
UNIT 2 LOGISTICS MANAGEMENT: CONCEPTUAL FRAMEWORK, SCOPE, AND IMPORTANCE*

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2.0 OBJECTIVES

After reading this Unit, you should be able to:

- Explain the meaning of logistics management;
- Describe its conceptual framework;
- Examine the scope of logistics management; and
- Bring out its importance.

2.1 INTRODUCTION

The term logistics includes multitude of functions in movement of materials and goods from sources of supply to the users. The management of logistics calls for effective planning, execution, controlling and coordinating several activities. Its scope is wide that involves processing of orders, maintenance of inventory, transportation, materials handling and packaging. This Unit acquaints the learners with the conceptual framework of logistics management, its scope and importance. It familiarises the learner with certain key concepts in the realm of logistics management.

2.2 LOGISTICS MANAGEMENT: CONCEPTUAL FRAMEWORK

Logistics management is an integrating function which coordinates and optimises all logistics activities, as well as integrates them with other functions, including marketing, sales, manufacturing, finance, and information technology. As per the Council of Supply Chain Management Professionals, logistics management is that part of supply chain management which plans, implements, and controls

the efficient, effective, forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customers' requirements.

Logistics management activities include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfilment, logistics network design, inventory management, supply/demand planning, and management of third-party logistics services providers. The third-party logistics providers(3PL) include freight forwarders, courier companies, and other companies which integrate and offer subcontracted logistics and transportation services. To varying degrees, the logistics function also includes sourcing and procurement, production planning and scheduling, packaging and assembly, and customer service. It is involved in all levels of planning and execution i.e. strategic, operational, and tactical.

Logistics management is a process of planning, executing, and controlling the efficient and effective flow and storage of goods and services, and related information from the point of origin to point of consumption for the purpose of conforming to customer requirements. It is defined as a process of management which integrates the movement of products, services, data, and capital from the stage of raw materials to the consumer product. It is application of management principles to logistics operations for efficient and cost-effective movement of goods and personnel and the management of the activity of transporting goods to customers or to places where they are bought or sold. Logistics management includes the design and management of systems to control the flow of material, work-in-process, and finished inventory to support business unit strategy.

2.3 LOGISTICS MANAGEMENT: SPECIFIC CONCEPTS

The actual work of logistics is supportive in nature. Logistical support is necessary for manufacturing and marketing operations. The concept of logistics is based on a total systemic view of the multitude of functions in movement of materials and goods from sources of supply to users. Accordingly, it compels management to think in terms of managing the total system; rather than just one part of it; to facilitate the management of the organisation in its continuous search for better solutions to be implemented for its long-term improvement. The concept of logistics management could be considered as ensuring cost effectiveness, and optimum use of raw materials and stock, better transportation, and warehouse facilities so that the products can be made available at any point of time without scarcity. Various logistics management concepts could be combined into the concept of total logistics management with excellence and continuous improvement for achieving a competitive advantage. Some of the specific concepts and assumptions for better logistics management are briefly discussed below.

Lean Logistics Management

Lean logistics management is a business management philosophy that considers the expenditure on resources utilised for the achievement of any goal other than the creation of value for the end customer. It is a process that recognises and eliminates wasteful activities from the supply chain. It highlights concepts such

as value, flow, waste, and excellence/perfection. It attempts to define a well – designed supply chain that operates and delivers products to the end customer with minimum wastage. It aims at reduction of wastage of resources in the organisation.

Agile Logistics Management

This encompasses tools, techniques, and initiatives that enable an organisation to thrive under conditions of unpredictable change. Agile logistics management enables achieving rapid response to customer needs, along with the ability to quickly reconfigure operations to respond rapidly to unforeseen shifts in the marketplace. It may incorporate “mass customisation” concepts to satisfy unique customer requirements and includes the ability to react quickly to technical or environmental exigencies.

Agile logistics management is concerned with doing things quickly, saving costs, being responsive to market demands, maintaining flexibility and high productivity.

Whereas lean-based management concentrates on generating maximum output value by reducing waste, agile management focuses on increasing efficiency and flexibility to adjust to the customer needs as quickly as possible.

The basic advantages of agile logistics management are working towards prompt and effective response to the customer needs in the changing market, ability to adjust and deliver the products according to the customer needs, produce and deliver new products while optimising costs, decreasing manufacturing costs, increasing customer satisfaction, higher competitiveness, and reduction of those processes which add no value.

Resilient Logistics Management

The resilient logistics management concept is a constantly developing branch in management studies. It is defined as the system’s ability to return to its initial state or a new or desired state after the elimination of unproductive or negative processes that influence the system. The resilience is strongly related to risk within the entire supply chain and the enterprise.

The four key pillars of resilient logistics management are visibility, flexibility, collaboration, and control.

Green Logistics Management

Green logistics management concept is pro-ecological and directly stems from the deteriorating environment conditions reflected in lower supply of raw materials, excessive waste, and increased pollution levels. It is a natural consequence of the evolutionary change in manufacturing companies which replaced a reactive approach to environment management approach with a proactive one.

