

# GALGOTIAS UNIVERSITY

PBL REPORT

TOPIC

FACTORS AFFECTING LSCM

BBA LOGISTICS AND SUPPLY CHAIN  
MANAGEMENT 5<sup>TH</sup> SEM

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# CERTIFICATE

This is to certify that Mohd Ali Mirza (18SLAM1010002), final year student of BBA Logistics and supply chain management of Galgotias University has made his PBL report on the topic “Factors Affecting LSCM” under the guidance of Prof. Ashok Kumar Sharma (H.O.D Logistics and supply chain management) in October 2020.

SIGNATURE

# DECLARATION

I HEREBY DECLARE THAT THE WORK DONE ON THE PBL REPORT MADE ON THE TOPIC OF "FACTORS AFFECTING LSCM "IS SOLELY DONE BY ME. NO PART OF IT IS TAKEN FROM ANY OTHER SOURCE AND IS MY ORIGINAL WORK.

MOHD ALI MIRZA

# ACKNOWLEDGEMENT

I WOULD LIKE TO EXPRESS MY SPECIAL THANKS OF GRATITUDE TO PROF. ASHOK KUMAR SHARMA AS WELL AS PROF. AVDHESH KUMAR YADAV WHO GAVE ME THE GOLDEN OPPORTUNITY TO DO THIS WONDERFUL PROJECT ON THE TOPIC "FACTOR AFFECTING LSCM" WHICH ALSO HELPED ME GROWING MY KNOWLEDGE AND I CAME TO KNOW ABOUT SO MANY NEW THINGS.

I AM REALLY THANKFUL TO THEM.

SECONDLY I WOULD ALSO LIKE TO THANK MY PARENTS AND FRIENDS WHO HELPED ME A LOT IN FINISHING THIS PROJECT WITHIN THE LIMITED TIME.

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# ABSTRACT

THIS PROJECT REPORT IS ABOUT THE FACTORS THAT AFFECT THE LOGISTICS AND SUPPLY CHAIN MANAGEMENT. IT HAS BEEN MADE WITH THE VIEW TO KNOW MORE ABOUT THE FACTORS ON WHICH SOMEONE HAS TO KEEP A NOTE BEFORE TAKING THE DECISION IN THE SUPPLY CHAIN. IN THIS REPORT ALL THE IMPORTANCE IS ALSO COVERED TO GET A WIDE KNOWLEDGE ABOUT THE TOPIC.

# INTRODUCTION

BEFORE MOVING TOWARDS THE FACTORS ON WHICH THE LOGISTICS AND SUPPLY CHAIN ARE AFFECTED LET ME FIRST INTRODUCED YOU ALL WITH THE CONCEPT OF THE LOGISTICS AND SUPPLY CHAIN. AND WHY IT IS SO IMPORTANT FOR ANY COMPANY TO WORK ON THEIR SUPPLY CHAIN.

THE TERM SUPPLY CHAIN MANAGEMENT WAS FIRST INTRODUCED IN THE YEAR 1982 BY KEITH OLIVER. IT WAS THEN WHEN THIS WORD WAS USED BUT LATER THE WORD LOGISTICS ALSO CAME IN EXISTENCE AND IS BEEN USED VERY INTERCHANGEABLY THESE DAYS, BUT THERE IS A SUBTLE DIFFERENCE THAT EXISTS BETWEEN THE TWO. WHERE THE SUPPLY CHAIN IS THE OVERALL TOTAL CONCEPT OF THE FLOW OF GOODS AT THE SAME TIME LOGISTICS IS JUST ONE PART OF IT. NOW SINCE THE WORLD IS GETTING INTERCONNECTED AND IT IS BECOMING FASTER. THE FACTORS THAT ARE AFFECTING THE SUPPLY CHAIN AND LOGISTICS ARE ALSO GETTING HIGHER. TODAY CUSTOMER WANT A HIGH SPEED DELIVERY THAT CAN HELP THEM GET THEIR GOODS WITHIN NO TIME. CUSTOMER SATISFACTION HAS BECOME A VERY IMPORTANT PART IN THIS FIELD. WITH THE INTRODUCTION OF E-COMMERCE IT HAS



BECOME MORE CRUCIAL TO MAINTAIN A GOOD SUPPLY CHAIN. THUS NOW WE WOULD SEE THE FACTORS THAT ARE AFFECTING THE LOGISTICS AND SUPPLY CHAIN MANAGEMENT.

