CHAPTER 22

MANAGEMENT CONTROL SYSTEMS, TRANSFER PRICING, AND MULTINATIONAL CONSIDERATIONS

# LEARNING OBJECTIVES

1. Describe a management control system and its three key properties
2. Describe the benefits and costs of decentralization
3. Explain transfer prices and four criteria used to evaluate them
4. Calculate transfer prices using three different methods
5. Illustrate how market-based transfer prices promote goal congruence in perfectly competitive markets
6. Avoid making suboptimal decisions when transfer prices are based on full cost plus a markup
7. Understand the range over which two divisions negotiate the transfer price when there is unused capacity
8. Construct a general guideline for determining a minimum transfer price
9. Incorporate income tax considerations in multinational transfer pricing

# CHAPTER OVERVIEW

Chapter 22 examines management control systems of organizations with emphasis on the role of a subsystem, that of the accounting information system. In Chapter 6 the concept of management control systems was introduced through the budgeting process. The three key properties of a management control system are described in this chapter but studied in three different chapters: (1) alignment with strategy—Chapter 13, (2) fitness with organizational structure—Chapter 22, and (3) performance of managers and employees—Chapter 23.

The goal of a management control system is improving the collective decisions within an organization in an economically feasible manner. Throughout the text the importance of providing relevant and reliable information to decision makers via the accounting information system has been emphasized. Again that purpose is illustrated using transfer pricing in a decentralized organization as a way that accountants provide information to improve managers’ decisions.

This chapter progresses from a notation of a key property of the management control system—“designed to fit the company’s structure and the decision-making responsibility of individual managers”—to a closer look at organizational structure—centralized or decentralized—to a detailed study of the role of transfer prices for a decentralized organization. Included are multinational aspects and the impact of governmental levies, especially income taxes.

CHAPTER OUTLINE

1. Management control systems
2. Overview of management control systems
3. Characteristics of an effective system
4. Achieves its stated goal of guiding and improving decisions for benefit of company
5. Is cost effective
6. Performs as designed
7. Influences behavior of people who use it
8. Role accounting information plays in system
9. Specifics of management control systems

***Learning Objective 1:***

Describe a management control system and its three key properties

1. **Management control system**: means of gathering and using information to aid and coordinate the planning and control decisions throughout an organization and to guide the behavior of its managers and employees
2. Information gathering
3. Both financial data and nonfinancial data
4. From within the company and outside the company
5. Different kinds of information needed for different tasks
6. Report: some companies use single report of balanced scorecard *[Chapter 13]*
7. Behavior of managers and employees
8. Formal management control system

* Includes explicit rules, procedures, performance measures, and incentive plans
* Consists of several systems, including management accounting system and human resource system

1. Informal management control system

* Includes shared values, loyalties, and mutual commitments among members of organization
* Includes company culture and unwritten norms about acceptable behavior

1. Key properties for evaluating an effective management control system
2. Closely aligned to an organization’s strategies and goals
3. Fit the organization’s structure and the decision-making responsibility of individual managers
4. Motivate managers and employees to give effort to achieve the organization’s goals
5. **Motivation**: desire to attain a selected goal (the goal-congruence aspect) combined with resulting pursuit of that goal (the effort aspect)

* **Goal congruence**: when individuals and groups work toward achieving the organization’s goals—managers working in their own best interest take actions that align with the overall goals of top management
* **Effort**: exertion toward achieving a goal

ii. Incentives: a variety of rewards

**Do multiple choice 1.**  **Assignment after L. O. 2.**

1. Organization structure and decentralization
2. Management control system must fit organization structure
3. Decentralization raises additional set of management control issues
4. Total decentralization: minimum constraints and maximum freedom for managers at the lowest levels of an organization to make decisions
5. **Decentralization**: freedom for managers at lower levels of the organization to make decisions—empowers managers and employees of subunits to take decisive actions
6. **Autonomy**: the degree of freedom to make decisions—greater the freedom, greater autonomy
7. Total centralization: maximum constraints and minimum freedom for managers at the lowest levels of an organization to make decisions

