



# BEHAVIORAL ACCOUNTING

SIEGEL/RAMANAUSKAS-MARCONI



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# Preface

This book describes the relationship between the accounting system, human behavior, and organizational efficiency. It is written for an audience of students and business people. The book is intentionally descriptive. There are no rigorous quantitative applications or complex statistical discussions.

Each substantive chapter begins with a business dilemma. After discussion of the relevant behavioral science concepts that bear on the dilemma, a diagnostic review of the dilemma pinpoints important concepts for consideration and offers solutions. This approach is intended to demonstrate the practical applications of behavioral accounting. The book includes examples, cases, discussion questions, references, and appendices. A teacher's manual is also available.

## BEHAVIORAL ACCOUNTING ---

Behavioral accounting is an area of accounting that has slowly but steadily grown over the past 25 years. An increasing number of journal articles deal with behavioral topics, and many textbooks include some mention of behavioral accounting. More and more schools offer courses in behavioral accounting, and a growing segment of accounting students and professors focus their research on the behavioral dimensions of accounting. Interested academicians have formed a Behavioral Accounting Section within the American Accounting Association and have established two journals, one devoted solely and one partially, to behavioral accounting topics.

While managerial accounting, cost accounting, and budgeting textbooks mention the behavioral aspects of accounting, and may even have one chapter that describes behavioral accounting, they do not provide interested readers with complete coverage. This book aims to fill that gap; it is the first comprehensive textbook/handbook in behavioral accounting to be published, and is a needed complement to the several monographs and books of readings on behavioral topics that are available. Each of the existing monographs and books of readings addresses a small portion of the broad scope of behavioral accounting; this book covers most major areas. Depending on the functional orientation of the instructor, business person, or other user, outside readings emphasizing specific topics in behavioral accounting may be used as supplementary sources.

## AUDIENCE

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The primary audience for this textbook is students enrolled in behavioral accounting courses that are offered at the advanced undergraduate and graduate levels of colleges and universities.

The book is also intended for decision makers and for managers responsible for leading and motivating. It could be used by practitioners who are members of such organizations as the National Association of Accountants (NAA), Financial Executives Institute (FEI), the Planning Forum (PF), etc. It applies to both profit-oriented and not-for-profit organizations.

The book can also be used as a supplementary text in accounting courses dealing with budgeting, international accounting, and decision theory, as well as in management, engineering, or other business courses concerned with operations, production controls, information theory, planning and control. In all these courses repeated reference is made to the importance of the human factor in business operations. A supplementary book like this one, that offers practical examples of the interrelationship between accounting control systems, human behavior, and productivity will benefit students, instructors, and practitioners.

People using the book should have an understanding of basic accounting and management concepts and principles, and have some exposure to the behavioral sciences.

## ACKNOWLEDGEMENTS

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We applaud the people at South-Western Publishing Company for their commitment to professional accountancy as evidenced by their decision to publish this book. We are also grateful to the pioneers in the field of behavioral accounting for contributing chapters to this text. A heartfelt “thank you” is offered to the DePaul MBA students who pretested this textbook in the Behavioral Accountancy course. Finally, we thank the School of Accountancy at DePaul University for the support they provided.

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## **PART ONE**

# **Foundations of Behavioral Accounting**

- CHAPTER 1 Introduction to Behavioral Accounting
- CHAPTER 2 A Survey of Behavioral Science Concepts and Perspectives
- CHAPTER 3 Behavioral Concepts from Psychology and Social Psychology
- CHAPTER 4 Assumptions About Human Behavior: A Historical Perspective
- CHAPTER 5 Research Methods

# CHAPTER 1

## Introduction to Behavioral Accounting

A 1984 profile of New York Governor Mario M. Cuomo<sup>1</sup> described the behind-the-scene activities preceding the governor's first budget meeting. Taxes had to be raised to reduce a nearly \$300 million excess of spending over revenues. Cuomo had promised voters that he would not raise any of the "big three" taxes: individual income, corporate, or sales tax. The governor's advisers presented about 40 revenue options but privately urged Cuomo to raise the sales tax. Mr. Cuomo later explained to a visitor that his advisers were "budgeteers; they don't understand psychology." While an increase in one or more of the big three taxes would be simpler to collect, it would retard the image of stability that Cuomo wanted to create and tarnish Cuomo's credibility with his constituency.

If Mr. Cuomo's meeting were to be held today—with a new generation of advisers trained in behavioral accounting—he would not make the statement that "they don't understand psychology." Behavioral accounting is the interface of accounting and social science. It is concerned with how human behavior influences accounting data and business decisions and with how accounting information affects business decisions and human behavior.

