The Tourism Industry Chain

Track: Hospitality and Tourism

The new competitive model changed from the conventional "business unit" to "virtual business unit". Competition is now focused on productive chains rather than on companies. This trend can be observed in manufacturing and in the competitive tourism industry as well. The tourism industry offers a series of typical services including hostelries, transports, restaurants, amusements, and requires important infrastructure, like telecommunications and logistics. This article studies this complex chain, analyzing some of its members and the interactions between them. Important aspects such as the definition of a chain's participating entities, the activities controlled and the level of managerial control are discussed.

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1. Introduction

Mostly in the last decade, a vast literature on Supply Chain Management (SCM) has been produced. Excluding sales services, and other few exceptions, much of it addresses the case of manufacturing with little attention to service industries. This lack of attention to the service industries is somewhat surprising because: (a) in the main economies the service sector is the fastest expanding and has become the largest one, (b) production and consumption are simultaneous in services, making coordination of activities among the suppliers is far more critical than in manufacture, (c) the progress in the so called IT (Information Technologies), including e-commerce, and integrated enterprise management systems, that allows and promotes SCM integration, affects essentially the managerial part of the organizations in such a way that services should profit from them no less than manufacture.

Among the services industries, tourism is, worldwide, one of the largest and fastest growing. Due to its complexity, in terms of component firms and product package, the potential benefits of SCM advancement seem to be large. Still many tourism enterprises do not seem understand the necessity and the opportunity to work together with their suppliers and customers.

The objective of this paper is to examine the concept and the structure of SCM for a service product, specifically for a tourism product, and draw some conclusions useful for guiding academic research. To achieve this objective, Section 2 briefly characterizes the SCM concept and sketches a convenient analytical framework. In Section 3, some relevant general characteristics of services are discussed, and the case of the tourism industry is further explored through an analysis having as focal entity a typical tourism operator. The last section of the paper presents some general conclusions.

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2. Supply Chain Management Framework

Though no definition of SCM is universally accepted, its characterization usually involves the idea of formally managing, across different companies, from raw material suppliers to final consumers, the entire chain of activities necessary to produce value to the final consumer. Of course, this integrative management has the objective of making the chain's product more competitive, i.e. of lower cost, higher quality, more dependable, more diversified and promptly delivered.

Among the SCM conceptual frameworks proposed in the literature, the one by Lambert and Cooper (2000) (hereafter L&C), merits special attention here because it addresses implementation issues and is based on empirical evidences. This framework was clearly based on the manufacture paradigm, and in Section 3, its application to tourism will be commented.

Three basic elements each one corresponding to a question concerning the analysis and synthesis of SCM compose the framework.

1) **SCM Network Structure**: Who are the key SCM members with whom to link processes?
2) **SCM Business Processes**: What processes should link each of these SCM members?
3) **SCM Management Components**: What level of integration and management should be applied for each process link?

Network Structure

Three primary aspects of the network are considered, namely: (1) the members of the SCM, (2) the structural dimensions of the network, and (3) the different types of business process links across the SCM.

SCM members - In principle, all firms that contribute (directly or indirectly) to the consumer product are members of the SCM. This, however, is of no practical use because it would be nonsense to try managing the immense process chain that would result. If its not feasible to consider all these firms, it is natural to integrate the management of the processes linking them only as far as this integration will result in positive marginal net benefit. For practical purpose, L&C distinguish between ***primary members*** and supporting members defining the formers as *"... those autonomous companies ... who carry out value-adding activities ... to produce a specific output for a particular customer or market."* Complementarily, ***supporting members*** are the ones that "*... simply provide resources, knowledge, utilities, or assets for the primary members...*"

Structural dimensions - The dimensions of the network have profound implications on how the chain should be managed, and therefore must be accounted for. A long chain is more likely to be difficult to manage than a short one. This first dimension is called ***horizontal structure***. The second dimension - ***vertical structure*** - tries to capture the complexity that numerous companies at each tier add to the management of the chain. The last dimension is the ***horizontal position*** that the focal company occupies within the chain. It is relevant because, from the focal company's standpoint, the relative importance of the business processes (discussed below) is a function of its horizontal position.