**DEFINE LOGISTICS**



Logistics is generally the detailed organization and implementation of a complex operation. In a general business sense, logistics is the management of the flow of things between the point of origin and the point of consumption to meet the requirements of customers or corporations. Logistics is used more broadly to refer to the process of coordinating and moving resources – people, materials, inventory, and equipment – from one location to storage at the desired destination. The term logistics originated in the military, referring to the movement of equipment and supplies to troops in the field.

## **COMPONENTS**

**THE MANAGEMENT OF LOGISTICS CAN INVOLVE SOME OR ALL OF THE FOLLOWING BUSINESS FUNCTIONS, INCLUDING:**

- **INBOUND TRANSPORTATION**

Inbound logistics refers to the transport, storage and delivery of goods coming into a business.

- **OUTBOUND TRANSPORTATION**

Outbound logistics refers to the same for goods going out of a business.

- **FLEET MANAGEMENT**

Fleet management is the management of: Commercial motor vehicles such as cars, vans, trucks, specialist vehicles, forklifts, and trailers  
Private vehicles used for work purposes  
Aviation machinery such as aircraft  
Ships  
Rail cars.

- **WAREHOUSING**

Warehousing is the act of storing goods that will be sold or distributed later. While a small, home-based business might be warehousing products in a spare room, basement, or garage, larger businesses typically own or rent space in a building that is specifically designed for storage.

- **MATERIALS HANDLING**

Material handling is the movement, protection, storage and control of materials and products throughout manufacturing, warehousing, distribution, consumption and disposal.

- **ORDER FULFILMENT**

Order fulfilment is in the most general sense the complete process from point of sales inquiry to delivery of a product to the customer.

- **INVENTORY MANAGEMENT**

Inventory management refers to the process of ordering, storing and using a company's inventory. This includes the management of raw materials, components and finished products, as well as warehousing and processing such items

- **DEMAND PLANNING**

Demand planning is the process of forecasting the demand for a product or service so it can be produced and delivered more efficiently and to the satisfaction of customers.

## IMPORTANCE



Although many small businesses focus on the design and production of their products and services to best meet customer needs, if those products cannot reach customers, the business will fail. That's the major role that logistics plays. But logistics also impacts other aspects of the business, too. The more efficiently raw materials can be purchased, transported, and stored until used, the more profitable the business can be. Coordinating resources to allow for timely delivery and use of materials can make or break a company. And on the customer side, if products cannot be produced and shipped in a timely manner, customer satisfaction can decline, also negatively impacting a company's profitability and long-term viability.

## DEFINE SUPPLY CHAIN



A supply chain is a network between a company and its suppliers to produce and distribute a specific product to the final buyer. This network includes different activities, people, entities, information, and resources. The supply chain also represents the steps it takes to get the product or service from its original state to the customer. Companies develop supply chains so they can reduce their costs and remain competitive in the business landscape.

## UNDERSTANDING SUPPLY CHAINS

A supply chain involves a series of steps involved to get a product or service to the customer. The steps include moving and transforming raw materials into finished products, transporting those products, and distributing them to the end-user. The entities involved in the supply chain include producers, vendors, warehouses, transportation companies, distribution centres, and retailers.

The elements of a supply chain include all the functions that start with receiving an order to meeting the customer's request. These functions include product development, marketing, operations, distribution networks, finance, and customer service.

Supply chain management is a very important part of the business process. There are many different links in this chain that require skill and expertise. When supply chain management is effective, it can lower a company's overall costs and boost profitability. If one link breaks down, it can affect the rest of the chain and can be costly.

