

# METHODOLOGICAL SHORTCOMINGS IN ACCOUNTING POLICY RESEARCH

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## ⟨Abstract⟩

There are several reasons why accounting research cannot solve accounting policy questions. One reason (the impossibility of satisfying all users' preferences) has been previously identified and described in the literature. In this paper we attempt to make explicit second and third types of limitations. These limitations are the impossibility of choosing pareto-optimal judgment criteria and some inherent methodological limitations in the various types of accounting policy research. After discussing policy research problems, we suggest strategies that should help to overcome the weaknesses inherent in accounting policy research.

Probably the most critical problem facing accounting researchers and policy makers today is the issue of deciding between accounting alternatives. Although it is and was the explicit goal of the FASB and its predecessor, the APB, to eliminate alternative accounting models, measurement rules, and disclosure requirements, we still have difficulty identifying which alternatives should be used in current financial reporting by business enterprises. In addition, not only do accounting policy makers have difficulty deciding between alternatives, but accounting researchers have more or less concluded that it will be impossible to ever identify the "best" alternatives. Gonedes and Dopuch (1974) concluded that no research strategy

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used by accounting researchers to date is capable of selecting the most socially desirable accounting alternative. In reaching their conclusion, they applied a very demanding performance criterion to accounting research (i. e., that the alternatives should be capable of being socially ranked). Later, May and Sundem (1976) suggested that the purpose of research and the contribution of research is not and will not be in selecting optimum alternatives, but rather the purpose of research is to contribute, along with all other available strategies, to developing theories that may be used by policymakers to settle specific issues.

Basically, the reason that Gonedes' and Dopuch's conclusion is so negative is because of analytical results developed in the areas of social choice, welfare economics, and decision theory. It has been shown in the discipline of welfare economics that it is impossible to construct a collective choice rule that satisfies even a minimal set of general conditions. In addition, May and Sundem (1976) suggest that it would be extremely costly, if not impossible, to construct a social decision making system that could assess the consequences for and preferences of every individual who might be affected by a given accounting policy decision. In summary, it has been largely these social welfare issues that have caused most researchers to accept the fact that accounting research cannot give policy makers the answers they need. Some researchers would even conclude that this social welfare problem is also responsible for the minimal impact that accounting research, in general, has had on the practice of accounting.

We are convinced, however, that in addition to the social choice problem of user preferences, there are two other research problems that make the conclusions of individual pieces of accounting policy research questionable. The problems are (1) the social choice problem of deciding between judgement criteria and (2) the methodological weaknesses inherent in accounting policy research. In the remainder of the paper, we attempt to describe these two additional limitations and then recommend a research strategy that should help in overc-

oming at least one of them.

### The Decision Criterion Problem

The process of deciding between accounting alternatives is very much like athletic competition at the Olympics. In the Olympics, there are events to determine who is the strongest person in the world. In that event, each contestant lifts weights and that participant who lifts the most weight is deemed to be the strongest person. In the Olympics they also have races. In each race, the contestants run a predetermined distance and that runner who covers the distance in the least amount of time is declared the winner. Once in a while they even have rifle shooting contests. In such a contest, each of the contestants shoot at targets which are placed some predetermined number of feet from the contestants and that person who shoots closest to the bull's eye or center of the target the greatest number of times is declared the winner. In the case of deciding between accounting alternatives, the contestants are not individuals. The participants may be FIFO vs. LIFO or historical cost vs. replacement cost. That, in itself, doesn't cause any trouble. What does cause trouble, however, is that there is no universally accepted criterion on which to judge which alternative is superior. We can't say that that which comes closest to the bull's eye the greatest number of times or that which is the fastest or that which can lift the most weight is the best. It is very difficult to find criteria that can serve as a means for ranking accounting alternatives. Therefore, our first problem in accounting policy research (in addition to the social choice question of satisfying individual preferences) is the difficulty of determining what criteria should be used to judge between accounting alternatives. Several research criteria for deciding between alternatives have been suggested in the literature. Among those suggested have been the following:

1. Predictability
2. Market association tests
3. Pareto-optimality

4. Fineness
5. Opinions of experts
6. Relevance
7. Tax benefits
8. Tradition
9. Cost benefit effectiveness
10. Pragmatism
11. Conservatism
12. Matching
13. Understandability
14. Verifiability/Objectivity
15. Neutrality
16. Timeliness
17. Comparability
18. Completeness
19. Feasibility
20. Accuracy
21. Better management decisions
22. Better investment decisions
23. Better loan decisions
24. Usefulness
25. Realistic data
26. Economic Reality