***Learning Objective 2:***

Describe the benefits and costs of decentralization

1. Benefits and costs of decentralization
2. Benefits of decentralization as advocated by supporters
3. Creates greater responsiveness to local needs—information is key to wise decisions
4. Leads to gains from faster decision making
5. Increased motivation of subunit managers
6. Greater management development and learning
7. Sharpened focus of subunit managers
8. Costs of decentralization as pointed out by advocates of more centralized decision making
9. Suboptimal decision making (loss of control)
10. **Suboptimal decision making**: a decision’s benefit to one subunit is more than offset by costs or loss of benefits to organization as a whole

* May occur when there is lack of harmony or congruence among overall company goals, subunit goals, and individual goals of decision makers
* May occur when no guidance given to subunit managers concerning the effects of their decisions on other parts of organization
* Most likely to occur when subunits are highly interdependent

1. Also called **incongruent** or **dysfunctional** decision making

1. Decreased loyalty toward the organization
2. Managers may regard themselves as competitors and be unwilling to share information or to assist when needed
3. Managers may use information to further their own self-interest rather than organization’s
4. Increased costs of gathering information
5. Duplication of activities
6. Comparison of benefits and costs
7. Cost-benefit analysis of decentralization useful on function-by-function basis
8. Benefits of decentralization generally greater when companies face uncertainties in their environments, require detailed local knowledge for performing various jobs, and have few interdependencies among divisions
9. Decentralization in multinational companies
10. Centralization more difficult with subunits in different countries and on different continents due to physical and practical aspects
11. Decentralization has drawback of lack of control
12. Choices about responsibility centers
13. Responsibility centers used to measure performance of subunits in organizations *[Chapter 6]*
14. Cost center—manager accountable for costs only
15. Revenue center—manager accountable for revenues only
16. Profit center—manager accountable for revenues and costs
17. Investment center—manager accountable for investments, revenues, and costs
18. Responsibility centers used in centralized or decentralized organizations

**Do multiple choice 2 and 3.**  **Assign Exercises 22-16 and 22-17.**

1. Transfer pricing
2. Overview of transfer pricing
3. Transfer prices used in decentralized organizations to coordinate actions and to evaluate performance of subunits

***Learning Objective 3:***

Explain transfer prices and four criteria used to evaluate them

**TEACHING TIP**: An excellent case for use in helping students understand transfer pricing is Birch Paper Company. Quoting from the Solutions Manual (Problem 25-31) to accompany the 8th edition of this text—“This classic case is undoubtedly the most widely used transfer pricing case in the world. It can be used for either a quick look or a thorough study of the subject . . . Birch Paper Company is an unusually “rich” case because the instructor can use it as a springboard for exploring a variety of issues, including the philosophies of decentralized versus centralized management styles, the role of division managers in decisions concerning marketing, and the effects on organizational design of interdependencies among divisions.” Though the date might put one off, the technique, that of active learning embodied in the method is most up to date, is found in the article, “Classroom Experience in the Behavioral Implications of Accounting Performance Evaluation and Measurement,” in the *Accounting Review*, April 1973. The article, written by R. Virgil, W. Nord, and S. Schoen on pages 410-418, guides an instructor through the experiential use of the case. Because the case presents the basic concepts of transfer pricing (and other concepts), it is indeed timeless, as well as timely.

