

Supply Chain Digitization (NPTEL)

Assignment 02

1. How does poor demand forecasting affect supply chains?
 - a) Excess inventory keeps on stacking in the warehouse.
 - b) Disruption in transportation and logistics.
 - c) Disturbs the relations with the suppliers.
 - d) Can lead to understocking of goods.

Ans: Excess inventory keeps on stacking in the warehouse, Can lead to understocking of goods.

2. What is a feature of standard products in operational efficiency?
 - a) Flexible scheduling and higher changeover frequency
 - b) Continuous production, longer runs, and optimized setups
 - c) Premium shipping with expedited services
 - d) Safety stock and dual-sourcing

Ans: Continuous production, longer runs, and optimized setups

3. How can risk management strategies be tailored for non-critical components?
 - a) Close supplier collaboration and safety stock
 - b) Single-sourcing with flexible agreements
 - c) Premium shipping and customized packaging
 - d) Expedited services and dual-sourcing

Ans: Single-sourcing with flexible agreements

4. How does digitization contribute to addressing SC challenges?
 - a) Facilitates transparency and real-time visibility
 - b) Automates compliance monitoring
 - c) More informed decisions
 - d) Increases reliance on manual processes for efficiency

Ans: Facilitates transparency and real-time visibility, Automates compliance monitoring, More informed decisions

5. Why is geographic segmentation important in supply chain management?
 - a) It helps classify products based on their demand volatility and shelf life.
 - b) It addresses differences in demand patterns, regulatory requirements, and distribution networks across regions.
 - c) It focuses on meeting the preferences of e-commerce customers.
 - d) It tailors delivery requirements for specific distribution channels.

Ans: It addresses differences in demand patterns, regulatory requirements, and distribution networks across regions.

6. What are the key differences in responsive and efficient supply chain?
 - a) Demand vs forecast driven
 - b) High vs low inventory levels
 - c) Long vs short lead times
 - d) Emphasis on agility vs standardization

Ans: Demand vs forecast driven, High vs low inventory levels, Emphasis on agility vs standardization

7. What is a common challenge associated with a pull strategy?

- a) Overproduction and waste due to demand fluctuations
- b) Difficulty responding to sudden changes in customer demand
- c) Longer lead times due to production starting after order placement
- d) High holding costs for finished goods inventory

Ans: Longer lead times due to production starting after order placement

8. Which industry frequently uses a push-pull boundary by combining push for components and pull for final assembly?
- a) Fast-moving consumer goods (FMCG)
 - b) Automobile manufacturing
 - c) Retail fashion
 - d) Pharmaceuticals

Ans: Automobile manufacturing

9. Which measure is more suitable for comparing the variability between two datasets with different means?
- a) Standard deviation
 - b) Coefficient of variation
 - c) Coefficient of variant
 - d) All are equivalent

Ans: Coefficient of variation

10. In which of the following scenarios push-pull strategy should be employed?
- a) Low volume Low demand variability
 - b) High volume Low demand variability
 - c) High volume High demand variability
 - d) Low volume High demand variability

Ans: Low volume Low demand variability, High volume High demand variability

11. Which quadrant in the Kraljic Matrix represents items with low strategic importance and low supply risk?
- a) Strategic
 - b) Leverage
 - c) Bottleneck
 - d) Non-critical items

Ans: Non-critical items

12. What is the recommended inventory strategy for Segment A products in ABC analysis?
- a) Focus on minimizing stock levels
 - b) Use just-in-time ordering to reduce costs
 - c) Keep high levels of stock to avoid stockouts
 - d) Discontinue the products as they contribute to minimal revenue

Ans: Keep high levels of stock to avoid stockouts

13. A company has the following inventory data, Fast moving: 10 items (turnover ratio= 4) and Slow moving: 20 items (turnover ratio =2). Calculate the overall inventory turnover ratio for all 30 items.

Ans: 2-3

14. What does the AHP method allow in inventory segmentation that traditional methods may lack?

- a) Subjective analysis of inventory turnover
- b) Historical analysis of inventory movements
- c) Weighted consideration of multiple criteria
- d) Forecasting future inventory trends

Ans: Weighted consideration of multiple criteria

15. Vinileiver uses AHP to segment its inventory based on four criteria: demand variability, cost, turnover rate, and profit margin. The weights assigned to these criteria are 0.5, 0.2, 0.1, and 0.2, respectively. If a specific inventory item scores 9, 6, 7, and 8 concerning these criteria, what will be the overall weighted score for this item.

Ans: 8