AN INVESTIGATION OF THE RELATIVE IMPORTANCE OF THE CHARACTERISTICS OF INFORMATION IN GOVERNMENTAL FINANCIAL REPORTING

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ABSTRACT

In both its Concepts Statements, the Governmental Accounting Standards Board describes the basic characteristics of information in governmental financial reports and recognizes that the relative importance of the qualities may differ between groups of decision makers. This study examined the relative importance attached to the qualities by a sample that included preparers, auditors and users of governmental financial reports. The survey questionnaire was based on the Analytic Hierarchy Process and captured the respondents' perceptions through a series of tradeoffs between pairs of the qualities. Profile analysis was used to examine the responses for group differences. The results revealed differences between and within the group profiles that should be considered in future policy deliberations on the reporting model.

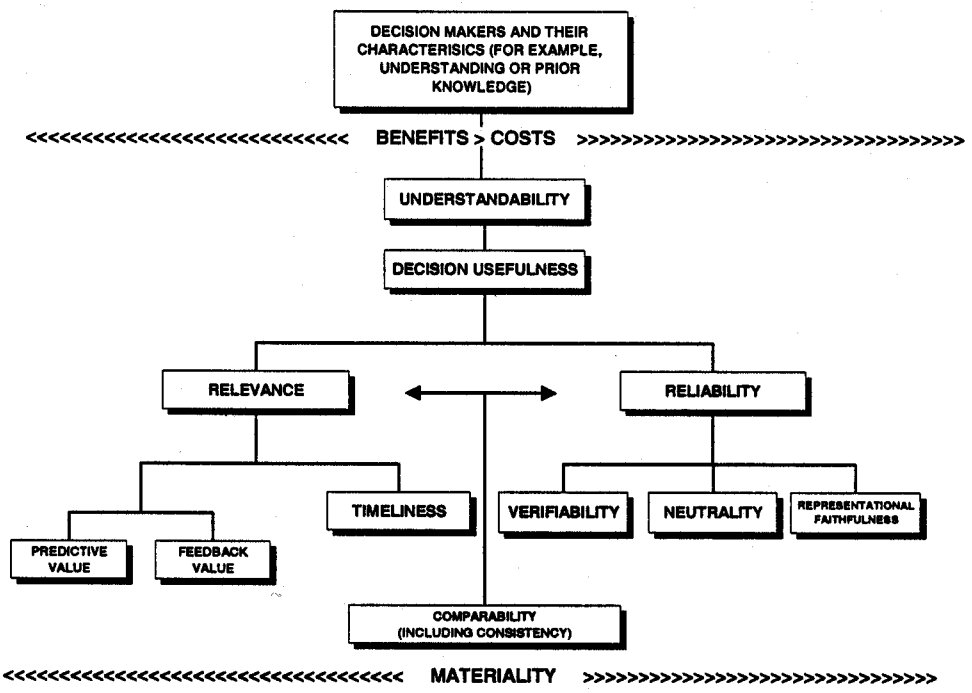
1. INTRODUCTION

In a discussion of the importance of high quality accounting standards, Securities and Exchange Commission (SEC) chairman Arthur Levitt [1998] indicated that educated investors need relevant, useful information to make their decisions. He stated, "I firmly believe that the success of capital markets is directly dependent on the quality of the accounting and disclosure system" [80]. In addition, he observed that developing high quality standards requires input from all stakeholders in capital markets including preparers, auditors and users of financial statements. Subsequently, members of each of these constituencies responded with commentaries that extend the discussion of the characteristics of high quality accounting standards [Imhoff, 1998].

A consensus of these commentaries is that proposed accounting standards should be consistent with both academic research and the conceptual framework underlying financial reporting. Smith [1998] asserted that the overriding consideration should be to provide more useful information to users of financial statements. He added, "If the needs of users were fully understood, evaluating standard-setting proposals would be easy" [164]. To support this process, academics need to direct research toward studying the information needs of users and the decision usefulness of information [Rogero, 1998; Linsmeier et al., 1998]. Jonas and Young [1998] extended this thinking by indicating that standard setters must become experts in the decision usefulness of information so they can balance the costs and benefits of financial reporting. Like Levitt [1998], they recognized that a user focus does not mean standard setters should ignore other constituents. Preparers and auditors can provide valuable input; however, "the standard setting process *begins* with understanding the decision usefulness of information" [Jonas and Young, 1998 p.154].

