



Japan-ASEAN Cooperation



## Sustainable Human Resource Development in logistics services for ASEAN Member States

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## **Sustainable Human Resource Development in logistics services for ASEAN Member States**

# **Logistics Planning & Analysis**

## **Chapter 6**

### **Transportation Management**



## Sustainable Human Resource Development in logistics services for ASEAN Member States

### Objectives

- Understand the role of transportation and its importance in logistics.
- Examine the principles of transportation.
- Able to identify the role of entities in a transportation network.
- Examine the transportation modes and their costs.
- Understand the concept of total transportation cost.



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# Introduction – Role of Transportation in Logistics

- The role of transportation in logistics operations has changed dramatically over the last three decades.
- Today a wide range of transportation alternatives is available.
- Transportation adds place value to products and services.
- Transportation is essential because no modern firm can operate without providing for the movement of its raw materials and /or finished products.



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# Transport Functionality

- Transportation is a very visible element of logistics.
- Consumers are accustomed to seeing trucks and trains transporting product or parked at business facilities.
- Few consumers fully understand just how dependent our economic system is upon economical and dependable transportation.
- Transportation enterprises provide two major services:
  - Product Movement.
  - Product Storage.



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# Transport Principles

- Economies of Scale
  - The cost per unit of weight generally decreases as the size of a shipment increases.
- Economy of Distance
  - This refers to decreased transportation cost per unit of weight as distance increases.



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# Transport Participants

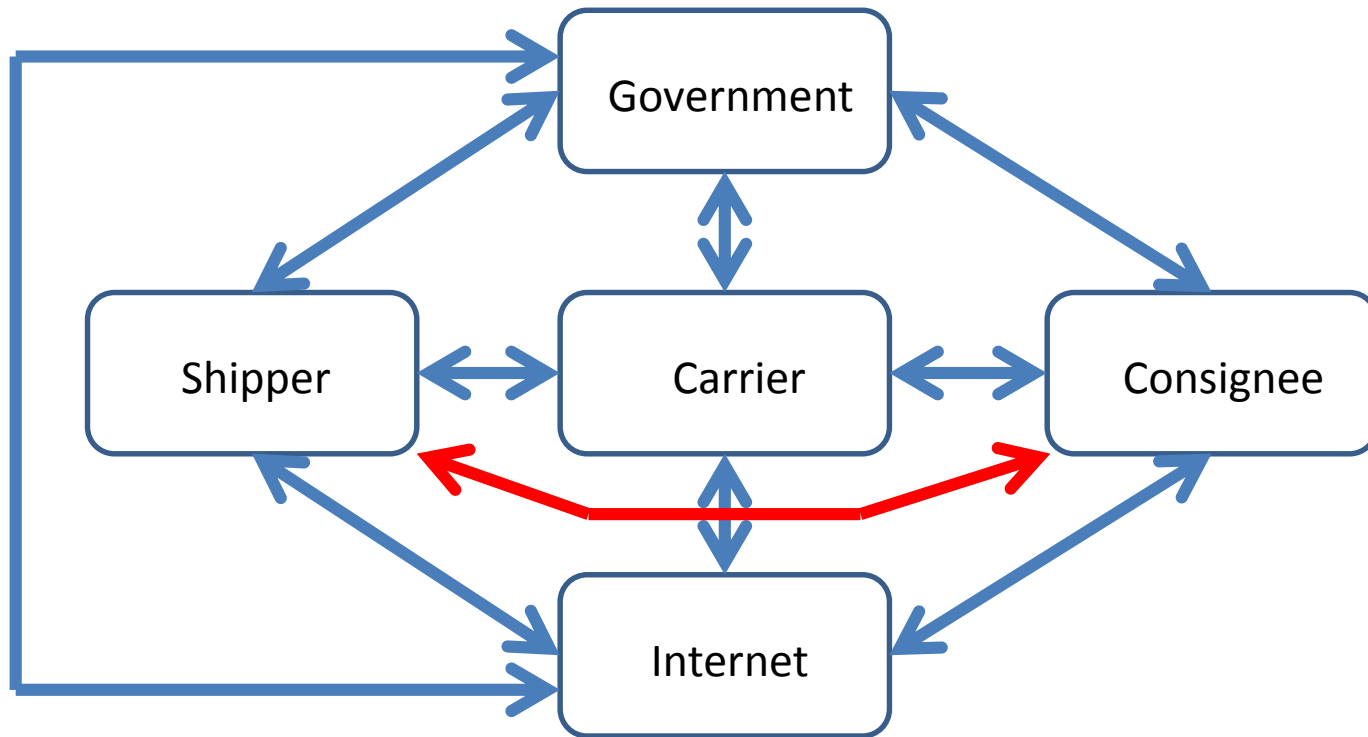


Figure 6-1: Relationship among Transportation Participants





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# Importance of an Effective Transport System

