

1

Logistics and Supply Chain Management in Travel Operations

ADE ORIADE AND HARRY CAMERON

Objectives of the Chapter

- Explain the nature of logistics and supply chain management in travel operations.
- Examine the relationship between logistic activities and their management within travel operations.
- Apply the concepts of logistics and supply chain management to explain how travel operators gain competitive advantage and respond to developments in the sector.
- Evaluate the key business functions that constitute the logistics system.
- Assess the role of new technology on travel operations logistics and supply chain.

Introduction

This chapter aims to equip students with an understanding of the organization of operations based on the creation of responsive and effective systems. It explores the organization of operations in terms of flow of information, services and resources. In particular, it analyses the effective planning and management of facilities and processes, involving operational issues such as location, information handling and supply of materials. Additionally, the chapter appraises quality and inventory management and acknowledges the increasingly uncertain environment in which operational decisions are made and their implementation controlled.

Logistics and supply chain management are closely linked concepts, which cannot be discussed in isolation. However, there is a clear distinction between the two. To avoid confusion it is useful to define each concept at this stage.

Christopher (2005, p. 4) defines **logistics management** as:

The process of strategically managing the procurement, movement and storage of materials, parts and finished inventory (and the related information flows) through the organization and its marketing channels in such a way that current and future profitability are maximised through the cost-effective fulfilment of orders.

People are usually conversant with the word logistics and they use it when talking about moving materials, but then dissociate it from its conceptual aims, which are to provide a tool to enable businesses to be responsive in providing services that meet and possibly exceed the expectations of their customers. Gourdin (2006) refers to logistics as a systematic management of a range of activities that are necessary to transfer benefits

from their point of production to the customer. Based on this definition, logistics places the customer at the nucleus of its focus. However, as straightforward as this may seem, managing logistics can be daunting, particularly in travel operations, and it is not uncommon for managers to face challenging and problematic issues in achieving agile and lean logistics processes. These complexities stem from increased competition, increased customer demand, improved technology, continued business expansion, increased demand on organizational resources and a host of other factors. Figure 1.1 outlines the logistics process for the travel industry, demonstrating the importance not just of physical resources but also of information.

Christopher (2005) describes **supply chain management** as a wide concept that builds upon the ‘single-plan’ framework of logistics and which explains the flow of products and information through a business. In this sense, supply chain management aims to achieve coordination and linkage between operations and the business processes that take place between an organization, its suppliers and its customers. The concept may be regarded simply as the integration of key business processes among industry partners with the view to adding value for customers. It closely links numerous successive elements of the industry value chain, from upstream suppliers, through sub-assembly manufacturers, final manufacturers, distributors and retailers to the end customers. For instance in travel operations, one linkage may be from catering suppliers to individual cruise ships moored in dock to individual customers. Any changes that take place within this relationship may be based upon cost savings, quality enhancement or, ideally, both. The main aim is to have a commercial and competitive advantage over rival organizations by making the process more cost-effective and more efficient, and the products more differentiated (Richard and Wisner, 2005).

As tourism involves the movement of people from the tourism-generating zone to the tourism destination zone, it is inevitable that, with the exception of the industry’s largest organizations, a number of service providers will be involved who are unlikely to belong to the same organization. Even where they are part of one business, it is likely they will

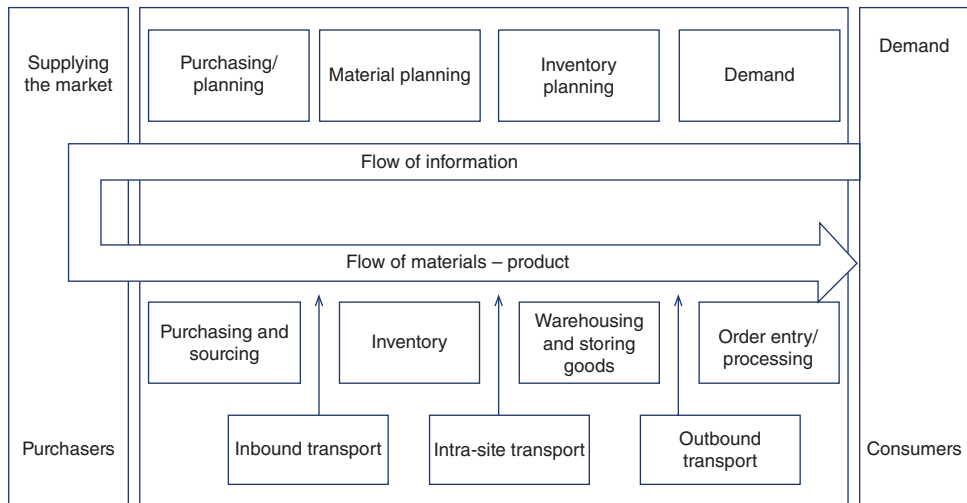


Fig. 1.1. The logistics process. Adapted from Page, 1999.

be managed as separate business units; therefore, the need to create a seamless system becomes imperative. Such seamless operations must strive to deliver quality service that:

- results in delighted customers;
- maintains a relationship that nurtures dependable service suppliers;
- provides an environment that encourages high standards of customer care; and
- focuses on total quality management.

Supply chain management and logistics activities in travel and tourism may range from ground handling, to delivery of catering products, to information systems management and compliance with health and safety regulations.

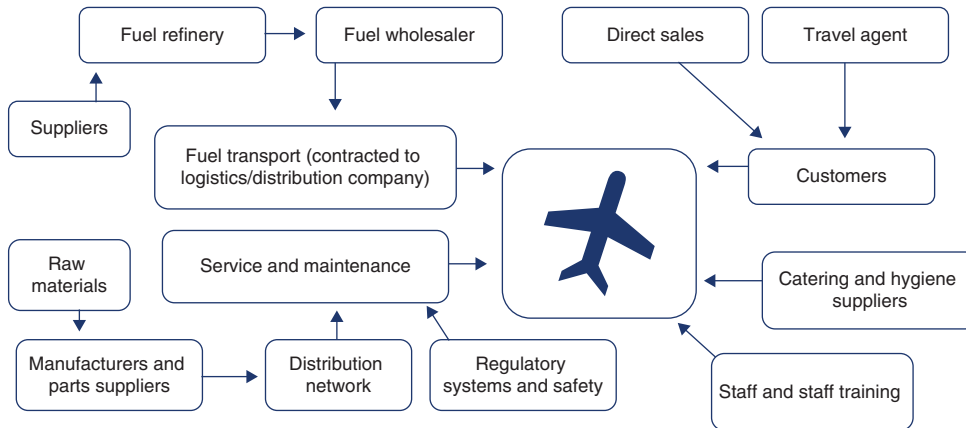


Fig. 1.2. Example of a supply chain for an airline operator.

