

# Accounting As Measurement System – A Research Paradigm

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## Elements of a Measurement System

- Users
- User Decision Models
- Objects to be measured
- Relevant Attributes of Objects
- Rules of Measurement
- Creators of rules
- Methods of recording and summarizing measurements
- Measurers
- Verifiers
- Reports

## Some Research Questions

- What do investors want to know about company performance?
- What is the right entity to measure? (controlled group? Legal entity? Cost center?)
- Do users understand the financial reports?
- What types of cost or revenue data do managers find most useful?
- How commonly do certain types of transactions occur?
- What are the effects of different measurement rules on
  - Investment or credit decisions?
  - Employee or managerial motivation?
- What rules would lead to the “best” decisions?
- Can certain rules have better or worse effects on the whole economy? Did fair value accounting contribute to the 2008 fiscal problems?
- What motivates fraud or “earnings management”?
- How can fraud or errors be best detected?
- What controls can best minimize errors and frauds?
- Are particular measurement or disclosure rules useful?
- What affects the performance of auditors?
- Can financial statement information predict future performance?
- Can financial statement data predict bankruptcy?
- What types of systems can accumulate financial data most effectively?

Some of these questions are:

- Descriptive
- Explanatory
- Predictive

## Some Typical Research Methods

### Statistical hypothesis tests using archival data

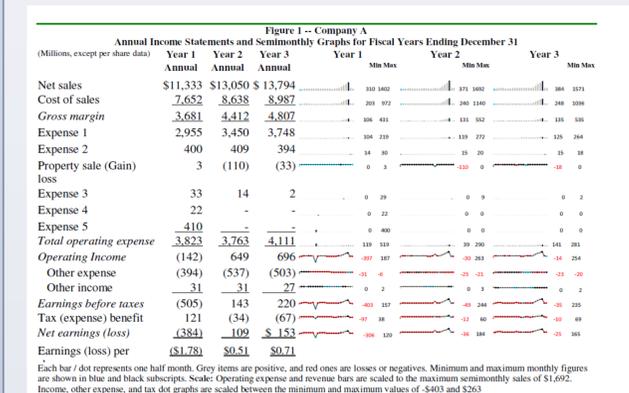
Ex. – Regression analysis of various disclosures against company stock returns, to test if markets react to certain data.

### Descriptive statistical reports using archival or survey data

Ex. – Graphs of numbers of companies reporting earnings just above, as opposed to just below, analyst forecasts, to look for earnings management.

### Laboratory experiments using human subjects

Ex. Tests to see if people understand tables better than graphs, or laboratory tests to see how large a difference people consider significant.



### Field experiments, using controlled situations

Ex. A nonprofit organization sent out different types of financial information along with fund raising appeals, and measured which type of data was associated with the highest donations.

### Case studies

Ex. Studies of particular companies with frauds, or of how particular companies manage and control their businesses.

### Theoretical analysis

Ex. Mathematical models of how firms should use cost data, or how managers react to different incentives.

### Historical studies

Ex. Studies of disclosures made in different time periods

### Comparisons of international differences

Ex. Comparisons of what income looks like under U.S. and International accounting standards

## Accounting Research Is Interdisciplinary

### Bankruptcy Law

Related to bankruptcy prediction models, as well as proper rules for valuing items in companies in financial distress.

### Communications Science

Related to the proper structure of reports, as well as what is the appropriate level of summarization of data.

### Computer Science / Information Systems

Affects the appropriate rules for summarizing and reporting information, studies of internal controls, and the best techniques that should be used by auditors.

### Economics

User models are typically based on economic theories. The value of auditing is based on theories of the economics of information.

### Education

How should accountants and auditors be trained? How can accounting data be best understood by users?

### Engineering

What factors affect the costs of products?

### Ethics

Which people have rights to information? Should rule makers consider social consequences of their rules?

### Finance

How is accounting information used in financial markets?

### Law

Law defines many of the things measured by accountants, such as what a “sale” is. Law also affects the behavior of managers and auditors. Law is often reliant upon accounting measures.

### Management Science

Various types of management and governance structure affect audit risk. What information is most useful to different management methods?

### Perceptual science / Psychology

What affects the ability of auditors to detect anomalies? What affects users’ ability to understand financial data?

### Process design

How do production processes affect cost behavior? How do control processes affect audit risk?

### Tax

How do tax laws affect behavior and financial reporting? What values and measures should the tax code use?

## My Own Nonprofit Research

### Do donors penalize nonprofits with “bad” cost ratios? YES

- (1998). Differences in Sensitivity of Financial Statement Users to Joint Cost Allocations: The Case of Nonprofit Organizations. *Journal of Accounting, Auditing, and Finance*

- (1999). Factors Affecting the Relation Between Donations to Not-For-Profit Organizations and an Efficiency Ratio. *Research in Government and Nonprofit Accounting*

- Tinkelman, D. & Mankaney, K. (Spring, 2007). When is administrative efficiency associated with charitable donations? *Nonprofit and Voluntary Sector Quarterly*.

### Should donors do this? PROBABLY NOT

- (2006). The Decision-Usefulness of Nonprofit Fundraising Ratios: Some Contrary Evidence. *Journal of Accounting, Auditing, and Finance*

- Donabedian, B. & Tinkelman, D. (September, 2007). Street Lamps, Alleys, Ratio Analysis and Nonprofit Organizations. *Nonprofit Management and Leadership*.

- Tinkelman, D. & Donabedian, B. (2009). Decomposing the Elements of Nonprofit Organizational Performance. *Research in Government and Nonprofit Accounting*.

### Do Board Characteristics Affect Performance? SOMETIMES

- Callen, J., Klein, A. , & Tinkelman, D. (2003). Board Composition, Committees, and Organizational Efficiency: The Case of Nonprofits. *Nonprofit and Voluntary Sector Quarterly*

- Callen, J., Klein, A. , & Tinkelman, D. (2010). The Contextual Impact of Nonprofit Board Composition and Structure on Organizational Performance: Agency and Resource Dependence Perspectives. *Voluntas*.

### Do Nonprofits Fudge to Make Numbers Better? SOMETIMES

- Bhattacharya, R. & Tinkelman, D. (2009). How Tough are Better Business Bureau / Wise Giving Alliance Financial Standards? *Nonprofit and Voluntary Sector Quarterly*

- Tinkelman, D. (2009). Unintended Consequences of Expense Ratio Guidelines: The Avon Breast Cancer Walks. *Journal of Accounting and Public Policy*.

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