The Japanese Style of Business Accounting

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Classical, Stewardship, and Market Perspectives on Accounting: A Synthesis

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INTRODUCTION

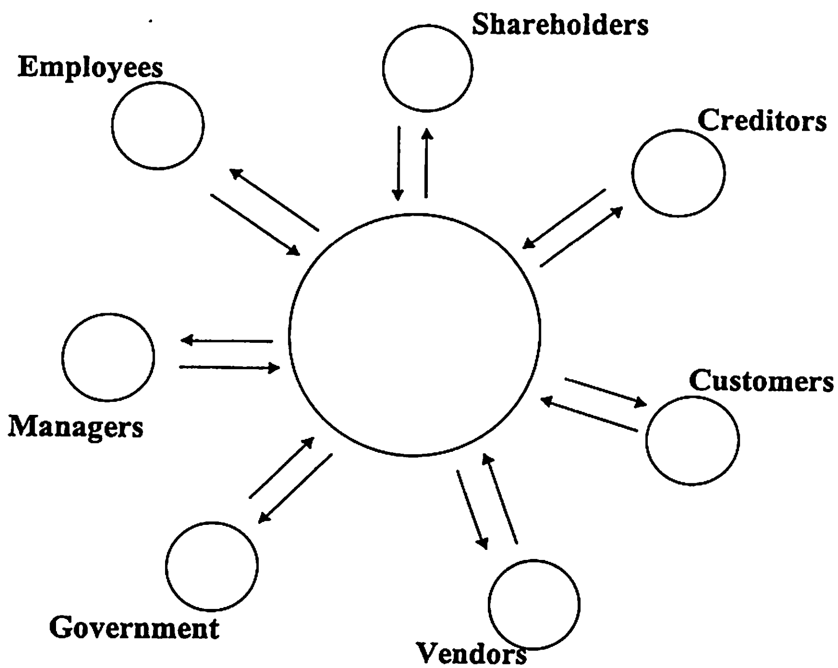
The second half of the twentieth century has generated a rich variety of perspectives on business organizations and accounting. Existence of different, often conflicting perspectives of the same object or event is a classical theme. Kurosawa's film *Rashomon* and the ancient Indian parable of four blind men and the elephant are but two examples of the multifaceted nature of social phenomena. Multiple perspectives can, but need not, engender conflict; they can also enrich and deepen our understanding of the subject. Few things in business or society have a unique, right way of being looked at. A common theme may underlie even the most diverse perspectives. The purpose of this chapter is to identify and emphasize this commonality among perspectives on accounting and to develop a rich synthesis from them.

A synthesis presumes an understanding of various points of view. I cannot be sure if my understanding of these points of view will satisfy their proponents. Perhaps it is best that I summarize my own perspective of accounting first. I then identify what is common among these perspectives and how they relate to one another.

ACCOUNTING AND ECONOMIC THEORY OF ORGANIZATIONS

Beginning some 60 years ago, Barnard, Cyert, March, Simon, and their colleagues built the modern theory of organizations (see Barnard, 1938; Cyert and March, 1963; Simon, 1947, 1952). One of the key ideas to emerge from the work of this "Carnegie school" is that we can usefully think about an organization as a

Figure 2.1
The Firm as a Set of Contracts among Agents



set of contracts or an alliance among many individual economic agents. The result is a simple but powerful synthesis of economic and organization theories. This model of organizations provides a fertile soil that can help sustain a robust theory of accounting. Simply stated, if organizations are contract sets or alliances, accounting is their operating mechanism to make them work. Most, if not all, accounting concepts and aspects of accounting practice can be integrated into the contract model of the firm (see Figure 2.1; Sunder, 1997).

By entering these contracts, agents make promises to deliver resources and are promised delivery of resources in return for their performance. Agents enter these contracts when they believe that what they receive (or expect to receive) from their participation in the organization is worth the sacrifice they are expected or intend to make. For an organization to succeed, its production technology and set of contracts must satisfy each one of its participants by delivering enough resources to them in exchange for the resources they contribute to it. When this crucial condition cannot be fulfilled, dissatisfied agents abandon the alliance; it may collapse unless an alternative set of contracts that fulfills this condition can be put together.