## IMPORTANCE OF SUPPLY CHAIN



### 1. BETTER COLLABORATION

Information flow is a prominent challenge for companies. According to Oracle, 76% of companies lack an automated flow of information across the supply chain, and half of companies say fragmented information results in lost sales opportunities. Integrated software solutions remove bottlenecks and allow for the seamless sharing of

information, providing a big-picture view of the supply chain from end to end

## 2. IMPROVED QUALITY

Quality control issues follow the rule of 10, explains Arshad Hafeez, Global Expert for Supply Chain Management and Quality Control, SCM-Group Function (GF) in an article for CIO Review. According to the rule of 10, the cost to replace or repair an item increases by tenfold at each step of the progression, resulting in significant costs for companies when quality issues arise.

## 3. ON TIME DELIVERY

There is a efficient and effective delivery of the goods.

## 4. HIGHER EFFICIENCY RATE

HAVING REAL-TIME DATA ON THE AVAILABILITY OF RAW MATERIALS AND MANUFACTURING DELAYS ALLOWS COMPANIES TO IMPLEMENT BACKUP PLANS, SUCH AS SOURCING MATERIALS FROM A BACKUP SUPPLIER, PREVENTING FURTHER DELAYS. WITHOUT REAL-TIME DATA, COMPANIES OFTEN DON'T HAVE TIME TO INITIATE PLAN B, RESULTING IN ISSUES SUCH AS OUT-OF-STOCK INVENTORY OR LATE SHIPMENTS TO END CONSUMERS.

## 5. KEEPING UP WITH DEMAND

If consumer sales increase by 5 percent in a given week, a retailer could end up ordering 7 percent more product in response to the increase and a feeling that demand will continue,” according to a report by VISA. “The next link in the chain, observing what appears to be a 7 percent increase in demand, then orders a larger increase on his supplier. Eventually the factory may observe an inflated 20 percent increase in orders.”

## 6. SHIPPING OPTIMIZATION

According to Logistics Management’s The State of Logistics Report, freight transportation costs increased by 7% from 2016 to 2017, while private and dedicated trucking costs increased by 9.5%. Less-than-truckload costs rose by 6.6%, and full truckload costs rose by 6.4%. Due to rising costs, shipping optimization is a priority for supply chain leaders. Identifying the most efficient shipping methods for small parcels, large bulk orders and other shipping scenarios helps companies get orders to customers faster while minimizing costs.

7. REDUCED OVERHEAD COST With more accurate demand predictions, companies can reduce the overhead costs associated with storing slow-moving inventory by stocking less low-velocity inventory to make room for higher-velocity, revenue-producing inventory. Warehouse fulfilment costs contribute significantly to overhead. Reduce these costs by optimizing your warehouse layout, adopting the right automation solutions to improve productivity and implementing a better inventory management system

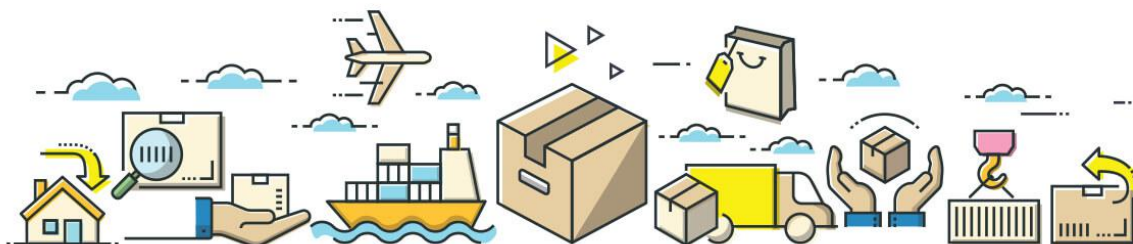
#### 8. IMPROVED RISK MITIGATION

Analysing big-picture and granular supply chain data can reveal potential risks, enabling companies to put backup plans in place to readily respond to unexpected circumstances. By taking proactive action, rather than reacting to supply chain disruptions, quality control issues or other concerns as they arise, companies can avoid negative impacts. Understanding risks also helps companies achieve leaner operations.

