The central theme of the book is that effective logistics and supply chain management can provide a major source of competitive advantage and a market position of enduring superiority over competitors in terms of customer preference.

The goal of logistics and supply chain management is to achieve competitive advantage through both cost reduction and service enhancement. Customer service is being increasingly recognised as a powerful means of adding value and the mission of logistics management is to plan and coordinate all those activities necessary to achieve desired levels of delivered service and quality at lowest possible cost.

The challenge for management is to identify appropriate logistics and supply chain strategies to take the organisation to a position of sustainable cost and service advantage in its chosen markets.

Moreover, the book suggests that in today's challenging global markets, firms cannot compete as stand-alone entities. The route to sustainable advantage lies in managing the complex web of relationships that link highly focused providers of specific elements of the final offer in a cost-effective, value-adding chain. The key to success in this new competitive framework will be the way
in which this network of alliances and suppliers are welded together in partnership to achieve mutually beneficial goals. This new competitive paradigm in effect places the firm in a wider ‘extended enterprise’ which competes as an integrated supply chain against other supply chains.

The author, who is a world authority in the field, describes the tools, core processes, and, even mindsets, needed to create the agile supply chains needed to succeed in the more volatile competitive environment of the 21st century.
Key Learning

- In today’s highly competitive marketplace the goal must change to the attainment of higher levels of customer responsiveness. Agility rather than cost becomes the key driver.

- There must be a move from a ‘production push’ mentality to a ‘demand pull’ philosophy in which, ideally, nothing is made, sourced or moved until there is a demand for it.

- Enabling supply chains to become more demand-driven requires better visibility of real demand. Real demand occurs at the end of the supply chain and if that information can be captured and shared upstream then the dependency on inventory reduces.

- Customer retention is a key measure of success generated and developed *inter alia* by the delivery of superior customer service.

- The real task of supply chain management is to co-ordinate the wider end-to-end pipeline. In-bound logistics is just as critical as the distribution of final product under this paradigm and the emphasis is now on time compression from one end of the supply chain to the other.

- The traditional primacy of functions in organisations must yield in future to an emphasis upon cross-functional and market-facing management of the key business processes that create value for customers.

- In future the competitive vehicle will no longer be the individual firm but rather the supply chain of which that firm is a member.
Definitions

The author defines

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

- ‘supply chain management’ as ‘the management of upstream and downstream relationships with suppliers and customers to deliver superior customer value at less cost to the supply chain as a whole.’

The concept of supply chain management is in fact no more than an extension of the logic of logistics. Whilst logistics is essentially a planning orientation and framework that seeks to create a single integrated plan for the flow of product and information through a business, supply chain management builds on this framework and seeks to achieve wider linkage and co-ordination between the business and the processes of other entities in the pipeline (i.e. suppliers and customers).

Logistics and Customer Value

Put very simply, the output of all logistics activity is customer service.

Customer service provides a significant opportunity to differentiate an otherwise standard product and an opportunity to tailor the company’s offering to meet specific customer requirements.
Customer value can be enhanced by developing logistics processes that make it easier for the customer to service their customers whilst incurring less costs e.g. increasing their perceived benefits via on-time deliveries, shorter lead-times, flexible response and reducing their costs via less inventory, lower ordering costs, reduced stock-out costs.

Ultimately all businesses compete through seeking to deliver superior customer value and the success or failure of any business will be determined by the level of customer value that it delivers in its chosen markets.

**Key Principles of Logistics and Supply Chain Management**

The four following themes provide the basis for successful logistics and supply chain management viz.

- **Responsiveness**

  The key word is *agility* which implies the ability to move quickly and to meet customer demand sooner. To a truly agile business volatility of demand is not a problem; its processes and organisational structure as well as its supply chain relationships enable it to cope with whatever demands are placed on it.

  The responsive business will have agile suppliers and will work very closely with them to align processes across the extended enterprise. It will also be very close to its customers, capturing information on real demand and sharing that information with its partners across the network. Internally the business will also be focused on agility through the way it organises – breaking through functional silos to create process teams. In terms of its manufacturing and sourcing strategies, the responsive business will seek to marry the lean and agile paradigm through de-coupling its upstream and downstream processes, utilising the principles of postponement wherever possible.
For example, paint manufacturer, ICI, offers consumers customised solutions in terms of the colour of paint through the use of paint mixing machines located in retail outlets. The retailers only need to stock a relatively small number of base colours to provide an almost infinite number if final colours. Thus ICI can utilise lean processes in producing base colours in volume but can provide an agile and timely response to end users. It is also an example of how it is possible to reduce complexity whilst providing the requisite variety that the market

In the particular context of increasing globalisation, the challenge for global logistics management is to structure a supply chain that is agile and flexible enough to cope with differences in customer requirements and yet can enable the benefits of focused manufacturing to be realised.

