004; Preuss, 2005; Handfield et al., 2005; Rao, 2005; Roy and Khan, 2010) rather than service sectors. We, in this paper focus on service sector like tourism industry and study the challenges and potentials for transferring the concepts of SSCM from the manufacturing industry to the tourism service sectors. SCM in tourism starts with planning of a product. The success of every enterprise depends on its supply chain partners (Lippmann, 1999). Basically, SCM deals with the management of the raw material, inventory of raw material and delivery of the services to each sector, identifying the different sectors to be covered.

During the economic globalization process, the service industry has increased quickly. Service industry got importance in the economic growth of any country. Service supply chain was developed by Ellram in 2004. Basically it includes process management, information management, competency management and service preference etc.

In the year 2007, Linton proposed Sustainable supply chain management. Seuring and Mueller (2008) and Carter and Roger (2008) and some other researchers have carried out the research one step ahead and defined sustainable supply chain management from the economic point of view at different level of management including logistics service supply chain, hotel supply chain, product design and retailing supply chain (Sampson & Spring, 2012; Wang et al., 2015; Hussain et al., 2015; Liu et al., 2016). Recently, research on supply chain management has shifted to green supply chain or sustainable supply chain management. These studies are based on Triple Bottom Line (TBL). TBL is an integrative approach, mainly consists of economic bottom line, environmental bottom line and social bottom line. Here, in this study, with the consideration of TBL, we focus on the sustainable service supply chain management (SSSCM) and try to optimize the whole service supply chain's economy, environment and social performance based on Santiniketan.



**Fig 1: Triple Bottom Line (TBL)**

After going through the entire literature and some informal questionnaire we can conclude the entire tourism supply chain management through following valuable points.

- Business Strategy changes according to market condition (Various luxurious hotels are under construction to meet the new weekend tourism concepts among urban people)
- Enterprise-centric strategy  $\rightleftharpoons$  customer-centric strategy  $\rightleftharpoons$
- SCM + Sustainability Development = SSCM Sustainable supply chain management adds sustainability into existing SCM process to consider social, economic and environmental impacts of business activities.
- Research on SSCM has so far focused on manufacturing industry rather than service sector.
- Focus on service sector (Tourism Industry)
- Economic globalization  $\rightleftharpoons$  Service industry developed  $\rightleftharpoons$  Service Supply Chain (Ellram, 2004)  $\rightleftharpoons$  Sustainable supply chain management (Linton, 2007)
- Triple Bottom Line (TBL)- integrative approach consists of economic bottom line, environment bottom line and social bottom line

#### **Objectives:**

Though our main objective is to identify and analyze the main factors those are highly responsible in developing supply chain management to enhance the overall development of tourism in Santiniketan. Some other objectives are

1. To enhance the local tourism through uninterrupted activities of SSSCM.
2. To develop the socio-economic structure of the tourism through flow of proper SSSCM.
3. To develop the home-stay approach in tourism by providing them all the necessities with home like atmosphere and food through proper logistic channel.

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## **2. METHODOLOGY**

The authors conducted exploratory research amongst mainly West Bengal and some National level tour operator. This is used to locate examples of existing tourism supply chain initiatives from different parts and at different points in the supply chain. We review industry relationship particularly of those organizations that are interested in sustainable tourism.

Study of a wide range of documentary information (websites and industry literature) mainly from state and national level tour operators, tours operators supporting their members in implementing SSSCM, and different organizations engaged in tourism including Government itself.

The study took a semi-structure approach. We used paper review method which is mainly consists of three steps: (1) Source identification; (2) Source selection and extraction; and (3) Source evaluation. Themes are based on the analysis of SSSCM theory in the literature with the perspective of Santiniketan. It covers attitude towards sustainability. It also tells about action, method and procedure are to be taken care of to implement SSSCM initiatives and the impact of the whole system.

