Chapter 5: Supply Chain Performance Measurement and Financial Analysis

Questions about supply chain performance metrics:

- “Is it quantitative?”
- “Is it easy to understand?”
- “Does it encourage appropriate behavior?”
- “Is the metric visible?”
- “Does it encompass both outputs & inputs?”
- “Does it measure only what is important?”
- “Is it multidimensional?”
- “Does it facilitate trust?”

Supply Chain Performance Metrics commonly used:

- On-time delivery 90%
- Quality of goods/services 83%
- Service capability/performance 69%
- Price competitiveness 55%
- Compliance with contract terms 51%
- Responsiveness 50%
- Lead time 44%
- Technical capability 34%
- Environmental, health, and safety performance 30%
- Innovation 29%

Source: Logistics Management (January 2006)

Supply Chain Performance Metrics

- Successful supply chain performance measurement relies on appropriate metrics that capture the entire essence of the supply chain process.
- Cost has long been recognized as an important metric for determining efficiency.
- The focus on minimizing total supply chain cost requires measuring the cost tradeoffs when making changes to the configuration of the supply chain.

Developing Supply Chain Performance Metrics

- The development of performance metrics program should be a team effort
- Involve customers and suppliers, where appropriate, in the metrics development process
- Develop a tiered structure for the metrics
- Identify metric “owners” and tie metric goal achievement to an individual’s or division’s performance evaluation
- Establish procedure to mitigate conflicts arising from metric development and implementation.
- Secure top management support for supply chain metrics development

Figure 5-4 Process Measure Categories

TIME	COST
On-time delivery/Receipt	Finished goods inventory turns
Order cycle time	Days sales outstanding
Order cycle time variability	Cost to serve
Response time	Cash-to-cash cycle time
Forecasting/Planning cycle time	Total delivered cost
Quality	• Cost of goods
Overall customer satisfaction	• Transportation costs
Processing accuracy	• Inventory carrying costs
Perfect order fulfillment*	• Material handling costs
• On-time delivery	All other costs
• Complete order	• Information systems
• Accurate product selection	• Administrative
• Damage-free	Cost of excess capacity
• Accurate invoice	Cost of capacity shortfall
Forecast accuracy	**Other/Supporting**
Planning accuracy	Approval exceptions to standard
• Budgets and operating plans	• Minimum order quantity
Schedule adherence	• Change order timing
	Availability of information

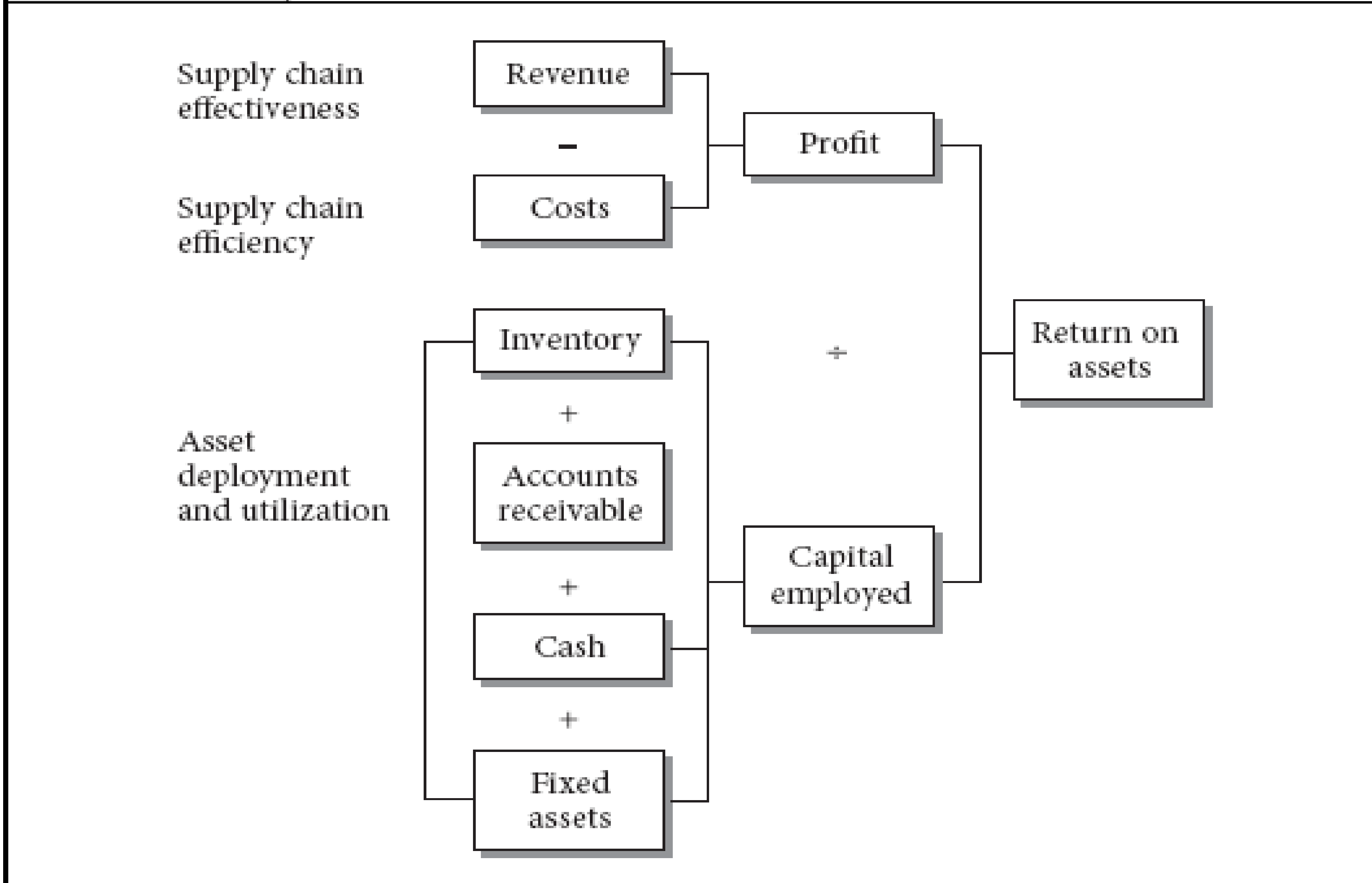
Source: J. S. Keebler et al., Keeping Score, Council of Logistics Management, (1999).