1. **Transfer price**: price one subunit charges for a product or service supplied to another subunit of the same operation
2. Creates revenues for the selling subunit and purchase costs for the buying subunit that affects each subunit’s operating income

ii. Creates operating incomes used to evaluate subunit performance and motivate managers

1. **Intermediate products**: products or services transferred between subunits of an organization
2. A curious phenomenon

i. Activities within organization clearly nonmarket in nature

ii. Prices for transfers among organization subunits has a distinctly market flavor

iii. Rationale of optimizing subunit performance leads to optimizing performance of organization as a whole

1. Transfer prices help achieve an organization’s strategies and goals and fit its structure
2. Promote goal congruence
3. Promote sustained high level of management effort
4. Helps to evaluate performance of individual subunits and their managers
5. Promote high level of subunit autonomy in decision making if top management favors high level of decentralization

**Do multiple choice 4.**

***Learning Objective 4:***

Calculate transfer prices using three different methods

1. Methods of transfer pricing that produce different operating incomes for individual subunits from different revenues and cost for individual subunits
2. Market-based transfer prices
3. Cost-based transfer prices
4. Negotiated transfer prices *[Exhibits 22-1 and 22- 2]*
5. Specifics of transfer pricing
6. Market-based transfer prices

***Learning Objective 5:***

Illustrate how market-based transfer prices promote goal congruence in perfectly competitive markets

1. **Perfectly competitive market**: a market in which there is a homogeneous product with buying prices equal to selling prices and no individual buyers or sellers can affect those prices by their own actions
2. Use of market prices generally leads to optimal decisions if three conditions met

* Market for the intermediate product perfectly competitive
* Interdependencies of subunits minimal
* No additional costs or benefits to company as a whole in buying or selling in external market instead of transacting internally

1. Use of market prices motivates managers to deal internally and to take exactly the same actions as if dealing in the external market
2. Use of market prices serves to evaluate economic viability and profitability of each division individually
3. Distress prices
4. Use of term “distress prices” to mean temporary drop below historical average market price when supply outstrips demand

ii. Choice of transfer price when distress prices prevail

* Use of the distress price itself (for short run) if exceeds incremental costs of supplying product or service; otherwise buy from outside supplier
* Use of long-run average price or “normal” market price (for long run) unless price stays low for long period of time; consider closing subunit

**Do multiple choice 5 and 6. Assign Problems 22-27 and 22-28.**

1. Cost-based transfer prices

***Learning Objective 6:***

Avoid making suboptimal decisions when transfer prices are based on full cost plus a markup

1. Use of full-cost bases (full cost plus a margin)
2. Used when market prices unavailable, inappropriate, or too costly to obtain
3. Buying division may regard fixed cost and markup of selling division as variable costs and then purchase from outside vendor expecting savings in variable costs that will not occur
4. Managers prefer full-cost-based transfer price (from surveys taken)

* Represent relevant costs for long-run decisions
* Facilitate external pricing based on variable and fixed costs
* Least costly to administer

1. Other issues to consider

* Activity-based cost drivers provide more refined allocation of costs to products
* Budgeted costs and budgeted rates provide advance notice of price to use
* Overcomes problems of inefficiencies in actual costs
* Eliminates affect of variations in quantity of units produced

1. Variable cost bases
2. Use can achieve goal congruence
3. May need to determine transfer payment differently for buying division than for selling division to evaluate division performance
4. Prorating the difference between maximum and minimum transfer prices
5. One possibility: budgeted variable cost plus transfer price
6. Requires sharing information about variable costs as each division has incentive to overstate variable costs for more favorable transfer price
7. **Dual pricing**: using two separate transfer-pricing methods to price each interdivision transaction
8. A single cost-based transfer price seldom exists that simultaneously meets evaluation criteria
9. Difference between two prices creates corporate subsidy to one division
10. Not widely used in practice

* Problems when computing taxable income of subunits if divisions located in different tax jurisdictions
* Top management concern that manager of supplying division does not have sufficient incentive to control costs
* Insulate managers from frictions of marketplace

1. Negotiated transfer prices

***Learning Objective 7:***

Understand the range over which two divisions negotiate the transfer price when there is unused capacity

1. Unused capacity available in supplying subunit
2. Price between variable costs of supplying subunit and market price for buying subunit
3. Set by bargaining strengths of two subunits, information about demand for services from external parties for supplying subunit, and information about external sources of supply for buying subunit
4. Sensitive negotiations because each division’s performance evaluated on basis of operating income
5. Price may have no specific relationship to either costs or market price
6. Strongly preserves subunit autonomy
7. Motivates effort to increase subunit income
8. Disadvantageous as to time and energy spent on negotiations