Before moving further, we must define the terms used in the preceding definition, "economic agents," and a "set of contracts." An economic agent is a person

or an organization who complies with a simple condition of consistency between its preferences and actions. Whenever an opportunity arises, the agent chooses its preferred courses of action out of the set of actions available and known to it. If the person chooses courses of action whose consequences are dominated by the consequences of other available actions, the person could not be thought of as an economic agent. Such choice is not consistent with its preferences and objectives. It is difficult to build a social model without assuming at least a minimal level of behavioral consistency.

A contract is simply a mutual understanding among two or more economic agents about one another's actions. A lunch date is a contract. So are hiring a welder, buying a share of stock, and promising a delivery schedule to a customer. In all these examples, each party makes (an implicit or explicit) promise to take a specific action that is relevant to the other party. In the sense I use the term, a promise does not have to be legally enforceable in order to qualify as a contract. But it can be. All promises do not have to be explicitly stated. Many aspects of the promise can be left to social convention and mutual understanding. Nor does a promise have to be written down in order to qualify as a contract.

Contracting individuals have their own purposes or goals. They choose to enter contracts and comply with them. We can assume that they join an organization only when they like the expected consequences of such participation (compared to the alternative opportunities for employment of resources they have to offer). In this concept of organizations it is not necessary to assign a goal to the organization itself. Organization is seen simply as a set of contracts among purposive individuals. To use another analogy, economic agents are the players who seek their goals; organization is an arena or the tournament in which they perform and by whose rules they agree to abide.

Neither the contract theory of organizations nor the theory of accounting based on it is specific to business. Both are applicable to a broad range of organizations, whether they are in business, government, society, or even religion. However, for the purpose of illustration, it is useful to take an example, and, given our present interest, we shall consider the example of business organizations. A business corporation can be thought of as an alliance among those who contribute capital (shareholders, bondholders, banks), labor (employees), management skills (managers), cash (customers), equipment and supplies (vendors), public services (government), support (community), and so on. In exchange for their contributions, various agents may receive dividends, interest, salaries, wages, benefits, products, cash, tax payments, clean air, and so on. Depending on their purpose, different people look at the contract set at varying levels of detail and specificity. For our present purposes of developing a rough sketch of a theory of accounting, we do not go into further detail.

FUNCTIONS OF ACCOUNTING

Accounting is necessary to assemble, implement, enforce, modify, and maintain a contract set or organization. How does accounting perform its functions? How do these functions relate to what we know about accounting systems in business organizations?

A contract set in which agents are obligated to contribute resources and have the right to receive resources must have a system to measure and record all resource inflows and outflows. In business organizations goods and supplies are reckoned and recorded into the accounting system at the receiving dock. Money from the customers is handled by the cashier, the accounts receivables, and customer accounts. Contributions of labor might be measured at the punch clock, inspection, or the point of transfer of goods from factory to the finished goods warehouse. Measurement of nonphysical resources, especially services, is more difficult. Accounting systems are adapted to measure various intangibles to the extent it can be done in a reliable and consistent manner. Without measurement of resource contributions, it would be impossible to determine who deserves to receive what resources from the organization in accordance with the contract. No set of contracts can function without a mechanism to measure contributions.

In its second function, the accounting system measures, records, and controls the outflow of resources from the organization. Payroll and benefit accounts for employees, shipping to customers, accounts payable to suppliers, and tax accounts measure the outflow of resources to the government. Again, some outflows are less tangible and therefore more difficult to measure than others, and accounting systems are adapted to try to measure these outflows as well as practicable. Depreciation of fixed assets that yield their service potential over a number of accounting periods is an example of estimation methods accountants use for this purpose. Necessity of this function for operation of a contract set parallels the necessity of the first function listed previously.

Of course, independent pieces of data on individual resource flows are of limited value. In recording the resource flows, the accounting system causally relates incoming resources to outgoing resources, so the whole system explains the causes and effects of various events in the organization (see Ijiri, 1993).

In its third function, the accounting system compares the data on resource inflows and outflows to determine who has fulfilled his or her contracts and to what degree. The accounting system prepares comparative reports on resource inflows and outflows related to various individuals in the organization. These statements are important parts of the procedure used to evaluate the contracts of these individuals. For example, the accounting system may provide the sales manager with an account statement for customer X containing all the information about the shipments to, and orders and payments from, the customer. This statement becomes an input to the decision the sales manager makes with respect to that customer. The accounting system may also produce a statement on the resource flows associated with the sales manager for the decisions to be made by the marketing vice president

to whom the sales manager reports. A great deal of what we call managerial or internal accounting concerns compilation of information to implement the contracts of various employees and managers in the organization.