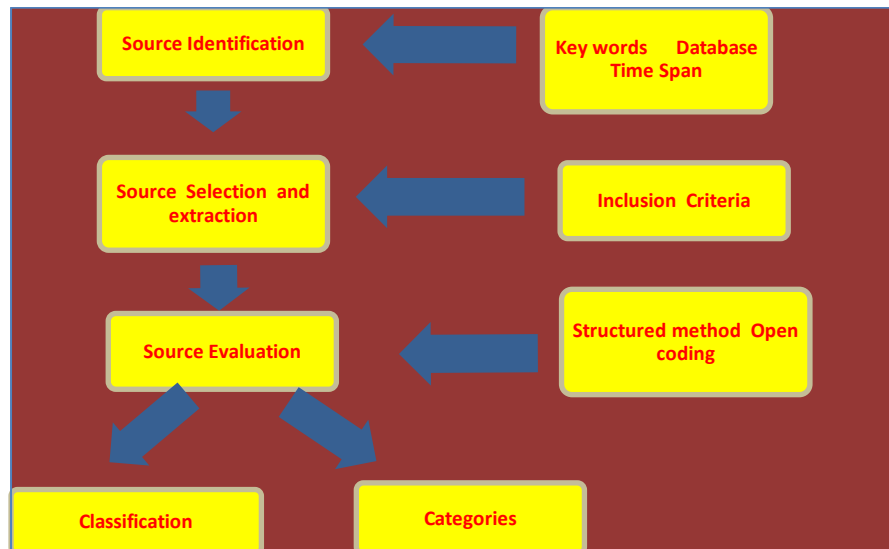


Fig 2: Methodology

### 3. RESEARCH ANALYSIS

The result of the study found was substantial. It covers a wide range starting from the increase in the proportion of local goods and service used in the tourism sector, to working on environment and socio-cultural issues. In the study of Santiniketan we found a wide range of good practice. Only few of these are specifically demanded by tour operator. But these practices may fit with the sustainability policies and can make an important contribution to certain aspect of tourism.

The authors analyzed the results keeping in mind the four key sectors of the tourism supply chain –transport, accommodation, foods and crafts, and destinations. Numerical measurement is not appropriate to the exploratory nature of the research though all the common practices are indicated to analyze key trends.

#### Transport:

If the tourists do not experience comforts while travelling or while coming to the destination, all ingredients of tourism product will fail. The tourist should be offered safe, fast, convenient and economic transport services. Basically it is not possible to build an airport in each and every tourist sites and at the same time all the tourists cannot avail air services. Hence other transportation facilities like railways and road transport facilities become significant. Rail and roadways should be prepared and develop in a planned way so that speed and schedule can be maintained.

As we are dealing with sustainability issue, tour operators do not have the ability to influence the sustainability of air transport. Only the air transport operator can do it by running the newest aircrafts, with high load factors to ensure lower impacts per head. But it is very difficult to reduce environmental cost due to high carbon dioxide emission from air transport. The operator should use carbon offset scheme. In this scheme the carbon dioxide emission can be measured and minimized through offsetting by promotion of reforestation projects or investing in renewable energy supplies. We should concentrate more sustainable forms of transport i.e. train travel and water transport. As for our case of Santiniketan there is no coast line or back water or any big river areas, we cannot consider another sustainable form of transport i.e., water transport. Rail transportation needs to develop with special attention.

Bolpur is the railway station for Santiniketan. It is two to three hours by train from Kolkata. Convenient connections are 13017/13018 GanaDevta Express departing Howrah at 06:05, 12337/12338 Shantiniketan Express departing Howrah at 10:10 (this is the only train which originates/terminates in Howrah and Bolpur, so one has a better chance of finding seats on this train rather than the other trains if one buys unreserved tickets. 12347/12348 SahidRampurhat Express departing Howrah at 11:55, 13011/13012 Malda Inter-city Express departing Howrah at 15:25, 15657/15658 Kanchenjunga Express departing Sealdah at 06:35, 12345/12346 Saraighat Express, 53047/53048 Visvabharati Fast Passenger, 13071/13072 Jamalpur Express, 53041/53042 Darbhanga Passenger are other good trains. Female traveler can look for designated "Ladies Compartment" to enjoy a more comfortable and hopefully less crowded ride.

Santiniketan is well connected by roadways all around. From Kolkata, if we want to go by bus, Kolkata-Asansol bus or Kolkata-Suri bus can be taken. For Asansol bound bus we have to get down near Panagarh and for Suri bound bus we have to get down near Ilambazar and for both cases we have to catch another bus for Santiniketan.

Santiniketan is connected with Kolkata by an excellent road (Around 70% road is excellent 4-lane way). From Kolkata travel to Dankuni and take the Durgapur Expressway. It is now part of NH2. Travelers can enjoy the beautiful highways by pleasant car ride. It will bypass Saktigarh and Bardhaman. Crossing Bardhaman (NababhatMor) turn right. After that the highway passes Gushkara and crosses the Ajay river and proceed towards Santiniketan. Santiniketan is 162 km from Kolkata by road. Good drivers can cover the distance in about 3 hours.