**Do multiple choice 7 and 8.** **Assign Exercises 22-19, 20, 25, and Problems 22-29 and 22-30.**

***Learning Objective 8:***

Construct a general guideline for determining a minimum transfer price

1. General guideline for transfer-pricing situations *[Exhibit 22-3]* *[Surveys of Company Practice]*
2. Price used depends on economic circumstances and decision at hand
3. General guideline helpful as first step in setting a minimum transfer price:

Minimum transfer price = Incremental costs per unit incurred up to point of transfer

+ Opportunity costs per unit to the supplying division resulting

from transferring products or service internally

1. Incremental costs: additional costs of producing and transferring products or services
2. Opportunity costs: maximum contribution forgone by selling division if products or services transferred internally
3. Illustrations of general guideline
4. Opportunity costs equal market price minus variable costs (contribution margin) if perfectly competitive market for intermediate product exists and selling division has no idle capacity (minimum transfer price = market price)
5. Opportunity cost is zero (no contribution margin forgone)

* Selling subunit has idle capacity (minimum transfer price = cost-based or negotiated)
* Selling subunit has no external market for intermediate product (minimum transfer price = incremental costs per unit)

**Do multiple choice 9.**  **Assign Exercises 22-21, 22, 26, and Problem 22-35.**

1. Multinational transfer pricing and tax considerations *[Concepts in Action]*

***Learning Objective 9:***

Incorporate income tax considerations in multinational transfer pricing

1. Tax factors include income taxes as well as many other types of taxes or government levies
2. Income tax payments reduced by recognizing more income in low tax rate countries and less income in high tax rate countries
3. Tax issues may conflict with objectives of transfer pricing
4. Tax regulations of different countries restrict transfer prices companies can choose

**Do multiple choice 10.**  **Assign Exercises 22-18, 23, 24, and Problems 22-31 and 22-32.**

**CHAPTER QUIZ SOLUTIONS:** 1.**a** 2.**c** 3.**b** 4.**d** 5.**b** 6.**d** 7.**a** 8.**b** 9.**c** 10.**a**

**CHAPTER QUIZ**

1. If management decides to pursue an unwise goal, the management control system for that company should
2. reinforce this company goal.
3. be scrapped because an unwise goal will harm the company and should not be reinforced with a systematic approach.
4. not be changed from the previous wise goals to incorporate the current unwise goal.
5. not tie the managers’ reward to the pursuit of an unwise goal.
6. Which of the following is **not** a benefit associated with decentralization?
7. Quicker decision making
8. Increased motivation of subunit managers
9. Increased competition among managers
10. Greater responsiveness to local needs
11. Which of the following is a cost associated with decentralization?
12. Not enough time spent in gathering information about different subunits of the organization
13. Decreased loyalty toward the organization as a whole
14. More management development and learning
15. Lack of day-to-day involvement by top management in operating decisions
16. [CPA Adapted] In a decentralized organization in which subunits may buy goods from one another, the transfer-pricing system should be designed primarily to
17. allow subunit managers to buy from external parties.
18. increase the consolidated value of inventory.
19. minimize the degree of autonomy of subunit managers.
20. evaluate performance of individual subunits and their managers.
21. [CPA Adapted] In order to motivate subunit managers to exert effort to maximize their own subunit’s operating income, interdivisional transfers of a product preferably should be made at prices
22. equal to fully allocated costs to the producing subunit.
23. equal to the market price of the product.
24. equal to variable costs of the producing subunit.
25. negotiated by top management.