Business Process Links - L&C recognize that though integration is fundamental, parsimony in managing business process linkages is a feasibility imperative. How far along the supply chain, and to what extent a process should be managed, are important decisions. They depend on how critical is the process and how powerful the company is in persuading the other chain members. The framework considers the following four types of business process links: (a) *managed*, (b) *monitored*, (c) *not-managed*, and (d) *not-member*. **Managed -**

Are links that the focal company considers critical to its strategic goals and has enough power to integrate and manage. **Monitored** - Are links not critical enough to justify active involvement in managing but must be integrated and managed properly between other member companies. To safeguard its interests the focal company must monitor the process performance. **Not-managed** - Are links not critical enough to the focal company to merit any involvement in their integration and management. The focal company can trust the other member companies in integrating and managing these process links. **Non-member -** Are links that do not belong to the focal company's SCM structure but whose management have important impact on it. Exposure of sensitive information, competition for limited supplies and shorter lead times are a few of many problems that a non-member process link may bring about to the focal company chain through a shared supplier.

Business Processes

The integration of processes along the various companies that add value to the product from raw material to the delivered product, and beyond, is key to the notion of SCM. Of course, parallel to the material or service flow, there is a chain of managerial actions within each company that must be organized and linked into business processes across the various chain member companies. L&C consider the following eight business processes.

(1) Customer relationship management includes the identification of customer groups key to the organization's mission, establishing product and service agreements with specified levels of performance, identifying and eliminating sources of demand variability in cooperation with customers, and monitoring customers' satisfaction and their profitability.

(2) Customer service management operates on the interface between the company and its customers, provides a communication channel between them in managing the product/service agreement, monitoring its delivery, and assists the customers in the use of the product. It may require managed links not only with immediate customers but also with 2-tier or 3-tier customers.

(3) Demand management tries to match capacity and demand. The further in the future, and the more accurate is the information on product demand, the better are the conditions for matching capacity and demand so as to reduce inventories, and to improve service and capacity utilization. Demand management also means, whenever feasible, shifting demand peaks by stimulating (e.g. offering discounts) or inhibiting (e.g. warning customers against busy occasions resulting in long lead-times) purchases. A customer order, or a low stock level observed somewhere downstream in the chain, is a hint of future demand for upstream suppliers. Thus, in demand management the flow of demand information upstream the chain may drastically reduce lead times and safety stock levels.

(4) Customer order fulfillment, or meeting customer need dates is one of the main goals of SCM. Achieving high order-fill rates requires integration of the firm's production, and logistics no matter whether or not these activities are performed by the firm itself or by other SCM members. Following up the orders, monitoring the fulfillment performance, identifying and correcting delivery failures, and eliminating their causes requires close cooperation of the functional areas and firms involved.

(5) Manufacturing flow management is decisive for the goals of fast responsiveness to customer orders. Synchronization of the production flow, balancing capacities of the various resources, and managing the bottlenecks are key concerns. Manufacturing flow process extends to suppliers as well as to customers of the focal companies. There is no use to improve internal flow when a bottleneck exists elsewhere.

(6) Procurement requires integration with the suppliers so as to achieve adequate volume and variety flexibility, quality, and a dependable and fast flow of supplies at low cost. Strategic objectives call for different relationships with different suppliers. At the strategic level this process involves alliances with a few key suppliers with whom there is a large potential for mutual benefits from integration.

(7) Product development and commercialization - As a company narrows its focus, it becomes more dependent on its suppliers for product development, and more cooperation is necessary for achieving a competitive design and a short time-to-market. This dependency on suppliers ties this process to the procurement process. Product development and commercialization must cooperate with the customer relationship management process in identifying customers' needs. Cooperation with the manufacturing flow management is key for developing manufacturing technology and flow control system.

