

Cambridge University Press

0521418445 - Judgment and Decision-Making Research in Accounting and Auditing

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Excerpt

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Part I

Overview

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Perspectives on judgment and decision-making research in accounting and auditing

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Introduction

Fundamental research in judgment and decision making has significantly influenced research in several applied fields including medicine, law, public policy, and business. Applied research results increasingly have been put to practical use. One of the disciplines within business that has been heavily influenced is accounting and auditing. Applied judgment research in accounting and auditing has proliferated during the past 20 years, as the importance of descriptive research and the role of experimental methods have been more fully appreciated and more researchers have been trained in core disciplines such as cognitive psychology and Bayesian inference and decision making. During that time, the field has undergone several important shifts in emphasis, and undoubtedly will continue to evolve in the future. It is that evolution that we wish to capture and influence in the chapters of this book.

To set the stage for the chapters that follow, this introductory chapter encompasses three main topics. The first section provides a broad description of both accounting and auditing *practice* and the evolution of judgment and decision-making *research* in these fields. The purpose of this section, which is written primarily for readers outside of accounting and auditing, is to provide some perspective on the judgment tasks and research approaches that have attracted accounting and auditing researchers. The next section previews the chapters in this book, all of which provide excellent descriptions of past and current research and extremely thoughtful discussions of future research avenues. It provides a quick glimpse into each of these insightful chapters. The final section centers around several prominent research themes identified in the various chapters. Some of these themes appear in all or most of the chapters, while others appear in only a few chapters. By collecting these themes in this introductory chapter, and by adding our own perspective to those provided by the chapters' authors, we try to give the reader a sense of

the issues and opportunities that face judgment and decision-making research in accounting and auditing today.

Judgments and decisions in accounting and auditing

Accounting and auditing are distinct but related fields from both a research and a practical standpoint. Together, they provide critical information for economic judgments and decisions. Accounting is traditionally divided into managerial accounting, which involves information generated by organizations and used *internally*, and financial accounting, which involves internally generated information that is communicated *outside* the organization. Auditing, in contrast, is an independent review and attest function performed by independent accounting firms. Together, managerial accounting, financial accounting, and auditing have a significant impact on the financial economy by facilitating the intra- and interorganizational flow of investment and the orderly operation of the capital markets.

In this section of the chapter, we first describe the practice of managerial accounting, financial accounting, and auditing, paying special attention to the types of judgments and decisions that are important in those fields. Following this, we comment on several features of accounting and auditing tasks that tend to distinguish them from generic judgment and decision-making settings. Finally, we describe the general nature of research in accounting and auditing, with special emphasis on the phases through which judgment and decision-making research has evolved.

Accounting and auditing practice

Managerial accounting provides information to decision makers who are managers and executives of organizations, including both profit-seeking organizations such as corporations and not-for-profit organizations such as universities and municipalities. Managerial accounting information is used in planning and controlling the costs of operations, reporting on the profitability of products and activities, and formulating overall firm policies. Decisions based on managerial accounting information determine the allocation of financial resources both inside and outside the specific organization. Typical decisions involve, for example, the quantities of products to be produced by the firm, the introduction of new product lines, location of new manufacturing or sales facilities, acquisition of new business entities, pricing of products and services offered to customers, and performance evaluation of individuals and organizational subunits.

While managerial accounting information is provided to parties who are internal to a specific organization, *financial accounting* information is supplied by the organization to a variety of external parties such as investors, creditors, financial analysts and other financial advisors, suppliers, customers, labor unions, and regulatory authorities. The two primary classes of external users

are current and potential investors and creditors (and their advisors). Investors buy and sell equity securities (stocks) of corporations; they consist of individual “nonprofessional” investors, professionals who provide investment advice to others (called “sell-side” analysts), and professionals who manage investment portfolios for institutions such as insurance companies and pension funds (called “buy-side” analysts). Creditors provide financial capital to organizations in many forms ranging from bank loans to debt securities (bonds); principal external parties from this perspective are bank loan officers and bond-rating agencies. Like financial analysts, the latter are professionals who provide advice to others.

