UNIT 13 EFFECTIVE LOGISTICS MANAGEMENT: CHALLENGES*

Structure

13.0 OBJECTIVES

After reading this Unit, you should be able to:

- Identify the challenges to effective logistics management;
- Describe aspects of business process planning and workforce management in logistics;
- Gain awareness about technologies and software for logistics enhancement; and
- Examine the regulatory and environmental issues related to logistics.

13.1 INTRODUCTION

The logistics industry is the backbone of any economy, and the driving force behind all sectors. The management of logistics has always been a complex task, but with time it has become even more specialised activity. Almost every business is in the activity of sale and purchase of materials and goods which are to be transported to specific places. The need for logistics is increasing due to e-commerce which is emerging to be a type of mass shopping as people prefer to shop online due to ease and convenience.

The global outlook for logistics industry is optimistic but the road ahead is challenging. Globally, the economy has a huge potential for good logistics. Logistics professionals face many challenges throughout the supply chain to

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handle the growing demand from customers and the need to meet their expectations.

The logistics industry is subjected to tremendous pressures in present times being driven by technological innovations, changing consumer expectations and stringent regulations. This is the last unit of this Course and it presents an overview of the challenges confronting the domain of management of logistics.

13.2 CHALLENGES TO EFFECTIVE LOGISTICS MANAGEMENT

There are many strategic challenges in global logistics strategy but cutting transportation costs has continued to be one of the difficult amongst others. Longer supply chains have greater exposure to risk. Greater variability due to several deviations from the plan and large buffer inventories can add significantly to the costs.

The key challenges and opportunities in logistics management are:

- Internal alignment: improving internal alignment before further integrating externally.
- External improvement priorities: picking upstream and downstream collaborative opportunities.
- Managing costs for healthy, profitable growth of the company.
- Workforce availability especially the supply chain managers, logistics managers and the team of logistics specialists.

Many of the challenges can be overcome by working with a logistics service provider (LSP). Some of the key threats to effective logistics management are:

- Efficient transportation
- Customer management
- Business process planning
- Improving supply chain visibility
- Workforce management
- Technological developments
- Regulatory compliances
- Environment issues

13.3 EFFICENT TRANSPORTATION

A company's transportation department can decrease the expenses of the logistics firm and the processes can be overhauled for faster delivery of the products. It can be achieved by finding the best delivery route which would be shortest, yet safest route, also saving money and time. Cost-effective packaging would ensure low investment and safety of goods by optimising the packaging as it occupies less volume, and it does not increase the weight of the package.

Cutting transportation costs: It is the single biggest challenge for the logistics industry, since transportation is a major part, covering about 30 percent of total expenses, but with rising fuel prices, the costs can escalate. Transportation costs are a major item in logistics and all freight forwarders try to negotiate the best rates for the movement of cargo.

Reducing carriers: Companies can redistribute their business among fewer carriers and negotiate for lower rates. However, this increases the risk of over dependency on few carriers. An optimal strategy needs to be worked out for cost effective and hassle-free delivery.

Consolidating shipments: This can consolidate shipments and get bulk rates, but this may delay deliveries impacting consumer satisfaction. Different types of transport are used to develop better strategies in which containers are filled to the best of their ability. An optimal route needs to be drawn.

Fleet management routing software: It can help to ensure that freight carriers ply on the shortest, most efficient routes – avoiding traffic congestions, considering road restrictions by vehicle type and time of day. This not only reduces the total miles driven, wear and tear and maintenance costs, but also lowers violations and safety risks, which can result in reduced insurance premiums.

Fuel Costs: One of the main reasons for the increase in transportation cost is the increased fuel price. Logistics companies may not be able to control the fuel prices but controlling fuel expenses is within their reach. The decrease in transportation costs can make positive changes in the business profit margin too. The business process can be made efficient by the proper planning and management of transportation costs such that the company can run the project within stipulated budget. Higher fuel prices will significantly affect the cost of wages and transportation for shippers. Working with a third-party logistics supplier (3PL) will help a company in dealing with these changes as they have the flexibility and experience to secure discounted transportation rates. To better optimise transportation costs, logistics managers need to have a clear view of future orders.

13.4 CUSTOMER MANAGEMENT

Customer service is the prime challenge in every industry and proper customer management is one of the threats confronting the industries. In logistics management also, the customers expect complete and proper transparency in product quality and delivery. In the dynamic business environment with complex supply chains, the customer expectations have changed in terms of delivery times and service quality. They want to get notified about the reliable information including exact place, expected date and time, and other details about the delivery.

Enhancing Customer Service: Customers expect their logistics partners to solve problems and help them grow in a competitive environment. Logistic supply providers (LSPs) must have the right people with the right skills and attitude, focus on enhancing and standardising the customer experience across all locations and channels, be it in-person interactions, phones, online chats, emails or social media.