A fourth function of accounting is to help assemble and maintain the contract set. To assemble the organization, entrepreneurs decide what resources are needed and what resources the organization can disburse to the participants in exchange. They must then find actual people who have such resources to contribute and who want what the proposed organization has to offer them in exchange.

To find these agents, the entrepreneur must access the appropriate factor markets to find the right kinds of labor, managers, customers, supplies, and investors in the organization. All these people must be convinced that participating in such an enterprise is in their own best interests. They should be able to compare the resources they would be expected to contribute against the resources they could expect to receive from the organization. People can be expected to participate in the organization only if they find the benefits of doing so worth the sacrifice expected of them. Organization is feasible only if it is technically possible to produce enough resources for disbursement out of the contributions gathered.

Accounting plays an important role in this function. Pro forma financial statements, business plans, and budgets prepared by the entrepreneur before the enterprise starts functioning help agents assess the costs and benefits of participating in the proposed enterprise in various roles.

After the organization is initially assembled, this function of accounting remains important throughout the life of the firm. No individual occupies a contractual slot in an organization forever; individuals come and go. Whenever a contractual slot falls vacant, or whenever a new contractual slot is created to increase the viability of the organization, an individual who is willing to occupy that slot must be found. Again, accounting helps find the replacement agents for the organization by distributing information of costs and benefits of occupying the contractual slots among the potential participants in various factor markets.

Finally, with the exception of shareholders of the firm, contracts of all other participants in a business firm are for a finite term. When they expire, they are often renegotiated in light of the changed circumstances. Sometimes, renegotiation is necessary even if a contract has not expired, because the changed circumstances have made the contract undesirable from the point of view of one or more parties. This modification, maintenance, and renegotiation of the contract set are an important part of running the organization. They also entail a great danger to the continued viability of the organization because one cannot assume that such renegotiation will be successful when it takes place. Given the asymmetry of information among the participating agents, contract negotiations are threatened by the incentives of the agents to bluff the counterparties. Agents are tempted to issue threats, sometimes empty threats, to quit their position in the organization if their terms are not revised in their favor. Such bluffs and threats sometimes lead to deadlock in negotiations and therefore deadweight losses to society.

Accounting performs its fifth function by making at least a minimal set of information common knowledge among the negotiating parties to help reduce the chances of such bluffs, empty threats, and deadlock. This is the primary purpose of what has come to be known as public disclosure in large organizations.

In summary, I view accounting as the operating mechanism of organizations that makes it possible for them to function. My next step is to examine various alternative perspectives on accounting through these colored glasses. I believe that this economic theory of organizations approach can help us look at these views in a unified manner.

A SYNTHESIS

In this section, I explain the relationship of my perspective on accounting to other perspectives. For the most part, there is no direct conflict among them. Each perspective emphasizes different aspects of accounting and makes different trade-offs between the specificity of its assumptions and the range of phenomena it seeks to explain. Let us start by looking at common elements of these perspectives.

From the vast accounting literature, I have selected three broad themes in accounting for the present discussion, without any claims to exhaustive coverage. The selected themes are labeled classical, stewardship, and market-based.

First, accounting is an answer to the practical problem of running an organization. Control of resource flows in a way that preserves the integrity of the organization is a common fundamental problem of running the business aspects of a kingdom, a temple, a medieval manor, a farm, a family-run grocery store, a textile mill, a bank, or a multinational corporation. All perspectives on accounting start out by sharing this basis.

All organizations collect and disburse multiple factors in various markets. The modern commercial environment is characterized by relatively well developed markets for many factors. This has not always been the case. Land often belonged to the king, and the farmer had no right to sell it. People were not always free to sell their labor to anyone they pleased. Development of markets for factors of production is virtually synonymous with the creation of modern commercial/industrial civilization (see Karl Polanyi, 1944). The extent of the development of specific factor markets is highly dependent on space and time. The kind of accounting system that best serves the needs of the organization depends on the extent of the markets in which the organization functions. I cite examples in the following discussion in which the assumed or actual extent of market development is the crucial variable in many accounting perspectives and controversies.

