

**A Theory of Accounting and Controls for Organizations Producing
Public- Versus Private-Goods**

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Introduction

I am delighted to be asked to deliver this inaugural Presidential Research Lecture at the American Accounting Association. I would like to thank President Michael Diamond, Director of Research Joel Demski, and the Executive Committee for this opportunity. In preparing this lecture, I have borrowed liberally from the scholarship and thoughts of scores of our predecessors and colleagues. The progress, if any, in our own thinking is made on the foundations they built.

I had decided on the subject matter of this lecture almost six months ago, and had been thinking about the subject for many years (slide 1). However, the subject happens to be especially timely, because the Government Accounting Standards Board issued its Standard 34 on Basic Financial Statements of state and local governments only about six weeks ago. A great deal of work has gone into writing that standard, and it includes many elements of value. I shall return to it later in my remarks.

In today's talk I would like to compare organizations that produce public goods to business organizations (slide 2). A key feature of business organizations is that they produce and sell private goods for a price. If not satisfied by the product, customers can withhold revenue from such organizations. With the help of this customer discipline, shareholders of business organizations can control the performance of hired managers through residual or net income-based contracts. Public good organizations, on the other hand, have no customers (slide 3). They

have beneficiaries, who have no simple and direct way of imposing a comparable discipline on the managers. This weakness, absence of the market discipline, greatly complicates the task of establishing effective management control in public good producing organizations. I propose that Max Weber's nineteenth century model of bureaucracy is close to the best we can do to accomplish the more arduous task of efficiently producing public goods. It is hardly surprising, then, that almost a quarter century of efforts, especially since the bankruptcy of New York City, toward harmonizing the organizational designs of public and private good producing organizations have had only limited success.

I would like to first outline a micro-economic view of organizations as a set of contracts (slide 4). I shall next state the role of accounting and control as a mechanism to define, implement, enforce, and modify these contracts. Third, I would like to compare the critical differences between resource flows of organizations that produce public and private goods. I shall describe the differences in management structure and organization necessitated by the differences in resource flows. These differences lead to very different decision-making responsibilities in the two types of organizations.

Then, I would like to discuss the consequences of management structure and decision-making for accounting and control in the two types of organizations with an example of what happens when management practices from business are thrust upon public good organizations without careful thought, and with some general remarks.

Importance

Before addressing these issues, I should explain why I think they are important. Let us look at accounting education, research and practice. It seems fair to say that all three have come to be focused on business organizations.

In 1986-87, Joe Schultz chaired the AAA Committee on Professorial Environment. It conducted a survey about how much time accounting professors spend teaching courses on various topics. Since this is the most recent data I have available, let me show you the results. (slide 5, table 1). Accounting for government and not-for-profit organizations occupy a mere one percent of the professors' time. How to run government and not-for-profit organizations has virtually disappeared from the accounting curriculum.

In research, I looked at Gary Previts' index for fifty years of Accounting Review for 1925-75 and could find only about two articles per year on governmental and not-for-profit accounting problems in our leading association journal. I doubt if other accounting research journals of general interest devote a much larger fraction of their pages to the subject.

In practice, ever since the bankruptcy of New York City, government and not-for-profit organizations have been under pressure to conform their accounting and control practices to business practices. Major accounting firms published their recommendations (slide 6) shortly after this event. Sound Financial Reporting in Public Sector: A Prerequisite to Fiscal Responsibility, from Arthur Anderson, Financial Reporting Practices of the American Cities: A Public Report from Coopers & Lybrand, and Public Financial Reporting by Local Governments, by Touche Ross, are examples of such recommendations. Robert Anthony's book, Tell It Like It Is, is an academic contribution on similar lines. Virtually all of them argued for using commercial business accounting and management control practices to the government and not-for-profit sector.

