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7. Understand the distribution center concept.

When we finish this lecture you should

Marketing Strategy Planning Process

Marketing Strategy Planning for Place (Exhibit 12-1)

Physical Distribution Gets It to Customers

Logistics customer service
- What it is
- Level to offer
- Cost
- JIT and EDI

Transporting
- Transportation modes
- Benefits and limitations

Storing
- Inventory costs
- Storage facilities and distribution centers
Physical Distribution Customer Service Level

Factors Affecting PD Service Levels

- Info on Product Availability
- Order Processing Time
- Backorder Procedures
- Inventory Storage
- Order Accuracy
- Damage in Transit
- Online Status Information
- Advance Info on Delays
- Delivery Time
- Compliance with Customers
- Defect-Free Deliveries
- Handling Adjustments/Returns

Trade-Offs of Costs, Service and Sales (Exhibit 12-2)

Total cost of physical distribution
Inventory cost
Lost sales
Transporting cost

Customer service level (percent of customers served within some time period—say, four days)

Note: Sales may be lost because of poor customer service or because of the high price charged to pay for the high customer service level.

The Total Cost Approach

We're changing the game of shipping, again.

A Cost Comparison of Alternative Systems (Exhibit 12-4)

Total costs of distribution by airline
- $15,000
- $20,000

Inventory
- $110,000

Transportation
- $119,000

Total $254,000

Total costs of distribution by rail with warehouse
- $199,000
- $40,000

Inventory
- $199,000

Transportation
- $119,000

Total $264,000
A manufacturer of accessories for personal computers evaluates all the alternative systems combining order processing, transportation, inventory management, and storage. If the total cost approach is followed, which physical distribution system should the manufacturer select?

A. The one that maximizes customer service at the highest total cost.
B. The one that maximizes customer service at the lowest total cost.
C. The one that meets the customer service requirement at the lowest total cost.
D. The one that meets the customer service requirement and minimizes transportation cost.
E. The one that maximizes customer service and minimizes the cost of each individual component of physical distribution.

Better Information Helps Coordinate PD

Areas Where Computers Help PD Service
- Continuously Updated Information Systems
- Electronic Data Interchange
- Internet

Coordination of PD
- Intentional delays in order confirmation
- Shifting the burden of holding inventory

Ethical Issues May Arise

Product Availability
- False expectations about delivery speed
- Selling products that are not available
- Running out of popular products

The Transporting Function Adds Value to a Marketing Strategy (Exhibit 12-5)

<table>
<thead>
<tr>
<th>Products</th>
<th>Cost of transporting as percent of selling price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceuticals</td>
<td>1%</td>
</tr>
<tr>
<td>Electronic equipment</td>
<td>3%</td>
</tr>
<tr>
<td>Factory machinery</td>
<td>5%</td>
</tr>
<tr>
<td>Chemicals and plastics</td>
<td>6%</td>
</tr>
<tr>
<td>Manufactured food</td>
<td>8%</td>
</tr>
<tr>
<td>Iron ore</td>
<td>10%</td>
</tr>
<tr>
<td>Cabbage</td>
<td>38%</td>
</tr>
<tr>
<td>Bituminous coal</td>
<td>42%</td>
</tr>
<tr>
<td>Sand and gravel</td>
<td>55%</td>
</tr>
</tbody>
</table>
Which Transporting Alternative Is Best? (Exhibit 12-6)

<table>
<thead>
<tr>
<th>Transportation Features</th>
<th>Mode</th>
<th>Cost</th>
<th>Delivery Speed</th>
<th>Number of Locations Served</th>
<th>Ability to Handle a Variety of Goods</th>
<th>Frequency of Scheduled Shipments</th>
<th>Dependability in Meeting Schedules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel</td>
<td>Truck</td>
<td>High</td>
<td>Fast</td>
<td>Very extensive</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Travel</td>
<td>Rail</td>
<td>Medium</td>
<td>Average</td>
<td>Extensive</td>
<td>High</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Travel</td>
<td>Water</td>
<td>Very low</td>
<td>Very low</td>
<td>Limited</td>
<td>Very high</td>
<td>Very low</td>
<td>Medium</td>
</tr>
<tr>
<td>Travel</td>
<td>Air</td>
<td>Very high</td>
<td>Very high</td>
<td>Limited</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Travel</td>
<td>Pipeline</td>
<td>Low</td>
<td>Slow</td>
<td>Very limited</td>
<td>Very limited</td>
<td>Medium</td>
<td>High</td>
</tr>
</tbody>
</table>

Water Transportation

Airfreight Is Expensive but Fast and Growing

Interactive Exercise: Transportation Modes

Checking your knowledge

The best transportation alternative for shipping chickens from farms in West Virginia to processing plants in Maryland would be:

A. air.
B. truck.
C. rail.
D. water.
E. none of the above.

Economies of Scale in Transporting
Achieves Production Economies of Scale
Keeps Prices Steady
Builds Channel Flexibility

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Type of Warehouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed investment</td>
<td>Private</td>
</tr>
<tr>
<td>Unit cost</td>
<td>High</td>
</tr>
<tr>
<td>Control</td>
<td>High</td>
</tr>
<tr>
<td>Adequacy for product line</td>
<td>Highly adequate</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Low, fixed costs have already been committed</td>
</tr>
</tbody>
</table>

Total Inventory Cost (Exhibit 12-7)

The Storing Function and Marketing Strategy

Specialized Storing Facilities May Be Required (Exhibit 12-8)

Checking your knowledge

Which of the following statements indicates a reasonable approach to the management of inventory and storage?

A. “Inventory that sits in a warehouse doesn’t do any harm; besides, it might be needed someday.”
B. “Inventory and storage costs should be minimized, regardless of the impact on customer service.”
C. “The cost of stockouts always exceeds the cost of carrying inventory.”
D. “Always have a large safety stock of inventory to eliminate the possibility of stockouts.”
E. Have enough inventory on hand to meet the expected level of customer service required, but don’t carry too much.”

You now

You now

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<table>
<thead>
<tr>
<th>Key Terms</th>
</tr>
</thead>
</table>
| • Logistics  
• Physical distribution  
• Customer service level  
• Physical distribution concept  
• Total cost approach  
• Supply chain  
• Electronic data interchange (EDI)  
| • Transporting  
• Containerization  
• Piggyback service  
• Freight forwarders  
• Storing  
• Inventory  
• Private warehouses  
• Public warehouses  
• Distribution center |