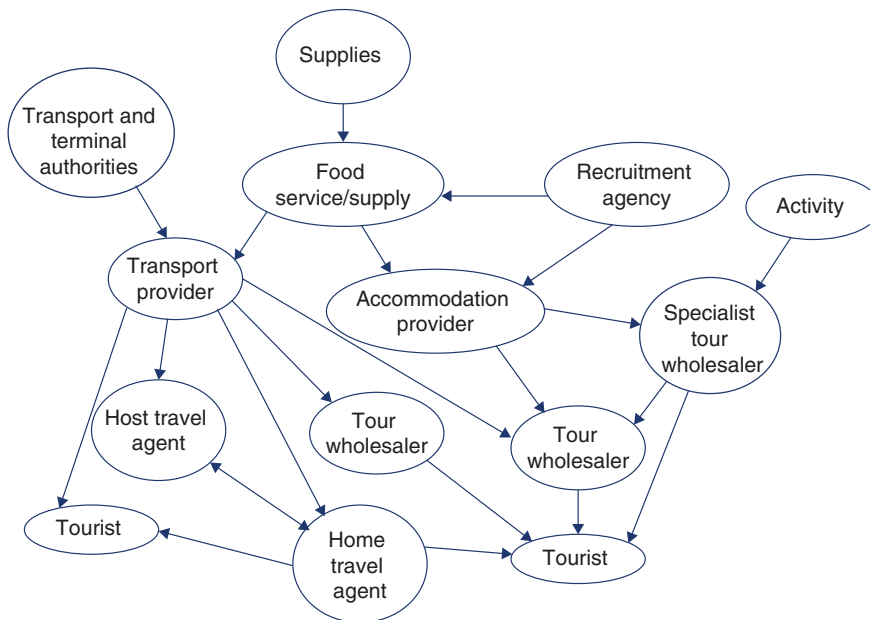


Fig. 1.3. A typical supply chain in travel operations.

CASE STUDY: FERRY OPERATIONS

The sea crossing by ferry is for many where their holiday begins, and thus forms a key link in the tourism experience. For many remote island communities, the car ferry has not only stimulated tourism but also acts as a lifeline, delivering vital supplies. Companies such as Caledonian MacBrayne and Western Ferries are good examples of this type of operation on the Clyde and in the Western Isles of Scotland. New pressures on funding ferry services have made businesses adapt to their products; in Norway, the Hurtigruten coastal ferry service, despite having its state operating subsidy phased out, has survived by developing and combining its cruise and ferry tourism operations.

On shorter routes across harbours, ferry operators provide services that can act as a platform for viewing landscape and maritime heritage. The Star Ferry in Hong Kong and the Staten Island Ferry from Manhattan in New York are excellent examples of ferries as a tourism attraction in their own right. Liverpool's famous Mersey Ferry has survived mainly as a tourism attraction; it not only offers trips across the Mersey, but now has scheduled cruises up the Manchester Ship Canal. Traditional ferry routes have always faced competition in some form or other; the famous ferries that criss-cross the Bosphorus now face stiffer competition from the new rail tunnel linking the European and Asian sides of Istanbul, but these ferries, because of their unique location, will always have a role not only as vehicles for transporting the millions of commuters that want an alternative passage, but also, for many tourists, as a way to view the beautiful landscape and architecture that can be seen from the sea.

Globally, the passenger ferry market is very competitive, and many companies have invested heavily in new tonnage. On routes across the English Channel, Irish Sea and Baltic Sea, and from the UK to northern Spain and the Greek Islands, new Super ferries, such as the *Spirit of Britain* (47,592 grt), smaller conventional Ro-Ro ferries, fast Ro-Pax ferries, large cruise ferries (which can have more accommodation than the Super ferries) and fast Catamaran services offer the traveller not only speed, but a whole range of services. On many vessels, there are fast food counters, bars, restaurants, spas, shops, food courts, cinemas, video games, large TV screens, play areas for children and, on longer routes, accommodation.

To meet new environmental operating standards, by 2015 ferry companies operating in the Baltic Sea, the North Sea and the English Channel will have to comply with the EU Sulphur Directive 2012/33/EU, which requires a drastic cut in sulphur emissions from all vessels. To comply with the standards, expensive exhaust emission scrubbers are being fitted to newer vessels, and some companies are now developing liquefied natural gas (LNG)-powered vessels. As mentioned earlier, the ferry industry is a highly competitive and low-margin shipping sector, so this may lead to higher operating costs, which will translate into price increases to customers on these routes.

A key part of the supply chain is the importance of efficient and effective port access and passenger throughput. Port operations continue to be upgraded, with piers and ramps being extended to cater for the new generation of Super ferries used by ferry operators. While the shore-based operations adapt and improve, it is crucial that high standards of marine operating safety at sea are maintained by the ferry industry. Despite the serious operational lessons that have been learnt, from the disasters of the *Herald of Free Enterprise* in 1986 and the *MS Express Samina* in Greece in 2010, incidents and fatalities continue to happen. While the media focuses on aircraft accidents, worldwide far more fatalities happen on ferries than on aircraft. The figures

Continued

CASE STUDY. Continued.

are particularly high in the Far East, where safety standards are not as rigorous. The MV *Sewol* Korean ferry disaster is a tragic example of where the ferry operator and the regulators who oversaw the operations failed to observe the regulations on overloading and did not properly secure cargo, which was seen as a direct cause of the ship's extreme list and eventual sinking. Significantly, it is crucial for coastal community residents, travellers and visitors that safety standards are improved, that new vessels are introduced and that crew training and stricter operating standards are maintained, especially in areas such as cargo and passenger loading capacity. To improve standards, joint initiatives by organizations such as Interferry and the International Maritime Organization are working to improve the shocking safety record of domestic ferry operations in developing nations, which is conservatively estimated at 1000 incidents a year.

From the London-based International Maritime Organization (IMO)

Question

Based on a business or business unit of your choice create your own supply chain diagram to demonstrate the complex relationships that exist in service delivery.

