



ADVANCED TOPICS IN FINANCE AND ACCOUNTING

**THE
ECONOMICS
OF
ACCOUNTING
POLICY
CHOICE**

RAY BALL

CLIFFORD W. SMITH, JR.

THE ECONOMICS OF ACCOUNTING POLICY CHOICE

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THE ECONOMICS OF ACCOUNTING POLICY CHOICE

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INTRODUCTION

This collection brings together thirty-four previously-published articles on the economics of accounting policy choice. These articles adopt a *costly-contracting* perspective. The collection is designed for use in Intermediate Accounting courses (in conjunction with texts that explain the mechanics but not the economics of accounting policies) and in Accounting Theory or other research-level courses.

As the mechanics of Generally Accepted Accounting Principles (GAAP) become increasingly complicated, it becomes increasingly difficult to obtain a comprehensive knowledge of accounting by learning its mechanics. It becomes natural to turn to more systematic ways of acquiring accounting knowledge. The contracting-cost literature provides a systematic attempt to understand accounting, as it is practiced. It studies the economics of accounting policy choice. While the literature is still at a formative stage, it already has achieved important results and offers promise of much more.

To be selected for the core collection, an article has to meet three criteria:

1. *Topic is accounting policy choice*: the article seeks to explain how GAAP are determined, why different corporations choose different accounting techniques from among GAAP, or why they change their choices over time;
2. *Approach is empirical*: the article either utilizes data on accounting policy choices, their determinants or their effects, or it develops empirically testable propositions; and
3. *Underlying theory assumes costly contracting*: the tested or testable propositions arise from the economic theory of costly contracting.

In addition, we have included several survey articles. These surveys deal with a literature that is wider than can be contained in this collection and they add a perspective to the articles included.

The articles are organized into four sections. The first section introduces the costly-contracting literature in accounting. It contains pioneering contributions and two literature survey articles. The second and third sections cover the influence of debt and compensation contracts on accounting, respectively. The fourth section focusses on particular accounting technique choices. Because the section themes are not mutually-exclusive, the organization we have chosen is unlikely to be optimal for all courses of study. We therefore recommend that instructors experiment with the order in which the articles are prescribed. Each section begins with an introduction that places the section in perspective and briefly describes the articles contained in it. In each section's introduction, references to articles reproduced in this collection are set in bold. Other references are to sources that are listed at the end of the collection.

The articles originally were published in *The Accounting Review*, *Australian Journal of Management*, *Journal of Accounting and Economics*, *Journal of Accounting Research* and *Journal of Financial Economics*. We acknowledge the cooperation of all of the authors and publishers represented in the collection. We also acknowledge the encouragement and support of Ken MacLeod at McGraw-Hill and the secretarial assistance of Jane Muellner.

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I

CONTRACTING-COST THEORIES OF ACCOUNTING POLICY CHOICE

1 Watts, Ross L., "Corporate Financial Statements, A Product of the Market and Political Processes," *Australian Journal of Management*, 2 (1977), pp. 53-75.

2 Watts, Ross L. and Jerold L. Zimmerman, "Towards a Positive Theory of the Determination of Accounting Standards," *The Accounting Review*, 53 (1978), pp. 112-134.

3 Watts, Ross L. and Jerold L. Zimmerman, "Positive Accounting Theory: A Ten Year Perspective," *The Accounting Review*, 65 (1990), pp. 131-156.

4 Christie, Andrew A., "Aggregation of Test Statistics: An Evaluation of the Evidence on Contracting and Size Hypotheses," *Journal of Accounting and Economics*, 12 (1990), pp. 15-36.

5 Jensen, Michael C., "Organization Theory and Methodology," *The Accounting Review*, 58 (1983), pp. 319-339.

6 Zimmerman, Jerold L., "The Costs and Benefits of Cost Allocations," *The Accounting Review*, 54 (1979), pp. 504-521.

7 DeAngelo, Linda Elizabeth, "Equity Valuation and Corporate Control," *The Accounting Review*, 65 (1990), pp. 93-112.

The seminal work of Coase (1937) established the fundamental proposition that all economic institutions (Coase called them "firms," following general usage in economics) owe their existence to costs of contracting. The impact of Coase's paper, entitled "The Nature of the Firm," has been enduring. It was instrumental in earning its author the 1991 Nobel Prize in Economics, some 54 years after its publication. Like all important propositions, Coase's is deceptively simple. He observes that, in the absence of contracting costs, firms would be irrelevant: consumers could contract directly with the owners of factors of production; there would be no demand for firms to intermediate between them; and all decisions would be based on a complete set of costlessly observable market prices. This proposition is no less than a *general institutional irrelevance theorem*, in a hypothetical world without costs of contracting.

The theorem is so fundamental that it appears, under various guises, in several literatures. In corporate finance, for example, it appears as the Fisher Separation Theorem, that (given the value of the firm) the timing of its cash distributions to shareholders is irrelevant to them, provided it is costless for them to transact (that is, to contract in the capital market). Miller

and Modigliani (1961) proved the related theorem, that corporate dividend policy is irrelevant when transactions costs are assumed away. Modigliani and Miller (1958) had earlier proven the irrelevance of corporate capital structure under the same assumption. These are examples of *specific institutional irrelevance theorems*, addressing specific institutional details in a hypothetical world without costs of contracting.