The Governmental Accounting Standards Board (GASB) began with a focus on the information needs of financial statement users and the decision usefulness of information. Concepts Statement No. 1 [GASB, 1987] states that financial reporting is a means of communicating financial information to assist users in assessing the accountability of governmental entities and making economic, social and political decisions. The statement describes the basic characteristics that the GASB believes information in financial reports must possess to be effective. The Board asserts these concepts will be used for evaluating existing and future financial reporting standards and practices. Concepts Statement No. 2 [GASB, 1994] reaffirmed the critical importance of information quality and the characteristics discussed in its Concepts Statement No. 1 [GASB, 1987] and Statement of Financial Accounting Concepts No. 2 (SFAC 2) of the Financial Accounting Standards Board [FASB, 1980].

Figure 1: A Hierarchy of Accounting Qualities



The GASB's [1999] current five-year strategic plan is a formal outreach program that emphasizes user involvement in the standard setting process. To support this initiative, the GASB is developing a comprehensive database of financial statement users, preparers and auditors. Clearly, the GASB and the FASB agree with the AICPA Special Committee on Financial Reporting [1994] that improving the decision usefulness of accounting information is essential for the accounting profession to continue to serve its customers. Achieving this goal requires an investigation, analysis and understanding of the qualitative characteristics that contribute to decision usefulness. While the GASB discusses the characteristics of financial information in both Concepts Statements, it [GASB, 1987, par. 62] refers readers to the FASB's more detailed discussion in which the qualities are presented as a hierarchy similar to Figure 1. This hierarchy of accounting qualities [FASB, 1980, par. 15] differentiates between primary and other qualities; however, it does not assign priorities among qualities. Both Boards [GASB, 1987, par. 72-74; FASB, 1980, par. 45] recognize that the relative importance of the characteristics may differ between groups of decision makers because they make different kinds of decisions and have different needs.

The hierarchy of accounting qualities is a schema for evaluating the decision usefulness of accounting information. Schema can be viewed as tree-like structures, similar to Figure 1, with a network of weights defining the connections between the elements [Rumelhart et al., 1986]. In unstructured judgmental tasks, such as evaluating accounting information, schema function as interpretive frameworks that influence inferences and predictions in schema-relevant domains and the confidence with which these judgments are made [Lord and Maher, 1991; Markus and Zajonc, 1985]. While schema contribute to the efficiency of information processing in a particular domain by focusing attention and cognition on important information, they are also a source of cognitive biases that can hinder effective problem solving. In a particular situation, individuals may not attend to potentially important information because it is inconsistent with the schema they developed in other circumstances. Also, individuals are likely to focus on different aspects of the environment because of differences in their schema. In this way, schema differences can contribute to communication and coordination problems that inhibit group functioning and problem solving.

It is likely that different groups of decision makers attach different weights to the characteristics in the hierarchy of accounting qualities because of their decision making experience [Lord and Maher, 1991; Markus and Zajonc, 1985]. Jonas and Young [1998] note fundamental differences between the training and experiences of accountants and users that produce a gap between the perceptions of accountants and users. Consequently, preparers and auditors may not attend to information that is potentially important to users because it is inconsistent with their schema.

As part of its original agenda-setting process, the GASB initiated a study [Jones et al., 1985] to examine the needs of users of governmental financial reports. The results are based on a survey of preparers and auditors as well as users to

determine whether their perceptions were consistent. While the questionnaire covered many subjects, one section asked participants to indicate how important they considered timeliness, consistency and comparability. However, the participants were not asked to make tradeoffs as occur in the standard-setting process. The study was intended to stimulate discussion and encourage further research about user needs.

