

SUPPLY CHAIN DYNAMICS, AGILITY AND RELATIONSHIP MANAGEMENT: BSS 421



WEEK 14 : GLOBAL SUPPLY CHAINS

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Task for Week 12



1. Why are mult-tiered relationships not common in most industries.
They are found where modular manufacturing is possible to carried out.
2. Give examples of partnerships in product and service industries.
Insurance industry has partnerships with companies that have huge work customer base e.g. banks They also partner with hospitals and educational institutions.
3. Why are collaborations and integrations not as common as partnerships.
Because they use expertise and also get to know processes for buyer or supplier. Most companies may not be willing share this because they use it for competitive advantage.
4. Why is there a wide attempt to form relationships between organizations in recent times? (in the 2020s)
Because most ways for gaining competitive advantage have been exhausted.

Recap of last Topic 12



We discussed;

1. Partnerships
2. We differentiated collaborations and integration partnerships.
3. Multi- tiered relationships
4. Partnerships, multi-tiered relationships and supply chain dynamics

Objectives of this week's Topic.



The overall objective describe nature of global logistics and the specific objectives are ;

1. Differentiate local supply chains from global supply chains.
2. Describe the nature of global supply chains.
3. To explain the relationship between global logistics and supply chain dynamics.

Introduction to Global Logistics



Logistics can be broadly divided into two categories: materials management and physical distribution management.

Materials management deals with activities concerning the production of parts and finished goods, which includes everything from their packaging to recycling, reuse or disposal

Physical distribution encompasses tasks related to making parts and finished products available for consumption, such as transportation and warehousing.

Elements of Logistics



Elements of logistics

1. **Transportation:** This refers to the movement of products from one location to another. It can involve various modes such as road, rail, air, sea and pipeline.
2. **Warehousing:** This involves the storage of goods in a facility for a specific amount of time until they are needed for distribution or use. Warehouse management includes inventory control, order fulfilment, and often cross-docking.
3. **Inventory Management:** This involves tracking and managing stocked goods. Effective inventory management ensures that there is an optimal level of stock at all times, minimizing costs and ensuring product availability.

Elements of Logistics Cont'd



- 4. Order Fulfilment:** When an order is received, it is processed, picked, packed, and shipped to the customer.
- 5. Demand Forecasting:** Predicting demand for products in the short run to ensure that sufficient stock is available. It helps in maintaining the right inventory levels and planning for peak periods.
- 6. Production Planning:** Ensures that production schedules align with demand and distribution capabilities.
- 7. Network Design:** Is determining the most efficient and effective design for the logistics network, including location of production facilities, distribution centers and routes.

Elements of Logistics cont'd



8. **Procurement:** The process of selecting and purchasing goods and services that will be used in the supply chain
9. **Packaging:** It is protecting products during transport, promoting products, and facilitating ease of handling and storage.
10. **Reverse Logistics:** Managing the return of goods, whether it is returns, repairs, recycling or disposal.
11. **Information Management:** It involves the use of technology to track and control the flow of goods in real-time.

Elements of logistics cont'd



12. **Customer Service:** Providing support related to all logistics functions and ensuring customer satisfaction.
13. **Security and Compliance:** Ensuring that all transport and storage of goods meet regulatory requirements and that goods are protected against theft, loss, or damage.
14. **Sustainability:** Implementing green logistics practices that reduce environmental impact, such as optimizing routes for fuel efficiency or using sustainable packaging materials.

Local and Global Supply chains



Local Supply Chains

OECD (2002), OECD (2013), OECD (2021), WB 2010 & WB 2023 reports on state of global logistics form the basis of global logistics and implication to supply chain dynamics. Local supply chains vary depending on economic status of the country and global importance in terms of resources. Logistics therefore can be described as follows ;

- 1. High Costs and efficiency.** Most developing countries especially in Africa have high cost of logistics but the efficiency is low. Because of quality of infrastructure, ease of shipping, timeliness and quality of logistics services. It takes longer on average to import a container of supplies to African countries and move it to the final destinations .

Local Supply Chains and Global Supply chains.



Local supply Chains Cont'd

- 2. Inter-Modal Challenges.** Most developing countries do not have well developed different modes of transportation. Road net works is the most common while railway, air transport and water ways are not developed. This makes it difficult to transport bulky cargo from one region to another.
- 3. Customs.** Inefficiencies from lack of automated electronic Customs processing systems, information and communications infrastructure and services, reduce administrative efficiency and increases expenses and delays.

Drivers of Global Supply Chains



Global supply chains are cross border logistics . Drivers of cross border logistics are :

1. **Customer Expectations:** Modern customers demand quick deliveries, accurate order fulfilment, and the flexibility to change or return orders. Meeting these expectations requires an efficient logistics system.
2. **Technological Advancements:** Technologies such as RFID, GPS tracking, drones, and warehouse automation tools have revolutionized logistics, driving more efficient operations.
3. **Cost Efficiency:** Reducing operational costs while maintaining or improving service quality. This could involve optimizing transportation routes, reducing inventory holding costs, or improving warehouse efficiency.

