

Chapter 8

THE PROCUREMENT OF EQUIPMENT

BA 477 Purchasing and Supply Management

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LEARNING OBJECTIVES

1. Understand what a production buy is.
2. Understand what a capital equipment buy is.
3. Learn how to manage an equipment buy.
4. Learn the tradeoffs between leasing and buying equipment.
5. Learn what a reverse auction is.

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THE NUANCES OF CAPITAL EQUIPMENT PROCUREMENT

- Nonrecurring Purchases
- Nature and Size of Expenditure
- Price vs. total life cost (TCO)
- New, Used, Lease?
- Who should be involved in the process?

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SUPPLY MANAGEMENT'S ROLE

- Distinctly different role than in acquisition of materials
- Gatherer and source of information
- Process coordinator
- Consultant to management
- Contract administration
- Facilitator of unbiased specifications
- Liaison service provider
- Negotiator

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BUILD THE FOUNDATION

- Identify the Need for a Procurement
- Project Management
- Selection of an Equipment Sourcing Team
- Build and Train the Team

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IDENTIFY OBJECTIVES AND ESTIMATE COSTS

- Identifying Objectives
- Used Equipment
- Spares
- Estimating Acquisition Costs and the Total Cost of Ownership

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USED EQUIPMENT

- Reasons for Purchasing Used Equipment
 - + Cost
 - + Availability
 - + Used equipment may satisfy the purchasing need
- The Used Equipment Market
 - + Used equipment dealers
 - + Sale by owner
 - + Brokers
 - + Auctions

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USED EQUIPMENT

- Cautions in Purchasing Used Equipment
 - + Difficult to determine the true condition
 - + Check the reputation of the supplier
 - + Inspect the equipment
 - + Observe the equipment under power
 - + Determine the age

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ESTIMATING ACQUISITION COSTS AND THE TOTAL COST OF OWNERSHIP

- A team should develop both acquisition cost and TCO cost estimates.
- In the development of the estimates the life cycle costs should be considered.

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LIFE CYCLE COST ANALYSIS

- Usage of the equipment
- Number of years it will be in service
- Various economic inflation factors
- Original delivered cost
- Installation
- Calibration
- Energy and labor for operation
- Routine maintenance
- Major overhauls
- Downtime
- Disposal of the machine

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TOTAL COST OF OWNERSHIP FOR EQUIPMENT

$$TCO = (A) + (NPV \sum_{i=1}^n C_i) - NPV S_n$$

A = delivered acquisition cost

NPV = net present value

C_i = total operating costs incurred in year i

S_n = salvage value in year n

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DEVELOP UPDATED ACQUISITION COST AND TCO ESTIMATES

Table 8-1

	X	Y
Acquisition cost	\$1,000,000	\$1,200,000
PV future cost	<u>\$2,000,000</u>	<u>\$1,300,000</u>
TCO	\$3,000,000	\$2,500,000

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LEASED EQUIPMENT

- Operating Lease
 - + Used by most firms to facilitate business operations
 - + Focus is on operating convenience and flexibility
 - + Most operating leases are short term
 - + Most often used when firm wants freedom/flexibility
- Financial Lease
 - + Primary motivation is to obtain financial benefits
 - + Usually they are long-term
 - + Many financial leases are non-cancelable
 - + Some argue financial leases distort the financial reports

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LEASED EQUIPMENT

- | | |
|--|--|
| <ul style="list-style-type: none"> • Factors favoring <ul style="list-style-type: none"> + Operating and Managerial Convenience + Operating Flexibility + Obsolescence Protection + Financial Leverage + Income Tax Considerations <ul style="list-style-type: none"> ◦ difference between lease payments and allowable depreciation can be written off | <ul style="list-style-type: none"> • Factors against <ul style="list-style-type: none"> + Cost + Control |
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POST-AWARD ACTIVITIES

- Work closely with the users of the equipment to ensure that performance expectations are fulfilled
 - + Collect and interpret performance data
 - + Use techniques on Relationship and Contract Management where applicable

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REVERSE AUCTIONS

- Can be used for both production buys and capital equipment buys
- A “forward” auction is one where buyers offer increasingly higher prices for a product or service. The highest bidder wins. This is what most people understand as an auction.
- A “reverse” auction is one where sellers offer increasingly lower prices for a product or service. The lowest bidder wins.

TAKEAWAYS

- Supply management personnel function as facilitators, coordinators, contract administrators, and consultants in procurement of equipment.
- Specifications must be precise and complete.
- Economic analyses must be thorough and accurate.
- Total cost of ownership analysis must be used.
- Responsibilities of both the supplying and buying firms should be established.