Context and Concepts

There is no doubt that times are changing as a result of advancements in technology, increased customer expectations and intense competition, especially as the world is fast becoming a more compact global village. The travel and tourism industry is multi-sectoral with numerous organizations contributing to the 'production' of one, or a bundle, of products. Even though there is a tendency for vertical integration in the industry, e.g. Canadian Sunwing Travel Group in 2011 expanded to include hotel business in its existing tour and airline portfolio, there still exists a need for collaboration and partnership. For an organization to survive in these changing times, there has to be a flexibility and adaptability that allows the business to be innovative in its strategic vision. For instance, many organizations in the travel industry, including the travel giant TUI Travel (now part of the TUI Group), continue to work in collaboration with organizations whose capabilities and positions are envisaged to add value to their strategic position.

Added Value and Competitive Advantage

The two most commonly used concepts in logistics and supply chain management are added value and competitive advantage. Some writers refer to these as cost and value advantages. Organizations that aim to have a competitive advantage by delivering added value to their customers must understand how that value is generated and lost. Both of these ideas are best captured by Porter's (1990) value chain model. An adapted model of the value chain is illustrated in [Fig. 1.4](#). This divides the main functions into

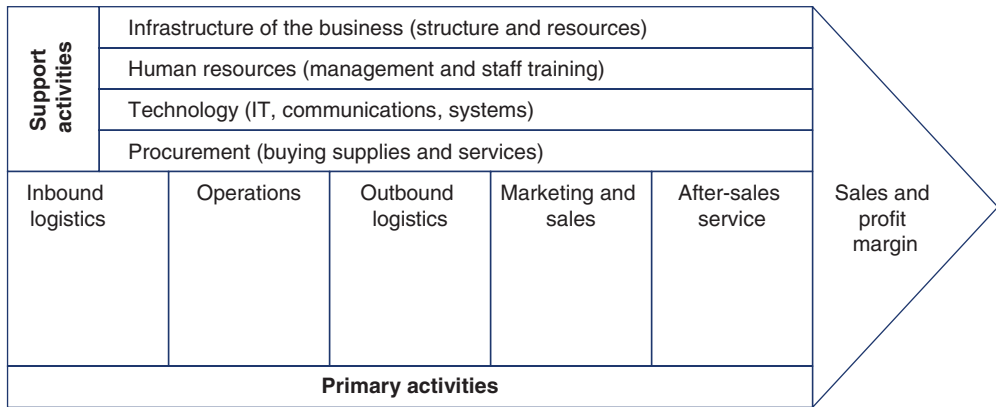


Fig. 1.4. The value chain. Adapted from Porter, 1990.

two categories: primary activities and support activities. The primary activities depict functions that are performed to deliver a service or create a product, while the support activities enhance the effectiveness of the primary activities. In Porter’s (1990) model, the primary activities comprise inbound logistics, operations, outbound logistics, marketing and sales and service, while the support activities include organization infrastructure, technology development, human resource management and procurement.

An organization must perform these activities in order to provide benefits to its customers. The cost of the activities and their corresponding values determines whether or not the best value products or services are developed (Johnson *et al.*, 2008). While the value chain can be used to chart the general strategic course of an organization, its use in determining the cost and value effectiveness of an organization’s logistics system cannot be overemphasized. As identified previously, the travel industry is multi-sectoral with a number of organizations co-producing one ‘product’ (for example, a package holiday may comprise flights to a destination, hotel accommodation, visits to attractions and car rental). The effectiveness of both inbound and outbound logistics needs to be understood and managed in relation to suppliers and customers. In this case, the logistics activities of an organization and its suppliers must be understood in the context of delivering a final product or service to customers from a value network perspective (Johnson *et al.*, 2008).

Business Functions in Logistics Systems in Travel Operations

Logistics systems are made up of many business functions, some of which are linked or identical to the activities mentioned in the value chain model; however, unlike the value chain, the functions are likely to differ from industry to industry and from one type of operation to another. Some of the major components of the logistics system identified by Page (1999) include purchasing, technical expertise, production planning, storage and materials handling, transport, inventory management, warehousing, planning, marketing and customer service.

In travel operations, some of the business functions are more prominent than others, so this chapter discusses the key elements of information processing, inventory

management, transport, storage and materials handling, and outsourcing, as well as planning and location.

Transportation

Transportation has been described as the pivot around which economic activities revolve. In manufacturing, transport is mainly concerned with the physical movement of goods from the point of production to the point of consumption or storage. In travel operations, the movement of people and materials is involved. Page (1999) submits that transport is an important element in moving visitors closer to the products of tourism. This distribution calls for the introduction of different approaches to transport. The transport of people is inextricably linked to the development of modes of transport. The train first facilitated this in the 1840s – a direct result of technological developments from the industrial revolution. The aeroplane and the motor coach evolved through the 20th century and, in the case of the aeroplane, early passengers were happy to arrive without incident! Today's tourist expects a certain level of comfort, safety and reliability.

However, the consumer does not have much input into how his or her personal goods are carried. The customers' expectation is to arrive at a destination, to be reunited with their luggage and for this to have sustained no damage. The passenger may not have any idea how the luggage has been transported and may not set his or her eyes on it from check-in at the airport until reaching the baggage reclaims point at the destination.

The transport of goods also relates to the effective movement of food and equipment for trains and planes. Cook–chill food will have to be transported and stored at the right temperature with specialized equipment. The quantities and variety of food need to be considered for each flight, and decisions taken about the level of preparation that is acceptable while on board.

Other transport considerations include the supply of spare equipment and parts for aircraft and trains, which need to be stored in central locations for distribution for service and maintenance, but with the flexibility for quick delivery to minimize disruption due to unexpected breakdowns.

The final consideration with transport is the supporting infrastructure, which operators rarely have any control over. Although operators may have no responsibility for delays caused by infrastructural failure, they will most likely have to accept the complaints from their customers. This complex situation is explained in greater depth in the following case study.

One major factor that has contributed immensely to tourism development in relation to transport is the deregulation of air transport. Liberation started in the USA in 1979 and was introduced in Europe in 1997. This has many implications in terms of increased competition, strategic alliances, the development of budget airline operations and management within the air transport industry. Tactical partnerships developed after deregulation in line with growth in global distribution systems (GDS). Among the numerous benefits to partners are reduced costs of marketing and reservation, joint loyalty programmes and code sharing. In the future, the role of transport is likely to become broader and environmental issues have already taken centre stage of the transport debate, with many businesses looking to negate their carbon footprints to avoid the likely impacts of otherwise enforced legislation.