#### 9. IMPROVED CASH FLOW

The benefits discussed above allow companies to make smarter decisions, choose the right partners, accurately predict and respond to market and demand changes and reduce supply chain disruptions, but that's not all: they also improve the company's bottom line. For example, working with reliable suppliers not only means fewer disruptions and more satisfied customers, but it also improves cash flow by allowing you to invoice (and get paid for products and services) sooner. Implementing more cost-effective solutions to eliminate wasteful spend and reducing overhead costs also contribute to positive cash flow.

## **SUPPLY CHAIN MANAGEMENT VS. BUSINESS LOGISTICS MANAGEMENT**



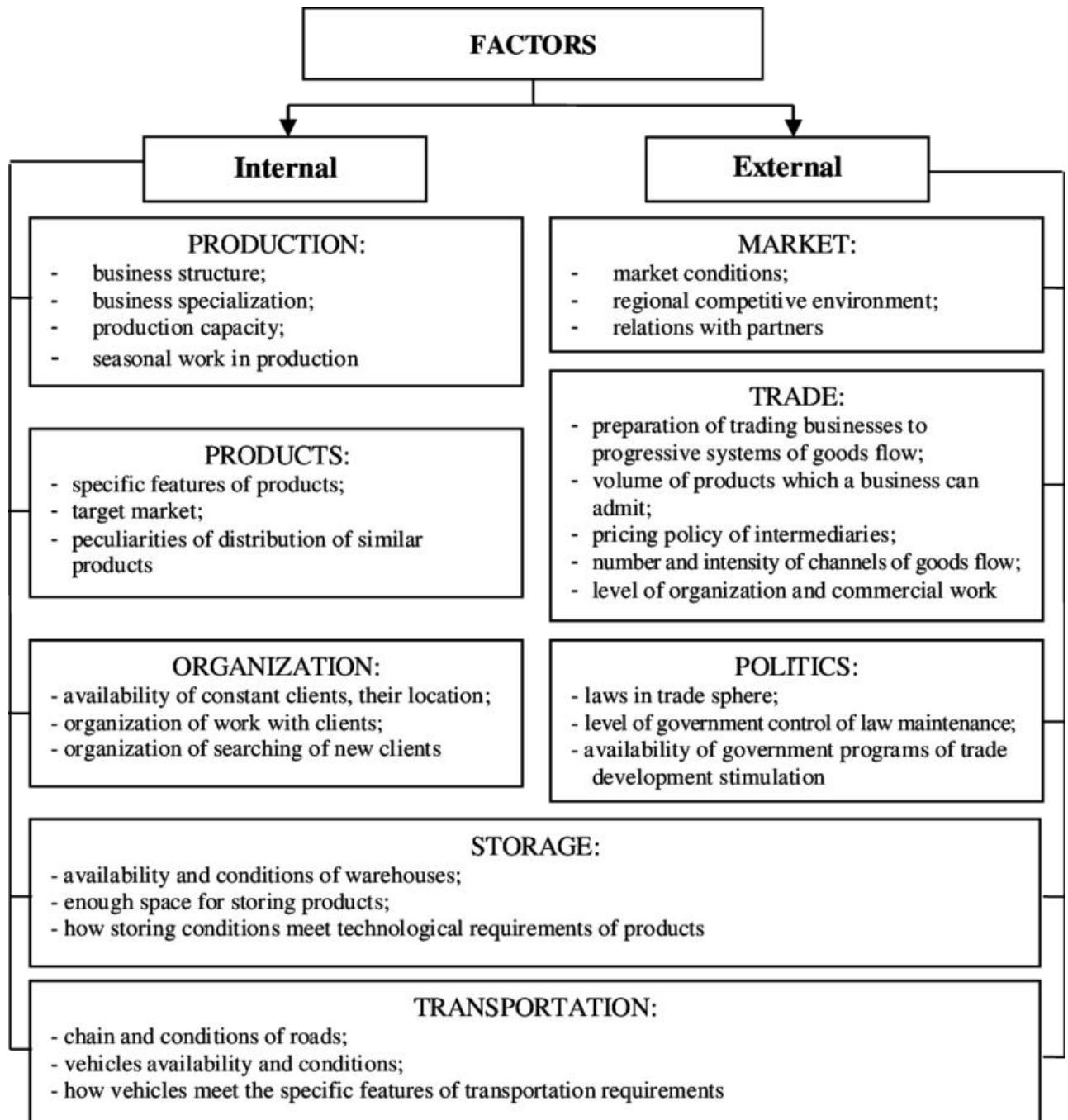


THE TERMS SUPPLY CHAIN MANAGEMENT AND BUSINESS LOGISTICS MANAGEMENT—OR SIMPLY, LOGISTICS—ARE OFTEN USED INTERCHANGEABLY. LOGISTICS, WHICH IS ONE LINK IN THE SUPPLY CHAIN, IS DIFFERENT.

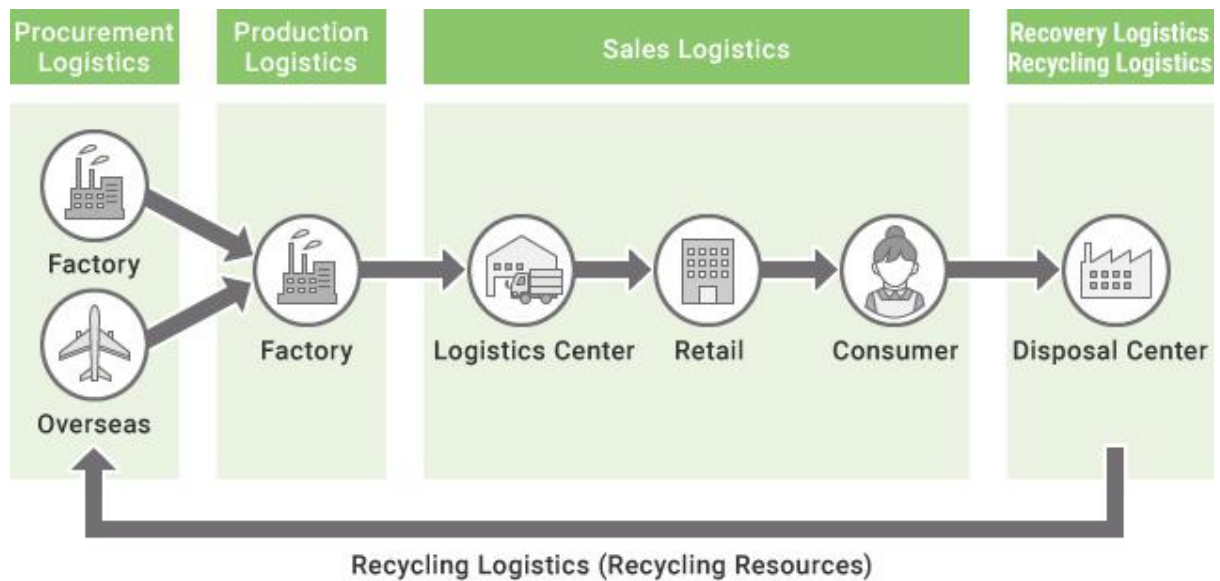
LOGISTICS REFERS SPECIFICALLY TO THE PART OF THE SUPPLY CHAIN THAT DEALS WITH THE PLANNING AND CONTROL OF THE MOVEMENT AND STORAGE OF GOODS AND SERVICES FROM THEIR POINT OF ORIGIN TO THEIR FINAL DESTINATION. LOGISTICS MANAGEMENT BEGINS WITH THE RAW MATERIALS AND ENDS WITH THE DELIVERY OF THE FINAL PRODUCT.