Institutional irrelevance theorems provide important insights. To the researcher who is interested in explaining why the economy is structured in a particular fashion, the Coasian analysis suggests that contracting costs be studied. Economic theories that assume an absence of contracting costs cannot explain even the existence of firms, let alone whether they are diversified or divisionalized or incorporated or pay dividends or calculate their income in a particular fashion. An implication of the general institutional irrelevance theorem is that no “institutional fact,” such as the existence of a corporation or a corporate policy on debt, can be explained by an economic theory that assumes away contracting costs.

The converse of the irrelevance proposition is that, in an unregulated economy, the institutional structure that we observe is contracting-cost-efficient. Contracting costs *do* exist and institutional form is economically relevant. Decades, centuries, and even millennia of competitive innovation in institutional forms leads to the more efficient contracting technology tending to replace the less efficient.¹ At the most general level, Coase (1937, p. 390) reasoned that firms exist because “there is a cost of using the price mechanism.” More specifically, individual institutional details are explained, under this theory, in terms of their contracting-cost efficiency.

Researchers seeking to explain the existence of an enormous range of institutional facts, ranging from the existence of firms in general through the existence of particular detailed practices, therefore have turned their attention toward *efficiency in contracting* as an hypothesis. For example, Fama and Jensen (1983) seek contracting-cost explanations for the dominance of non-profit corporations in areas that attract donations of time and money (charities, hospitals, universities), of professional partnerships in “ethical” areas (law, public accounting, medicine) and of other basic institutional forms. Brickley and Dark (1987) study the decision to franchise versus own the operating units of a chain (restaurants, travel agencies, etc). In the absence of regulation, such choices are dictated by contracting costs alone. The literature started by Coase (1937) now is substantial.

One branch of the contracting-cost literature focuses on the *economics of agency relationships*. Within this there are two distinct sub-branches, commonly labelled the “modelling” and the “empirical” agency literatures. The research reproduced in this volume focuses on the latter branch, which builds on important work by Alchian and Demsetz (1972) and Jensen and Meckling (1976). While these branches share a common objective (scientific investigation of economic institutions) and increasingly utilize each other’s results, the empirical branch is more likely to emphasize the consistency of theory with a rich range of institutional “facts” and less likely to emphasize the formal completeness and internal consistency of the theory. An analysis of this literature, with particular reference to accounting research, is provided by **Jensen (1983)**.

No theory completely explains or is approximately consistent with all the “facts” with which it is confronted. A normal response is to modify the theory for important omitted vari-

¹See Alchian (1950) for an analysis of innovation in economics and Rosenberg and Birdzell (1986) for an account of institutional innovation since the Middle Ages.

ables. In seeking to explain the existence and form of economic institutions, researchers have found it necessary to modify their analysis of voluntary contracting among economic agents, to allow for the *regulation of economic activity* by the political process. Coase (1937, p. 393) himself observed that “transactions on a market and the same transactions organized within a firm are often treated differently by Governments or other bodies with regulatory powers.” While regulation in principle can create both costs and benefits, the literature has focused on the latter, using the term *political costs*. Hence, contracting costs arise from two sources in this literature: private and political.

Coase’s general theorem applies equally to accounting. Whether expressed in its irrelevance form (“nothing matters without contracting costs”) or its preference form (“the observed institutional structure can be explained in terms of contracting-cost efficiency”), the theorem applies to all areas of institutional form, including the existence and detailed shape of accounting. In principle, the economics of costly contracting, modified to allow for economic regulation, can be used to explain the existence of accounting, the form taken by the profession, the existence of GAAP, the process that determines GAAP, the content of GAAP, the selection from GAAP by corporations, and the most detailed institutional facts in accounting. In practice, the theory and the data never appear perfectly consistent, no matter how successful the literature is, thus presenting the research challenges for further literature development.²

In a world without contracting costs, accounting would be irrelevant: all prices relevant to all decisions would be costlessly observable; prices would be sufficient for all decisions; and thus no resources would be devoted to producing accounting numbers for use in decision-making. In a world with contracting costs, to explain the general existence and the specific forms of accounting rules and accounting numbers, one must investigate the contracting contexts in which accounting numbers are used. These determine the demand for the accounting product. Supply considerations (that is, the nature of accounting as a specialist producer of information) must be considered also.³

These ideas were introduced to the accounting literature by **Watts and Zimmerman (1978)** and **Watts (1977)**. Their work builds upon the principal/agent analysis of Jensen and Meckling (1976) and examines both contracting in an agency setting and political costs. Surveys of this literature are presented by **Watts and Zimmerman (1990)** and **Christie (1990)**. Christie’s survey utilizes formal statistical techniques for aggregating results across empirical studies, whereas Watts and Zimmerman provide a more typical overview. In spite of their differences in approach, the surveys reach a similar conclusion. They conclude that there are reliable statistical relations between a firm’s preferred accounting policies and properties of its debt contracts, properties of its management compensation contracts, and its size (the latter is offered as a proxy for political costs). The directions of the relations are as predicted by the theory. The contracting-cost and the political-cost explanations of accounting “institutional facts” thus have much to offer.