CASE STUDY: THE UK RAIL NETWORK

The purpose of rail travel is twofold: the movement of people and the movement of goods. In the UK, rail infrastructure, which includes track, bridges, level crossings, tunnels, electric cabling, signals and 2500 stations, are all owned by Network Rail, whose mission is to 'create a railway for the 21st century'. This places with them responsibility for the maintenance and development of railway infrastructure, delivered through major engineering contractors. Risk management and health and safety are crucial aspects of the business. As a result, most engineering works require track closures or slow running, which creates obvious issues for train operating companies trying to deliver a timetabled service but unable to influence works that may be causing delays. However, the West Coast track and signalling upgrade has enabled faster running trains, especially Virgin's tilting Pendolino units on this main line.

The majority of train operating companies (TOCs) on the network deliver services because they have won franchises from the government. These are generally large travel-related international businesses such as Virgin, National Express, First Group and the Abellio group, which now runs the ScotRail franchise. A small number of operators work on an 'open access' model that allows access to the rail network for smaller enterprises usually running a small number of very specific routes. Decisions about this cheaper form of access to the network are, like Network Rail itself, managed by the Office of Rail Regulation.

A further logistical complication is the fact that most of the rolling stock is not owned directly by the operator but by rolling stock operating companies (ROSCOs), which are owned by UK banks, which lease the equipment to the TOCs. This reduces the financial risk to the business and increases flexibility. Ironically, it makes it much easier to transfer equipment between operators when franchises are won and lost. There are also additional spot-hire companies that provide rail equipment at short notice to train operators. Some of these are also owned by banks.

The other market sector that deserves mention here is the heritage railway business because there are some organizations in this sector running excursions and trips along main-line routes. They are restricted by the need to have suitably qualified steam train drivers and these are a dying breed in one of the most lucrative parts of the heritage railway sector. However, the heritage railway industry is now addressing possible skills shortages in operations and engineering by offering apprenticeships to encourage the next generation that will be needed to run the business. Along with these positive developments, many more routes are now being reconnected for steam running, linking steam-preserved branch lines for special excursions by main-line operators. As part of winning the ScotRail franchise, Abellio has agreed to provide a Great Scenic Railway scheme to attract more tourists north of the border, including a tourist ambassador and improved on-board catering using local produce.

The key message then, in this brief resumé of the structure of UK railways, is to highlight the complexity within which operators work while striving to deliver high-quality customer care, weighted against a whole raft of legislative and operational issues, in a commercially driven environment.

This complex structure is now under much more scrutiny as the government has awarded the franchise of the East Coast Main Line to Virgin and is planning to sell off its 40% share in Eurostar – at a time when the question of private versus public ownership of Britain's railways centres on fare prices and issues with quality of services. Eurostar, which links St Pancras International in London with destinations in France and Belgium, has been enjoying record passenger numbers. At present, the French

Continued

CASE STUDY. Continued.

state-owned railway company SNCF (Société Nationale des Chemins de Fer Français) owns 55%, with the state-owned Belgian company owning the remaining 5%. While the sale of 40% of Eurostar is seen as a far more straightforward process, forming part of the Conservative government's ideology to sell off state assets, which may eventually be to other state-run European rail operators, the debate over the franchise arrangements for the East Coast Main Line are far more complex and controversial.

The background to the franchise operations for the East Coast Main Line highlights the complex financial arrangements for funding and operating railways in the UK. In 2009, the Labour government had to bring the line under public control because the TOC, National Express, could not meet the terms that it had agreed to pay in its franchise arrangement; this was after the previous operator, GNER (Great North Eastern Railway), had been axed for also having financial problems. The creation of the state-owned company, Directly Operated Railways (DOR), has created a real debate on what operating methodology is best suited to deliver an effective and efficient service. For DOR has been successful, transforming the service on the East Coast, but has also delivered premium payments to the government as part of the franchise arrangements. Therefore, the critical question is: why was the present government adamant in awarding the franchise to a private sector operator – in this case Virgin? Campaigners had signed a petition demanding that the East Coast service remains in public ownership, wanting to know the arguments for privatizing a service that had been operating profitably.

Various sources

Questions

1. What alternative structures would work better? It may be useful to research the management of railways in other countries, or to reflect on the history of British Rail and its privatized predecessors to try to understand some of the challenges and advantages that were presented by the management structures of the past.
2. East Coast Main Line: profitable and publicly owned – so why sell it?

Storage and materials handling

The majority of operators in the travel trade hold very little stock and much of what is held is only on a temporary basis, for example food waiting to be taken on to planes or travel brochures waiting to be put on shelves. There are exceptions to this though. Airline operators have to store planes, maintenance equipment and parts. Airports have to store vehicles and equipment. Train companies have to store rolling stock. Any physical asset that is owned by a business becomes part of the inventory of that company, no matter how small. There are of course values linked to this inventory, which are discussed in greater detail in Chapter 7. What is important here is how that inventory is managed, where it is stored and, ultimately, how it is moved to where it needs to be in the most cost-efficient manner.

There is, for example, no point flying a plane to one destination then bringing it back empty if it could be used for a return flight. Similarly, it is a waste of resources to fly planes around the world just to bring them back to a specific location for maintenance checks.

It is also fruitless to have broken and faulty equipment out of use, as in business terms, this is a cost, so parts for repairs need to be able to be transported to where they are needed as quickly as possible. Similarly, travellers on long-haul flights will need breakfast, lunch and dinner. Preparing, cooking and packing food to serve 555 passengers aboard an Airbus A380 from London to Cape Town is impossible, and businesses specialized in preparing and packing food will be a key part of the supply chain. In contrast, many train companies now have chefs on board and provide a range of light meals and dinners that can be cooked in on-board kitchens. This model is increasingly replacing the traditional on-board buffet car, and food is distributed through the same network that supplies the hotel and catering trade.

Of course, this supply chain can fail and there are plenty of tales of flights where there was insufficient water for everybody on board. At some other time, some operators will have to deal with the handling of travellers' belongings. Management of the supply chain to minimize these risks relies on those businesses in the chain having their own contingency plans, and the operators also having their own alternative options. This becomes increasingly challenging as more people have different dietary requirements and demand is not always easy to predict.