#### **Accommodation:**

Accommodation facilities are found to be another important aspect of Tourism product. A good supply chain management starts with hotel operator knowing the upcoming business demand. Optimum inventory management is required to minimize the cost. Classified and unclassified hotels of different grades or stars are to be easily available to the tourists. Otherwise unplanned development of accommodation sector can hamper the quality holiday experience of the tourist. To accommodate the tourists of all segments there is a strong need to develop hotels of different grades and categories. The accessibility and comfort of user is very important factor in accommodation. On the other hand quality service and personal attention are also significant.

From the sustainable point of view, instead of big hotels from big hotel chains or group of hotels, we will prefer to use locally owned small hotels, which meet their sustainability requirements in which small properties, local food and contact with local hosts are a key part of the tourism product. Smaller accommodations generally take less action on environmental issues. They are especially in more remote destinations, use solar and wind energy. They focus on the reduction of costs from energy, water and waste and emphasis on sustainable tourism activities.

This is the high time to think about the renewable energy technology, energy saving devices, water saving devices, recycling waste water and waste management. Those actions will help to reduce operating costs as well as improving environmental performance but unfortunately laser attention has been given to this area so far.

Santiniketan and the surrounding areas offer some accommodations such as Santiniketan Tourist Lodge (West Bengal Tourism Development Corporation), Bolpur; Hotel Camellia, Prantik; Chutti Holiday Resort, 241 Charupalli, Jamboni (off Sriniketan Rd); Jiraan-Theretreat; Manashi Lodge; Bolpur Lodge, Bhubandanga; Hotel Royal Bengal, Bhubandanga; Park Guest House; Hotel Rangamati, Bhubandanga; Mark & Meadows Resort, Sriniketan Rd (GurmukhJethwani); Rater Tara Diner Rabi Guest House (Star at Night, Sun During Day), Tinni House, PhulDanga, Talor Rd, Behind PHE Bungalow; Country Roads Home Stay, Adjacent to Mela Math; Krishna Chura Homestay, Purbapally, Shantiniketan, Bolpur; Monpakhi Homestay, Simantapalli, Near Santiniketan Nursery; Raktokorobi Karugram Ruppur, Bolpur (7 km from SurulMor); Santisudha, Sonajhuri, Amar kutir Road (Behind Saturday's AnnyaHaat); Kheyatori, Kheyatori, KabiJoydeb Rd, Daronda (Near Bonovilla Bus Stand, Daronda Village).

Government statistics put the daily inflow of tourists in to Santiniketan at around 3,500 per day; but during major festival such as Pous Utsav, Basanta Utsav, Rabindra Paksha, and Naba Barsha it goes up to an average 40,000 per day or more. Obviously, many of them do stay back in Santiniketan, which has 85 lodges with accommodation for 1,650. So there is a lack of accommodation for that time. Taking this opportunity home stay approach can be developed. Basically, home stay is a very good sustainable approach where local people will accommodate tourist in their house, provide them all the necessities with home like atmosphere and homemade food which will develop the socio economic structure of the area without hampering the environment.

#### **Food and crafts:**

Local food and crafts is one of the tourist attractions of any tourist spot. It can generate a good amount of profits for the local people. But for making local food and crafts popular volume of production and delivery at set quality standards can be met by local producers. Key issues for local sourcing of food supplies in the tourism sector are quality, reliability and quantity of supply. Therefore training, technical support and investment are required to promote local sourcing. Local sourcing and production will improve the contribution of tourism to the local economy, both financially and in terms of employment. It also helps to preserve local skills in craft production.

Santiniketan itself is famous for its Handicrafts, Batik prints, leather craft. A favourable time for shopping is during the "Pous Mela". The Mela attracts lakhs of visitors, both for the amazing range of interesting crafts it showcases as well as the relaxing rural ambience of the Mela grounds. 'Kantha stitch' is one of the unique style of embroidery associated with Santiniketan. 'Sudha Karu Shilpa' in Andrews palli, hand made Batik works are available at "karu-shangha, an organization founded by Nandalal Basu for the house wives, who are ex-students of kala-bhavana Santiniketan, 'Amar Kutir' in Sriniketan. 'Basundhara' in Sonajhuri palli offer quality kanthastitchwork in the form of Sarees, Dupattas etc. Apart from that handicrafts like dokra (artistic brassware from nearby Dariapur), bamboo toys, leather bags, and locally handwoven cotton are also available.