Subsequently, Wilson [1990] investigated users', preparers' and attestors' perceptions regarding alternative reporting formats for governmental general-purpose financial statements. The study was an extension of the GASB financial reporting project. The analysis found differences among subgroups of the respondents. The study concluded that these differences need to be considered in future policy deliberations and that future research on users', preparers' and attestors' perceptions is essential.

As suggested by the GASB [1999, 1987], the AICPA [1994], Levitt [1998] and several commentators [Jonas and Young, 1998; Linsmeier et al., 1998; Rogero, 1998; Smith, 1998], this study attempts to contribute to developing a comprehensive database of financial statement users, preparers and auditors. It extends Jones et al. [1985] and Wilson [1990] by using AHP to elicit the relative importance attached to the qualitative characteristics by a sample that included preparers, auditors and users of governmental financial reports. With AHP, tradeoffs were made between qualities within each branch of the hierarchy of accounting qualities rather than comparing all the qualities to each other. Profile analysis was used to examine the relative importance attached to the qualitative characteristics for differences *between* the groups as well as for differences *within* each group.

2. DATA COLLECTION

2.1 Analytic Hierarchy Process

AHP was used to evaluate the hierarchy of accounting qualities. AHP was introduced by Saaty [1972, 1977] to assist a decision maker in evaluating complex judgmental problems involving qualitative criteria. AHP directs a decision maker to represent the problem as a hierarchy and assign weights to the qualitative criteria by making tradeoffs among them. Saaty [1987, p.157] noted that the special value of AHP is "it can be used to incorporate judgments on intangible criteria and other elements alongside tangible ones which have known measurements." Because of its intuitive nature and its power in solving complex judgmental problems, AHP has been applied to many diverse decisions [Zahedi 1986] and [Saaty 1990, 1994, 1999].

In the application of AHP to the hierarchy of accounting qualities, the problem was decomposed into three levels. The top level consisted of one factor, the overall goal of decision usefulness. The second level included five elements, the primary qualities of relevance and reliability, the constraints of materiality and costs, and the interactive quality of comparability. The third level of the hierarchy involved two branches. One branch was the ingredients of relevance; the other branch was the ingredients of reliability.

The AHP pairwise comparison procedure was conducted for each branch in the hierarchy of accounting qualities. The pairwise comparisons were made using the verbal scale in Figure 2. To proceed with the AHP computations, the verbal comparisons must be translated into the corresponding numeric scale. The details of the calculations have been explained by Saaty [1994, 1990].

Figure 2: AHP Pairwise Comparison Scale

AHP VERBAL SCALE	AHP NUMERIC SCALE
Extremely More Important	9
Very Strongly More Important	7
Strongly More Important	5
Moderately More Important	3
Equally Important	1
Moderately Less Important	1/3
Strongly Less Important	1/5
Very Strongly Less Important	1/7
Extremely Less Important	1/9

2.2 Survey Questionnaire

Group priority setting is by nature an interactive process. In this study, it was not possible to achieve interaction among the participants because of the large sample size. When these conditions exist, Saaty [1990, p.227] suggests that individual opinions be surveyed by questionnaire and that group weights be derived from the mean of the individual judgments.

A cover letter discussed the hierarchy of accounting qualities and the purpose of the study. The questionnaire asked the participants to make comparisons between pairs of the qualities. Figure 1 was included in the mailing with the questionnaire because it depicts the relationships discussed in SFAC 2 [GASB, 1987, par. 62] and provides the context for the pairwise comparisons. The comparisons were made using the AHP verbal scale. The first set of ten comparisons involves the primary qualities of relevance and reliability, the interactive quality of comparability and the constraints of materiality and cost. In the second set of six pairwise comparisons, the ingredients of each primary quality are compared.

To test for differences between groups of decision makers, the participants were asked to indicate the years of experience

they had in each professional activity. This part of the questionnaire was developed from the structured interview questionnaire used by Wilson [1990] to investigate the preferences of users, preparers and attestors regarding alternative formats for governmental financial reports. There is significant evidence from cognitive research that the schema individuals use to process information and make decisions develop gradually. Furthermore, they are difficult to alter, to ignore or to suppress once learned [Jonas and Young, 1998; Lord and Maher, 1991; Markus and Zajonc, 1985]. Therefore, the classification of a respondent was based on the professional activity in which the respondent had the majority of experience rather than the respondent's current position. For example, a respondent with ten years' experience as an auditor and five years as a preparer would be classified as an auditor. In addition, participants were asked to identify the primary group with which they identified their careers. Individuals who did not have the majority of their experience in one professional activity or did not identify their careers with their majority professional activity are less likely to be representative of a particular group. These individuals were excluded from the analysis.