Inventory management

The principle of effective inventory management is based upon the production of only the quantity of stock required for immediate demand. On the one hand, the aim is not to hold excess stock as this brings with it storage costs, so a minimal level of inventory must be maintained based on demand management tools (Chapter 3), and in this sense the need to balance the costs of holding and not holding inventory is a key factor. The cost of holding stock may be in the form of storage, insurance, handling and risk of loss through perishability. On the other hand, the cost of not holding stock can be manifest as lost revenue through the unavailability of items and, potentially, the resulting negative image that may accompany such an incident if a number of customers are affected and are consequently dissatisfied with the level of service. From both perspectives, inventory is more focused on cost reductions, even though it has not been seen in that light in the past. However, times are changing, and the high cost of inventory has encouraged organizations to concentrate on efficient supply chain and quality management (Russell and Taylor, 2009).

Types of inventory

It is essential to understand the various forms that inventory can take. The list of six types of inventory below is based on the work of Gourdin (2006):

- **Normal:** These stock levels meet regular levels of demand and are predictably replenished, such as airline food and travel brochures.
- **Safety:** Stock is held as insurance to meet uncertainty in demand.
- **Transit:** Stock held en route to two or more locations.
- **Speculative:** Stock is held in anticipation of meeting future demand. This type of inventory is common in the travel trade. Stock may be held or released depending

on what an operator or a number of operators envisage the future could be. Examples include the selling of a flight or hotel room at a discounted rate.

- **Seasonal:** This is applicable to the travel trade when stocks are held and accumulated in readiness for a certain season. Ski resorts, for example, will buy in new hire equipment in preparation for the start of the season, but are likely to sell it cheap at the end of the season.
- **Dead:** Stock that is not sold within a given time. Dead stock translates into lost revenue.

Inventory management usually relies on supply chain models such as just-in-time (JIT), when stock arrives just as it is needed with orders processed along a computer-based distribution network. Other models include material requirement planning and distribution resource planning but these methods evolved in the manufacturing sector and the nature of travel products does not suit their philosophies. The principal approach within the service sector is yield management (Chapters 3 and 7). Yield management is a revenue management method that provides tools to forecast and sell products at prices that maximize profit and minimize loss.

Information processing

This is one significant activity that links all other components of the logistics system; this is the key to success in supply chain management. Whereas historically the travel business relied much on intermediaries to distribute products and maintain relationships with travellers, with the growth of the Internet, organizations have been able to reduce distribution costs, and gained access to and increased control over their actual and potential customers. From a logistics perspective, the major benefit has been the shortened length of time required to reach suppliers and end users directly and quickly. Information systems enable organizations to match demand with supply, particularly where a number of co-producers and distribution channels are involved in product delivery. Information processing cannot be overemphasized if travel organizations are to deliver total tourist experience, and this data is often shared over a GDS. In the recent past, there are, however, problems related to the number of small and medium-sized enterprises (SMEs) who do not engage with the technology. This means that the traveller or travel agent trying to book a holiday cottage in Italy is likely to have to phone up to obtain prices and availability information. There are, of course, some small businesses that can see the benefits of these systems, and the investment made by the bigger businesses often reduces the costs for the smaller operators. This gives SMEs the opportunity to link their databases and spreadsheets with those of their suppliers and clients (Gourdin, 2006).

No doubt, this has allowed for greater versatility in the way in which organizations manage data to improve responsiveness to customers' needs. With organizations (including those in the travel industry) now able to generate, accumulate and process vast amounts of information concerning their suppliers and customers, they are more able to perform their planning, coordination, control and customer service functions. [Figure 1.5](#) illustrates the functions of the logistics information system of a typical tour operator. It must be noted that each and every one of these functions has a direct or indirect influence on customer satisfaction and, subsequently, an effect on the organization's aims and vision.

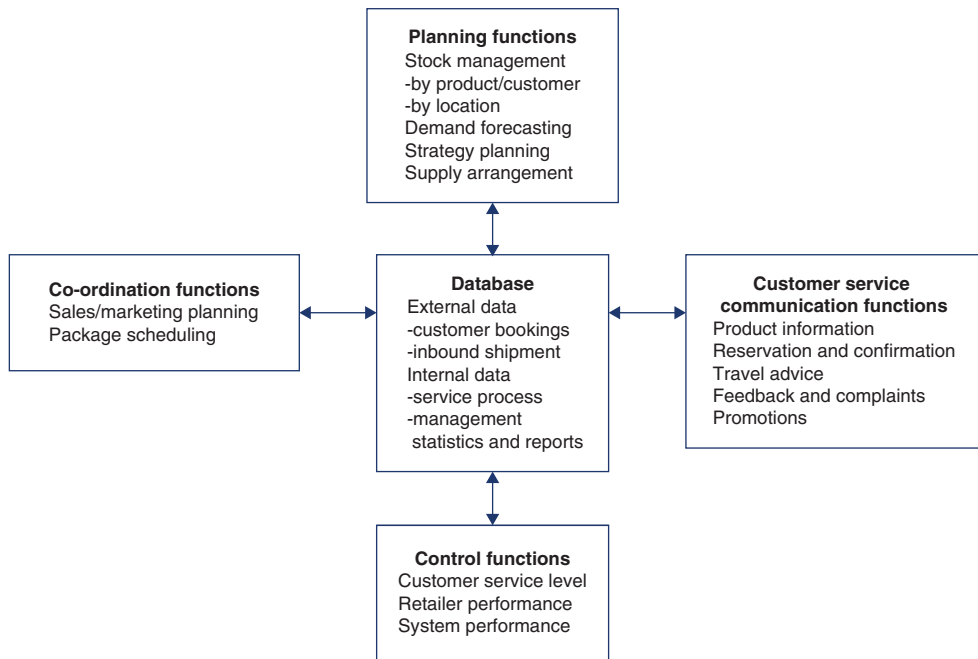


Fig. 1.5. Functions of the logistics information system of a typical travel firm. Adapted from Christopher, 2005.

Increasingly, new technologies that enable operators to gather information on their customers and operations are revolutionizing logistics operations and supply chain management. The rise of the big data revolution is sweeping across all sectors and shaping the way that communication – between organizations and their suppliers on the one hand and organizations and their customers on the other – is being handled. The speed at which data is collected, stored and analysed is phenomenal. For example, the use of Twitter for customer service is so critical because ‘e-word of mouth’ on the platform is instantaneous and spontaneous. Review websites such as TripAdvisor have become so popular among travel operators to the extent that operators behave as if ‘the fear of bad customer comment on TripAdvisor is the beginning of operational wisdom’. To this effect, operators are continually engaging with new technologies and devising appropriate strategies to cope with the changing landscape.