In addition to accounting education, research and practice, the public itself has come to regard the bureaucratic form of management used by such organizations as inherently inefficient. Bureaucracy is characterized by four important features (slide 7): fixed wages, impersonal rules, job tenure and promotion from the inside. Max Weber defined the nature and functions of

bureaucracy in the later part of the nineteenth century. In recent years, fueled by press reports of \$800 screw drivers and \$900 toilet seats bought by the Department of Defense, the public has come to view the people who run such organizations as inefficient, lazy, or worse. This movement reached a crescendo (slide 8) with the appearance of George Washington in a pinstriped suit on the cover of the Journal of Accountancy in August 1981. The lead story was: Financial Reporting: Should Government Emulate Business?

Not everyone agreed with such characterization of government and not-for-profit organizations (slide 9). Bolton wrote: Don't Put Government Financial Accounting in a Straight Jacket. Drebin asked: Is Accounting that is good for General Motors good for Detroit? And Mautz asked: Should Government Emulate Business? However, these remained largely cries in the wilderness. A major thrust of the past quarter century has been to push business practices into government and not-for-profit organizations through our classroom teaching as well as practice.

I shall argue that there are legitimate reasons (slide 10) why accounting, management controls, and design of many governmental and not-for-profit organizations must be different from business in significant respects. Imposition of business practices in such organizations can inflict significant damage, as my colleagues Besselman, Arora and Larkey have shown in their research on the consequences of reform of defense department purchasing practices. Indeed, I shall argue that bureaucracy is the best possible solution to a very difficult problem of organizing for efficient production of public goods. This problem is far more difficult than organizing for the production of private goods that most business organizations do. If one runner takes longer to run one mile than another takes to run a hundred yards, we cannot properly conclude that the second runner is faster. Yet, in criticizing the bureaucratic form of production, that is exactly what we do. Why do we do so?

I believe it is because (slide 11) we lack an economic theory of organization for production of public goods or public administration. It is fashionable today to complain about management schools teaching too much theory and not enough practical skills. Here we have an example of a discipline, management of public enterprises, virtually pushed out of university curricula, because of a lack of an adequate theory. I believe we can build such a theory. It will not only help us understand and organize what we know about various types of organizations, and their accounting and control systems. It will also allow us to see their similarities and differences in a common framework. In the time remaining today, I would like to present such a framework, and its consequences.

Framework: Contract Model of Organizations

The framework for such a theory was developed (slide 12) more than sixty years ago in a book, Functions of the Executive, written by Chester Barnard, the president of a phone company. He proposed that (slide 13) an organization can be thought of as a set of contracts among many people. In a business organization, for example, these people are employees, shareholders, customers, vendors, managers, creditors, auditors, government, etc.

Each party in the contract agrees to contribute resources (slide 14). For example, employees and managers contribute skills, shareholders and creditors contribute capital, vendors provide machinery and materials, and customers provide cash. It is assumed that each person is an economic agent pursuing his or her own interest. Simon (1952) formalized this view of organizations by specifying that each participant demands an inducement at least as large as the opportunity value of her contribution to the organization. If she can get more elsewhere, she will quit the organization.

The world is uncertain and different persons know different things. For a contract to work, two conditions must be fulfilled (slide 15). First, each person should find it in her own best interest to do what other members of the organization expect of her. Second, the sum of resources expected by all participants from the organization should be no greater than what can be produced using their contributions. Otherwise the contract, and the organization, falls apart.

Contributions from and inducements to participating agents take a variety of forms. The first requirement of control is to devise a system of measuring the contributions made by each agent, determining the amount of inducement due to them, and monitoring the distribution of inducements so that each agent receives her due, no more and no less. Agents who do not receive what is due to them will be inclined to leave and agents who receive more than their contractual due will reduce the share of others and may induce them to leave. In either case, a failure to perform this basic control function leads to the collapse of an organization.

Accounting and control helps implement and enforce the set of contracts. These include: (slide 16)¹ (1) measuring contributions from each participant to the organization; (2) measuring the inducement received by each participant; (3) comparing the contributions made and the inducements received by each participant to the respective contractual quantities and distributing this information to various participants.

Accounting and control should be designed to implement the contracts of all participants. In this talk I shall concentrate on contracts of two parties – managers and shareholders – which are especially important for our subject today.