2.3 Sample

The questionnaire was mailed to 600 individuals who were selected randomly from the national membership list of the AGA. Members of the AGA were surveyed for two reasons. First, they are likely to be familiar with GASB Concepts Statements. Second, AGA members work not only as auditors but also as preparers and users of governmental financial reports.

The initial mailing was followed by a reminder letter. A second mailing of the survey was sent two weeks after the initial request. The sample was reduced to 572 because subjects were unavailable. The three mailings resulted in a total of 309 returned questionnaires, a 54 percent response rate. This compares favorably to the 340 responses in the Jones et al. [1985] user needs survey and the 45.6 percent response rate in Wilson's [1990] survey of preparers, attestors and users of governmental financial reports. Five responses were incomplete, 14 respondents did not have a majority of experience in one professional activity, and nine did not identify their professional careers with the majority of their experience. Furthermore, 37 respondents were considered inconsistent because their consistency ratio was greater than 10 percent. Consequently, 244 responses were used. Results of analyses between early and late respondents indicated no significant differences in the weights assigned to the qualitative characteristics.

3. RESULTS

Profile analysis is a special case of the repeated measures design [Morrison, 1990; Looney and Stanley, 1989; Bray and Maxwell, 1985]. In this study, the repeated measures in an individual's profile were the relative weights assigned to the characteristics in the hierarchy of accounting qualities, and the group factor was based on the professional activity of the respondent.

3.1 Differences Between Group Profiles

All four multivariate test statistics from the MANOVA indicated a significant response-by-group interaction for the informational characteristics and the ingredients of both reliability and relevance.[1] Consequently, differences between the group profiles were examined by performing a separate ANOVA on the group weights for each quality, and the adjustment recommended by Looney and Stanley [1989] was used in calculating the significance levels. The F test from this ANOVA was significant at the .01 level for relevance, representational faithfulness, neutrality, predictive value, feedback value and timeliness.[2] For each of these qualities, the ANOVA results imply that at least one group assigned a weight to the quality that is different from the weights assigned by the other groups.

Next, the data were examined to assess the specific differences between the groups. The results of the Scheffe multiple comparison procedure are presented in Table 1.

Table 1: Scheffe Test Results *Between* Groups

Quality	Professional Group	Relative Weight	Scheffe* Grouping
	Users	.277	A
Relevance	Preparers	.249	A
	Auditors	.183	B
	Users	.094	A
Representational	Preparers	.094	A
Faithfulness	Auditors	.062	B
	Auditors	.103	A
Neutrality	Preparers	.053	B
	Users	.048	B
	Users	.103	A
Predictive	Preparers	.073	B
Value	Auditors	.051	C
	Preparers	.072	A
Feedback	Users	.065	AB
Value	Auditors	.053	B
	Users	.109	A
Timeliness	Preparers	.104	A
	Auditors	.079	B

*Relative Weights with the same letter are not significantly different at alpha = .05 with df = 241.

In this sample, users (.277) and preparers (.249) allocated significantly more weight to relevance than auditors (.183). Among the reliability ingredients, both users (.094) and preparers (.094) gave more weight to representational faithfulness than auditors (.062). In contrast, auditors (.103) assigned more importance to neutrality than either preparers (.053) or users (.048). Among the relevance ingredients, users (.109, .103) and preparers (.104, .073) gave more weight to timeliness and predictive value than auditors who assigned .079 to timeliness and .051 to predictive value. In addition, preparers (.072) placed more emphasis on feedback value than did auditors (.053).