Better Customer Service: Today's customers expect certain features relating to customer service especially when they order online. They want to receive tracking information and real-time updates to keep them aware of where their order is along the shipping and delivery schedule. They also want the option to pay for faster shipping, such as two-day or same-day shipping. Anything more than this is considered unacceptable and may deter customers from following through with the purchase. A third-party logistics provider (3PL) can help in achieving transparency throughout the supply chain so that the customers can be provided with the required information.

Reverse logistics: This is required by every e-commerce business. Customers need a way to return items they have purchased if they are dissatisfied with them, and this process needs to run smoothly. Without an efficient reverse logistics platform, one cannot achieve customer satisfaction. However, a reverse logistics strategy can be challenging and costly, without the right support. A 3PL provider can help face these challenges with their pre-existing robust solutions. They can help process returns in a timely manner to satisfy the customers and can help decide what to do with returned items to prevent any revenue loss. These solutions may include repackaging unused items for resale or refurbishing items to sell at a discounted price.

13.5 BUSINESS PROCESS PLANNING

Planning: It is inevitable for the success of every industry to plan for better logistics management to enable the company to operate within its budget in achieving productivity. Planning involves procuring the goods, storage facilities, and delivery of products to the exact location. The other parameters in this are time, transportation, and the costs. A supply chain operative should be able to devise the flow chart for the whole operation. The purpose of planning is to attain maximum work in the least possible time, with maximising the profits.

Contingency plan: Proper planning is to be done to meet unforeseen circumstances. Logistics planning process is incomplete without a contingency plan. In the process of management of logistics eventualities can be related to:

- The products
- Unavailability of the transportation
- Freight related matters
- Any internal issue in the organisation
- External factors impacting the organisation

Improving Business Processes: The enterprises rely on their logistics supply provider to derive cost reductions and business process improvements. LSPs are expected to have the knowledge and experience to look beyond supply chain and logistics operations to drive changes within the overall operations framework. They also need to be financially stable, flexible, and open to taking reasonable risks for long term gains. The logistics business is highly competitive where industry benchmarking plays a key role in business process improvements, to be the best and the fastest.

Offering segmented and personalised services: Logistics today is not only about delivery within the agreed period, but more specialised services should

also be offered. Logistics processes are turning into many small segments in the supply chain. Therefore, it is necessary to offer specific services as well as package price offers for overall freight management.

Metrics: For new strategies in the system, measurement of output is needed. Logistics network optimisation is incomplete without integrating measurement, analysis, and feedback. The measurement tools and software should be integrated that easily determines and classifies the information as per the requirement. Cycle-time, Cost and Service metrics related to different operations can be considered and incorporated.

The increase in new opportunities makes it imperative to keep in tune with new advances in business processes. The challenge is to adapt and implement the changes to offer better service and to increase efficiency in operations. However, this can be costly and challenging without the right assistance. A third-party or fourth-party logistics (4PL) provider will work as an extension in dealing with any broken or weak links in the supply chain. They help improve logistics process by offering appropriate planning, strategy, and services that work in the company's favour.

13.6 IMPROVING SUPPLY CHAIN TRANSPARENCY

Supply chain transparency is crucial in minimising order errors and to retain the customers and earn their loyalty. This ensures that information about every aspect of inventory is available and allows better customer service by improving performance and reducing errors. Improved supply chain transparency uses specific information to establish relationships between lead events and forecasted activity. It highlights the need for changes in flow or deployment decisions pertaining to material or products, to minimise or prevent potential problems.

To have accurate and on time deliveries, logistic companies need to have transparency on all aspects of the supply chain such as:

- Tracking shipments to ensure they are following the prescribed route and schedule, and in case of disruptions, notifications and alerts be activated so that prompt action can be taken. Customers need to get updates, namely, shipping notifications, expected time of delivery, and be able to track shipments on a web portal.

- Entire workflow in a warehouse i.e. receipt of inventory, storage, order management and completion, and shipment.

Transparency is critical to every e-commerce and retail business, which can be provided by a third-party provider through use of technology in the warehouse. They can help make more efficient use of time, improve forecasting of inventory movement, increase security and quality control, etc.

13.7 WORKFORCE MANAGEMENT

A workforce team is an essential aspect of an organisation that is responsible for its growth. They must have the ability to communicate at any point in time to ensure coordination and a smooth workflow. Work force management

requires great precision in terms of schedules, job responsibilities, good communication, and consistency in the implementation of logistics operations, etc. A LSP can help manage the employees better by providing managers in major locations, ensuring quality communication, and scheduling solutions.

From the delivery person to the warehouse manager, everyone should aim to give their best in their respective field of work. Proper training of the employees by regular training workshops keep the employees updated with the latest trends in the logistics industry. This helps in increased efficiency and satisfaction of the clients. A logistics manager with impeccable interpersonal skills is crucial for the organisation in tapping the business opportunities.