¹ See Sunder (1997)

Special problems arise in measuring the contribution of managers to organizations (slide 17). They occupy the procedural hub in organizations. They control the organization's physical resources, and have preferential access to information. They negotiate with other agents on behalf of the organization, and monitor them. Unfortunately, their own contributions to the organization cannot be measured accurately. They can appropriate organization's resources, and yet it is difficult to detect malfeasance. How do organizations make sure that the managers will do what they are supposed to? Public-good and private-good organizations require a fundamentally different solution to this problem, generating many of their structural differences.

Public and Private Goods

For the sake of clarity, let me state the standard definitions of the economic concepts of public and private goods (slide 18).

A pure public good has two characteristics: zero marginal cost and non-excludability. Zero marginal cost means that it is possible to provide the good for benefit of additional members of a specified group without additional cost. Non excludability means that, if the good is produced, those who do not pay cannot be excluded from benefiting from the good. National defense of the United States can be said to be a pure public good for the citizens of the country as is public broadcasting in the city of San Diego for the citizens of this city.

On the other hand (slide 19), a cup of coffee, a shirt, or a car, are pure private goods because the conditions of zero marginal cost and non-excludability do not hold. Very few goods are purely public or private; most lie somewhere on the continuum between the two extremes.

The production and distribution of public goods are an important part of all economies. However, producing public goods presents some special problems.

Comparing Public and Private Good Organizations

Briefly, (slide 20) private and public good organizations differ in their resource flows, residual claims, and product market discipline. These three differences cause their product and investment decision-making, and accounting and control systems to be different also.

Resource Flows (slide 21)

Customers of the private good organizations pay a per unit price for what they buy and this sales revenue constitutes the largest inflow of resources to the organization (slide 22). Public-good organizations, on the other hand, have beneficiaries instead of customers. They do not receive resources from the beneficiaries as a quid pro quo for rendering goods or services. This unreciprocated outflow of resources must be made up from other sources such as legislatures or city councils in the form of appropriations of tax revenues and from the boards of trustees in the form of gifts and donations.

Shareholder and creditor contributions to private-good organizations are on capital account (slide 23); they expect to receive a return. However, resource contribution from the governing body of an organization, irrespective of whether it is made on revenue or capital account, pays for the production and unreciprocated distribution of public goods and it is not expected to be returned to the governing body, either immediately or in the long run. The so-called "capital" contribution from governing bodies for acquisition of fixed assets (plant, equipment, property, etc.) is qualitatively different from the capital contribution received by the private-good organizations from their shareholders. Public good organization "capital" contributions are, in fact, lump sum revenue contributions. Thus, the economic function and expectations associated with the flow of resources from the governing bodies to public-good producing organizations are fundamentally different from business corporations.

Residual Claims

The residual claim of shareholders in business firms functions as an economizing device (slide 24). It reduces a large number of multilateral contract negotiation and monitoring functions to a smaller number of bilateral processes. For example, if an organization consisted of five agents and no residual claimant, there have to be ten negotiating relationships because actions of every party affect everyone else. Introduction of a residual claimant can reduce the number of these links in our example to four, by insulating various claimants from the contracts and the performance of many others.

The residual claimant has strong incentives to try to anticipate the future. Every body's actions affect the residual claimant. Being susceptible to misappropriation, no economic agent would be willing to be the residual claimant if she could not exercise control through a set of pre-specified rules. Fortunately, other agents in business organizations can usually look after their own interests, and therefore are willing to cede control to the residual claimant.

Stock market trading in residual claims of business firms has two important consequences (slide 25). It provides incentives to gather information about the value of the residual claims. A large information industry exists to sell information about private-good organizations. Traders in residual claims search for information on the current as well as the longer-term resource flows of the organization.

In public-good organizations (slide 26), the absence of residual claims eliminates a major source of private incentives to produce and disseminate information about the organization. Annual budget cycles and current disbursements occupy much of their time. The concern for longer run resource flows is much weaker as our social security problem shows.