3.2 Differences Within Group Profiles

Because the response-by-group MANOVA results revealed the possibility of a significant interaction effect, differences within each group profile also were examined by performing a separate ANOVA on the weights for each group. In addition, the adjustment recommended by Looney and Stanley [1989] was used in calculating the significance levels. The F tests from these ANOVAs indicated differences within all the group profiles that were significant at the .01 level for the informational characteristics, the reliability ingredients and the relevance ingredients.[3]

Table 2: Scheffe Test Results *Within* Groups

	Preparer(df=270)		Auditor(df=615)		User(df=320)	
Informational Characteristics	**Relative Weight**	**Scheffe* Grouping**	**Relative Weight**	**Scheffe* Grouping**	**Relative Weight**	**Scheffe* Grouping**
Reliability	.245	A	.261	A	.231	A
Relevance	.249	A	.183	B	.277	A
Materiality	.243	A	.269	A	.239	A
Comparability	.158	B	.169	B	.152	B
Cost	.105	C	.118	C	.101	C
Reliability Ingredients	**Preparer(df=162)**		**Auditor(df=369)**		**User(df=192)**	
	Relative Weight	**Scheffe* Grouping**	**Relative Weight**	**Scheffe* Grouping**	**Relative Weight**	**Scheffe* Grouping**
RepresentationalFaithfulness	.094	A	.062	B	.094	A
Verifiability	.098	A	.096	A	.089	A
Neutrality	.053	B	.103	A	.048	B
Relevance Ingredients	**Preparer(df=162)**		**Auditor(df=369)**		**User(df=192)**	
	Relative Weight	**Scheffe* Grouping**	**Relative Weight**	**Scheffe* Grouping**	**Relative Weight**	**Scheffe* Grouping**
Timeliness	.104	A	.079	A	.109	A
Predictive Value	.073	B	.051	B	.103	A
Feedback Value	.072	B	.053	B	.065	B

*Weights with the same letters are not significantly different at alpha = .05 with df in parentheses.

[1] The probability reported in the response-by-group MANOVA for the informational characteristics was .000 [F(10,476)=3.750] for Pillai's Trace, .000 [F(10,474)=3.890] for Wilk's Lambda, .000 [F(10,472)=4.029] for Hotelling-Lawley Trace and .000 [F(5,238)=8.084] for Roy's Greatest Root. The probability reported in the response-by-group MANOVA for the reliability ingredients was .000 [F(6,480)=16..001] for Pillai's Trace, .000 [F(6,478)=17.854] for Wilk's Lambda, .000 [F(6,476)=19.730] for Hotelling-Lawley Trace and .000 [F(3,240)=39.620] for Roy's Greatest Root. The probability reported in the response-by-group MANOVA for the reliability ingredients was .000 [F(6,480)=8.785] for Pillai's Trace, .000 [F(6,478)=8.944] for Wilk's Lambda, .000 [F(6,476)=8.128] for Hotelling-Lawley Trace and .000 [F(3,240)=15.522] for Roy's Greatest Root.

[2] In this study, the repeated factors were the relative weights assigned to the qualities within each branch of the hierarchy. Therefore, p=5 for the informational characteristics, and p=3 for the relevance ingredients and the reliability ingredients. The adjusted significance levels (α/p) were .01/5 (.002) and .05/5 (.01) for the informational characteristics and .01/3 (.0033) and .05/3 (.0167) for the reliability and relevance ingredients. The probability reported in the ANOVA was .000 [F(2,241)=19.353] for relevance, .000 [F(2,241)=12.390] for representational faithfulness, .000 [F(2,241)=32.317] for neutrality, .000 [F(2,241)=21.107] for predictive value, .002 [F(2,241)=6.389] for feedback value and .000 [F(2,241)=8.299] for timeliness.

[3] In this study, the groups were preparers, auditors and users of financial reports; therefore, g=3. The adjusted significance levels (α/g) were .01/3 (.0033) and .05/3 (.0167). The probability reported in the ANOVAs on the informational characteristics was .000 [F(4,270)=19.757] for preparers, .000 [F(4,615)=47.149] for auditors, and .000 [F(4,320)=32.090] for users. The probability reported in the ANOVA on the reliability ingredients was .000 [F(2,162)=8.338] for preparers, .000 [F(2,369)=19.054] for auditors and .000 [F(2,192)=18.842] for users. The probability reported in the ANOVAs on the relevance ingredients was .007 [F(2,162)=5.099] for preparers, .000 [F(2,369)=23.103] for auditors, and .000 [F(2,192)=11.260] for users.