**The following data apply to questions 6–10.**

The Santa Fe Manufacturing Company has two divisions in Kansas, the Holton Division and the Derby Division. Currently, Derby buys a part (10,000 units) from Holton for $16 per unit. Holton has purchased new equipment and wants to increase the price to Derby to $18 per unit. The controller of Derby claims that she cannot afford to go that high, as it will decrease the division’s profit to near zero. Derby can buy the part from an outside supplier for $16 per unit. The incremental costs per unit that Santa Fe incurs to produce each unit are Holton’s variable costs of $12. Fixed costs per unit for Holton with the recent purchase of equipment are $5.

1. Holton has no alternative uses for its facilities. Should Derby continue to buy from Holton or buy from the external supplier?

Company as a whole Derby Division only

a. Buy from external supplier Buy from external supplier

b. Buy from external supplier Buy from Holton Division

c. Buy from Holton Division Buy from Holton Division

d. Buy from Holton Division Buy from external supplier

1. If Santa Fe would prefer to negotiate a transfer price between the divisions, what range of transfer prices would be used?

a. $12 - $16 b. $12 - $17 c. $12 - $18 d. $16 - $18

1. If Holton could use its facilities for other manufacturing operations that would result in monthly cash operating savings of $45,000, what would be the advantage (disadvantage) to Santa Fe?

a. $(25,000) b. $5,000 c. $20,000 d. $25,000

1. If Holton has no alternative uses for its facilities and the external supplier drops the price to $11 per unit, what should be done from the point of view of

Company as a whole Derby Division only

a. buy from Holton Division. buy from external supplier.

b. buy from external supplier. buy from Holton Division.

c. buy from external supplier. buy from external supplier.

d. buy from Holton Division. buy from Holton Division.

1. Assume the Derby Division is located in England rather than Kansas. The income tax rate used in England is 45%, whereas the effective income tax rate is 30% in Kansas. Which cost would be the best transfer price for the company as a whole (based upon original data)?
2. Full cost of $17 c. Variable cost of $12
3. Market price of $16 d. The price that best promotes goal congruence.

**WRITING/DISCUSSION EXERCISES**

1. **Describe a management control system and its three key properties**

***At what size or magnitude of operations does an organization need to develop a management control system?*** If one considers any grouping of persons for any purpose that will extend beyond the shortest of time spans to be an “organization,” then every organization uses a management control system of some description. All organizations need a means of gathering information and methods to use that information for the organization’s benefit. Consider the basic family unit: any family member can identify the one person or persons who “runs” the family. That family member knows what everyone is doing, what is going on and when, and how to make it all happen. That person embodies the management control system. Obviously not all organizations have superior systems—some families manage better than others. From the first page of the chapter, the authors of the text set forth a basic reason for learning about management control systems—“Which company has the better management control system . . .? The answer lies in how well each control system achieves its stated goal of guiding and improving decisions for the benefit of the company in a cost-effective way, and how the system influences the behavior of the people who use it.” Everyone benefits from learning about a system common to all.

The evolution of a management control system was described in the Writing/Discussion Exercises for Chapter 6, Learning Objective 1.

1. **Describe the benefits and costs of decentralization**

***How does the saying, “The whole is more than the sum of its parts,” apply to decentralized organization structure?*** The whole of the organization may be enhanced if the subunits of the decentralized organization work toward goal congruence—managers and employees working in their own best interest taking actions that achieve the overall goals of top management. The benefits of decentralization are those that describe this synergy or cooperative action and are noted in the text. The costs are also noted, and if the costs outweigh the benefits, the whole will not be more or better than the total of the subunits. [Refer to Chapter 6, Learning Objective 7 in the Writing/Discussion Exercises for a similar discussion in relation to responsibility centers and responsibility accounting.]

1. **Explain transfer prices and four criteria used to evaluate them**

***Why is it necessary to establish transfer prices between subunits before evaluating the performance of subunit managers?*** A transfer price is a number and numbers provide a means of comparison. At a minimum, the comparison could be positive or negative in relation to operating income for a subunit. With the use of numbers, the comparison could be expanded to include the degree of achievement of a goal or standard established—the percentage of achievement, for example. A transfer price provides a measurement.