Private good organizations tend to eliminate the need to measure the manager's contribution by making the manager the residual claimant of the firm's resources (slide 27). This is

the entrepreneur-managed firm of neoclassical models. In larger private-good organizations, this problem is solved by giving managers a stake in the residual claims and an independent audit. Net income of a firm is determined through partially standardized accounting rules. In the absence of product-market discipline, this does not work for production of public goods.

Product-Market Discipline (slide 28)

Customers of private-good organizations negotiate on the quality, quantity, and price of the goods they buy. If they are not satisfied, they may refuse to transact. Customers' ability to withhold revenues from an organization is a powerful device to discipline the managers of the firm, making it easy to give a simple objective function to its managers. Managers can be promised a reward based on the income they produce for the residual claimants without endangering the stability of the organization.

Public-good organizations do not have customers who can directly withhold resources from the organization (slide 29). They would continue to consume resources even if the goods are of a poorer quality. Before we consider how this problem is solved in public-goods organizations, let us ask what might happen if the private-good contract were retained for the production of public goods.

Given a business type profit-maximizing contract (slide 30), managers of a public good organization could simply cut back the quality or quantity of the public goods they provide to their beneficiaries. Without the production of public goods, the organization itself would be redundant. The structure of contracts which is quite efficient for production of private goods is not feasible for the production of public goods. A business firm's control system cannot maintain equilibrium in a public-good organization.

Beneficiaries of public good organizations cannot effectively bargain with them (slide 31).

Therefore the quantity and quality decisions in such organizations are made by the governing bodies who provide the funds. Thus the distribution of responsibilities for decision making in public good organizations differs significantly from business firms.

Decision Making in Public and Private-Good Organizations

Product Decisions (slide 32)

In private good organizations managers have the best expertise and information to identify the surplus-generating potential of various products. The link between the residual they produce and their own remuneration induces them to search for profitable products. The boards of directors review and approve these decisions. Directors do not much care if the firm generates a residual by making cars, cameras, clothing or chemicals. The “ethical” concerns of these boards are rarely involved until the residual-generating potential of the policy is endangered.

In contrast (slide 33), the governing bodies of public good organizations play a far more active role. The will to provide public goods originates there, and is manifested in their willingness to pay for the cost. If they are willing to pay, the public goods are produced. The possibility of residual generation, and managers’ information advantage is irrelevant to this decision because the net residual is negative. Therefore, managers are rarely given incentives to look for newer types of public goods to be produced and distributed by the organization. They may do so, anyway, to seek promotion and power, or to retain their jobs.

Investment and Production Decisions (slide 34)

In private-good organizations, the quantity and quality of each good produced is chosen by the managers. Delegation of quantity decisions is possible because the link between the residual and their own remuneration constrains the managers from producing too little or too much

relative to the residual-maximizing quantity. Decisions to invest in plant and equipment follow from quantity and quality decisions.

In contrast (slide 35), the quantity and quality of public goods are specified by the governing bodies of the organizations. Without customer discipline, it is not possible to design a self-enforcing contract for managers. Production of more public goods may enhance their power as well as work. Manager's incentives to make such decisions are difficult to align with the objectives of their beneficiaries or funding agencies. Consequently, investment decisions are made by the governing bodies, and not by hired managers.

Accounting Controls (slide 36)

There are significant differences between the internal control procedures and the system of financial reporting of public-good and private-good organizations. These differences are often interpreted as prima facie evidence of poorly designed or managed public-good organizations. Closer scrutiny reveals other reasons for these differences.

It is not my purpose to argue that all is well with the accounting control systems of all public-good producing organizations. Many problems exist, and some have been attended to. GASB is trying to deal with them with its efforts, especially its Statement 34 issued last month. Instead, my purpose is to point out that there are legitimate economic reasons to expect that the control systems that work effectively in private-good organizations will not necessarily function well in public-good organizations. The contract theory suggests that there are very good reasons to use different accounting control systems for the two types of organizations. Let us look at various aspects of these systems: (slide 37) entities, funds, consolidation, assets/depreciation, revenue (cash vs. accrual) and budgets.