As markets develop and collapse over time in a society, the organizations that constitute that society also adapt to the changing market structures. In the latter part of the twentieth century, publicly held transnational corporations are clearly the dominant form of organization. But this phenomenon is not peculiar to the twentieth century; the first joint-stock company (British East India Company) was formed less than 400 years ago. The three major perspectives on accounting I would like

to discuss here are linked to three proximate levels of market development. Hatfield (1924: 8) wrote:

> In part the new significance of accounting is due to sub-division of ownership and the severance of ownership and control so characteristic of the corporate form of business organization. If the substitution of small partnership for the individual trader called for improvement in bookkeeping methods, how much more was improvement needed when the partnership was displaced by the corporation with its owners numbered by the tens of thousands.
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> But still more significant has been the great investment of fixed capital characteristic of modern production and made possible by the organization of corporations. The use of fixed capital on a large scale increases incalculably the difficulty of determining the profits earned in any given year. Paciolo made no serious effort to do this. Business in his day was congeries of disconnected ventures. . . . As these ventures fell in, the profit gained in the completed transaction was ascertained, somewhat roughly, it is true, but fairly satisfactorily. But no attempt was made to deal with unfinished operations.
>
> But today business is a continuum.

At any time and in any society, diverse organizational forms coexist, as do the forms of accounting that serve their needs. Even at the frontiers of technology, the personal computer revolution took place not in the laboratories of giant multinationals but in the garages of lone entrepreneurs. In their organizational form, these entrepreneurs are closer to the people for whom Paciolo wrote his treatise than they are to Fujitsu, IBM, or NEC.

Environment, size, and form of each organization vary in time and space. All accounting perspectives use a subset of all possible organizations as a prototype. Usually, it is the dominant form of business organization in the society where the perspective is developed. The accounting system discussed under each perspective is designed to fit the chosen prototype.

For our purposes, we can use Hatfield's key events as boundary lines for these prototypes: separation of ownership and control defines the first boundary line, and subdivision of ownership into a large number of small pieces defines the second. A crude correspondence exists between three organizational forms defined by these boundaries, on one hand, and three perspectives on accounting I would like to discuss next.

Classical Perspective

Through most of recorded history, most economic activity of society was carried on by individual farmers, herdsmen, craftsmen, or traders acting alone or in small kinship groups. The business activities of most of these individuals were simple enough to call for little more than counting. Accounting originated with traders who engaged in more complex forms of business activity by engaging in trade with many people, often on a repeat basis or on credit. Accounting was differentiated from mere counting by establishing the cause-and-effect relationship between the sacrifice and benefit aspects of each transaction (see Ijiri, 1975, 1993). This cause-and-effect driven organization of transactions in double-entry bookkeeping gave it balance and usefulness as a powerful instrument of control over the flow of resources.

The classical perspective on accounting developed in various parts of the world during the millennia preceding the Industrial Revolution. This perspective was meant to serve the dominant business organization of the day—the traders. Today, the oldest available codification of this system is Part 1, Section 9, Treatise 11 of Pacioli's *Summa de Arithmetica, Geometria, Proportioni et Proportionalita* (Review of Arithmetic, Geometry and Proportions), entitled "Particularis de Computis et Scripturis" (Particulars of Reckonings and Their Recording); see J. B. Geijsbeek (1974 [1914]). This system developed in response to the personal needs of the wealthy, the merchants, and their businesses.

The classical perspective on accounting included counting, recording, and communication. Counting became necessary in civilizations where quantities larger than four or five had to handled; human cognitive ability to discriminate among various quantities diminishes sharply beyond this threshold. Recording was an aide-mémoire for those whose affairs included so many transactions over periods of time that memory could not be relied on to keep track of the resource flows. Yamey (1977: 14) quotes the old English preamble of Robert Loder's farm accounts in early seventeenth-century England:

> A Bock [for my] rememberance; what seed wheat and barley I yearly sowe and [how mu]ch I wenow and sell in the same yeare. Item what h[ay] I ha[v]e yearely growing; . . . Item how my quite rentes are yearely pay'd me; Item of the valewin some yeares of my aples and cherries. Item of the quantitie of whole which I have yearly growing; and how many shep I sheared for it; Item of money owing me; Item what paymentes I owe the Kinge; Item how I pay my servauntes theyr wages; Item what my charges in the harvesting and making hay hath bine in some yeares; Item how and what I pay for tieth of my orchardes; Item how much wood I buy; . . . Item how many landes I yearely dounge with the potte, and which are dounged at alle; and o[f] such other remembrances.