- Without reliable transportation, most commercial activity could not function.
- An efficient and inexpensive transportation system contributes to greater competition in the marketplace, greater economies of scale in production and reduced prices for goods.
- Results:
  - Greater Competition
  - Economies of Scale
  - Reduced Prices



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# Transport Cost Characteristics

- Transportation usually represents the most important single element in logistics costs for most firms.
- Freight movements have been observed to absorb between one-third and two-thirds of total logistics costs.
- The relevant costs are:
  - Variable cost
  - Fixed cost



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# Cost Characteristics by Mode

- The type of services that a carrier is likely to emphasize is indicated by the nature of the general cost function and by the relationship of the mode to those of other carriers.
- The modes are:
  - Rail
  - Water
  - Air



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# Carrier Pricing Strategies

- **Cost-of-Service**
  - The cost-of-service strategy is a build-up approach where the carrier establishes a rate based on the cost of providing the service plus a profit margin.
- **Value-of-Service**
  - It is an alternative strategy that charges a price based on value as perceived by the shipper rather than the carrier's cost of actually providing the service.

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# Total Cost Concept & Trade-offs

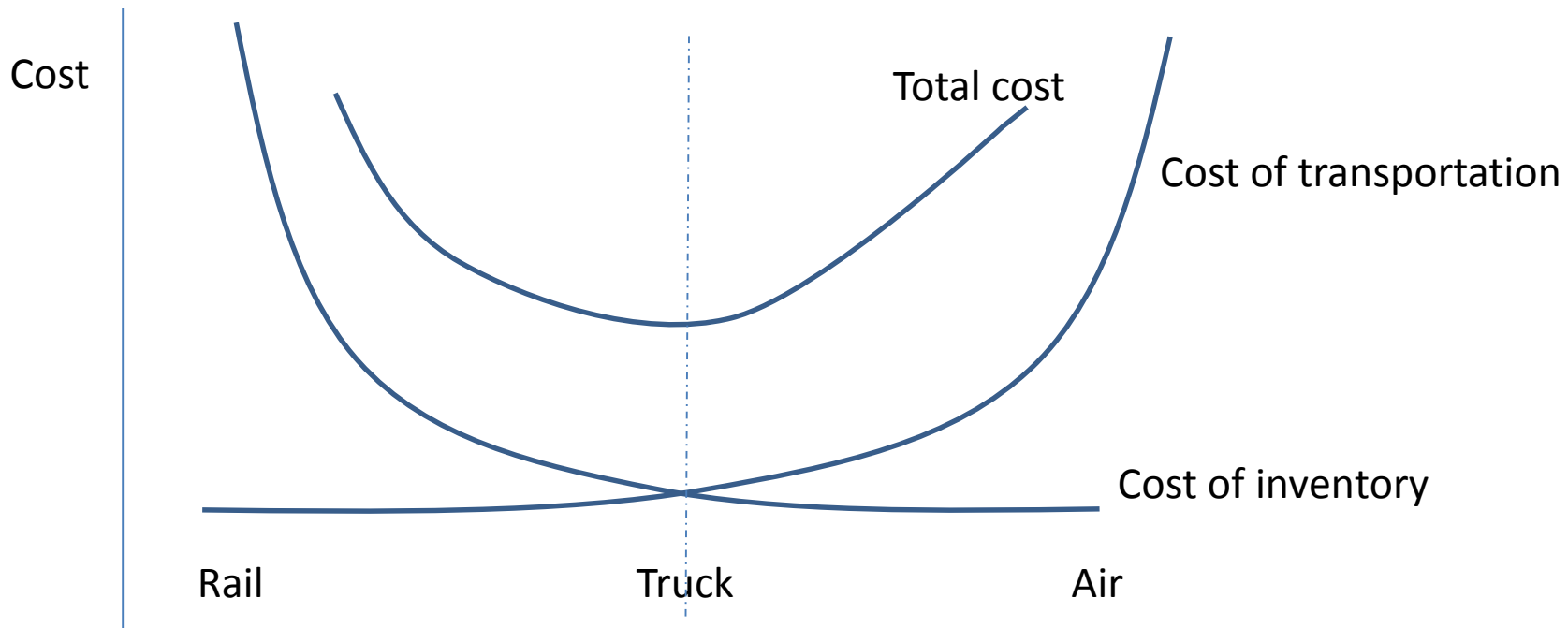


Figure 6-2: Cost Trade-off between Transportation and Inventory Costs as a Function of Transportation Service Characteristics



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# Conclusion

- Without a well-developed transportation system, logistics could not bring its advantages to the benefits to the economy.
- A good transport system in logistics activities could provide better logistics efficiency, reduce operation cost, and promote service quality.
- Logistics and transport system need to work in tandem to bring out efficiency.