1. OECD (2002), transport logistics: shared solutions to common challenges
2. OECD (2013) Aid for Trade and Value Chains in Transport and Logistics
3. OECD (2021) Competition Assessment Reviews ASEAN
4. World Bank (2010) Connecting to compete : trade logistics in the global economy
5. World Bank (2023) Connecting to compete : trade logistics in the global economy

Drivers of Global Supply Chains Logistics



- 4. Globalization:** As businesses expand globally, they require logistics networks that can manage international shipping, customs, and various regulations efficiently.
- 5. Inventory Management:** Reducing inventory levels while ensuring product availability is crucial. This requires efficient forecasting and inventory replenishment systems.
- 6. Transportation Management:** Choosing the right mode of transportation, consolidating shipments, optimizing routes, and managing transportation providers can significantly influence logistics performance

Drivers of Global Supply Chains logistics Cont'd



7. **Lean Thinking:** Adopting lean principles that help to eliminate wastage in logistics processes, driving efficiency and responsiveness.
8. **Growth of E-commerce :** The surge in online shopping demands quick and efficient fulfilment and return processes, driving changes in logistics strategies.
9. **Environmental Concerns:** Growing emphasis on sustainability drives green logistics initiatives such as eco-friendly packaging, energy-efficient transportation, and waste reduction.
10. **Regulations and Compliance:** Adhering to global and local regulatory requirements, especially in industries like pharmaceuticals, food, and chemicals, impacts logistics operations.

Drivers of Global Supply Chains logistics Cont'd



11. **Infrastructure:** The quality and availability of physical infrastructure such as roads, ports, airports, and railways significantly influence logistics efficiency.

12. **Risk Management:** The need to mitigate risks associated with disruptions, like natural disasters, political instability, or strikes, requires resilient and flexible logistics strategies.

13. **Collaboration and Integration:** Increased collaboration among suppliers, manufacturers, and retailers can streamline logistics processes. Integration of systems and data-sharing further drives efficiency.

Drivers of Global Supply Chains logistics Cont'd



- 14. Need for Real-time Data and Analytics:** The ability to gather, process, and act upon real-time data allows companies to be more proactive, adjusting to changes and predicting issues before they become larger problems.
- 15. Capacity and Resource Availability:** The availability of resources, such as trucks, warehousing space, and labour, can drive logistics decisions, especially during peak seasons.

Global logistics Networks



Global networks are plans and ways of how goods flow from warehouses to the consumers. Factors determining networks are

- 1. Customer Needs and Expectations** such as Delivery time
Service quality, requirements, return policies and processes
- 2. Organization's Objectives:** that includes business goals such as cost reduction, market expansion, or service enhancement, need to alignment with the broader company mission and values
- 3. Product Characteristics** such as size, weight, and volume of products, perishability, fragility, or special handling Requirements value and security needs.

Factors Determining Global Networks Design Cont'd



4. **Geographical Considerations** such as distance between suppliers, production facilities, and customers and geographic challenges
5. **Supply Chain Complexity** such as number and diversity of suppliers.
6. **Technological Infrastructure:** such as availability of technology solutions , maturity of digital infrastructure, including IoT, AI and data analytics capabilities.
7. **Regulatory Environment** trade regulations and tariffs environmental and sustainability regulations, Health and safety standards
8. **Economic Factors:** such as fuel and transportation costs. Labor costs in different regions and currency exchange rates

Factors Determining Global Networks Design Cont'd



9. **Competition** such as Competitive offerings in the logistics space Pressure to match competitors' service levels or pricing.

13. **Internal Capabilities:** including existing expertise and skill set of the logistics team available assets such as fleet, warehouses, or technology systems.

14. **Financial Considerations:** such as Budget allocations for logistics operations. Return on investment expectations such as . Cash flow management and inventory carrying costs.

Distribution Channels



- 1. Direct Channel or Manufacturer to Consumer:** The producer sells directly to the consumer. Examples include e-commerce, mail order, telemarketing, or direct sales. It provides full control over pricing, promotion, and customer experience.
- 2. Retail Channel (Manufacturer to Retailer to Consumer):** Producers sell to retailers, who then sell to end consumers. Suitable for producers who do not have the means to reach a wide consumer base directly. Most common in traditional sales.
- 3. Wholesaler/Distributor Channel. (Manufacturer to Wholesaler to Retailer to Consumer):** Producers sell in bulk to wholesalers, who break bulk and sell to retailers. These are suitable for mass manufacturers.