The information supplied to external parties relates to the financial condition, financial performance, and cash flows of the firm for current and prior years; its main purpose is to assist external parties in predicting these variables in the future. Because financial accounting information is generated and disclosed by managers of particular organizations, who typically have significant incentives to portray the results of their stewardship favorably, and because external users have only limited access to such information via other channels, an extensive set of measurement and disclosure rules for financial accounting information is mandated by regulatory bodies in both the public sector (most notably the Securities and Exchange Commission) and the private sector (most notably the Financial Accounting Standards Board). Thus, in contrast to the provision of managerial accounting information to internal users, significant constraints exist on the form and content of financial accounting information that is communicated to external users. One of the most important of those constraints is the requirement of an independent *audit*.

The principal vehicle by which an organization’s financial accounting information is communicated to investors, creditors, and other external parties is a set of financial statements that are part of a company’s “annual report.” The annual report also contains information other than financial statements, the most important of which is an *auditor’s report* prepared by a firm of certified public accountants (CPAs) that is independent of the reporting organization. The CPA firm provides an independent review and attest service by examining the reporting firm’s financial statements, related disclosures, and underlying systems and records to assess whether the financial statements are presented in accordance with “generally accepted accounting principles” as promulgated by the Financial Accounting Standards Board (and with the concurrence of the Securities and Exchange Commission).

Both the audit *process* and the *output* of that process are replete with important judgments and decisions. The audit process entails judgments about the amount and type of evidence to collect, the extent to which such evidence is credible, and the actions that should be taken in response to the evidence that has been collected and evaluated. The ultimate output of an audit is an independent opinion (i.e., judgment) about whether the company’s financial statements are “free of material misstatements.” To the extent the financial statements are judged *not* to be free of material misstatements, the confidence

of investors and creditors in the reporting firm's disclosures will be undermined, with associated negative effects on the firm's ability to raise additional debt or equity capital. Similarly, other parties such as suppliers, employees, and labor unions will react negatively to auditors' judgments that a firm's financial statements contain material misstatements, and regulatory agencies may impose significant penalties on such companies. Thus, auditing is a critical professional service from the standpoint of both individual companies and the financial economy in general.

Distinguishing features of accounting and auditing tasks

At their most basic or generic level, the judgment tasks and settings of accounting and auditing resemble those of any domain. However, a number of features tend to distinguish accounting and auditing tasks from those in generic settings. Four such features relate to (1) the multiperiod/multiperson nature of the judgments and decisions, (2) enormous financial (and other) consequences involved, (3) the presence of markets, and (4) important institutional considerations (also see Libby, 1990).

First, many judgments and decisions in accounting and auditing are made in multiperiod/multiperson settings. Decisions such as the pricing of products and services, investing in equity securities of corporations, and evidence collection and evaluation in auditing are not made on a one-shot basis by an individual working in isolation. Instead, such decisions typically have recurring effects over several time periods, often have to be "re-made," and often must take into account the preferences and beliefs of others. The multiperiod/multiperson nature of accounting and auditing tasks brings to the forefront many important considerations for applied decision making. For example, their multiperiod nature emphasizes an approach to decision making that is sequential and iterative, while their multiperson nature significantly increases the accountability requirements on the decision maker.

Second, the tasks and settings of accounting and auditing tend to have financial consequences that often are enormous in magnitude. Consider, for example, the financial consequences of a pension fund manager's "bad" choice of which stocks and bonds to include in the fund's investment portfolio. Life-or-death consequences – like those associated with some judgments in medical and legal domains – do not exist. However, the high stakes of accounting and auditing judgment tasks are not limited to financial outcomes, but involve important "human" consequences as well. In the pension fund case, adverse financial consequences for the fund can translate into important lifestyle consequences for individuals whose future retirement income is partially determined by the fund manager's choices. In managerial accounting settings, a manager's opportunities for promotion and professional development – and, ultimately, his or her career path – can be affected by periodic performance evaluations based in part on managerial accounting information. In auditing, a report attesting that an organization's financial statements are "free of material misstatements" when they subsequently are

found *not* to be free of material misstatements can have serious reputational consequences for the auditors who were directly responsible for the report.