Question

What are the benefits of models such as that shown in Fig. 1.5 to illustrate how information flows work within a business?

In Nilsson’s (2006) study of experienced logisticians, it was found that customer demands on logistics had increased in both scale and scope, and involved several factors, such as customized order bookings and customized labelling among others. According to Buhalis (1998, p. 411):

Increasingly, new, experienced, sophisticated, demanding travellers seek information about more exotic destinations and authentic experiences, as well as the requirement to interact with suppliers in order to satisfy their specific needs and wishes.

Only organizations that can effectively identify and satisfy these specific needs through their information systems are likely to succeed in the competitive travel market. Traveller satisfaction is said to depend highly on whether information provided by the operator on the accessibility, facilities, activities and attractions at a destination is accurate and comprehensive (Fesenmaier *et al.*, 1992, in Buhalis, 1998).

Planning

Christopher (2005) sees production planning in the manufacturing sector as the centre of the entire logistics process; this is equally true in the travel sector, but unlike the manufacturing industry, process planning in the service sector focuses on the customers. The design and delivery of services are based on the relationship between people (customer, employees, distributors and suppliers), equipment, facilities and the physical environment in providing products that will meet the expectations of the customer. Generally, planning is a process that comprises objective formulation, assessment of the current situation and identification of the issues. Other components include data gathering and analysis, actions and responsibilities, and monitoring and modification of variance where necessary. More specifically, process planning in travel operations involves establishing who the customers are and what their needs are in order to develop products and services that satisfy those customers' needs.

The identification of customer types, behaviour and needs is discussed in greater detail in Chapter 4, but the process of forecasting is a logistics tool, and Archer (1980, in Gunn, 2002) defines it as the art of predicting the occurrence of events before they take place. Forecasting is used by managers and marketers alike to study the feasibility of a project, determine its operational requirements, set marketing goals, explore the potential market and ensure that adequate capacity is provided (for detailed coverage of forecasting see Chapter 3). The role of logistics in terms of gathering and processing information cannot be overemphasized in carrying out these activities.

Organizations deploy different methods in transferring plans to the operating team; mostly, manuals or service blueprints are used. Service blueprints are a valuable tool for operations and logistics managers as they illustrate all the elements that comprise a service or process. Some diagrams have already been presented in earlier sections of this chapter, but these can be developed further to create a flow chart (blueprint) of service delivery. A simplified flow chart is provided in Fig. 1.6, with likely failure points illustrated by the letter 'F'. The chart could be presented with additional information to assess costs and relationships between staff and resources.

Question

Can you design a service blueprint for a travel product or service?

When new processes are designed, organizations naturally take steps to familiarize their employees with the new systems and equipment. Often, training courses

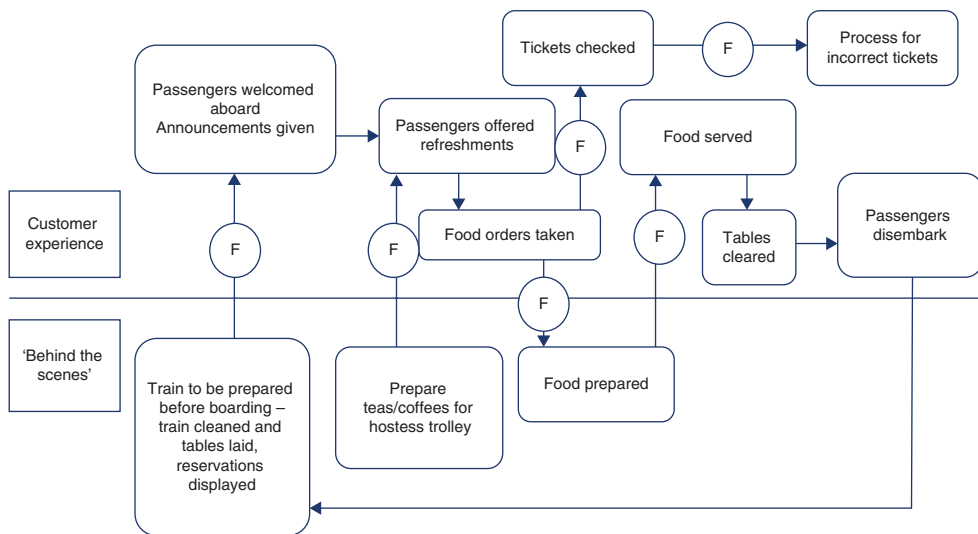


Fig. 1.6. Service blueprint for First Class train carriages. ‘F’ indicates likely failure points.

are organized, tests run and simulations carried out. Failure in process planning is most likely to affect customers’ experience of a service negatively, so the more planning that can be carried out at a test stage the better.

Any negative experiences of a new product, service or facility are likely to result in bad publicity and the need for possible refunds or compensation. So there is a real need for adequate preparation before a major change in operations, and the option to switch back to the older method should be retained if possible, at least during an interim phase, or an alternative contingency plan put in place.

CASE STUDY: PROCESS PLANNING AT HEATHROW

An example of the importance of process planning was illustrated by the Heathrow Terminal 5 (T5) saga. This shows how failure in one logistics activity can have a major impact on an organization’s and its partners’ activities. The two principal operators at the centre of the T5 incident were the airline operator British Airways (BA) and the then British Airports Authority (BAA) as the airport operator. Both organizations are market leaders in the industry with a wealth of experience and a reputation for quality service. This incident is a one-off teething problem that had huge consequences.

The construction of T5 started in September 2002 and it officially opened in March 2008. The terminal was funded by BAA at the cost of £4.5 bn and it was envisaged that the expansion would benefit passengers and create a world-class airport. It was constructed with the capacity to process 12,000 bags an hour, with 96 self-service check-in kiosks, 56 standard check-in desks and 20 security lanes.

Despite the magnitude of the preparation, the operation was far from smooth. The main problem started early on the first day of operation. In the first instance, both staff and passengers had trouble locating the car park. This resulted in staff turning up late, by which time queues had started building at the check-in desks and arrival passengers had to wait for their bags. This completely clogged up the system.

Continued

CASE STUDY. Continued.