Entities, Funds, and Consolidation (slide 38)

Segregation of funds is distinctive to the accounting and control systems of larger public-good organizations. Though resources in all funds may be overseen by the same group of managers, governing bodies restrict their use to effectively make each fund a distinct entity. Funds provided by governing bodies are targeted for specific public goods to specified beneficiaries. Since the beneficiaries cannot discipline the managers, the governing bodies do so by segregating funds to ensure that they are used as intended.

Segregation of funds (slide 39), and multiple entities, means more detail and pages in financial reports than in the reports of private good organizations of comparable revenues or employees. Public-good organizations are often criticized for presenting great detail, and for their failure to aggregate sufficiently to provide the reader with an overall picture. While inclusion of the aggregate numbers will be useful, aggregated, simpler financial statements are not sufficient for such organizations. Why? (slide 40)

The planning and policy-making function in public-good organizations is performed by the governing bodies and by hired managers in private-good organizations. The reports of public-good organizations to their governing bodies are comparable to the reports junior managers (who carry out the orders) make to senior management in private-good organizations. Such reports in private good organizations are also, of necessity, more voluminous and detailed than the reports management makes to shareholders and the general public.

There is another way of looking at the differences in financial reporting of public and private-good organizations. The governing bodies of public-good organizations place enough restrictions on the use of funds that it is not useful for all agents, except perhaps the general creditors, to know the total value of all funds.

As the volume of borrowing by public good producing organizations has increased, so has the pressure for publication of consolidated financial statements originating from the creditors. We must be careful that in meeting the contractual needs of creditors of such organizations, we do not over-generalize to impute the same needs to all participating agents.

Each constituent of a public-good organization is interested in learning about the resources spent by the organization to produce public goods because they cannot directly monitor the organization's output. Consolidated financial statements do not serve this purpose.

The danger is that consolidation of funds could be dysfunctional for the purpose of contract enforcement of participants other than creditors if it created an impression that resources under the control of the organization are fungible across funds.

Fixed Assets and Depreciation (slide 41)

Private-good organizations record and value their long-term assets at acquisition cost and allocate this cost as a cost of production over the useful life of the asset. This cost allocation or depreciation is reckoned by a standardized formula. Valuation of fixed assets helps provide an objective basis for valuation of individual assets and the equity of the firm. These valuations are useful because in private-good organizations both individual assets as well as the residual rights are traded. Indeed, the precision with which the accounting valuation approximates the transacted prices is a major criterion for assessing the usefulness of various methods of accounting valuation.

In public good organizations (slide 42), there are no residual interests to be traded and, therefore, accounting valuation does not assist in trading these rights. Moreover, many public-good organizations acquire fixed assets only if they expect to be long-term producers, and therefore rarely sell their fixed assets. Monetary valuation of assets which are not intended for

sale or exchange by public-good organizations is less relevant than in private good organizations where the chances of transactions in fixed assets are higher.

Many of the assets held by public-good organizations are either unique (e.g., Mount Rushmore), or the organization has such a dominant position in the market that its actions largely determine the exchange value of the asset. In either case, no meaningful valuation can be placed on these assets. They are disclosed in non-monetary form in the reports. In addition, as Mautz (1981) pointed out that the “assets” such as the Lincoln Memorial could just as easily be considered liabilities because they represent a net cash outflow for the government in the form of maintenance costs.

The practice of charging depreciation (slide 43) of fixed assets in computing net income of private-good organizations serves three contracting functions. First, depreciation helps estimate the residual surplus generated by the firm during a given period by providing an estimate of the opportunity cost of the services provided by fixed assets. This residual surplus not only informs the residual claimants about the value generated for them in the firm, it is an important statistic for all other participating agents because it informs them of the continued viability of the system of contracts and warns them of any forthcoming pressures in re-negotiation of contracts. Second, charging depreciation to the cost of production helps estimate the full cost of production which enters into the pricing decisions of many firms. Finally, depreciation is an important device to induce hired managers to make production-investment decisions that do not conflict with the interests of residual claimants. Managers are promised a share of the residual surplus. If they invest too much in plant and equipment relative to the output they can sell at profitable prices, depreciation on the plant and equipment reduces the residual or surplus and hurts their interests. On the other hand, if they invest too little in plant and equipment relative to what can be profitably

sold, the depreciation charge is small but revenue is even smaller and the residual is not as large as it could have been. Thus the practice of charging depreciation is analogous to charging managers for the opportunity value of the capital they tie up in plant and equipment to induce them to optimize investment in such capital.