- **Reliability**

One of the main reasons why any business carries safety stock is because of uncertainty either about future demand or about a supplier’s ability to meet a delivery. A key to improving reliability in logistics processes is enhanced pipeline visibility. It is often the case that there is limited visibility of downstream demand at the end of the pipeline. This problem is exacerbated the further removed from final demand the organisation or supply chain entity is. If means can be found of opening up the pipeline so that there is clear end-to-end visibility then reliability of response will inevitably improve.

- **Resilience**

Today’s marketplace is characterised by higher levels of turbulence and volatility. As a result, supply chains are vulnerable to disruption and, in consequence, the risk to business continuity is increased. Whereas in the past the prime objective in supply chain design was probably cost minimisation or possibly service optimisation, the emphasis today has to be upon resilience. Resilience refers to the ability of the supply chain to cope with unexpected disturbances. There is evidence that the tendencies of many companies to seek out low-cost solutions because of pressure on margins may have led to leaner but more vulnerable supply chains.
The aim is to create a supply chain community whereby there is a greater visibility of upstream and downstream risk profiles (and change in those profiles) and a shared commitment to mitigate and manage those risks.

Resilient supply chains may not be the lowest-cost supply chains but they are more capable of coping with the uncertain business environment. Resilient supply chains have a number of characteristics, of which the most important is a business-wide recognition of where the supply chain is at its most vulnerable. Managing the critical nodes and links of a supply chain becomes a key priority. Sometimes these ‘critical paths’ may be where there is dependence on a single supplier, or a supplier with long replenishment lead times or a bottleneck in a process. Other characteristics of resilient supply chains are their recognition of the importance of strategic inventory and the selective use of spare capacity to cope with ‘surge’ effects.

- Relationships

Increasingly companies are discussing the advantages that can be gained by seeking mutually beneficial long-term relationships with suppliers. From the suppliers’ point of view, such partnerships can prove formidable barriers to entry for competitors. The more processes are linked between the supplier and the customer the more the mutual dependencies increase and hence the more difficult it is for competitors to break in. Supply chain management by definition is about the management of relationships across complex networks of companies that, whilst legally independent, are in reality interdependent. Successful supply chains will be those that are governed by a constant search for win-win solutions based on mutuality and trust. This is not a model of relationships that has typically prevailed in the past. It is one that will have to prevail in the future as supply chain competition becomes the norm.
Characteristics of Agile Supply Chains

To be truly agile a supply chain must possess a number of distinguishing characteristics viz.

- Firstly the agile supply chain is *market sensitive* meaning that it is capable of reading and responding to real demand. Most organisations are forecast-driven rather than demand-driven. In other words, because they have little direct feed-forward from the marketplace by way of data on actual customer requirements, they are forced to make forecasts based upon past sales and convert these forecasts into inventory. The breakthroughs of the last decade in the use of information technology to capture data on demand direct from the point-of-sale or point-of-use are now transforming the organisation’s ability to hear the voice of the market and to respond directly to it.

Most traditional supply chains were designed to optimise the internal operations of the supplying company. The new perspective sees the customer and the consumer not at the end of the supply chain but at its start. In effect this is the philosophical difference between supply chain management and what more properly might be called ‘demand chain management’.

- Secondly the use of information technology to share data between buyers and suppliers is, in effect, creating a *virtual* supply chain. Virtual supply chains are information based rather than inventory based. Electronic Data Interchange (EDI) and now the Internet have enabled partners in the supply chain to act on the same data (i.e. real demand) rather than be dependent on the distorted and noisy picture that emerges when orders are transmitted from one step to another in an extended chain.
Thirdly supply chain partners can only make full use of shared information through **process alignment** i.e. collaborative working between buyers and suppliers, joint product development, common systems and shared information. In this new world a greater reliance on suppliers and alliance partners becomes inevitable and hence a new style of relationship is essential. In the ‘extended enterprise’ there can be no boundaries and an ethos of trust and commitment must prevail. Along with process integration comes joint strategy determination, buyer/supplier teams, transparency of information and open-book accounting.

Fourthly the idea of the supply chain as a confederation of partners linked together as a **network** provides the fourth ingredient of agility. There is a growing recognition that individual businesses no longer compete as stand-alone entities but rather as supply chains. Managing networks calls for an entirely different model than the conventional ‘arm’s length’ approach to managing customer and supplier relationships. Clearly a much higher level of collaboration and synchronisation is required if the network is to be truly agile. It can be argued that in today’s challenging global markets, the route to sustainable advantage lies in being able to make best use of the respective strengths and competencies of network partners to achieve responsiveness to market needs.

It will be apparent that agility is not a single company concept but rather it extends from one end of the supply chain to the other. The concept of agility has significant implications for how organisations within the supply/demand network relate to each other and how they can best work together on the basis of shared information. A number of basic principles can be identified as the starting point for the creation of the agile supply chain including viz.