Green logistics describes all attempts to measure and minimise the ecological impact of logistics activities of organisations. Its characteristics are:

- Reduce
- Re-use
- Rework

- Refurbish
- Reclaim
- Recycle
- Remanufacture.

Green logistics management concept blends environment management and logistics management. This focuses on multiple approach to product design which takes into consideration issues of environmental risk management, occupational health and safety, rational materials use or waste reduction. It focuses on goods manufacturing and distribution that promotes sustainable development which takes social and environmental factors into cognisance. Sustainable logistics is a key element in the development of environmentally conscious supply chain design.

For example, any organisation making efforts to minimise the emissions and energy consumption of transportation in moving its supplies by use of electric vehicles is adapting green logistics.

We shall be discussing in detail about green logistics in Unit 11 of this Course.

Total Logistics Management

Total Quality Management is an approach in which managers constantly communicate with organisational stakeholders to emphasise the importance of continuous quality improvement, that forms the basis of the concept of total logistics management.

- a) Logistic quality guarantees customer satisfaction and continuous logistic quality improvement.
- b) The pursuit of logistic partnership is based on professionalism and trust.
- c) The safety and security assurance for people and goods and information flows.
- d) The pursuit of ‘one click’ activities implementation based on flow processes, automation and computerisation.
- e) Sustainable logistics development ensures an organisation’s impact on its environment, in an appropriate and effective manner.
- f) Logistics management based on product logistic efficiency is the foundation to secure effective and efficient goods and information flow.

Check Your Progress1

Note: 1) Use the space given below for your answers.

2) Check your answers with those given at the end of the Unit.

- 1) Explain the meaning of logistics management.

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2) What do you understand by green logistics management?

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2.4 SCOPE OF LOGISTICS MANAGEMENT

The scope of logistics management involves order processing, inventory control, transportation, warehousing, materials handling, and packaging, all integrated throughout a network of facilities. The goal is to support procurement, manufacturing, and customer service operational requirements. It aims internally to coordinate functional competency into an integrated operation focusing on serving customers (internal); and externally, to ensure operational synchronisation which is essential with customers (outside of the firm) as well as material and service suppliers to link internal and external operations as one integrated process.

Logistics management is a supply chain management component that is used to meet customer demands through the planning, control and implementation of the effective movement and storage of related information, goods, and services from origin to destination. It helps companies reduce expenses and enhance customer service. The logistics management process begins with raw material accumulation to the final stage of delivering goods to the destination. By adhering to customer needs and industry standards, logistics management facilitates process strategy, planning and implementation. The scope of logistics management includes:

Business Logistics: It is the systematic and coordinated set of activities to provide the physical movement and storage of goods, services, and related information

- from the point of origin of the vendor or the supply services
- through company facilities
- to the point of consumption (customer/market)
- and the associated activities (like packaging, order processing)
- in an efficient manner necessary to enable the organisation to contribute to the explicit goals of the company and meet customer requirements.

Materials Management: Materials management is the planning, organisation and control of all aspects of inventory, embracing procurement, warehousing, work-in-progress, shipping, and distribution of finished goods. It is the inbound logistics from suppliers through the production process, the movement and management of materials and products from procurement through production.

Physical Distribution: It is the movement and storage functions associated with finished goods from manufacturing plants to warehouses and to customers. **Distribution relates to** outbound logistics, from the end of the production line to the end user having activities associated with the movement of material, usually

finished goods or service parts, from the manufacturer to the customer. These involve the functions of transportation, warehousing, inventory control, material handling, site and location analysis, packaging, and the communications network necessary for effective management.

Supply Management: Supply management is the act of identifying, acquiring, and managing the resources and suppliers that are essential to the operations of an organisation. It includes the procuring of physical goods, information, services, and any other necessary resources that enable a company to continue its operations. The main goals are cost control, the efficient allocation of resources, risk management, and the effective gathering of information to be used in strategic business decisions. It is a systematic business process that goes further than procurement to include the coordination of pre-production logistics and inventory management.

Decentralised Logistics Management

Decentralised logistics management is based on the premise that a company needs to decentralise its operations to enable the organisation/company to respond to the local needs. Any company while dealing with different local specific cultures requires inputs from the dispersed/ local organisational units. The managers who deal with the local cultural variations daily normally know what works and what does not. The product moves further away from the key stakeholders at the central corporate office and closer to the end customer. While this can be accomplished through self-owned warehouse and logistics, a managed decentralised logistics network is far more suitable than its counterpart.

An organisation should determine whether to centralise its logistics structure based on its strategic goals or not. However, the majority of organisations have adopted a centralised logistics structure. Centralisation can potentially decrease costs by reducing the needed warehouse space, consolidating operations, expanding channel activities, and standardising logistics processes.

There is no “one-size-fits-all” logistics solution. The term supply chain refers to the many links that a product goes through on the way to a customer. The efficiency of that supply chain is a function of the amount of cost and effort to move the product, and how quickly the product needs to be moved. One of the main challenges in the supply chain is the last mile - the final leg from the distribution centre to the customer. This is one of the major factors in choosing between centralised and decentralised logistics.