Accounting and auditing decisions also have “secondary” consequences that extend to parties other than those who are most immediately affected (e.g., the retirees, managers, and auditors in the above scenarios). For example, if a bank loan officer decides to stop the liberal credit terms that historically have been extended to a particular business firm, this can affect not only the firm itself but its employees, suppliers, customers, and others.

A third important feature of accounting and auditing judgment settings is the critical role played by various markets that mediate the ultimate consequences of decisions made by individuals or groups. An excellent example is the market in which a company’s equity securities are traded, such as the New York Stock Exchange. The existence of such a market induces a form of competition among individual decision makers that can result in strategic decision behavior, thus adding a significant layer of complexity to the decision-making process. Naturally, the role of markets in accounting decisions is a reflection of multiperson considerations, as described earlier, since the effect of accounting information on market prices is caused by the interactions of many individuals.

Finally, accounting and auditing judgment tasks are embedded in pervasive institutional settings. An organized stock exchange is one such setting but there are many others – including organizational structures, professional societies, and networks of regulatory agencies – that somehow must be taken into account by decision makers. For example, the decisions of individual auditors are made in settings that involve (1) the presence of other members of the audit team, including peers, subordinates, and superiors; (2) the existence of a market for audit services in which other independent auditing firms compete for audit clients; (3) a strong professional society (the American Institute of Certified Public Accountants) that formulates professional standards and enforces a code of professional responsibilities; (4) a regulatory environment involving massive government agencies such as the Securities and Exchange Commission, the Federal Trade Commission, and the Federal Home Loan Bank Board; and (5) a legal environment involving increasingly frequent lawsuits against auditors alleging fraud or negligence in the performance of the audit, which can result in large financial losses for which insurance is becoming increasingly difficult to obtain. Such a setting imposes enormous constraints and risks that influence judgments made throughout an audit.

Markets, institutions, financial consequences, and multiperiod/multiperson issues are some of the features that distinguish judgments and decisions made in the applied fields of accounting and auditing from those made in generic settings. Other applied fields no doubt have their own features that distinguish them from generic settings, and perhaps from other applied settings. On the other hand, commonalities likely exist among the various applied fields in which judgment and decision making are practiced (and researched). Such commonalities could perhaps be used to effectively link the

research in one applied field to the practical issues of other applied fields. In many applied fields (such as accounting and auditing, medicine, law, and engineering), perhaps the key distinguishing feature is the professional nature of both the judgments and the judgment settings. The professional aspects of several applied fields may serve not only to distinguish research in those fields from generic research, but also to link the research results of such fields to each other. The professional nature of accounting and auditing judgment tasks, and of the contexts and settings in which they are embedded, is a central topic throughout the various chapters of this book.

Accounting and auditing research

Prior to the mid-1960s, research and scholarship in accounting consisted largely of a priori research based on implicit assumptions about both the functioning of capital markets and the objectives and decision processes of investors, creditors, and managers of organizations. Virtually all of the research was in the areas of managerial accounting and financial accounting, and it typically was directed at developing measures of the “true” economic performance of managers and business firms. Little research attention was directed toward auditing during this time.