### THE TRADITIONAL ROLE OF ACCOUNTING

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*Accounting* is a service discipline whose function is to provide relevant and timely information about the financial affairs of businesses and not-for-profit entities to assist internal and external users in making economic decisions. *Internal users* of accounting information are the organization's own line and staff personnel, who view accounting reports as the foundation on which financing, investing, and operating decisions are made. *External users* include such groups as stockholders, creditors, labor unions, financial analysts, and government agencies. These seemingly diverse groups have in common a keen interest in the financial affairs of business enterprises and not-for-profit organizations.

A distinction is made between financial accounting and management accounting. The emphasis in *financial accounting* is on reporting to external

users. The information presented is governed by Generally Accepted Accounting Principles (GAAP)—the rules that prescribe the manner of presentation and the method of computation.

*Management accounting* (or managerial accounting) is concerned with internal reporting. The information presented to managers is not bound by GAAP. Rather, it is governed by the information needs of the decision maker.

*Behavioral accounting* is the third major branch of accounting. It is concerned with the relationship between human behavior and the accounting system. Its domain includes both financial and managerial accounting.

## The Accounting Information System

Accounting is called the language of business because it measures and communicates financial and other information about people, organizations, social programs, government activities, and business ventures to decision makers.

Accounting can also be viewed as an information system. In most organizations, accounting is the major quantitative information system. The accounting system receives information from the environment (the firm, government agencies, suppliers, customers, etc.), measures the information, records it, processes it, and issues reports back to the environment. People act on the basis of the accounting reports. The results of some of these actions, in turn, are received, measured, recorded, and processed by the accounting system.

Accounting information systems are built around the particular structure and business activities of the organization. A well-designed system includes procedures for measuring, recording, and summarizing economic events; it provides internal controls designed to safeguard assets and promote operational efficiency; and it permits the retrieval of relevant data for internal or external reporting.

## Where Accountants Work

Accountants work in business firms, not-for-profit organizations, or in public accounting firms.

Accountants who work in business or not-for-profit organizations are responsible for the design and maintenance of the accounting information system, financial planning and control, and the production of reports for both internal and external users. The reports to internal users provide information needed to maintain and improve operational efficiency and profitability, develop organizational policies and plans, and make nonroutine decisions.

Business and not-for-profit organizations engage public accounting firms to conduct an independent *audit* of their financial records. An audit involves the examination of information presented in financial statements. Based on

the results of the examination, the public accounting firm issues an audit report, which expresses an opinion on the “fairness” of presentation of the financial statements. All states require that the report be signed by a *certified public accountant* (CPA). Public accounting firms also provide their business and not-for-profit clients with tax, accounting, and management consulting services.

CPAs who work in public accounting are considered to be “independent” of their clients. While they have a responsibility to their clients, CPAs also have a responsibility to the external users of publicly reported financial information. This responsibility is manifest in the *attest function*, whereby the CPA expresses an opinion on the fairness of presentation of publicly reported financial data. It is important to note that the opinion does not certify or guarantee the accuracy or reliability of the data.

The attest function is of paramount importance to external users because it lends credence to, and promotes public confidence in, published financial reports. Since publicly reported financial statements are used by outsiders as a basis for major economic decisions, and since these statements are usually the only financial and operating information available to outsiders, the need for the attest function is evident. Its importance to public confidence in reported financial data and to the smooth functioning of the economy can hardly be overstated.

## THE BEHAVIORAL DIMENSION OF ACCOUNTING

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Accounting has traditionally focused on the reporting of financial information only. Over the last several decades, however, managers and professional accountants have recognized the need for additional quantifiable economic information not presently generated by the accounting system or reported in the financial statements. It is believed that such additional quantifiable economic information, not necessarily financial in nature, would lend more meaning to the data presently reported and therefore allow for more-informed decision making. Part of the nonfinancial, quantifiable information meant to complement the financial data falls into the area of behavioral accounting: the subfield of accounting that integrates the human behavioral dimension with traditional accounting.

### Definition and Scope

Behavioral accounting goes beyond the traditional accounting role of collecting, measuring, recording, and reporting financial information. It is that

dimension of accounting concerned with human behavior and its relationship with the design, construction, and use of an efficient accounting information system. Behavioral accounting, by considering the relationship between human behavior and the accounting system, reflects the social dimension of an organization and becomes, thereby, a vital supplement to the financial information that accountants currently report.