SUCCESSFUL LOGISTICS MANAGEMENT ENSURES THAT THERE IS NO DELAY IN DELIVERY AT ANY POINT IN THE CHAIN AND THAT PRODUCTS AND SERVICES ARE DELIVERED IN GOOD CONDITION. THIS, IN TURN, HELPS KEEP THE COMPANY'S COSTS DOWN.

## **FACTORS AFFECTING THE LOGISTICS AND SUPPLY CHAIN**



## **PRODUCTION**



PRODUCTION AND LOGISTICS IS CLOSELY RELATED TO EACH OTHER WITH LOGISTICS TRADITIONALLY SUPPORTIVE AND SUBORDINATE, HOWEVER THIS IS CHANGING WHEN INTER ORGANIZATIONAL ASPECTS ARE MORE AND MORE ADDRESSED. THE LOGISTICS FUNCTION IS CLOSELY TIED TO PRODUCTION AND ANY FLUCTUATION OCCURRING, OR DEVIATION FROM THE LEVELLED PRODUCTION SCHEDULE, WILL HAVE IMPACT ON THE LOGISTICS WORKLOAD. PRODUCT AND COMPONENT CHARACTERISTICS, ORGANIZATIONAL AND STRUCTURAL DECISIONS IN PRODUCTION ARE THREE SIGNIFICANT DENOMINATORS IF AND HOW MUCH CHANGES FROM THE PLANNED STATE WILL AFFECT THE LOGISTICS FUNCTION.

THE ANALYSIS SHOWS REASONS WHY THIS IS TRUE; FLUCTUATIONS, SMALL OR BIG, INTRODUCE BIGGER VARIANCE IN WORKLOAD THAN WHAT IS NATURALLY OCCURRING. SO, ACTIVITIES IN PRODUCTION WHETHER TO OPTIMIZE EFFICIENCY, TO ADJUST FOR HAPPENINGS AFFECTING SCHEDULED TAKT OR DUE TO PRODUCTION STRUCTURAL WILL, IF NOT MANAGED CLEVER, INTRODUCE MURI AND MURA FOR THE FORKLIFTS OPERATORS.

IT IS MAJORLY AFFECTED BY THE DECISION ON THE 4 BASIS POINTS:

- BUSINESS STRUCTURE
- BUSINESS SPECIALIZATION
- PRODUCTION CAPACITY
- SEASONAL WORK IN PRODUCTION

## PRODUCT



PRODUCT DIRECTLY OR INDIRECTLY AFFECTS IN THE FOLLOWING WAYS.

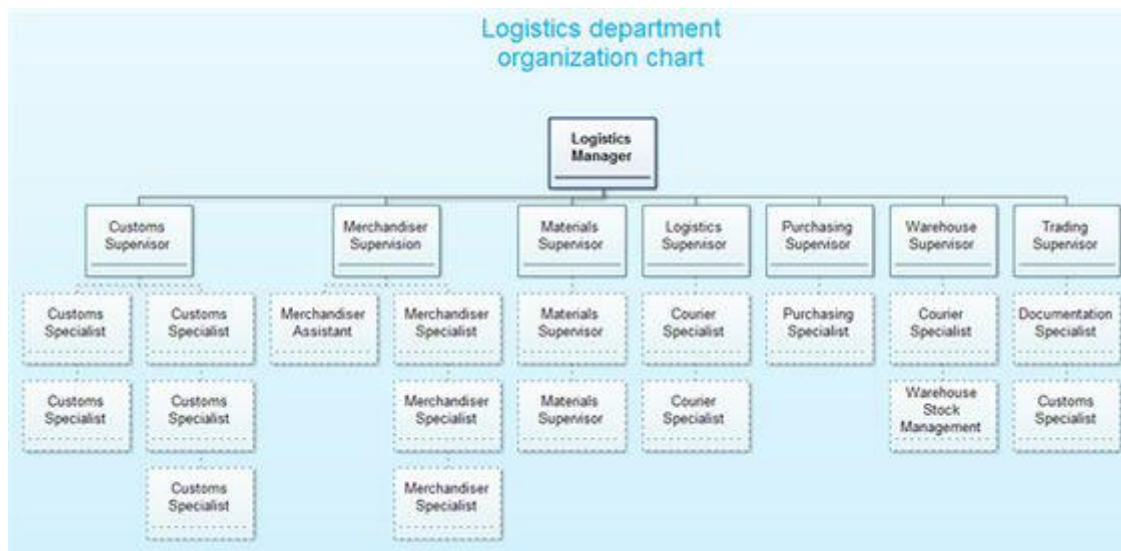
**VALUE OF PRODUCT:** THE PRODUCT'S VALUE TYPICALLY AFFECTS WAREHOUSING COSTS, INVENTORY COSTS, TRANSPORTATION COSTS, PACKAGING COSTS, AND EVEN MATERIALS-HANDLING COSTS. PRICES REFLECT THE RISK ASSOCIATED WITH MOVING THE GOOD FOR TRANSPORTATION.