By lunchtime, the problem had escalated and the airline was forced to cancel 20 flights. By the end of the first day of operation, a total of 34 flights had been cancelled. In addition, there was a backlog of around 15,000 bags. In the end, 400 extra staff were drafted in and the distribution of lost and left baggage had begun, but the impact of poor publicity will leave people with a somewhat disappointing memory of T5.

Various sources

Questions

1. How do you think this incident might have been prevented from happening?
2. What are the logistics functions involved here?
3. What are the consequences of this incident?

Location

Although issues relating to location are part of the planning process, location is a topic on its own that is worth discussing in depth. Traditionally, organizations locate their facilities close to either the market or the source of raw materials. In travel and tourism, the location of facilities can be operation, market or product led. Of course, in some instances, there is no choice. Railway stations have to be alongside the railway and new railways and trams are limited by their infrastructural requirements, but some facilities have more flexibility in their location. In fact, in some instances, it is the presence of airports, docks and train stations that is the catalyst for the development of other travel businesses (hotels, restaurants, entertainment) and for the development of distribution hubs for their suppliers. East Midlands Airport (EMA) in Derbyshire has made a significant impact on the local economy, not only because it draws in crowds of tourists (most of which depart at EMA for European holidays), but because it is an affordable location for freight and is surrounded by dedicated distribution depots for leading freight and courier businesses, many of whom have their own planes.

Some of the factors that influence the choice of location are discussed below:

- **Government policy:** Irrespective of the type of facility, it will be subject to policy on town planning, and to justification on the basis of economic and environmental impact assessments. There may be incentive schemes to encourage investment.
- **Risk:** The perception of risk has grown over recent years owing to terrorist attacks, political instability and natural disasters. In locating facilities, this factor needs careful consideration to ensure that the supply chain is not truncated.
- **Proximity to market:** Facilities located close to their market benefit from reduced transport costs and maintain close links with their customers. Although customers may have to travel to get to their destination, the services they need from travel operators can be brought closer to them. Technology has also made it possible for customers to assess operators' facilities without leaving the comfort of their homes.
- **Competition:** It is not uncommon to find operators locating their facilities close to their competitors. This is in part to maintain their visibility in the marketplace

and to offer customers a greater choice. Such a strategy is particularly pertinent for high street retail, but can be just as applicable when businesses are advertising on the Internet.

- **Complementarity:** The location of suppliers may be influenced by the location of the businesses that they supply in order to reduce transport costs. There may also be commercial benefits to sharing the same facilities, or leasing facilities back to suppliers.
- **Accessibility:** The facilities need to be supported by safe and secure infrastructural support.

These factors cannot be considered an exhaustive list, but they do point to the fact that the location of facilities needs careful consideration, particularly in this day and age. Increasingly, location in terms of proximity to the market is becoming less clearly defined as organizations are adopting digital means to manage their supply chain.

CASE STUDY: THE CASE FOR A NEW RUNWAY AT HEATHROW

While capacity has been constrained at Heathrow, the UK's main international hub airport for the last 10 years, competitors at other international hub airports, such as Frankfurt, Paris and Amsterdam, have more spare capacity and can therefore provide more services for their customers. As part of the independent review of this problem, Heathrow's New Approach document 2014 (<http://your.heathrow.com/wp-content/uploads/2014/04/A-New-Approach-2014-Web-2.pdf>) argues that the airport is one of the best connected hubs and is well placed to provide more services to an increasing range of growth markets.

However, with the demand for extra runway capacity in the south-east of the UK, the third runway question at Heathrow is again dividing planners and politicians. Despite assurances from the major political parties that there would not be a new runway, an independent commission was set up in 2012 to review the issue. While it has ruled out one of the alternatives – the so-called 'Boris Island' airport in the Thames Estuary – as too costly, the commission has stated that there is a need for one additional runway in the south-east of England by 2030, and that there are three realistic options: a third runway at Heathrow, lengthening the existing runway at Heathrow or building a second runway at Gatwick.

A report commissioned by Gatwick argues that the number of local residents affected by noise as a result of Heathrow expansion will be greater than if Gatwick were expanded. Airport Watch, an umbrella organization for groups fighting unsustainable airport expansion, believe that the political obstacles to expanding Heathrow were considerable and that Gatwick was becoming a more attractive alternative, which was politically more deliverable.

Questions

1. What is the value of a hub airport to the UK?
2. Why has Heathrow been successful?
3. Identify the key stakeholders in the demand for extra runway capacity in the south-east.
4. What are the main planning issues affecting the third runway option at Heathrow?

Outsourcing

Another important function that forms part of the planning process, but is worth discussing in detail, is outsourcing. Increasingly, outsourcing has become popular and continues in popularity among service, including the travel trade. There is no gain-saying in stating that one of the ways by which organizations manage their supply chains is through outsourcing. Outsourcing can help an organization to reduce its internal processes of managing and controlling, hence reducing supply chain complexity. According to de Leeuw *et al.* (2013), supply chain complexity – the extent to which a system consists of interconnected parts with counter-intuitive non-linear links (Perona and Miragliotta, 2004) – may lead to inefficiency, long lead-times, difficulties in integrating supply chains, issues of reliability, reduced financial performance, reduced delivery performance and a complicated system. Managing outsourcing effectively can help to ensure quality and innovation, and reduce complexity and cost. Lu *et al.* (2014) submit that cost saving is the distinct advantage of supply chain management outsourcing over the traditional self-managed supply chain, and that it is achievable through: the third party's demand pooling, expertise in supply chain management and sophisticated operational or technology infrastructure.

Creating value for both customers and the organization through outsourcing has emerged as a widespread strategy practice for many organizations. Gurbaxani (1996) identified, in the information technology (IT) context, three kinds of strategic intents for outsourcing; these include information service improvement, business impact and commercial exploration. All these types of outsourcing are evident in travel operations. Information service improvement is particularly prevalent, as many organizations in the travel trade desire to improve their information service functions and IT resources and capabilities by outsourcing functions such as web presence, social network functions, and distribution and call centre duties. According to Gurbaxani (1996), business impact strategic intent is based on the premise that specialists, who are better resourced and skilled, are better recruited to deliver specialized services in order to achieve business objectives. The third kind of strategic intent, commercial exploration, is very interesting and innovative. A good example can be found in Microsoft using its IT capability in spinning off Expedia.