The scope of behavioral accounting is quite broad. It includes: the application of behavioral science concepts to the design and construction of accounting systems; the study of human reaction to the format and content of accounting reports; the ways in which information is processed for decision making; the development of reporting techniques to communicate behavioral data to users; and the development of strategies to motivate and influence the behavior, aspirations, and goals of the people who run the organization. The scope of behavioral accounting can be broken down into three general areas:

1. *The effect of human behavior on the design, construction, and use of the accounting system.* This area of behavioral accounting is concerned with how the attitudes and philosophies of management affect the nature of accounting controls and the functioning of the organization. For example, managers who are averse to risk will demand different types of financial control systems than managers who are more inclined to take risks. Thus, the looseness or rigidity of accounting controls are influenced by human behavior.  
Similarly, interaction patterns within the firm lead to development of a group perspective toward the accounting system. This perspective is characterized by worker attitudes toward the control system, their behaviors in operating the system, and the consistency of enforcement.
2. *The effect of the accounting system on human behavior.* This area of behavioral accounting is concerned with how the accounting system affects motivation, productivity, decision making, job satisfaction, and cooperation. For example, a budget that is too "tight" may lead people to believe that the goals are not attainable and that there is no sense in trying to achieve them. A budget that is too "loose" may result in carelessness and inefficiencies in production.
3. *Methods to predict and strategies to change human behavior.* This third area of behavioral accounting is concerned with how the accounting system can be used to influence behavior. For example, the accounting control structure can be tightened or loosened, compensation plans can be altered, or performance evaluation reports can be modified.

## **Applications of Behavioral Accounting**

The economic and human benefits of recognizing the behavioral aspects of accounting are numerous. The following decision situations delineate some of them.

Company X, after a careful cost-benefit analysis, concludes that a new accounting information system should be installed. How should that decision be implemented? Can the firm simply buy the hardware, develop the software, train its work force, and watch expenses dwindle? Or will the company, after buying the hardware, developing the software, and training its work force, later discover that the system does not work as anticipated because of employee resistance to change?

Research suggests that if the behavioral aspects of such decisions are not investigated thoroughly, and if immediate corrective action is not taken when dysfunctional attitudes are detected, the second alternative is the more likely outcome.

In such a case, managers who are aware of the behavioral aspects of accounting would call for an investigation of how people view the innovation, whether they favor or oppose it, and what their fears about it are. The investigation should also ascertain whether or not people have misinformation or misconceptions about the system, how they perceive their roles in operating it, and how they are likely to react if the system is installed. Further, the behavioral accountant should determine whether people's apprehensions about the system are based on real security issues (e.g., compensation or job security) or simply reflect fear of the unknown.

If people have no fear of the system and eagerly anticipate its installation, management may then proceed with its plan, relatively confident that human problems will not preclude expected results. If, however, people fear and resist the innovation, management must discover the basis of these attitudes and determine how people's outlooks can be changed so that the installation of the new system will be successful.

Consider the behavioral implications of the following situation.

A few years ago, Company Y adopted a new standard cost system and instituted a formal budgeting process. The objective was to increase productivity and improve cost control. Each year, however, actual operating results deviated widely from planned, or "budgeted," results. Are these problems due to unrealistic budgets? Or can the deviations be traced to the employees who are responsible for achieving budgeted goals?

If it is determined that employee attitudes and behavior are responsible for the budget problems, Company Y should investigate the behavioral aspects of this situation. Questions such as the following would have to be answered: How do people currently behave during the budget-making process? Are they constructively and harmoniously relating to each other? How do employees perceive the process as a whole, their roles in it, and their individual goals in relation to organizational goals? A behavioral accountant would also want to know the cause of the attitudes and behavior and the likelihood that the same behavior will be repeated in the future. Obviously, if the undesirable behavior

is likely to be repeated, thus perpetuating inefficiencies in the budget-making process, the behavioral accountant would suggest strategies to change existing behavior to make it compatible with smooth organizational functioning.

The next situation highlights the incompleteness of the information contained in traditional external and internal accounting reports. Although the additional information called for in the following example is more likely to be reported internally to top management or to the board of directors of an organization, there have been suggestions to expand the scope of the auditor's attest function to include such information in financial reports to outside users.

Companies Z-1 and Z-2 are similar in financial structure, earnings history, and relative market shares in their industry. Even the most careful scrutiny of their financial statements will not provide any clues as to which firm is the better investment alternative, because the financial statements themselves emphasize the similarities between the firms. How can a potential investor who is concerned with the future prospects of these companies make an informed investment decision?

In such a situation, additional information, nonfinancial in nature, about the firms may help prospective investors make rational choices. Part of this nonfinancial information might be behavioral and might indicate, for example, that Z-1's work force is enthusiastic and highly motivated and that absenteeism is very low. In firm Z-2, on the other hand, the work force is characterized by low morale, high absenteeism, and excessive turnover. The behavioral accountant might also provide information on the differences in management styles of the two companies. It could be useful for potential investors to know something about the risk perceptions, economic outlooks, experience, and backgrounds of the two management teams.