#### **Destinations:**

In tourism supply chain destinations provide infrastructure and services. Basically it includes ground handler, representatives, excursions and activities. Destination initiatives for sustainable tourism seek to improve the quality of infrastructure. A number of examples of good practice on sustainability issues in this sector were identified. Activities are often depending on environmental quality and high degree of cultural interaction. But unfortunately there is no method of assessment the impact of activities. So the operator should emphasize the importance of selecting supplier based on community and workforce issues. They should have in-depth local knowledge and should promote to visit to community projects or local tourism enterprise. Operator should also follow environmental policies regarding issues such as- for example, through improvements to waste management

infrastructure for solid wastes and awareness raising programs on waste management practices, to transport systems and to reduce vehicle impacts and to increase the ability of the destination to gain from tourism. There should be a wider range of promotion of different activities to encourage tourists to take part in those activities. This will diversify and spread the economic benefits of tourism in different sector of the society.

Operators are often unwilling to undertake poorly managed products, which are otherwise popular with customers. There must be some initiatives on training on sustainability for representatives so that they can give information to customer on issues affecting the local environment and culture, and how to minimize negative impact.

Santiniketan has a great scope in excursion and activities such as Tagore's ashrama. The area has several buildings associated with the Tagores - Santiniketan building, Nutan Bari, Dehali etc. School classes and major functions are held in the AmraKunja(mango grove). Some of the VisvaBharati institutions are also located here. To maintain the sustainability, tourists are not allowed to stray into areas where outdoor classes are held as they disturb studies. Others Important places are Chhatimtala, Prayer place (under the "Chhatim" tree); BrahmaMandir, RabindraBhaban Museum; Kala Bhavana. Kalo Bari beside SangeetBhavana is interesting. Uttarayan complex has several buildings associated with Tagore's memory - Udayan, Konark, Shyamali (mud hut), Punascha and Udichi. Amar Kutir, (Many handicrafts like cloth, leather, batiks, hand-loomed fabrics and similar available); Kopai river (Known as Amaderchhotonodi in many of Tagore's poems); PrakritiBhavan, (Nature Art museum) and VisvaBharati are the others places of interest.

PoushMela, The fair is held at Santiniketan from 7th-9th Poush (December 22/23-25). Tribal sports, folk songs and dances including songs by bauls, are a part of the fair and festivities. Some sort of "bhangamela" or broken fair, with some shops, continue till the end of December. Maghotsav, Anniversary of BrahmaSamaj celebrated on the 11th of Magha (25th January), with prayers and songs at Chhatimtala. VasantaUtsav, held to celebrate Holi (March). The students dance and sing their ways through Amrakunja, followed by open-air variety programmes. RabindraJayanti, the birth anniversary of Rabindranath falls on 25th Baisakh (May 8/9), the Bengali New Year (NaboBarsho) is celebrated on the first day of the Bengali New Year (PoilaBaisakh) in mid-April with songs, dances, and recitations by the students. Briksharopana planting of saplings and Halakarshana ploughing of the fields on 22nd and 23rd Sravana (August). Varshamangal, Festival of rains during August/September. Tagore was a poet of nature and some of his finest creations were about the rains.

#### 4. CONCLUSIONS

The main finding of the research work is that the SSSCM depends on the good working relationship with suppliers, organizational cultures that support the sustainability factors and the organizational resource to invest in the sustainability. So far the focus was on environmental parameter of sustainability but this is the time to spread the idea over socio-economic criteria and industry-wide approaches should be taken to encourage and support the implement of SSSCM. The main challenge is to implement industry wide approach for the existing practice. On the other hand quality is a key factor of supplier selection. This paper discusses that there are many components in tourism like accommodation, transport, food and crafts, destination etc. and there is a need for Supply Chain Management to deliver quality service resulting in satisfying experience of tourist which can only be achieved through the higher integration of services within a particular sector (intra relationship) and also amongst the different sectors (inter relationship). It is easier to develop sustainability in accommodation as recommended by our home-stay approach rather than transport, particularly in air travel. Improvements in excursion and activities, sustainability are most obvious to tourist. In sustainable production and consumption of local food and crafts the local people get maximum economic benefit.

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