The Scheffe multiple comparison procedure was used to examine the differences within each group profile, and the results are presented in Table 2. In this sample, both the preparer and user groups viewed relevance as a primary quality while the auditors attached less importance to relevance than reliability. For each group, the weight assigned to materiality was not significantly less than the weight assigned to either relevance or reliability. These weights are consistent with the perspective that materiality is a pervasive attribute to be considered as it relates to relevance and reliability. Furthermore, cost did not appear to be an important constraint to disclosing decision useful information for the participants in this study; it was given the least weight by each group. Also, the relative importance assigned to comparability by all the professional groups is consistent with its designation as a secondary quality.

When the ingredients of reliability were compared, the auditors assigned more importance to neutrality and verifiability than representational faithfulness. In contrast, the preparers and users assigned neutrality a significantly lower weight than the other reliability ingredients. When the ingredients of relevance were evaluated, no ingredient was assigned more weight than timeliness by any group.

4. CONCLUSION

The results support the expectation that the relative importance of the characteristics of information in financial reporting differs between groups of decision makers [Wilson, 1990; GASB, 1987; Jones et al., 1985]. The preparers, auditors and users in the sample disagreed about the relative importance of relevance, representational faithfulness, neutrality predictive value, feedback value and timeliness. The results also revealed differences within each group's profile at each level of the hierarchy. Both the differences between the groups and the differences within the group profiles reflect the kinds of decisions associated with the professional activity of the groups. Auditors gave reliability more weight than relevance, and they assigned neutrality more importance than either the preparers or users in the sample. In contrast, the user group gave relevance, representational faithfulness, predictive value, feedback value and timeliness more weight than did the auditors.

These group differences present an important issue to the GASB as well as to the FASB and other accounting policy makers. The AAA Committee on Accounting and Auditing Measurement [Barrett et al., 1991, p.89] declares, "The primary criterion must be that the information provided by the reporting system should be relevant to the needs of the user." The group differences and the lack of input by users create difficulties for the GASB in evaluating the decision usefulness of its proposed standards [Levitt, 1998, p.79-80; Smith, 1998, p.164; Jonas and Young, 1998, p.154-157; GASB 1994, par. 73-74; Tandy and Wilburn, 1992, p.58]. Furthermore, the results show that cost does not appear to be an important constraint to disclosing useful information; it was given the least weight by each group in the sample.

The limitations of this study include those that are inherent in all survey studies. One of these limitations is questionnaire reliability. Pilot testing and interviewing of those who tested the instrument were performed to minimize problems with the wording of the questionnaire and with the context and order of the pairwise comparisons. Another limitation involves the potential for response bias, which was tested by comparison of early and late respondents. While the analysis in this study revealed several significant differences between the preparer, auditor and user groups, it is possible that the differences were underestimated or other differences were undetected because of the existence of subgroups. An extension of this research would be to segment the user group into the subgroups identified by the GASB [1987] and Wilson [1990]. Although the sample includes individuals who identified themselves as having the majority of their experience as preparers, auditors and users of financial reports, there is a limitation in extending the results to other than those in the sample.

Continuing research is essential to bridge the gap between users and standard setters. The GASB [1994, par. 69-73] itself emphasizes the importance of "extensive experimentation" to determine if reporting standards "possess the necessary characteristics of accounting information." Similarly, the Institute of Management Accountants (IMA) believes that research methods are needed to support the standard setting process. L. Hal Rogero [1998, p.183], the IMA Financial Reporting Committee chairperson, suggests a short interactive questionnaire on the FASB web site to obtain constituents' perceptions of the extent to which the desired characteristics are present in a proposal. The AHP questionnaire in this study is a simple mechanism that has been used in interactive settings and could provide both the GASB and the FASB with the simple interactive questionnaire that Rogero suggests.

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