In public-good organizations (slide 44), none of the three reasons for charging depreciation are applicable. However, depreciation may be useful for determining the cost of producing public goods. There is no residual claimant in such organizations and therefore there is no market for residual claims. Public goods are not sold to customers at a price so depreciation is unnecessary to help set pricing policy.² Finally, production investment decisions in such organizations are made by governing bodies, not by hired managers. The decision to invest in long term assets can be defended as an economizing production decision; accounting for depreciation does not play a useful role in making either acquisition or replacement decisions. The governing bodies can determine the need for replacement by directly ascertaining the state of the plant and equipment. GASB Statement 34 requirement to have governments' report on the state of their fixed assets is consistent with this view.

Accruals and Recognition of Revenue and Expense (slide 45)

Public-good organizations frequently use cash-basis or modified cash-basis accounting as opposed to the use of accrual accounting in private-good organizations. In accrual accounting, revenue from a sale is recognized when the firm renders services or goods and when either cash has been received or it is expected to be received with a high probability. Similarly, whenever possible, costs are subtracted from net income (i.e., recognized as expenses) when the inputs

² Depreciation may still be useful to assess the production decision so correct quantity decisions may be facilitated.

obtained by that sacrifice yield the corresponding revenue. Thus, accrual accounting is based on subjective estimates of the economic substance of transactions, and not on the formal appearance of transactions as revealed in cash flows. Cash flow accounting, on the other hand, equates revenue to the receipt of cash and expense to its disbursement. This difference between private and public accounting and control systems is considered by some to be indicative of a weakness of the latter, and proposals to move public good organizations to full accrual accounting have frequently been made.

Matching of expenses to revenues, and the corresponding accruals in private-good organizations, are possible as well as useful for control because of the causal link between revenue and expense in commercial transactions. There is no such causal link between revenue and expense in public-good organizations. Expenditures are committed by governing bodies and carried out by hired managers, and do not depend on what the beneficiaries do, or fail to do. Similarly, revenues for such organizations originate in actions by their governing bodies in the functional form of taxes, donations, wills, legacies, fines, etc.; they do not depend on the actions of the beneficiaries. Delivery of public goods does not specifically cause the inflow of resources from the governing bodies except in an anticipatory or in a long run sense. Introduction of standard accrual and matching concepts in the accounting and control systems of such organizations would have to be based on an economically vacuous link between their resource inflows and outflows.

Budgets, Appropriations and Encumbrances (slide 46)

Governing bodies of public-good organizations appropriate funds for specific items and transmit this information to hired managers through budgets. The budget constitutes an

authorization to the managers to expend specified amounts of resources on the production of specified public goods to be distributed to defined beneficiaries. In the absence of budgetary controls, there is no mechanism to ensure that the resources of the organization are utilized in accordance with the wishes of the governing body which supplies these resources. Item-by-item detail in budgets and in the reports produced by managers of public-good organizations is simply necessary to maintain this control and implement their contracts.

Concluding Remarks

Independent Variable

In these remarks I have used the contract theory of the firm and accounting to differentiate between the structure and management of organizations that produce public and private goods (slide 47). Once we recognize the differences in their resource flows, and management, it is easy to see why and how their accounting and control are also different. Traditionally, in accounting and economics, legal form has been the primary variable we use to classify organizations as business, government or not-for-profit. Teaching and research in accounting also has come to be organized by the same criterion. Our analysis, on the other hand, suggests that legal form of organizations is not the right classificatory variable. The real independent variable is the economic nature of organization's output. Legal form, management structure and accounting systems are all dependent variables.