(8) Returns process involves identifying a new destination for goods no longer needed by the user and managing the whole process until the material reach their new destination. Returnable containers in many industries, factory servicing and overhaul of equipment, parts reconditioning, remanufacturing, and waste disposal are examples of return processes.

Management Components

The last element of the L&C's SCM framework comprises eight management components, namely: (a) ***planning and control*** of operations, refers to the degree to which planning and control activities are jointly exerted; (b) ***work structure***, i.e. how the firm, or the chain performs its tasks and activities, to what degree process management is integrated; (c) ***organizational structure***, refers to how people and their activities are organized within the company or chain; (d) ***product flow facility structure*** refers to the network structure for sourcing, manufacturing, and distributing across the supply chain; (e) ***information flow facility structure***, i.e. what kind of information flows and how it flows along the chain; (f) ***management methods,*** meaning the corporate philosophy and management techniques; (g) ***power and leadership structure***, i.e. who leads the chain directions, how much coercion is used to induce participation; (h) ***risks and rewards***, refers to how risks and rewards are shared along the chain; (i) ***culture and attitudes***, refers to how the different corporate cultures, and allegiances coexist in joint efforts and shared responsibilities.

3. Tourism (Service) Supply Chain Management

Special Characteristics of Services

Though the L&C framework focus on the manufacturing paradigm it is certainly useful for providing insights into Service SCM. Furthermore, the SCM goals of short production cycles, low inventories and focus on the consumer, bring manufacturing systems and service systems management even closer together, as will become clear from the services general properties below.

A distinguished contrast of service and good production is that while goods can usually be produced well in advance to consumption, services are consumed during or immediately after production. Another feature that distinguishes managing services from managing manufacture is that the product of services is intangible. This adds difficulty to setting standards and measuring quality, and also, makes correcting errors a task usually much more critical than in manufacture.

Network Structure of a Tourism Operator

The tourism operator considered in the analysis "assembles" and sells tourism packages directly (via e-commerce virtual agent, or through a real office) or indirectly (through a travel agent) to the consumer. The first element of the SCM framework (the network structure) comprises the primary members shown in Figure 1.

See Figure 1

The chain has two tiers of suppliers upstream from the focal company and two tiers of customers with a large vertical structure in the tier of suppliers. This last feature reflects the fact that the tourism operator "assembles" and coordinates the execution of a sequence of services. The terminal operator was included as a primary member because in some countries ports and airports conditions may have substantial effect on the end product. The car manufacturer may also be a primary member because the make of the rented car may influence the consumer evaluation of the service, and also because special promotions may involve it. Supporting members are not considered here.

Business Processes and Management Components

Customer relationship management - Tourism is a very volatile market. Fashion, exchange rates, political factors, weather conditions, and seasonal patterns are only a few of a myriad of factors that affect the demand of tourism packages. Market segmentation is key to high quality and low price products. Identification of consumers' desires and negotiating, price, block booking and other details with suppliers is a complex process that requires much expertise and talent. Therefore this process should establish managed links of the tourism operator with most SCM members. Power and leadership structure, risks and rewards, culture and attitudes are the main management components relevant to this process.

Customer service management - The tourism package can be seen as a sequence of services (rather than a flow of goods) that compound the tourist's experience. Contact with, and feedback from the consumer, are intense in pre-sale, in counter, in production, and in post-sales phases.

The consumer should have the feeling that he is dealing with a single company responsible for the whole sequence of services. This stresses the importance of some management components. Organizational structure, within and among the members bound by managed links must be efficient and compatible so that customer information is correctly interpreted and passed along the chain, triggering effective coherent actions.

To be efficient throughout the chain, this process requires compatible management methods. A client-centered philosophy must pervade the whole chain to attain a low cost, fast response, dependable, and high quality customer service. Information flow facility structure must be carefully developed so that information such as consumer complaints and requests flow fast, in the right format, to the right people.