**DENSITY:** WEIGHT/SPACE RATIO AFFECTS TRANSPORTATION AND WAREHOUSING COSTS. AS DENSITY INCREASES FOR A PRODUCT, ITS TRANSPORTATION AND WAREHOUSING COSTS TEND TO DECREASE.

SUSCEPTIBILITY TO DAMAGE: THE GREATER THE RISK OF DAMAGE TO A PRODUCT, THE HIGHER THE TRANSPORTATION AND WAREHOUSING COST.

SPECIAL HANDLING REQUIREMENTS: NEED FOR SPECIAL HANDLING (E.G. REFRIGERATION, HEATING, OR STRAPPING) WILL USUALLY INCREASE WAREHOUSING, TRANSPORTATION, AND PACKAGING COSTS.

## ORGANIZATION



THERE ARE BASIC THREE POINTS ON WHICH THE LOGISTICS IS AFFECTED BY THE ORGANIZATION:

- Availability of the constant client: If there are no constant clients it directly or indirectly affects the logistics and supply chain because if there are no client the logistics cost is affected because the trucks or transportation will work with less load causing higher cost for transportation. As well as it will also affect the warehousing.
- Organization of work with clients: If there is no proper explanation of the work and how the material needed to be transferred. It will cause a threat in supply chain and logistics increasing the problem for the organization with their proper scheduling.

## MARKET



Transportation has been referred to as a “perfect market,” meaning no single party controls the entire market enough to affect rates. Instead, the market fluctuates based on supply and demand. If supply (equipment) is abundant and there is less freight available, rates go down; if capacity is tight and shipment volumes are greater, prices go up. Carriers respond to market demand in different ways, though it is common to base decisions on the strengths of their relationships with shippers. Some turn to the highest bidder for their equipment, whether the bidder is an existing customer or not. These carriers often ride the

waves of regional freight demand driven by produce and other seasonal items. The pricing pendulum swings further, and faster, during these market shifts than for other types of carriers.

When equipment becomes scarce, other carriers may shift their equipment to transactional customers who will pay higher spot market rates. Some carriers will show a preference to customers with higher contracted rates than shippers with larger volume and lower contracted rates.

Many carriers remain loyal to their shippers during market shifts, especially if the shipper shows a willingness to adjust and renegotiate rates that more closely reflect market realities. This enables the carrier to remain profitable, and the shipper does not have to go to the spot market and potentially pay higher rates.