1. **Calculate transfer prices using three different methods**

***Discuss other situations in which a process uses intermediate measures to evaluate performance toward a goal.*** In considering the various situations, the specific goal for each situation needs to be clearly established before identifying the intermediate measures within the process. Transfer prices, if calculated appropriately, promote the highest operating income for the company—an important goal. If the intermediate measures can be compared to established standards, they are usually considered more reliable as measurements toward the achievement of the goal. Using market prices as transfer prices generally leads to optimal decisions. If the intermediate measures serve to achieve the goal in an economically feasible manner, they would be considered cost-beneficial. The intermediate measures should have the following qualities: help achieve specified goals, fit the situation, and provide a means of assessing performance. In particular, they should promote (1) goal congruence, (2) management effort, (3) subunit performance evaluation, and (4) subunit autonomy.

Examples of situations that could be discussed in reference to the above qualities:

Grades used in the educational process (defining the goal could be interesting)

Height and weight in the growing process of children

Various statistics for a sports team

1. Illustrate how market-based transfer prices promote goal congruence in perfectly competitive markets

***How does the condition of “arm’s-length transaction” correspond to a perfectly competitive market?*** The term “arm’s length” means that each party to a transaction is operating independently of the other party and is fully capable of making a choice that would be in its own best interest. The transaction can be recorded by the use of one number that represents the actions of both parties, the give-and-take aspect or the value of what was given up is equal to the value of what was taken. A perfectly competitive market exists when no individual buyers or sellers can affect the prices agreed upon by their own actions. One price fits both the buyer and the seller.

1. **Avoid making suboptimal decisions when transfer prices are based on full cost plus a markup**

***Why is it a problem when a subunit of a company cannot match a market price with its transfer price in the manufacturing of its product?*** The problem of being unable to match market prices (assuming they exist) with transfer prices within the production process is that the manufacturing costs of the company are therefore probably more than the costs of their competitors. The overall cost of the product will be the sum of costs of the subunits. If at any point the sum of the costs exceed those of the market, a manager should search for inefficiencies or other problems.

1. Understand the range over which two divisions negotiate the transfer price when there is unused capacity

***How can the concepts presented in Chapter 12 on pricing be used in negotiating a transfer price between two subunits?*** Costs, customers, and competition are used to guide pricing decisions according to Chapter 12. In negotiating a transfer price, the supplying subunit could begin with its costs. The costs of the subunit having excess capacity are an indication that those costs are too high. The supplying subunit would need to compute the lowest price it could charge to cover its relevant or incremental outlay costs. Armed with this information, the supplying subunit could negotiate with its customer, the buying subunit. If a market price existed for that (intermediate) product, the market price would act like the competition and drive the negotiations toward that price.

1. Construct a general guideline for determining a minimum transfer price

***Being aware that transfer prices are not calculated as part of the cost of a product for product-costing purposes because a profit component is not included in a product’s cost, why develop a guideline for determining a minimum transfer price?***

Guidelines are models used to aid in decision making. Though the transfer price does not become a part of the product cost (at least the profit component is not included), per se, the transfer price is important in the performance evaluation and motivation aspects of a decentralized organization. Guidelines, or models, describe known relationships and are cost-effective tools that managers can use for gathering relevant information in making decisions. [Refer to Chapter 3, Learning Objective 1 of the Writing/Discussion Exercises.]

1. **Incorporate income tax considerations in multinational transfer pricing**

***If an organization is decentralized in the design and production functions but centralized for the finance and tax functions, why should the production subunits have to consider taxes in the setting of transfer prices?*** The decentralization of the production process is the reason for having transfer prices. The structure under which the finance operations and tax subunits are organized do not affect the production area’s transfer pricing. Taxes do affect the setting of transfer prices because the company needs to have the lowest price possible for its products. Taxes are a cost to the organization. Including taxes as part of the transfer price causes subunit managers to be aware of the impact of taxes on the cost of their product. Information is crucial in optimizing decisions.