Compared to the accounting literature that preceded it, the contracting-cost literature

²For an analysis of the interaction between theory and data in this literature, see Ball and Foster (1982).

³The role of contracting costs in a theory of accounting is strengthened by Hayek’s (1945) observation that information costs are significant determinants of the way the economy is organized. The accounting system is a specialist supplier of information.

offers many new insights, including:

1. Broadening the previously nearly-exclusive focus on reporting to shareholders, to encompass a range of users of accounting information;
2. Demonstrating the existence of a *market* for accounting information, albeit a regulated market;
3. Demonstrating that corporations and parties that contract with them act in their own interest in making accounting policy choices;
4. Demonstrating that regulation of accounting is not necessarily motivated by altruism; and
5. Demonstrating a demand for diversity in accounting policies.

By adapting economic theories of contracting and regulation to accounting, this literature continued the process of successfully merging accounting and economics, a process that essentially commenced with the “capital markets” research on accounting and stock prices. As in the capital markets area, this accounting research relied upon and contributed to underlying breakthroughs in economic thought.

A major problem confronting researchers in this literature is the unobservability of both contracting costs and political costs. Researchers tend to rely upon *proxies* for these costs. For example, a corporation’s observed debt/equity ratio is taken as a proxy for the closeness of the observed ratio to the maximum ratio prescribed in a contract to raise long-term debt. The latter in turn is a proxy for the expected value of the costs arising from any restrictions imposed upon the corporation under its debt contracts, should it breach the agreement to maintain a maximum debt level. These costs include the costs of renegotiating the debt agreement and the costs of opportunities foregone as a result of the agreed restrictions upon new investment, new financing, etc.⁴ A second example is size, which frequently is used as a proxy for the political costs arising from accounting policy choice. Potential research design problems arise from two sources: (1) the likelihood that the proxy measures the construct (contracting costs or political costs) with error; and (2) the possibility that the error is correlated with omitted variables. Random measurement error frequently causes true relations to be underestimated, perhaps to the point of not being observed. Correlated measurement error can cause the researcher to falsely attribute an observed relation to the theory under investigation. These problems are described in the **Watts and Zimmerman (1990)** survey article.

A related problem in this literature lies in distinguishing between *opportunism* and *contracting efficiency* as determinants of accounting policy choice. In theory, they are not clearly distinguishable, because in the presence of positive contracting costs there will be a positive optimal (efficient) amount of opportunism. In empirical work, the two explanations can be difficult to distinguish as well. For example, consider the relation between accounting policy choice and a dummy variable that indicates whether or not a corporation has a formal plan that ties executive compensation to reported earnings. (A selection of studies on compensation is contained in the third section of this collection). A statistically significant relation could indicate that managers whose compensation is formally tied to reported earnings act opportunistically in selecting accounting policies that influence reported earnings. Alternatively, it could indicate that corporations for which a particular accounting technique set is efficient also tend to be those for which it is efficient to utilize a formal compensation plan that uses reported income as a performance measure.

⁴This issue is studied in Duke and Hunt (1990).

One area that has resisted detailed empirical research from a contracting-cost perspective is “managerial” accounting. **Zimmerman (1979)** asks the question: “Why do corporations allocate overheads?” His answer is based on the principal/agent model. In a sense, the “institutional fact” that corporations do allocate overhead is evidence in favor of the model he proposes. Zimmerman’s work stands almost alone in a potentially important area of research. Empirical research in “management” accounting from a contracting-cost perspective seems likely to be limited, until richer data sets become available.

DeAngelo (1990) investigates the role of accounting in corporate control transactions. She reports evidence that accounting numbers are used in valuing equities in this context. DeAngelo views the demand for accounting numbers in this context as distinct from the demand modelled in the costly-contracting and capital markets literatures. This distinction is not clear, in that corporate control changes can be viewed as shareholders recontracting for the management of the corporation, which is a right attaching to their equity contract with the corporation.⁵

The articles reproduced in this section provide an introduction to the empirical literature applying contracting-cost economics to accounting. This literature addresses an increasingly rich set of institutional facts over time, as researchers learn how to adapt the theory to a wider and deeper set of issues. It offers much insight and further promise.

⁵A related issue is the relation between the demands for accounting information studied in the costly-contracting and capital markets literatures. **Watts and Zimmerman (1986)** point out that, in the absence of regulation, the supply of information to equity investors by corporations would be a matter of private contracting between them. This does not preclude negotiation by institutions acting on behalf of individual investors, such as security analysts’ associations, trustees or stock exchanges (which establish disclosure requirements), or by holders of large blocks of shares. In this sense, the issues studied in the two literatures are equivalent. **Watts and Zimmerman (1978)** and **Watts (1977)** point to pre-regulatory economies, in which corporations voluntarily contracted to supply audited reports.