The behavioral accountant's tasks in this situation are to investigate how people currently behave and how they view their work, their firm, and their co-workers. It is then up to the users of this behavioral information to make their own assessments of how people are likely to behave in the future and how these behavior patterns will affect the relative potential future earnings of each company. For internal purposes, the behavioral accountant would provide management not only with information about how people behave, but also with the reasons why people behave as they do and recommendations for changing behavior that is dysfunctional.

The preceding three examples demonstrate that the goal of behavioral accounting is to measure and evaluate relevant behavioral factors and communicate the results to internal and external decision makers. Without such information, accounting reports are incomplete, and decision makers are not being provided with all relevant data. Information on the behavioral dimension of the firm complements the financial data and provides economic decision makers with a more well-rounded view of the organization.

## **Behavioral Accounting: A Logical Extension of Accounting's Traditional Role**

Decision makers who use accounting reports are better informed when those reports contain as much relevant information as possible. Accountants acknowledge this fact through a time-honored accounting principle known as *full disclosure*. This principle requires not only supplementary explanations and additional details supporting the reported financial data, but also the reporting and explanation of critical nonfinancial organizational events. This additional information is reported either within the framework of the financial statements or in notes accompanying the statements.

To further sharpen the economic picture of a firm, a logical and necessary application of the full disclosure principle would require the inclusion of behavioral information to supplement the financial and other data presently reported. It would be difficult to argue convincingly that decision makers would not be interested in and benefit from access to such additional relevant information. In fact, behavioral information about major business organizations is standard fare in the business press. Business newspapers, newsletters, and magazines frequently report on existing managerial philosophies in particular firms, the morale of middle-level managers, the relative success of innovative approaches to management or operations, and the effects of managerial activities and outlooks on such topics as operations, earnings, labor negotiations, and work force attitudes. The business press also reports on the implications of these behavioral phenomena for future organizational success.

These reporting practices indicate an interest in and a demand for behavioral data. Unfortunately, the behavioral information reported in the business press is not yet presented in a way that allows for meaningful interfirm (i.e., Company X vs. Company Y) and intrafirm (i.e., Division A vs. Division B in Company Z) comparison. Advances in measurement techniques in the behavioral sciences now permit more accurate measurement of behavioral processes and allow accountants to expand the reporting function to include the behavioral dimension of organizations.

Few would argue with the assertion that information on the behavioral dimension of organizations is useful to a variety of internal and external decision makers. Open to discussion, however, is whether accountants should assume the task of such investigating and reporting. There are many other professions that may lay claim to the domain of measuring and reporting behavioral phenomena. Sociologists and industrial psychologists, for example, have worked in this area for decades. Market research firms and survey research methodologists regularly measure certain aspects of behavior and report the results to their clients. The list of professionals engaged in these activities could go on.



The accountant's claim to the investigation of behavioral phenomena is based on the nature of accounting; it always has been and still is an organization's major information system. The accounting information system reports on the organization's economic activities, of which the behavioral phenomenon is but one dimension. Accountants might claim that through centuries of experience they have become familiar with the information needs of both outside users and internal managers, the process of business decision making, and the kinds of financial data and reports that are relevant to various types of decision situations. Therefore, accountants would be most qualified to select behavioral phenomena for investigation because they know which behavioral data would most meaningfully supplement financial data. Further, accountants are the single group that could most logically incorporate the behavioral information into the existing business reports.

It should be emphasized, however, that accountants are not rigorously trained behavioral scientists. A course in behavioral accounting, along with three or four behavioral science courses, will provide accountants with a basic working knowledge of behavioral science concepts, an appreciation for the potential and limitations of behavioral science applications in accounting, and the ability to recognize quality research. A few behavioral science courses, however, do not make an accountant a behavioral scientist, just as three or four accounting courses do not make a person an accountant. Therefore, accountants who are interested in working in the behavioral area should consult with competent behavioral science researchers when designing behavioral research projects and analyzing their results.

## **HISTORICAL DEVELOPMENT OF BEHAVIORAL ACCOUNTING**

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The accounting profession's awareness of and interest in the behavioral aspects of the discipline began to develop in the early 1950s. In June 1951, the Controllership Foundation of America sponsored a research study that explored the impact of budgets on people. The study was carried out under the direction of the School of Business and Public Administration of Cornell University. Professor Schuyler Dean Holett was the project director and Professor Chris Argyris the research associate in charge of the field work. This exploratory research resulted in a number of tentative conclusions about the behavioral pitfalls in budgets and budgeting and in numerous thought-provoking suggestions for possible remedies.

The research was then used by Chris Argyris as the foundation for the 1953 landmark *Harvard Business Review* article, "Human Problems with Budgets"<sup>2</sup>, which introduced the problem area, and with it accounting's behavioral dimension, to a broader business audience. Of considerable interest is the