Check Your Progress Exercise 1

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

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

1) What are the challenges to effective logistics management?

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2) Elaborate on the challenges to efficient transportation.

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13.8 TECHNOLOGICAL DEVELOPMENTS

Technological Advancements: It has become imperative for logistics companies to adopt new and innovative technology solutions. With scarce labour, intense competition and demanding customers, technological advancements can increase productivity by minimising time, cost, and errors in various phases of logistics management. Some of these are:

a) Automation systems or data driven software solutions such as advance packaging, labeling, warehouse sorting etc. have become imperative.

b) Shipment tracking systems enable monitoring shipments round the clock, get alerts and notifications, and set up customised reporting.

c) Data analytics can help with improving customer experience, operational efficiency, and safety.

d) Use of Robotics and autonomous machinery. These help in drastically cutting down time taken for order completion and delivery.

e) Internet of things (IoT) can have an important role in reducing risks and ensuring safe delivery of goods. The best fleet management system connects with specialised sensors built into new generation trucks. This software provides real time in-transit visibility of trucks, shipments on board, and key vehicle parameters.

f) Cloud computing enables many of the above software solutions relatively inexpensive. However, trained manpower resources are required to make use of it and derive benefits from them.

Adopting Technology: The cost of adopting new technology used in the supply chain is high, but it is a requirement to survive in the competitive industry. A third-party logistics partner will resolve this issue, as many of these organisations are already equipped with the necessary technology to increase efficiency. Some of these technologies include radiofrequency identification for barcoding and scanning (RFID), communication technology such as electronic data interchange (EDI) and GPS, and material handling technology. Implementing these technologies on your own is extremely expensive and it is advantageous to partner with a 3PL provider. We have referred to these technologies in earlier units of the Course.

Automation: The logistics firm should embrace the technology for increasing productivity. There is valuable software that can be deployed in the logistics process, like:

a) The business process software can be integrated that provides timely updates regarding the movement of goods. This saves a considerable amount of time because manual interference is eliminated. Also, accurate tracking helps in improving overall process management. The operator and the client will get details regarding:

- The goods that are dispatched from the supplier.
- Procurement of the goods at the warehouse.
- Delivery of the goods at the destination

b) The account details and employee details can be managed using specific software developed for these tasks.

Digital trends in Logistics Management

a) **Drones:** These boost warehouse safety by using artificial intelligence to visually perceive any accidents that may occur. Also speedens up the delivery process by cutting down common operational costs.

b) **Robotics:** They detect package defect before its shipping by sorting the packages at double the speed.

c) **Cloud integration:** These provide real time data to specific distributed locations and to people across all geographical locations.

d) **Autonomous tracking:** It uses sensors in the vehicle to evaluate road conditions. Access to alternative routes based on location and shipment overload inside fleet.

e) **Internet of things (IoT):** It manages and accelerates productivity within the supply chain for their specific processes.

f) **3-D printing:** It **c**reates complex designs and effortlessly customisable products specific to unique customer needs.

g) **Blockchain:** This tracks the products' lifecycle and ownership from delivery to store shelf by using advanced technology for transparency.

13.9 REGULATORY COMPLIANCES

Government regulations: Logistics management in companies has several government-related issues as in certain ways, they need to abide by the laws, rules and regulations, framed by the national, state, and local authorities. For example, governments wield tremendous power over global shipments with multiple agencies involved in trade shipments and having the authority to hold and release the shipments. Even after the shipments are cleared in the ports, different departments need to give their approval. In addition, permit laws and taxation on international and domestic shipping also impact logistics.

Awareness and Compliance with regulations: Some clients have no idea how much logistics managers need to know the regulations and laws. Sometimes the package price for the logistics service may seem high, but in fact it is like one paying a "guarantee fee" for the valuable supplies. The rules vary from country to country, and goods can travel to many different destinations. This means that every logistics expert should be aware of current laws and upcoming updates. A slight mistake in documentation, or lack of awareness thereof, can be very costly to the business. Whether one is dealing with transport of hazardous substances or recyclables, priority should be to follow the regulations. It is essential to be aware of these regulations and ensure their adherence.

13.10 ENVIRONMENTAL ISSUES

Reducing greenhouse gas emissions is a major goal for many companies, especially after numerous studies have shown the negative impact, big business supply chains have on the environment. We have already discussed about this in detail in Unit 11 of this Course.

Companies that adapt and reduce their carbon footprints succeed better because both partners and consumers are more aware than ever before. Choosing a third-party logistics provider that strives to find ways to reduce gas emissions and waste can be a better option. Solutions include using global positioning systems (GPS) to find more efficient routes to ship and deliver, or recycling materials from returned goods to put back into manufacturing, instead of disposing them as waste.