Granted, the above list is incomplete, but each of these items have been suggested as possible criteria with which to judge accounting alternatives. For example, in their *Accounting Review* article in October 1968, Beaver, Kennelly, and Voss suggested that predictive ability can be used to judge between accounting alternatives. They suggested that the measure with the greatest predictive power with respect to a given event be considered as the best method for that particular purpose. In all fairness, it should be noted that these authors have since suggested that predictive ability is an incomplete judgement criterion. Likewise, other criteria have been suggested by other researchers. Marshack (1963), for example, suggested the fineness criteria as a method to assess the payoff relevance of various

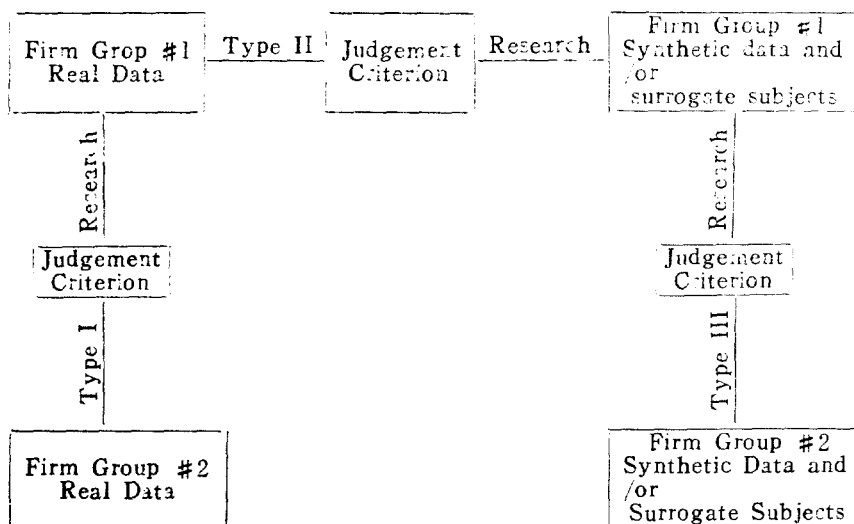
alternatives. In addition, a very recently suggested criterion was the Economic Reality criterion which was suggested by Greer and Morrissey (1978) in their *Journal of Accounting, Auditing and Finance* article.

we recognize that each of these criteria can be used in selected instances. Certainly, if loan officers are the group of interest, the criterion of better loan decisions is probably quite appropriate. On the other hand, the social choice problems that suggest the impossibility of satisfying heterogeneous individual preferences apply equally to the problem of deciding between judgement criteria. It is the same decision-theoretical conclusion that would suggest that there is no way to choose a research criterion that would satisfy the collective choice rules.

**Research Methodology problems**

Even if we accept the fact that accounting researchers and practitioners can decide on which criteria should be used to judge between accounting alternatives, there is another set of problems that make accounting policy research conclusions somewhat questionable. In describing these problems, we refer to Exhibit 1 below.

**Exhibit 1  
Types of Studies**



<TYPE I Studies>

Author	Title of Research Paper	Date of Research Paper	Accounting Policy Issue	Criterion Used To Judge Between The Alternatives
Edward L. Summers	"Observation of Effects of Using Alternative Reporting Practices"	<i>Accounting Review</i> April 1968	Whether the flowthrough or the deferred method is better in accounting for Income Tax Allocation and Investment Tax Credits.	Investor Preferences
Richard Frank Kochanek	"Segmental Financial Disclosure By Diversified Firms and Security Prices"	<i>Accounting Review</i> Apr. 1 1974	Whether or Not Segment Financial Information is Better than nonsegmented data.	The Effect On Stock Price Volatility and Earnings Predictions
Hai Fong, Robert S. Kaplan, and Georgeon Mandelker	"Pooling vs. Purchase: The Effects of Accounting For Mergers On Stock Prices"	<i>Accounting Review</i> January 1978	Whether Pooling vs. Purchase Is A Better Way To Account For Mergers	The Effect On Stock Prices
Robert K. Eskew	"An Examination of The Association Between Accounting and Share Price Data in the Extractive Petroleum Industry"	<i>Accounting Review</i> April 1975	Whether Successful Efforts or Full Costing is Better To Account For Firms In The Petroleum Industry	Market Response to the Two Methods
John L. O'Donnell	"Relationships Between Reported Earnings and Stock Prices In The Electric Utility Industry"	<i>Accounting Review</i> January 1965	Whether Accelerated or Straightline Depreciation Is Better In the Electric Utility Industry.	The Effect On Stock Prices