CASE STUDY: SMART SHIPS

Today's ships are now marketing themselves as smart ships, the new Royal Caribbean cruise ship *Quantum of the Seas* (168,666 grt) is claimed to be the most technologically advanced cruise ship in the world, offering Internet access (getting away from it all means being connected) faster boarding using new technology and robotic bartenders. A unique feature on this vessel is the North Star observation tower, which is a glass-walled capsule that can be extended on a 41 m crane to lift passengers up above the ship. New contemporary tonnage is now offering surf pools, planetariums, on-deck LED movie screens, dodgems, golf simulators, water parks, multi-room villas with private pools and in-suite jacuzzis, ice-skating rinks, rock-climbing walls and bungee trampolines.

The cruise ship product now offers an array of feature-rich innovative facilities, amenities and services that exceed the expectations of a growing population of

Continued

CASE STUDY. Continued.

cruisers. Nevertheless, while it is of the fastest growing leisure industry sectors, the cruise industry faces many challenges. While supply continues to grow at double-digit levels, demand struggles to keep pace. In 2008, the economic crisis led to a decline in passenger numbers, increasing again by 40% in 2011, which was encouraged by discounting on fares, but then falling again in 2012 to 36%, as a result of the Costa Concordia tragedy (CLIA UK & Ireland Cruise Report, 2012). A marine tragedy, news coverage of cruise disruptions, breakdowns, norovirus scares (see Chapter 10 – Case Study: not so smart ships – is it safe to take a cruise?) and the reality of a mature market has not helped companies struggling to create new demand. However, despite these issues, an enduring problem is the negative perception that many still have of the cruise product. A big problem for cruise lines is that many people who have never been on a cruise vacation assume that they won't like it. Common remarks you hear from non-cruisers are that cruising is:

- expensive;
- for old people;
- boring;
- stuffy;
- restrictive; and
- too formal.

Trying to cut through these perceptions is not going to be easy. Carnival Chief Executive Officer Arnold Donald commented at a recent industry conference that the industry is confronting 'a harder core of people who have negative preconceived notions of what cruising is. It's clear to me that as an industry we have not done a good enough job effectively communicating to the public ... to those who don't know what cruising is ... it's not just 3,000 people at a buffet line and super crowding.'

Questions

1. Propose a strategy to encourage new customers to the cruise sector.
2. Assess the opportunities for outsourcing that exist within the cruise industry.

Summary

This chapter has considered a range of aspects of logistics and supply chain management within the travel industry, but key to operationalizing these is the fact that logistics and supply chain management efforts should explore and take advantage of the relationship between all of the different functions rather than concentrating on individual components or treating them in isolation. There is, therefore, a need for an integrative approach, so that the underlying principles of logistics are deployed in planning and coordinating operational management.

With efficient logistics and supply chain management, travel products and services are moved in the supply chain from one stage to another in a system of regular communication between the travellers and the service providers. This enables the right

quality and quantity of products to be delivered to the end user at the right time through a well-designed delivery process, based on careful consideration of the relationships between the organization's resources.

Loyal customers are the most important asset that a successful business can have. How well it can retain its customers and win new ones will go a long way to determining its success. Christopher (2005) states that it no longer holds that good products will sell themselves or that the success of a company today will carry forward into tomorrow. What really counts is standing out among competitors, and the only two ways this can happen is for an organization to continually perform its functions and produce its products at a competitive cost, or by being seen as adding value to the benefits received by its customers. Even then, an organization needs to identify which of these two directions to take, and formulate strategies that will enable its logistics efforts to help to achieve its aims.

To succeed in this increasingly uncertain environment, organizations must respond to changing customer profiles and needs, and understanding the way logistics is managed, particularly in this digital age, will help to determine the success that can be achieved. Effective management of logistics and the supply chain must be geared towards the achievement of commercial and competitive advantage.

Further Reading

- Lu, Q., Meng, F. and Go, M. (2014) Choice of supply chain governance: self-managing or outsourcing? *International Journal of Production Economics* 154, 32–38.
- Gourdin, K.N. (2006) *Global Logistics Management: a Competitive Advantage for the 21st Century*, 2nd edn. Blackwell Publishing, Oxford, UK.

Review Questions

1. What is the relationship between logistics and supply chain management? Support your answer with examples.
2. How can managing logistics help an organization to achieve competitive advantage?
3. Explain how failure in one logistics activity can have a spiralling effect on the activities of an organization and its partners.
4. What is supply chain complexity? What are the effects of supply chain complexity?

References

- Buhalis, D. (1998) Strategic use of information technology in the tourism industry. *Tourism Management* 19, 409–421.
- Christopher, M. (2005) *Logistics and Supply Chain Management: Creating Value-adding Networks*, 3rd edn. Prentice Hall, Harlow, UK.
- CLIA UK & Ireland (2012) *2012 Cruise Report*. CLIA (Cruise Lines International Association) UK & Ireland, London.
- de Leeuw, S., Grotentuis, R. and van Goor, A.R. (2013) Assessing complexity of supply chains: evidence from wholesalers. *International Journal of Operations and Production Management* 33, 960–980.

- Gourdin, K.N. (2006) *Global Logistics Management: a Competitive Advantage for the 21st Century*, 2nd edn. Blackwell Publishing, Oxford, UK.
- Gunn, C. (2002) *Tourism Planning*, 4th edn. Routledge, London.
- Gurbaxani, V. (1996) The new world of information: technology outsourcing. *Communications of the ACM* 39(7), 45–46.
- Johnson, G., Scholes, K. and Whittington, R. (2008) *Exploring Corporate Strategy*, 8th edn. Prentice Hall, London.
- Lu, Q., Meng, F. and Go, M. (2014) Choice of supply chain governance: self-managing or outsourcing? *International Journal of Production Economics* 154, 32–38.
- Nilsson, F. (2006) Logistics management in practice – towards theories of complex logistics. *The International Journal of Logistics Management* 17, 38–54.
- Page, S.J. (1999) *Transport and Tourism*. Addison Wesley Longman, Harlow, UK.
- Perona, M. and Miragliotta, G. (2004) Complexity management and supply chain performance assessment: a field study and a conceptual framework. *International Journal of Production Economics* 90, 103–115.
- Porter, M.E. (1990) *The Competitive Advantage of Nations*. The Free Press, New York.
- Richard, J. and Wisner, J. (2005) Small business and supply chain management: is there a fit? *Journal of Business Venturing* 20, 403–436.
- Russell, R.S. and Taylor, B.W. (2009) *Operations Management: Creating Value Along the Supply Chain*, 6th edn. Wiley, Hoboken, New Jersey.