Spectrum Between the Two Polar Cases (slide 48)

My remarks are limited to the polar cases of organizations of production of pure public goods and pure private goods. As a practical matter, few goods satisfy these definitions and most goods have some public as well as private characteristics. Organizations designed to produce these goods also have appropriately mixed characteristics. The organizational design of

universities and utilities and other natural monopolies show some characteristics of both public and private-good organizations. Correspondence between the market power of organization exercises in its product and other factor markets, and its internal organization. This presents a rich spectrum of opportunities to study organizational economics and accounting controls.

Organizational Unit of Analysis

In the study of accounting and control we need to move away from our fixation with the legal form as well as legally defined unit of organizations such as corporations, associations, trade unions or city governments. Large organizations consist of many smaller units managed by middle-level managers. Even if the final output of an organization is a private good, it may have internal units which produce public goods. Public relations and research and development departments of many business firms operate as public good units. Research scientists in business firms receive fixed salaries.

Vendors to Red Cross, on the other hand, are paid on a per unit basis. It is possible to assign a label to classify a whole organization on the basis of the form that the contract of senior managers or some other subset of participants takes. However, in doing so, we forego the opportunity to examine the rich structural detail and functional characteristics that explain how organizations are engineered. It does not advance our ability to design buildings if we classify all buildings into categories of brick, concrete, and steel when, in fact, they all use all types of materials in varying proportions and in different places. The important feature for an engineer is not whether a building is made entirely or predominantly of brick or steel but where and how each type of material has been employed or can be employed. Attention to which contractual forms are used to govern which resource flows in the organization facilitates our understanding of the architecture of organizations.

Cost of Misunderstanding Bureaucracy (slide 49)

The prevailing attitudes in accounting, economics, and the public at large, characterize bureaucracies, and their accounting and control systems, as inefficient anomalies. Perhaps I would not overstate the case by saying that bureaucracy has become a dirty word. Many influential parties have proposed to radically restructure them on the lines of private good producing organizations.

Theory suggests that this would not improve the performance of these organizations. If I may cite an example of a recent research study by my colleagues at Carnegie Mellon University; Besselman, Arora and Larkey. A few years ago, pressured by the negative publicity about the defense departments purchasing practices, the U.S. Congress passed a law requiring the DOD to adopt commercial purchasing practices. Besselman, Arora and Larkey found that the DOD paid a lot more for its purchases under the new law because it could not exploit its monopoly purchasing power. If you are surprised by the results, the DOD vendors were not. They had vigorously supported the passage of the legislation to reform DOD purchasing practices through Congress. Overreacting to some extreme behaviors may not be a good way to develop accounting regulation.

Unequal Race

In practicing accounting and management, we should recognize that efficient production of public goods is a far more challenging task than production of private goods, because the former does not have the benefit of customer discovery (slide 50). Bureaucracy is a very old solution to this problem. It is always possible to improve our practices. But wholesale replacement of bureaucratic management and controls in public good producing organizations is not likely to be effective. At least this is what the theory suggests. May I conclude by saying that

accounting theory helps us understand what we do, why we do so, and how we might improve the efficiency of organizations in our society.

The theory and practice of accounting and control are the invisible software of modern civilization. Our unprecedented economic well being and prosperity at the turn of this millennium is built on efficiency of organizations and market mechanisms. None of them can work for a single day without accounting and control, nor did they exist until a few centuries ago before we developed the techniques of controlling huge organizations. As a member of the noble profession of accounting, I am proud that our predecessors have built what we practice today. As members of AAA, let us continue our contributions to society by helping to develop better Control and reporting processes, and sharing our thoughts.

Thank you for this opportunity to share these thoughts (slide 51).