Accounting scholarship changed dramatically in the mid-1960s from heavy reliance on a priori reasoning to the construction and evaluation of formal models of accounting phenomena and the application of empirical methods designed to understand the effects of accounting practices on the firm’s reported performance and the market’s evaluation of the firm. During the first few years of contemporary accounting research, the modeling and empirical analyses largely were driven by an economic conception of accounting decision makers. In much of the research, decision makers were assumed to be perfectly rational economic actors with unlimited cognitive abilities who were infinitely sensitive to variations in accounting information and who used such information to maximize their own subjective well-being or utility. While this world view provided important insights that were missing from the earlier era, it largely omitted real people from accounting’s research domain. Judgment and decision-making research in accounting began to appear in this economics-based setting in the mid-1960s. Its roots were in both practice and policy issues and in the theories and methods that underlie generic research in judgment and decision making.

Phases of judgment and decision-making research in accounting and auditing

Since the mid-1960s, judgment and decision-making research in accounting and auditing has evolved through three phases. The research of the mid-1960s to the early 1970s was inspired mostly by practice and policy issues. In managerial accounting, it focused on the impact of control systems and budgetary standards on the performance of employees who were subject to

their control. In financial accounting, it focused on the types of information to supply to external decision makers and on how best to measure and disclose that information. In auditing, it focused on how to perform audits more effectively and efficiently and how best to report audit results to external users. For the most part, researchers' attempts to address such issues during this time period occurred before they had a clear sense of the theories and methods of generic judgment and decision-making research.

In the second stage, from the early 1970s to the mid-1980s, theories and methods to guide the research were imported from the underlying literature in judgment and decision making. Much of the research emphasis in this period centered on constructing linear models of individual decision makers, evaluating the extent to which individuals' judgments and decisions departed from the prescriptions of normative models, such as expected-utility theory and Bayes theorem, and investigating reliance on judgment heuristics and the various biases to which that reliance could lead. While the development of the field during this period was influenced by the work of several researchers from the underlying disciplines, the most significant influences were several papers by Paul Slovic and Sarah Lichtenstein (especially Slovic and Lichtenstein, 1971) and by Amos Tversky and Daniel Kahneman (especially Tversky and Kahneman, 1974).

In many ways, this was a period in which judgment and decision-making researchers in accounting and auditing learned and practiced existing theories and methods, and these same theories and methods often were a major point of emphasis in our more "applied" studies. This phase of judgment and decision-making research in accounting and auditing has been reviewed extensively, e.g., by Libby (1981), Ashton (1982), and Birnberg and Shields (1989).

Since the mid-1980s, the research focus has shifted from documenting the shortcomings of human judgment in accounting and auditing settings to understanding (and reducing or eliminating) those shortcomings. The use of process-tracing techniques to describe the decision processes underlying choice in richer detail than is possible with analyses based on linear modeling is one example (e.g., Biggs and Mock, 1983). Another is exploration of alternatives to the Bayesian model of belief revision (e.g., Ashton and Ashton, 1988).

A major shift of this period has been from viewing the decision maker as a passive converter of inputs to outputs to viewing the decision maker as a diagnostician, especially in the auditing domain; the related roles of knowledge and memory in decision making have been emphasized and new models have emerged to guide the research (e.g., Libby, 1985). Various papers by Hillel Einhorn and Robin Hogarth heavily influenced these developments (e.g., Einhorn and Hogarth, 1981, 1985). More recently, researchers have begun to focus on ways of controlling or "debiasing" the errors, inconsistencies, and biases identified by the earlier research, particularly with mechanical decision aids of some type and, again, especially in auditing (see Ashton and Willingham, 1989).

Other recent research has responded to criticisms of judgment and decision-making research. Such criticisms typically concern variables that were omitted from earlier research in accounting and auditing settings, e.g., variables related to economic or organizational aspects of decision making that often are ignored (or at least downplayed) in generic judgment and decision-making settings but are likely to be extremely important in settings of interest to accounting and auditing research. Examples include financial incentives, feedback about the results of previous decisions, various accountability mechanisms, domain-specific experience and knowledge, and the impact of markets on decision-making processes and outcomes.