1. **Synchronise activities through shared information:**

Synchronisation implies that all parties in the supply chain are ‘marching to the same drumbeat’. In other words through shared information and process alignment there is in effect one set of numbers and a single schedule for the entire supply chain. This somewhat Utopian vision is increasingly becoming reality as web-based technology enables different entities in a network to
share information on real demand, inventory and capacity in a collaborative context e.g. the Tesco Information Exchange (TIE) is an extranet that enables Tesco’s suppliers to access their own sales data, item by item. This data is updated several times a day and potentially can provide manufacturers with the means to link their production schedules to Tesco’s replenishment requirements.

Successful synchronisation depends *inter alia* on a spirit of cooperation across the so-called ‘extended enterprise’ but in practice this is an issue that tends to limit the extent to which synchronisation can be achieved.

2. **Work smarter, not harder:**

Detailed examination of the processes that together constitute a supply chain inevitably highlights the fact that a large proportion of the end-to-end time is ‘non-value-adding’. In other words, time is being spent on activities that typically create cost but do not create a benefit for the customer. Time spent in inventory is a classic example of non-value-adding time. Time compression in a supply chain can be achieved not necessarily by speeding up activities but rather by doing fewer things i.e. eliminating where possible non-value adding activities.

3. **Partner with suppliers to reduce in-bound lead times:**

Conventionally, firms have maintained an arm’s-length relationship with suppliers. A major opportunity exists for reducing inbound lead times through close working with key suppliers.

One powerful way in which collaboration can improve responsiveness is through the adoption of Vendor Managed Inventory (VMI) practices whereby responsibility for the management and replenishment of inventory switches from the customer to the supplier.

*VMI is a classic instance of the application of the principle of ‘substituting information for inventory’.*

The customer no longer places orders on the supplier but rather shares with them information on sales, rates of usage or consumption. Using this information the supplier is better able to plan and schedule the acquisition,
production and delivery of the product. Both parties benefit, the customer through higher levels of availability and reliability and the supplier through a reduction in their need to carry safety stock and, often, a better use of capacity.

4. **Postpone the final configuration/assembly/distribution of products:**

This refers to the process by which the commitment of a product to its final form or location is delayed for as long as possible. Hewlett Packard, for example, design their DeskJet printers so that they can be manufactured as generic but incomplete units. They are then localised at regional centres where the appropriate power pack, plug and cable, local packaging etc are added. In this way inventory is minimised but availability is enhanced.

5. **The lead-time gap:**

Most organisations face a fundamental problem: the time it takes to procure, make and deliver the finished product to a customer is longer than the time the customer is prepared to wait for it.

The company that achieves a perfect match between the logistics lead time and the customer’s required order cycle has no need of forecasts and no need for inventory.

The challenge for logistics management is to search for the means whereby the gap between the two lead times can be reduced if not closed. Reducing the gap can be achieved by shortening the logistics lead-time (end-to-end pipeline time) whilst simultaneously trying to move the customer’s order cycle closer by gaining earlier warning of requirements through improved visibility of demand.

6. **Manage processes not just functions:**

Those companies who are able to respond rapidly to changing customer requirements tend to focus more on managing ‘processes’ which are the horizontal, market-facing sequences of activities that create value for customers. They are cross-functional by definition and are usually best managed through the means of inter-disciplinary teams.
Again Hewlett Packard is a good example of a company that has restructured its organisation around market-facing processes rather than functions. Order fulfilment has been recognised as a core process and so, on a global scale, there is one order management system architecture that links order entry, order management and factory order/shipment processing. This core process is supported by a common information system that provides ‘end-to-end’ visibility of the logistics pipeline from order to delivery.

In effect the information network now defines the organisation structure and the information that flows from the marketplace at one end of the pipeline to supply points at the other will increasingly shape the organisation – not the other way round.

7. Utilise appropriate performance metrics:

It is a truism that performance measurement shapes behaviour. A fundamental tenet of agility is customer responsiveness, hence the need to ensure that the primary measures of business performance reflect this imperative. If time-based metrics are employed then the focus could be on cycle-time reduction, set-up time reduction and other measures that encourage agile practices. ‘Time to market’ is, for example, a powerful metric employed by companies such as Sony and Canon whose short life cycles dictate a focus on rapid response to fast-changing technologies and volatile customer demand. A further incentive to agility can be created by linking processes to customer-based metrics e.g. rate of ‘perfect order achievement’ i.e. an order where the customer gets exactly what they want at the time and place they want it.

And Finally

The author cautions that companies that believe that they can continue to conduct ‘business as usual’, will find that their prospects for success in tomorrow’s marketplace will decline rapidly.
Author

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