#### MAJOR POINTS:

- MARKET CONDITIONS
- REGIONAL COMPETITIVE ENVIRONMENT
- RELATIONS WITH PARTNERS

## TRADE



- PREPARATION OF TRADING BUSINESS TO PROGRESSIVE SYSTEMS OF GOODS FLOW:
- VOLUME OF PRODUCTS WHICH A BUSINESS CAN ADMIT
- PRICING POLICY OF INTERMEDIARIES
- NUMBER AND INTENSITY OF CHANNELS OF GOODS FLOW
- LEVEL OF ORGANIZATIONAL AND COMMERCIAL WORK

## POLITICS



- LAWS IN TRADE SPHERE
- LEVEL OF GOVERNMENT CONTROL OF LAW MAINTENANCE
- A VARIABILITY OF GOVERNMENT PROGRAMS OF TRADE DEVELOPMENT STIMULATION

## **STORAGE**



Warehouse management plays a strategic role in the supply chain by enabling inventory distribution, sorting, or cross-docking processes that strive to meet the growing demand of the market. However, traditional warehouse management systems are not designed with the flexibility or technology capacities to address ongoing challenges in the industry.



- Location: Know where your inventory is throughout the entire warehouse process flow, from receiving to storage, to reduce excess inventory and improve inventory turns
- Accuracy: Meet the Service-Level-Agreements (SLA) and avoid any misplaced inventory to increase customer satisfaction and inventory control
- Space Utilization: Make the most out of warehouse space to improve productivity and throughput times
- Order Picking and Put-Away: Optimize the inventory handling operation by choosing the appropriate level of automation to reduce operating expenses

## **TRANSPORTATION**



Proper transportation management begins with a transportation management system (TMS). A TMS will automatically tender loads, track shipments, and gather and analyse historical performance data. This data, often referred to as big data, allows a company to see what's happening in its shipping operations. Once visibility is gained into transportation operations, changes can be implemented to increase

**EFFICIENCY AND CUSTOMER SATISFACTION, REDUCE** transportation spend, and optimize packaging or stored procedures that are harmful to overall supply chain goals.

#### **INVENTORY FLOW**

Effective transportation management keeps a company's whole supply chain running smoothly. With successful transportation execution, inventory can be kept lean and can be moved in and out of a warehouse quickly and efficiently. This improves warehouse efficiency, reduces overall lead time and saves money on storage. Supply chain disruptions can be costly while hurting customer satisfaction and loyalty. Creating effective inventory flow through transportation avoids damage caused by the disruption.

#### **SUSTAINABLE LOGISTICS**

Consumers are more and more aware of what it is they're buying and what ideals a company subscribes to. Also, transportation is an emission-heavy industry. Customers want to buy from companies who take social responsibility seriously and work hard to reduce their carbon footprint and minimize their energy consumption. Having inefficient transportation processes increases these environmentally-hazardous processes. Also, it can make a product unappealing to a customer due to the harm that comes with it.

#### **PREFERRED SHIPPER STATUS**

The ATA estimates the transportation industry is currently short 48,000 truck drivers. This shortage is expected to grow to 239,000 by 2022. A truck capacity crunch is due to the significant lack of drivers. Since there is much less trailer space to go around, shippers must compete to secure capacity. A company that has optimized transportation processes, such as short dwell-times and long tender lead times, will be a preferred shipper and have an easier time finding capacity because carriers will want to work with someone who boosts their efficiency. Having access to reliable capacity in the coming years can save logistics costs. Additionally, it can continue to provide a high level of service for customers.

#### **CUSTOMER SATISFACTION**

The processes in between procurement and shipping can be long and complicated, but out of all of these processes, transportation is the one where a company has direct contact with a customer. The point of delivery reflects the competency of the entire organization – if a company is constantly delivering products late, the customer will have a very negative view of this company and will likely not use their services again. Last mile logistics, the last stretch before delivery, is complex, costly, and it is often this part of the delivery that causes disruptions and delays. Proper management of transportation can ensure high delivery performance and consistent customer satisfaction. Therefore, the importance of transportation management is hard to overestimate.



# CONCLUSION

WE CAN CONCLUDE FROM THE DISCUSSION THAT THE OVERALL LOGISTICS AND SUPPLY CHAIN IS DEPENDENT ON THE FACTORS, THAT ARE:

1. PRODUCTION
2. PRODUCT
3. MARKET
4. TRADE
5. STORAGE
6. TRANSPORTATION
7. POLITICS
8. ORGANIZATION

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**THANK YOU**