In short, the range of theories, methods and variables that are studied today is much broader than before, and today's studies are richer than those of earlier years. Several sources provide reviews of this most recent phase of judgment and decision-making research in accounting and auditing, as well as commentary about the types of shifts in emphasis that have occurred (e.g., Ashton et al., 1988; Libby, 1990; Hogarth, 1991, 1993; Gibbins and Jamal, 1993; Libby and Luft, 1993).

A preview of the chapters

The chapters in this book analyze these and other influences on judgment and decision-making research in accounting and auditing, and they suggest many directions for future research in the field. While broad-ranging, the coverage in each chapter is not exhaustive but reflects the authors' judgments about where the field stands today and where many of the gains are likely to be realized in the future. Each chapter focuses on a substantive area of inquiry – generally, subfields within managerial accounting, financial accounting, or auditing – instead of on a particular methodological approach. This choice is purposeful and is intended to encourage future research that puts problems before paradigms.

Two chapters examine managerial accounting topics. Waller focuses on “decision-facilitating” aspects of managerial accounting, while Young and Lewis focus on “decision-influencing” aspects (see Demski and Feltham, 1976). Briefly, the decision-facilitating role of managerial accounting information refers to the predecision provision of information to reduce uncertainty, while the decision-influencing role refers to the postdecision provision of information for monitoring the performance of an individual or subunit. Research focusing on decision-facilitating aspects declined during the 1980s, while that focusing on decision-influencing effects increased.

Waller

Waller (Chapter 2) seeks to rejuvenate research on managerial accounting's decision-facilitating effects by advocating that decision research in managerial accounting return to a behavioral-economics foundation. The behavioral-economics approach, with its roots in the early work of March and Simon (1958) and Cyert and March (1963), is concerned with the empirical validity

of the assumptions that neoclassical economic theory makes about human behavior, with the actual processes (instead of the “as if” fiction) that produce decision behavior, and with the implications of empirical results for revising economic theory to improve its predictive and explanatory power.

Waller focuses on three decision areas that often have been studied in behavioral decision research in managerial accounting: (1) the choice of alternative information systems for communicating information to internal decision makers, (2) cost-variance investigation decisions, and (3) product-pricing decisions. The first area derives largely from the decision-theoretic notion that managerial accountants should consider the costs and benefits of alternative information systems they could supply to decision makers, while the latter two areas consider the choice of particular types of information that might be supplied for particular decisions. In each of these areas, Waller describes a set of existing studies that have attempted, in their own way, to bridge the gap between economics-based and psychology-based approaches to decision making. More importantly, he analyzes how these studies have fallen short of bridging that gap effectively, and how research in each area would differ – providing a richer and more effective integration of the economics- and psychology-based approaches – if the studies had been conducted from an explicit behavioral-economics foundation.

Young and Lewis

Young and Lewis (Chapter 3) note that questions about the decision-influencing aspects of managerial accounting information center on the effects of incentives on the decisions of subordinates within control systems. Against this background, they examine the experimental “incentive-contracting” research in managerial accounting. Incentive-contracting research concerns the design of incentive systems or contracts that motivate employees to meet or exceed budgeted performance levels. Such performance levels are established in part with managerial accounting information, and incentives can be used to reward the attainment of, or to penalize the failure to obtain, a particular standard. Incentive-contracting research tries to gain insights into decision making in managerial settings by combining aspects of normative principal-agent theory (e.g., Demski and Feltham, 1978) with aspects of descriptive research in industrial sociology (going back, for example, to Roy, 1952, 1954).

Young and Lewis analyze two major categories of incentive contracting research: (1) the effects of incentives on the self-selection of employees who possess different skill levels and on their subsequent performance of a task, and (2) incentive aspects of participation in standard setting, and its effects on budgetary slack formation and performance. Analogous to Waller’s call for a return to behavioral-economics foundations for addressing managerial accounting’s decision-facilitating role, Young and Lewis argue that future research on its decision-influencing role could profit from the incentive-contracting literature’s “cycling back” to its roots in industrial sociology. Note that both Waller’s and Young and Lewis’s prescriptions for future research