Distribution Channels



4. Agent / Broker Channel (Manufacturer to Agent to Consumer/Retailer): Agents or brokers represent the producer to sell their products. It often used when direct representation is too expensive or complicated. Agents earn a commission but don't take title of the goods.

5. Franchising: The franchisor licenses its processes, brand, and intellectual property to franchisees. Enables rapid expansion without the franchisor incurring high costs of traditional.

Distribution Channels



6. Hybrid/ Dual Distribution: Using two or more channels to reach end consumers. e.g. a business might sell directly via its website and through retailers or distributors.

7. Online Channels: E-commerce websites, marketplaces (direct-to-consumer platforms). Direct digital downloads for software or multimedia products.

Importance of Global Supply Chains



1. **Generation of demand.** Increased mobility, unrestricted product and service movement, and access to stronger logistics infrastructure all help to boost demand for any product
2. **Cost Reduction in doing Business.** Because of improved ports, railway networks, highways, and civil aviation infrastructure, transportation of products from one location to another becomes nearly uninterrupted, lowering corporate costs.
3. **Selling to world wide base.** Improved global logistics services from top logistics companies and better transportation are important for the movement of goods and services from one region to another. This helps companies to customers in every part of the world.

Importance of Global Supply Chains



4. **Stimulates rapid economic growth.** In the development process of any country, growth in the economy plays a vital role. This is possible because of expansion in trade and logistics infrastructure that create demand for mineral and agricultural products.
5. **Strategic infrastructure for global integration.** Trade logistic infrastructure and transportation play an important role in competitive advantage of business .

Logistics Partnerships



Partnerships can be used to differentiate various types of logistics found in supply chains. Saglietto, (2013), provides a basis upon which the following types of logistical service providers can be identified. These are;

1. 1PL or first party logistics provider which refers to a company that doesn't outsource transport and logistic services to another entity. It owns the cargo to be transported from one point to another such as . E.g. manufacturers to retailer, importers or retailers.

Logistics Partnerships cont'd



2. 2 PL or second party logistics provider is an asset-based company that owns and operates its own fleet as an additional business unit and can provide transportation services for other companies. A 2 PL is able to provide warehouse services and transportation of its goods or of other service seekers. They can also carry out clearing and forwarding for the customers.

3.3PL or third party logistics provider is a company that provides all logistics along the supply chain for a customer. It Conducts ware housing, transportation, logistics management along the supply chain as well carry some light manufacturing where necessary on behalf of the customer. 3PL conducts logistics on outsourcing basis.

Logistics Partnerships



4. 4 PL or fourth party logistics providers build and manage the overall supply chain of its customers. 4PLs have complete control of the entire supply chain, managing producers, vendors, transportation companies, warehouses, distribution centers, and retailers. Fourth Party Logistics Providers are non-asset based companies, they hire the services of 3PL and 2PL

Additionally there is an emerging class referred to as 5PL
5PL or Fifth Party Logistics Providers are non-asset based companies that provide the same services as the 4PLs but with an additional technological component. 5PLs manage networks of supply chains and often times have an e-business focus.

Challenges in Global Logistics



1. Reliability of information. Buyer and supplier should ensure that the source of information is reliable and it is a true reflection about foreign countries.

2. Communication issues. These include language and cultural barriers. Buyers and suppliers may need to arrange for communication where different languages are used when doing business. Even where similar language is used, technical terminologies may also differ from one country to the other.

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Challenges in Global Logistics



3. Currency exchange issues. Most currencies are readily convertible from one country to the other but there is always an issue that is associated with fluctuations in exchange rates. This becomes an issue especially if there is a long time delay between the agreed price and the time of payment. Even simple items purchased internationally have a lead time of 60-90 day. In some economies this can represent a big change in the cost. E.g. the difference in price of goods between January and July can vary widely.

Challenges in Global Logistics



4. Legislative Frameworks. The laws of one country may be very different from the laws of another country. During purchase it is important to state the law that is going to be applied in the purchase. The disadvantage comes when the law of the supplier is used but cannot be enforced by the buyer. This becomes a disadvantage to the purchaser.

5. Transportation. International trade requires one of the basic modes of transport. Road, rail and air. Given the cost, distance and sometimes complex logistics involved, international transportation becomes a factor in global sourcing.

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Global Logistics and Supply Chain Dynamics



1. Global logistics are characterized by dynamics because of cross-border issues.
2. It the most affected by emerging issues as people try to reach markets and try to out-do the competitors.
3. Developing countries are more disadvantaged compared developed countries who dominate logistics.
4. Global logistics have the greatest impact on domestic industries.

Task for next Week



1. What is the role of communication in supply chains?
2. How does conflict affect supply chains ?

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*THANK YOU ALL
WISHING YOU WELL
HAVE A LOVELY WEEK*