Risks and rewards, as well as culture and attitudes, are key for this process because the customer information it generates has strategic value, responsibilities for service quality must be shared, and different culture must be in harmony. For example, if a consumer has his luggage lost in an airline connection, the operator's officer (say the tourism guide) may not be able to take over the problem due to a tight schedule. The hotel reception desk (who has no formal responsibility for solving the problem) may intervene to avoid a bad experience to the consumer that can result in damage for the whole chain.

Demand management -Because services cannot be inventoried, excess capacity cannot be used to anticipate stock, and insufficient capacity cannot be remedied with stock. All the

first five members of the first tier of suppliers in Figure 1 face relatively fixed capacity, high fixed cost (in relation to the marginal cost), and a seasonal and erratic demand. This makes matching capacity and demand a difficult task, and mismatches very costly.

Demand management at the strategic level means devising ways of reducing expected unused capacity of the chain's members. This includes services (such as discount cargo freight) offered to non-members of the chain (say, a courier company) to use the off-season left over capacity, and the creation of counter seasonal products (such as corporate and scientific meetings).

At the tactical level it means planning together with the suppliers and customers. Decisions like block booking hotel rooms, airline seats, limousine services, and show tickets, must be taken in advance by the operator, and negotiated with the suppliers and travel agents. All this planning requires demand forecasts. If each member of the chain is informed of the decisions already taken by the others, demand forecast errors can be drastically reduced.

Customer order fulfillment - This process' purpose is essentially to deliver the right product at the right time. In tourism, it means fast and reliable response to customer's orders, and synchronization of the sequence of services included in the tourism package. It may mean the process to deliver the correct airline ticket at the right place and time, or to have the right rented car available for customer upon his arrival.

Due to the simultaneity of production and consumption, and to the intangibility of the product, in services part of this business process fuses with the operations flow process. It links essentially all members of the chain from the fist tier of suppliers to the consumer.

Operations flow management - As mentioned earlier, in services, parts of this process merge with Customer Service and with Customer Order Fulfillment processes. A distinguished characteristic of this process in services is the need for flexibility. Even "service factories" (Schmenner, 1986) such as airlines, hotels, and theaters require much more flexible production planning and control than manufacture due to the idiosyncrasies of human individuals. Special dietary needs, handling children and elderly travelling alone, and many other special individual conditions require special attention for essentially the same service.

As in other business processes, matching capacity and demand is a crucial concern here. Timing the sequence of services is complicated by the many random events (such as bad weather, airport delays, and tardy customers) and unexpected situations (such as a vehicle too large for transiting in touristic towns). Again, flexibility is essential for rescheduling the service sequence, and for increasing utilization of resources.

Procurement - To achieve the high level of integration required in a SCM a close relationship with some suppliers and customers is necessary. Tourism operators, hotels, airlines, and car rentals can benefit from sharing advertising and marketing channels. Furthermore, some processes, such as customer service management, demand management, and operations flow can hardly be integrated without a relationship that promotes trust and cooperation. Alliances are also important to help operations in diverse and distant cultural, legal and geographical environments. Tourism operators in different countries can make arrangements for exchanging products and services, or for sharing their local resources. More integration and closer relationships mean more complex operations, and longer commitments that can increase costs and long term risks. These negative consequences must be evaluated.

Product development and commercialization To develop a new product the tourism operator needs assistance of other chain members for conceiving the touristic experience, deciding on the different options of services (means of transportation, type and class of lodging, tours etc.), advertising, and for designing the operations that will implement it.

The tourism operation business has increasingly weak economic barriers to entry as the IT cut communication and information acquisition costs. Therefore, reputation based on high quality and dependable services, low cost, reliable customer service, courtesy, and other implicit service features difficult to obtain, become key to competition.

All the management components must be carefully examined and taken into the design process. If the product requires new member companies, their management methods, culture and attitudes must be compatible with what prevails in the SCM.