In this exhibit we suggest that there are basically three types of accounting policy research. The first type, which we label Type I Research, are those studies which examine data from two different sets of firms which use alternative accounting methods to examine which method meets the selected criterion best. With this type of study, researchers attempt to find two sets of firms that are identical in every respect except that they use a different accounting alternative to account for some phenomenon. There have been many studies of this type, of which the following five are typical:

All of these studies are Type I studies. Each of them, given a judgement criterion, tried to decide which accounting alternative was best in the circumstances. There is, however, an inherent problem with Type I studies. That problem is *it may not be possible to ever find firms that are comparable enough in all respects to conclude that the only real difference between the firms is the accounting alternative being tested*. There are many things such as different management, different locations, different sizes, and other factors that are probably not susceptible to enough control to warrant that the conclusions from this type of research are always valid. Campbell (1957) suggests that even the presence of a possibility that variables, other than the one of interest, may be changing, causes severe confounding or lack of validity of a study. We recognize that randomization and paired comparison techniques help, but we are not sure such methods completely alleviate the problems.

As a minimum, this is a significant methodological question.

The second type of accounting policy research often conducted is our Type II studies. Type II studies are those studies which examine data from a single set of firms which all use the same accounting method and through some self-selected method of conversion, convert those firms' data to new data that they believe would have resulted if the firm had been using an alternative method. There are several studies which have used the Type II research methodology. This type of research is necessary when one accounting method is required and an alternative method is being considered but cannot be used by

<TYPE 2 Studies>

Author	Title of Research Paper	Date of Research Paper	Accounting Policy Issue	Crit'ion Used To Judge Between The Alternatives
David W. Young	"Accounting For The Cost of Interest: Implications for The Timber Industry"	<i>Accounting Review</i> October 1976	Should Interest Costs Be Capitalized	The Effect On Financial Statements
Harold Bierman, Jr. and Ernest Liu	"The Computation of Earnings Per Share"	<i>Accounting Review</i> January 1968	Is there an alternative method of Computing Earnings per share which is superior to the currently used EPS number.	Which Earnings per Share Comput'ion Results in the Most Realistic Measure
Daniel L. McDonald	"A Test Application of the Feasibility of Market-Based Measures in Accounting"	<i>Journal of Accounting Research</i> Spring 1968	whether Net Realizable value Is A Better Method of Accounting than Current Historical Costs	Feasibility and Dispersion of Depreciation Estimates
Edward W. McIntyre	"Current Cost Statements and Investment Decisions"	<i>Accounting Review</i> July 1973	Whether Investment Decisions Made By Investors Are Better when using Current Cost Information Than When Using Historical Cost Information	Yield Rate of Return on Investments
Russell J. Peterson	"A Portfolio Analysis of General price Level Re-statement"	<i>Accounting Review</i> July 1975	Whether General Price Level Statements Are Better Than Historical Cost Statements	The Impact on Systematic Risk of Individual Companies

firms. For example, Type II studies have been common in examining policy questions such as historical costs vs. current value accounting where current value accounting has not been allowed under GAAP. Authors have converted conventional historical cost statements, to current value statements by using some algorithm and then examined the differences between the real data and the hypothetical data. Common accounting policy studies using this type of research have been:

There are several methodological questions that must be addressed when conducting Type II studies. First, *one can never be sure that the conversion from the currently used alternative to the proposed alternative is adequate*. Certainly, there are many difficulties in converting from one method to another method, especially when the algorithm for conversion has not been completely specified by GAAP or the profession and when the conversions may not be consistent across research studies. A second potential methodological problem with Type II studies is that we are never sure if the firms *would have made the same decisions had they been using the alternative accounting method*. If they had made different decisions, the financial results could possibly have been different. Certainly, this problem creates a built-in bias in favor of the current method of accounting.

The third type of research studies, are those which we label Type III studies. Using this approach, authors use synthetic data and/or surrogate subjects for two different sets of firms or data. Using fabricated data, researchers attempt to assess differences or preferences between accounting alternatives. The most common types of Type III research studies are behavioral and simulation projects where either student surrogates or fabricated data are used to have investors or other user groups make decisions about accounting policy issues. There have been many studies of this type among which are the following:

With Type III studies, there are several potential problems that need to be considered. First, one must ask the question of whether