The communication function of accounting is exemplified in the baked clay tablet, sent by the wife of a merchant, listing in cuneiform writing the merchandise sent to him from home in ancient Sumeria, now displayed in a museum. The view of accounting that relies on these three basic functions can be labeled the classical view. This is codified by Paciolo in his treatise. This form of accounting, designed for simple form organizations, has long been known as bookkeeping. Even to this day, bookkeeping is what laymen understand accounting to be.

If we return to the functions of accounting in a contract set, bookkeeping is concerned primarily with the first two—measuring and recording of resource inflows and outflows related to the organization. The books help merchants keep

track of their resources and obligations and causal relationships among them. It helps them know who owes them what and why, and what they owe the others by properly organizing the data on resource flows with respect to each contracting party in the organization. For merchants, most of these parties are their customers, suppliers, and possibly a small number of employees. They do not have shareholders, auditors, or managerial hierarchy to worry about. For small and simple organizations bookkeeping is all the accounting that is necessary to implement their contract set.

Stewardship Perspective

Stewardship accounting evolved to address the separation of ownership and control. It adds the interests of two parties to the counting and recording aspects of accounting recognized in the classical perspective. The aide-mémoire function of accounting is important even in organizations that have only a single layer of management, usually consisting of the sole proprietor. When organization expands to include two or more levels of management, a new problem arises. Now accounting must include not only the one who gives account but also the one who takes account. Ijiri (1975) labels them the accountee and the accountor, respectively. It is easy to see that stewardship played an important role in the accounts of temples and sovereigns since antiquity, as well as merchants or lords of manors who employed people (stewards) to handle the estates for them. The essence of the stewardship view of accounting is to see the problem that accounting solves as the problem of organizations. Organizations differ from individuals in that they involve actions, thoughts, information, and motives of more than one person. The stewardship view can be differentiated from the classical view of accounting in its emphasis on accounting as the solution to the problem of organizations.

The fundamental problem of running organizations is that no one person in the organization has all the information in his or her possession. Since people acquire most of the information needed for doing their jobs on the job itself, they have preferential, even exclusive access to such information. A branch of the stewardship perspective, labeled the agency theory of accounting, tries to deal with the consequences of the combination of this information asymmetry with the private interests of individuals. Diversity of private interests motivates individuals to utilize the information in their possession to advance their own interests, which may diverge from the corporate interests. This goal incongruence is the focus of agency theory, and most attention in this perspective is centered on ways of minimizing its impact.

Accounting apparatus developed to deal with the stewardship problems has come to be known as managerial accounting. Planning and budgeting, divisional and managerial performance evaluation and compensation, decentralization, transfer pricing, capital budgeting, and activity-based costing are all concerned with the problem of control in organizations with managerial hierarchy. Managerial accounting is built on the foundation of the basic accounting records of bookkeeping and therefore encompasses it. But accounting needs of large, hierarchical organizations need all these additional features that were either absent or present only in their embryonic forms in Paciolo's description of accounting practice.

If we return to the five functions of accounting listed earlier, we can view bookkeeping and managerial accounting as the mechanisms needed to implement the respective sets of contracts. Hired managers' resource contributions to the organization are difficult to observe directly because such contributions have no visible substance, and even the consequences of their effort cannot be known immediately. In modern industrial and commercial organizations where operations continue for years without a break, it is difficult to isolate the quality of managers' contributions to the organization from myriad other environmental factors even after the passage of time.

Compare the problem of evaluating the performance of the captain of a fifteenth-century trading ship and the manager of an automobile factory. The owner does not observe the actions taken by the managers to do their job in either case. But at the end of the ship's journey, when the goods are sold, both the owner as well as the captain know precisely how much profit the journey produced. Accordingly, they can write a contract to compensate the captain on the basis of this profit. Even if the manager works at the car factory for five or ten years, it is not possible to determine unambiguously how much profit it generated, as long as the operations of the factory continue with partially used fixed and intangible assets in place. Operations of a modern factory continue for so long that it is not practical to keep the managers waiting for their rewards until its operations end, and its assets are liquidated. If no link can be established between the resource contributions and entitlements of agents in an organization, it is not possible to define or implement or enforce their contracts. The managerial accounting concepts and practices listed in the preceding paragraph are designed to solve this difficult problem at various levels of managerial hierarchy.