*Contains a time component.

The Supply Chain–Finance Connection

- Supply chain performance has high impact on financial performance.
- Logistics service affects sales/marketing and corporate profitability.
- Financing inventory affects the amount of capital required to fund the business.

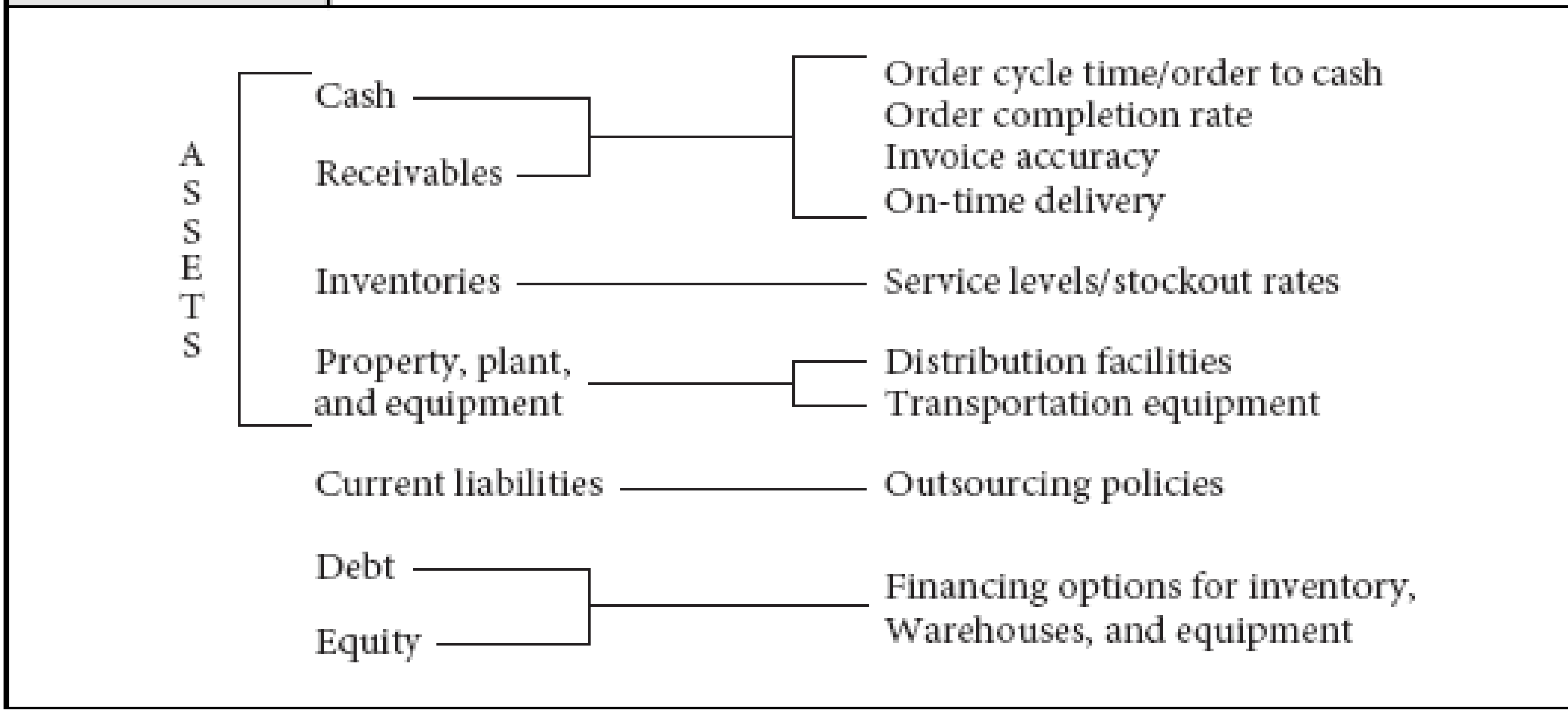
Figure 5-9 Supply Chain Impact on Return on Assets



The Supply Chain Financial Impact

- Supply chain plays a critical role in determining the level of profitability.
- A major objective for any corporation is to produce a satisfactory return for stockholders.
- Corporate financial efficiency is judged by the profit it generates in relationship to the assets utilized, or its return on assets (ROA).

Figure 5-10 Supply Chain Impacts on the Balance Sheet



Supply Chain Service Financial Implications

- The results of supply chain service failures are:
  - Costs to correct problems
  - Cost of lost sales
- When service failures occur, some customers experiencing the service failure will request that the orders be corrected and others will refuse the orders.
- The refused orders represent lost sales revenue that must be deducted from total sales.
- For the rectified orders, the customers might request an invoice deduction to compensate them for any inconvenience or added costs.
- Some customers may switch their purchase to competitors permanently and never return. The cost of lost sales can be high when this happens.