<TYPE III Studies>

Author	Title of Research Paper	Date of Research Paper	Accounting Policy Issue	Criterion Used To Judge Between The Alternatives
James M. Patton	"An Experimental Investigation of Some Effects of Consolidated Municipal Financial Reports"	<i>Accounting Review</i> April 1978	Are Fund-By-Fund or Consolidated Financial Reports Better For Municipalities	Which Resulted In A Better Interest Rate Decision
Lawrence A. Tomassini	"Assessing the Impact of Human Resource Accounting: An Experimental Study of Managerial Decision Preferences"	<i>Accounting Review</i> October 1977	Would Better Personnel Decisions Be Made With Conventional Accounting Data or Accounting Data Which Included Human Resource Accounting	Personnel Lay-off Decisions
William J. Bruns, Jr.	"Inventory Evaluation and Management Decisions"	<i>Accounting Review</i> April 1965	Is FIFO or LIFO preferable.	Are Better Production Advertising and Purchasing Decisions Made When Using FIFO or LIFO
Robert E. Jensen	"An Experimental Design For Study of the Effects of Accounting Variations in Decision Making"	<i>Journal of Accounting Research</i> Autumn 1966	Is FIFO or LIFO preferred and is Straight-line or Accelerated Depreciation preferred.	Better Investment Decisions
Melvin N. Greenball	"The Accuracy of Different Methods of Accounting For Earnings: A Simulation Approach"	<i>Journal of Accounting Research</i> Spring 1968	Which is the best alternative among Historical Cost, Business Profit, Current Operating Profit, Absorption Costing, or Direct Costing.	Prediction of Future Net Income

or not *the data are realistic*? Other questions are: (1) *are the results generalizable to the real world*, (2) *are the conversions or constructions of data (i.e., the algorithms) adequate*, and (3) *do users make decisions only on the basis of the information being considered* in the experiment and/or simulation. Each of these questions can affect the legitimacy of Type III research and certainly the combination of all four creates serious methodological problems.

### How Methodological problems Can Be Overcome

Thus far in this paper, we have discussed two different types of problems that affect accounting policy research. In so doing, it has not been our intent to suggest that the methods of research discussed are worthless and that there is no way to research accounting policy questions. In fact, we believe that an explicit recognition of these problems suggests at least two research strategies that would help validate the conclusions of policy-type research.

The first approach we suggest is the use of research methodologies that combine two or more of these three research strategies. If it can be shown for example, that Type I research studies on a particular policy issue result the same conclusions as Type II or Type III research studies on the same policy issue, then probably the individual limitations of each research methodology can be overlooked. In our review of the literature, we did not find many policy questions that had been systematically researched using similar judgment criteria but different research strategies. What we saw were numerous pieces of research, each using its own unique criteria and methodology without any thought about how their study fit in with other similar studies.

The second approach we suggest is the conducting of more repetitive types of studies. If, for example, it can be shown that two Type I research studies that use different data to research a policy question result in the same conclusions, then probably the limitations inherent in that type of research can be somewhat overlooked. The problem, however, is that currently there is no reward in our

profession for conducting repetitive research. Such research would probably neither be accepted for publication in any of our journals or be accepted as a dissertation at any of our reputable institutions. Thus, because of the disincentives to conduct repetitive research, we are again left with only isolated studies each using their own self-selected judgement criteria and/or methodology. Because of this problem, we would even go so far as to recommend that the *Accounting Review* or some other reputable journal contain a section where only "replication" results can be published.

Obviously, the use of multiple-and repetitive-type research strategies do not remove all of the problems inherent in conducting accounting policy research. Even if we overcome the methodology questions, we still have the two social choice problems (satisfying user preferences and choosing judgement criteria) that make it "impossible" to ever choose the best method. However, if only the "choice" problems were present, policy research could at least contribute, as May and Sundem suggest, to developing theories and policies that will settle specific policy issues. Until we remove or at least explicitly address the methodologic questions, however, we are not sure that research can make any kind of contribution. In fact, in our view, it is exactly these methodological questions and the resultant isolated studies that account for many of the reasons why accounting policy research hasn't had a greater impact in the profession. To our knowledge, accounting remains the only discipline that has not explicitly recognized replication studies as being extremely important. (See for example, Rose 1953.)

#### Summary Comments

In summary, we do not contend that the three policy research strategies described herein are the only types of accounting policy research that can be conducted. We do, however, believe that this paradigm represents a fairly inclusive taxonomy of accounting policy research and it is certainly easy to find many studies (in addition to those identified in this paper) that fall into this class-

ification scheme. We also believe that if accounting policy research is ever going to play an important role in policy decisions, the weaknesses inherent in each methodology must be explicitly recognized and mitigated. Presently, that does not appear to be happening.

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