There is a considerable focus on reducing emissions, primarily due to anti- idling (Idling means running a vehicle when it is not in motion) and emission reduction regulations by governments, but also on account of public awareness on environmental issues.

Companies can comply by adopting route and load optimisation, tracking and reporting emissions, upgrading engines, and choosing alternative fuels. For

example, in transportation, the latest truck models come with the best engine performance, emission compliance and much better mileage. These offer great savings in the long run but require steep upfront costs.

Environmental sustainability is assuming importance globally, and those within the supply chain are no different. More and more shippers are embracing sustainability programmes, and carriers and third-party logistics companies are focusing on greening efforts to attract shippers. In addition, those within the supply chain are becoming more sophisticated in how they demonstrate and document their carbon emissions, miles per gallon, data, and efficiency metrics. Evaluating the entire network, including sourcing locations and product demand, can drive the overall efficiency within the supply chain, resulting in emissions reductions. Shippers are becoming more and more flexible with their networks, but often business rules can inhibit network optimisation.

There are multiple ways shippers and 3PLPs are integrating sustainable environmental processes into the traditional supply chain. They are involved in tracking and reporting emissions; route optimisation and load consolidation; alternative fuels, including electric vehicles and natural gas; autonomous vehicles or platooning technology (groups of vehicles that communicate via wireless connection that assist with vehicle movements).

Check Your Progress Exercise 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) Describe the technological advancements and digital trends related to logistics.

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2) Regulatory and environmental issues are important in logistics- Elaborate.

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13.11 CONCLUSION

The aim of effective logistics management is to improve the efficiency of the operations, ensuring customer satisfaction and increase productivity by process optimisation. Tracing goods to their origins will also meet consumer demands while enhancing the safety and integrity of products. For better control, logistics companies today need to ensure real-time tracking, cost efficiencies, timely delivery, anticipate problems, have backup plans in place and heightened security.

Given stiffening competition, there is a pressing need for improvements in the areas of capacity forecasts, inventory management, alignment of manufacturing and logistics, systems integration, and information sharing. They must remain flexible, and committed to upgrading technology, people, and processes. These challenges can be successfully met by services that include real-time inventory management, e-commerce execution, implementation solutions, and fulfillment markets. There are endless benefits to working with logistics supply provider company which uses the best quality software systems for effective logistics management.

Logistics management should cater for changing customer needs and on time delivery. A software solution for better managing logistics should increase transparency of operations/activities, improve customer satisfaction, reduce invoicing time with built-in accounting, improve cost efficiencies, real time tracking and provide customised reports. For these block chain becomes a vital part of logistics management.

13.12 GLOSSARY

Block Chain: It is a digital record of transactions that is distributed across the entire computer network system in the chain. They are linked together.

Cloud Computing: It is the delivery of computing services including servers, databases, data storage, networking, and software. Cloud based storage makes it possible to save files to a remote database and retrieve them on demand. Google drive is an example of this.

Cycle time: It is the amount of time a team spends working on producing an item, till the product is ready for shipment.

Data Analytics: It is the science of analysing raw data to make conclusions about that information that helps in decision making.

Global Positioning System: It is a global navigation satellite system that helps military and civil users in determining accurate geographical locations.

Internet of Things (IOT): It refers to a system of interrelated, internet connected objects that can collect and transfer data over a wireless network using sensors without human intervention.

Metrics: These are measures of quantitative assessment commonly used for comparing and tracking performance or production.

3 D Printing: It is three-dimensional printing that creates a physical object from a digital design. It is an additive process whereby an object is created by laying down successive layers of material until the object is created.

Real time Tracking: It invokes use of technology to automatically identify and track the location and activities of people and objects within an area.

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13.14 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) Your answer should include the following points:
   - Efficient transportation
   - Customer management
   - Business process planning
   - Improving supply chain visibility
   - Workforce management
   - Technological developments
   - Regulatory compliances
   - Environment issues

2) Your answer should include the following points:
   - Cutting transportation costs
   - Reducing Carriers
   - Consolidating Shipments
   - Fleet management routing software
   - Fuel Costs

Check Your Progress Exercise 2

1) Your answer should include the following points:

- Drones
- Robotics
- Cloud integration
- Autonomous tracking
- Internet of Things (IoT)
- 3-D printing
- Blockchain

2) Your answer should include the following points:

- Government wields considerable over global shipments with multiple players involved in trade and shipments.
- Compliance with regulations laid down by government.
- Awareness of current laws, rules, and regulations about various types of material transportation.
- Adherence to environmental regulations to reduce greenhouse gas emissions, carbon footprint.
- Promoting environment sustainability measures such as route optimisation, load consolidation, upgrading engines, use of alternate fuels, use of electric vehicles, etc.

SUGGESTED READINGS

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