Budget is a contract for each manager in the organization. It specifies the resources the manager is authorized to spend and expected to generate in the organization. It is specified in terms of variables that are mutually observable to managers as well as to their superiors. These variables include financial as well as nonfinancial measures. The measurement and recording system of the firm discussed under classical accounting plays an important role in creating these measures. Under this system, even though the effort contribution of the manager cannot be directly observed or measured, a managerial contract that promises rewards on the basis of budgeted targets of observable performance measures is used to motivate the managers to do their best in the organization. Operation of large modern organizations would have been impossible without the development of this remarkable "engineering" feat of stewardship accounting.

Capital Market Perspective

Subdivision of ownership of business enterprises and the consequent displacement of partnership by joint-stock companies with a large number of shareholders

define the other major threshold in accounting (see Hatfield, 1924). Acquisition of equity capital from a large number of small shareholders who do not and cannot be in direct contact with the operations of the enterprise or with those hired to manage it requires another jump in the range of functions accounting must perform. The modern financial reporting model is designed to operate such organizations.

In the United States, development of this model began in the mid-nineteenth century, when railroads and public utilities needed large amounts of equity capital for their plant (see Yamaji, 1992). Publicly held corporations, a liquid stock market for trading their shares, and a system of accounting that was capable of implementing and sustaining such a system had to develop in step. This model is also the reason for inclusion of the qualifier "public" in certified public accountants.

What distinguishes the financial reporting model of accounting from bookkeeping and managerial accounting models is the additional attention it must pay to the existence and demands of the markets for capital. In the United States, most large corporations obtain their equity capital by selling shares to the public. The number of public shareholders is large, and their average holding is small, often only a few hundred shares. On the other hand, some 60 percent of the outstanding value of shares in the United States is held and managed by professionals who work for financial institutions. Shares of most large corporations, at least, are held by a relatively large number of shareholders.

Publicly held corporations placed new demands on accounting systems. Investors who are distant from the operations of the firm need an accounting system to protect their interests and to enforce the contract set. Recall that, having already made their capital contribution to the firm, shareholders are especially vulnerable to nonperformance of their respective contracts by the other parties in the firm. They must have reasonable assurance that, after they have made their own contribution to the firm, other agents, too, will make their contributions according to their mutual understanding.

Of the three models of accounting, the financial reporting model is the only one that must implement contracts among people who do not know one another. In contrast, both bookkeeping as well as the managerial accounting models are designed to implement contracts among people who deal with each other directly. Difficulty of communication nudges the market-mediated contracts among strangers in the direction of rules and standards. In the United States, development of these rules and standards has been spearheaded by the Interstate Commerce Commission, the Federal Reserve Bank, the New York Stock Exchange, the Securities & Exchange Commission, the American Institute of Certified Public Accountants, and the Financial Accounting Standards Board.

Use of rules and standards in financial reporting placed bounds on the exercise of judgment that lies at the heart of all accounting. Rules and standards impart certain rigidity to accounting. As rule makers try to improve the value of financial reports in contract implementation, they can hardly avoid reducing the information reports carried to the capital markets. Consequently, many individual shareholders as well as professional managers actively search for information about the prospects of the firm. Financial reports remain an important source of information, but there are many other sources equally and sometimes more important and timely than financial reports. Investor reliance on financial reports as a source of information is attenuated but not eliminated.

Another consequence of widely held, actively traded stocks in a market with small transactions costs is that the stock price is highly responsive to events and reports that are thought to affect the prospects of the firm. Prices can respond to information within a matter of minutes or hours. In the early years of development of the financial reporting model, corporate managers could use secret reserves to smooth out the financial reports over a period of time in order to minimize share price movements in response to transient events. Financial reporting rules have progressively narrowed this as well as other areas of managerial discretion, largely because of fear of misuse for personal benefit. Elimination of discretionary reporting is a double-edged sword; even self-serving reports by managers in a discretionary regime end up revealing a great deal about what kind of managers they are (see Levine, 1996).