Returns - Though services SCMs deal mostly with processes rather than with physical matter, they share with the manufacture the same concerns on the economic and social impacts that its operations have on the environment. This concern is not limited to pollution that large cruisers can bring to marine environments, and things of the sort. Tourism can create local employment opportunities, improve local infrastructure and sanitary conditions. It can also cause environmental damages and severe disruptions in the local social tissue. It can turn fishing villagers into drug pushers and prostitutes. The chain members should collectively consider these issues, at least, in their own interest. Cooperation with local authorities, community leaders and other social agents is necessary to guarantee long term profitability.

4. Conclusions

This paper was inspired by the need that the authors found of a conceptual framework to organize and direct a research on tourism supply chain management. A generic tourism operator SCM was mapped into a conceptual framework developed by Lambert and Cooper (2000). This framework, according to its authors was developed having in mind the need of practical guidance for implementing SCM and has empirical grounds.

The exercise was useful to pinpoint some concepts that must be reviewed to make the framework more adapted to the tourism industry, and to more general service industries. This adaptation becomes necessary because, in service, the distinction between product and the production process is blurred by the intangibility of the product and the simultaneity of production and consumption.

Even if some concepts of the framework are not yet clearly operationalized, the exercise has indicated that the framework can be useful as a starting point for a systematic examination of the requirements for efficient tourism services SCM.

Future developments of the research should include the specialization of the framework to the service chain, an operationalization of the concepts involved and an empirical investigation on their relevance.

References

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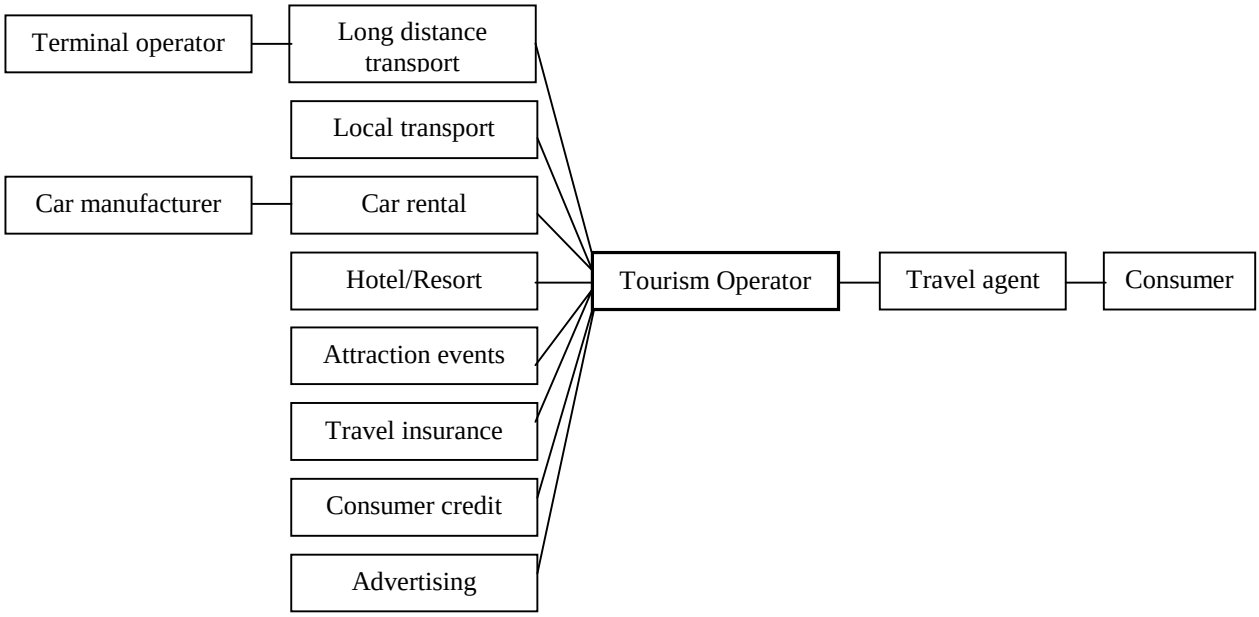

Figure 1 - Tourism Operator SCM Network (primary members)