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Table 1

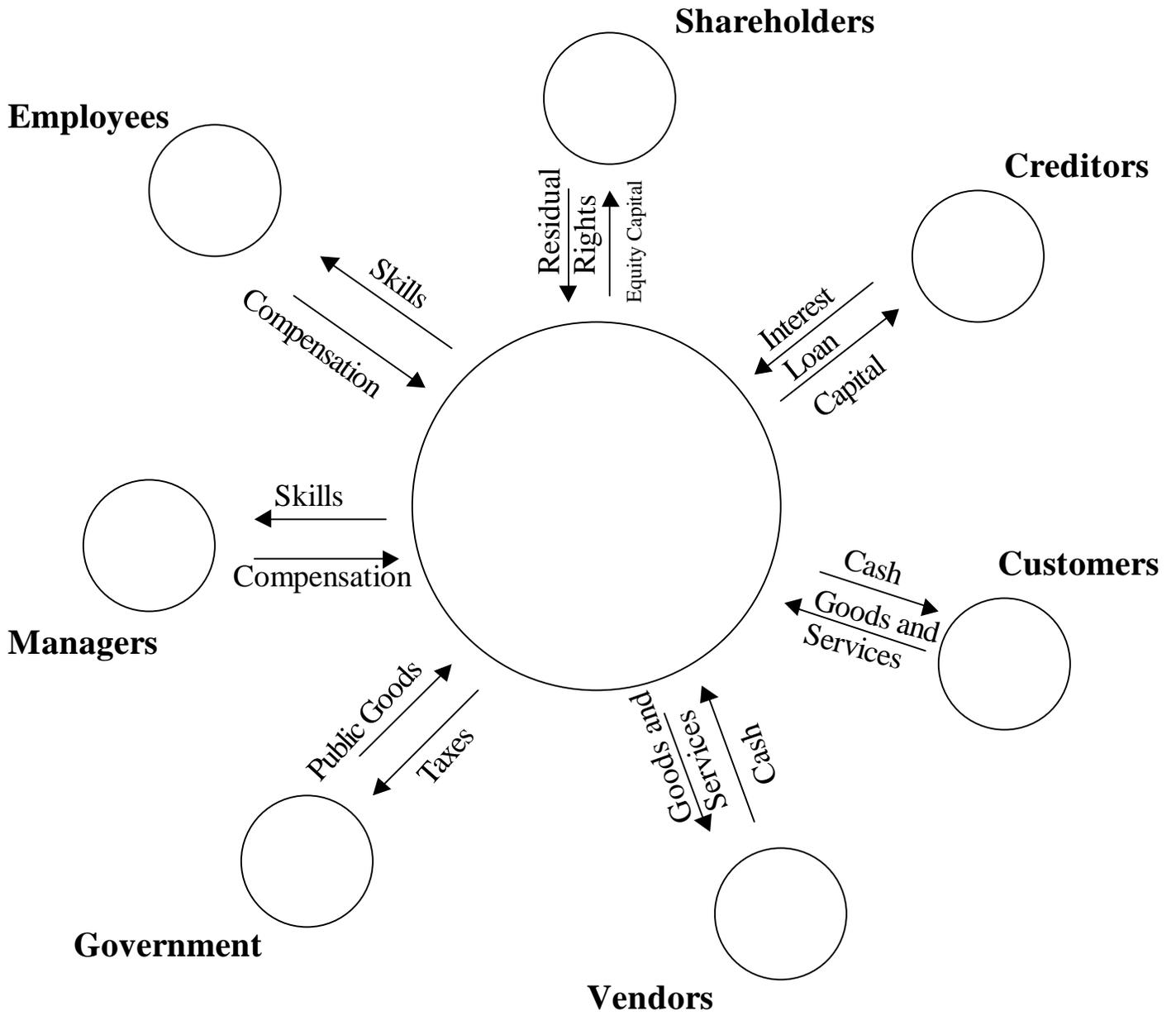
Proportion of Faculty Teaching Time by Subject Area

Subject Area	All Current Teaching (In percent)
Auditing	11
Financial	44
Managerial/Cost	21
MAS/Systems	5
Taxation	10
Government	1
Accounting Research	3

Source: American Accounting Association, "Report of the Professional Environment Committee, 1986-87," Table 47 in Joseph J. Schultz, Jr. Ed., Reorienting Accounting Education: Reports on Environment, Professoriate, and Curriculum of Accounting, Accounting Education Series Volume No. 10. Sarasota, Fla.: American Accounting Association, 1989.

Figure 1

Resource Flows in Private-Good Organization



Resource Flows in Public-Good Organization