2.5 IMPORTANCE OF LOGISTICS MANAGEMENT

Logistics management is extremely important for any enterprise is to be successful. It involves careful control of the goods both leaving the business premises and entering them, thus keeping the organisation running smoothly as a whole. Logistics management helps organisations seeking to use logistics as the key to gain competitive advantage. Logistics management involves numerous elements, including:

- Choosing the most effective routes for transportation
- Discovering the most competent delivery method

- Using software and IT resources to proficiently handle related processes

In logistics management, unwise decisions create multiple issues. For example, product deliveries that fail or are delayed lead to buyer dissatisfaction. The damage of goods due to careless transportation is another potential issue. Poor logistics planning gradually increases expenses, and issues may arise from the implementation of ineffective logistics software. Most of these problems occur due to improper decisions related to outsourcing, such as selecting the wrong vendor or carrying out delivery tasks without sufficient resources.

Good logistics management helps organisations deliver better service to their customers. Effective management of company's logistics helps in improving delivery and offers better customer service to all those who buy the products. While dealing directly with the customers to meet their demands, it is important to make sure that supplies or products are received on time and that products are sent to the customers as quickly as possible.

Logistics management is important for the following reasons:

- 1) **Cost Reduction and Profit Maximisation:** The optimal way is to boost the revenue by improving logistics management. Logistics management results in cost reduction and profit maximisation, primarily due to:
 - Improved material handling
 - Safe, speedy, and economical transportation
 - Optimum number and convenient location of warehouses etc.
- 2) **Efficient Flow of Manufacturing Operations:** Inbound logistics help in the efficient flow of manufacturing operations, due to on-time delivery of materials, proper utilisation of materials and semi-finished goods in the production process and so on.
- 3) **Competitive Edge:** Logistics provide, maintain, and sharpen the competitive edge of an enterprise by:
 - Increasing sales through providing better customer service
 - Arranging for rapid and reliable delivery
 - Avoiding errors in order processing; and so on.
- 4) **Effective Communication System:** An efficient information system is a must for sound logistics management. As such, logistics management helps in developing effective communication system for continuous interface with suppliers and rapid response to customer enquiries.
- 5) **Sound Inventory Management:** Sound inventory management is a by-product of logistics management. A major problem of production management, financial management etc., is to ensure sound inventory management, which is solved by logistics management.

Check Your Progress 2

Note: 1) Use the space given below for your answers.

2) Check your answers with those given at the end of the Unit.

1) Discuss the scope of logistics management.

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2) Give reasons for increasing significance of logistics management.

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2.6 CONCLUSION

Logistics management is all about managing goods manufactured by the companies. It is the business process that starts with the flow of material from the suppliers' manufacturing house, then to the customer through the distribution channel. Logistics management includes the planning, implementation and controlling the efficient and effective flow and storage of goods from the point of origin to the point of consumption. To resolve the conflicting issues, organisations should implement best logistic management practices. Organisation should focus on collaboration rather than competition. Good collaboration among transportation providers, buyers and vendors helps reduce expenses. An efficient and safe transportation provider is also vital to business success. Logistics management is incorporated within the supply chain system.

Supply Chain Management is an integrating function with primary responsibility for linking major business functions and business processes within and across companies into a cohesive and high-performing business model. It includes all the logistics management activities noted above, as well as manufacturing operations, and it drives coordination of processes and activities with and across marketing, sales, product design, finance, and information technology.

2.7 GLOSSARY

Inbound Logistics: It refers to the sourcing, transport, storage and receiving of goods coming into the organisation.

Inventory Management: It is concerned with all aspects of management of flow of goods from manufacturers to warehouses and from these facilities to

point of sale.

Outbound Logistics: It refers to warehousing, packaging, and transporting of goods going out of business.

Sustainable Development: It is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable Logistics: It is a resource management process that combines sustainable development with a logistics system.

Third-party Logistics Providers (3PLs): These are the outsourced transportation and logistics service providers.

2.8 REFERENCES

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2.9 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

- 1) Your answer should include the following points:
 - Logistics management is a process of planning, executing and controlling the efficient and effective flow and storage of goods and services and related information from point of origin to point of consumption.
 - It involves efficient and cost effective management of goods and personnel and management of transportation aspects.
- 2) Your answer should include the following points:
 - Green logistics management is pro-ecological.

- It encompasses initiatives to measure and minimise the ecological impact of logistics activities of organisations.
- It focuses on measures to reduce, reuse, rework, refurbish, reclaim, recycle and remanufacture.
- It blends environment management and logistics management.

Check Your Progress 2

- 1) Your answer should include the following points:
 - The scope of logistics management involves order processing, inventory, transportation, materials handling and packaging.
 - It encompasses business logistics, distribution, materials management, quick response system, supply management.
- 2) Your answer should include the following points:
 - Cost reduction and profit maximisation
 - Efficient flow of manufacturing operations
 - Competitive edge
 - Effective communication system
 - Sound inventory management