A third consequence of the financial reporting model has been the shift of emphasis from stock variables (balance sheet) to flow variables (income and cash flow statements). Given the imperfection of the markets for fixed assets of industrial corporations, their historical book values are poor indicators of the future earning power of the corporation. Projection of current earnings and cash flows into the future for the purpose of security valuation carries its own significant risks. Investors' and analysts' need for a sustainable earnings figure that can be projected into the future has given rise to lengthy debates and detailed rules on isolation of nonrecurring income items from the rest.

The greatest impact of market-based research on accounting thought has been to make the accountants aware of the existence of the alternative sources of information for the stock market, and the complex interaction among these sources, and the behavior of the market itself. Market-based research has forced many accountants to replace thinking of accounting in mechanical terms by thinking in economic terms. Accounting reports can definitely mislead investors, but the existence of the market limits the extent to which this can happen. Yes, accountants can withhold information, but the existence of the market limits the extent to which information can be withheld.

Of course, for the vast majority of firms in the United States, ownership shares are not traded in liquid markets. Most firms are simply not large enough to justify sufficient effort to search for information about their future prospects. What is true of General Electric or AT&T is not true of smaller firms, even if they are listed on stock exchanges. Then an even larger number of firms that are publicly held (defined in the United States by the Securities and Exchange Commission (SEC) jurisdiction over firms that have more than 500 shareholders), even though their shares are not listed on any exchange. In international markets also, shares of most firms are not actively traded. To that extent, the findings about the large firms with liquid trading in the New York, Tokyo, or London stock exchanges are not generalizable to others.

Development of markets for securities as well as for goods and services has led some to argue, especially during periods of significant price movements, that the historical cost valuation be replaced by market valuation of assets and liabilities. There are two obstacles to the use of current prices. First, all markets are imperfect in varying degrees, and errors of measurement in market-based prices must be weighed against the errors of using historical costs for current prices (see Lim and Sunder, 1990, 1991). Second, the benefits of providing more precise economic values for the purpose of security valuation and trading decisions must be weighed against any reduction in the effectiveness of the financial reporting system for implementing and enforcing the firm's contract set. While several proposals for market valuation have been tried out in the United States during the twentieth century, none have survived.

Financial reporting can be thought of as the most developed and inclusive form of accounting. It incorporates all five functions of accounting listed earlier (measurement of resource inflows and outflows, reporting on contract fulfillment, providing information to factor markets on costs and benefits of occupying various contractual slots in an organization, and making an agreed upon subset of information public to minimize conflict and deadlocks at the time of contract renegotiation). Public disclosure is an especially important part of financial reporting model that is absent in the bookkeeping and stewardship forms.

CONCLUDING REMARKS

To summarize, we can think of organizations (including business firms) as a set of contracts or alliances among many people who join them with the expectation of gain. We can think about accounting as the mechanism to define, implement, enforce, modify, and maintain this system of contracts. Organizations differ in their design, depending on the goals and resources of their participants and the environments in which they function. So do their accounting systems.

Narrowing our focus to business organizations, they can be crudely divided into three groups on the basis of two criteria—separation of ownership from control and subdivision of ownership into small holdings of a large number of shareholders. Owner- or partner-managed small businesses, professionally managed businesses with closely held ownership, and professionally managed businesses with diffused shareholdings are the three types of organizations that result from application of these criteria.

From the vast literature on accounting, we can also identify three basic accounting models and relate each model to one of the three categories of business enterprises. The classical double-entry bookkeeping model corresponds to the owner- or partner-managed small businesses; the stewardship model corresponds to the professionally managed closely held firms; and the financial reporting model corresponds to the professionally managed firms with diffuse shareholdings.

The three accounting models are not mutually exclusive. The stewardship model incorporates the bookkeeping model; the financial reporting model, in turn, incorporates the stewardship model. While the last category of organization and the accounting model to serve its needs are an invention of recent centuries, all three forms of organizations as well as their corresponding accounting models are practiced widely in modern industrial-commercial societies. Thus, the three major models of accounting complement one another across business organizations in society, as well as within business organizations with diffuse ownership or separation of ownership and control. Economic theory of organizations helps us develop a unified perspective on accounting that has enough room to nest the classical, stewardship, and market perspectives in harmonious relationship with one another.

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