

A Study of the Importance of Certain Attributes To Clients' Initial Selections of Audit Firms: A Longitudinal and Stratified Approach

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Abstract

This study examines the importance of certain accounting firm characteristics--reputation, personnel, industry experience, and fee--to the selection of audit firms by publicly-traded corporations. Client perceptions of these attributes were assessed to determine: (1) possible longitudinal changes in the relative importance of these attributes to clients' selections, and (2) possible concurrent differences in the relative importance of these attributes to two different client strata--large versus small corporations. Using conjoint analysis, interval measures of the relative importance of each firm attribute were determined. The results of this study indicate that large and small corporations have very different relative preferences for characteristics of audit firms. In addition, the importance attached to certain attributes of audit firms by large and small clients appears to be stable over time.

Introduction

This study was conducted over several years in three phases to meet two major objectives: (1) to identify possible longitudinal changes in the relative importance of accounting firm attributes to clients' selections of audit firms, and (2) to identify possible concurrent differences in the relative importance of audit firm attributes as evaluated by two important and potentially diverse client strata—large versus small corporations.

Using a method of analysis from marketing research (conjoint measurement), the importance of four specific large accounting firm characteristics was measured for the first time. This analysis extends previous research concerning the marketplace for audit services. In addition, the results of this study provide further evidence in two specific areas important to the audit marketplace: the pricing of audit services and the importance of reputation in the client-auditor relationship.

Further, by investigating the longitudinal changes in the auditor selection process, insight may be gained into the possible effects resulting from the increasingly

competitive market for audits. In addition, the comparison of concurrent differences in the auditor selection process, based on client company size, provides still further information regarding this selection process. The insight gained from these two perspectives may help accounting firms assess the propriety of continuing their current approaches to attracting new clients, given the possible negative consequences associated with some strategies.

The study is described in four parts. First, a review of the related literature is presented. Next, the research design is described. The results are then presented from both a longitudinal and a concurrent, stratified perspective. Finally, the study is summarized and conclusions are drawn.

Framework for the Study

Prior Studies of the Auditor Selection Process

Despite the increased emphasis on marketing by accounting firms, few empirical studies have focused on

clients' reactions to the accounting firms' marketing efforts. Because client companies' perceptions are the target of the marketing strategies, it is important to examine the impact of the marketing competition from the consumers' side of the marketplace rather than the sellers' side.

Some research studies in the 1970s did provide empirical evidence about the various attributes of accounting firms that were important to a client's selection process. The Berlin and Walsh study (1972) was one of the first to survey a group of financial executives in an attempt to identify criteria used to select an accounting firm. Barlev (1977) also researched the selection function but considered only qualitative aspects of the selection process. Cost (fee) was not included for evaluation by the newly-formed, medium-sized industrial companies surveyed, and this omission may be a major deficiency.

The importance of fee to the selection process has varied among studies. A survey by Management Analysis Center, Inc. for *Directors & Boards* (1977) indicated that price was one of the three most important factors in the decision to hire a new firm. However, fee was regarded as relatively unimportant in two other surveys, one conducted by Wood and Ball (1978) and another sponsored by Deloitte Haskins & Sells (1978). The latter was a comprehensive study in the area of auditor selection with the largest number of respondents and the most factors available for evaluation by respondents. Although these surveys contained some similarity, few consistent conclusions about the importance of various criteria to the selection of an accounting firm can be drawn. Possibly these inconsistencies were the result of an incomplete analysis of the marketplace for audit services.

Later studies examined the structure of competition in the audit services market. Shockley and Holt (1983) investigated the ability of bank executives to differentiate among the Big Eight firms along certain qualitative dimensions and concluded that differentiation was possible. Shields (1984) further refined the supply side of the marketplace by examining product differentiation among small CPA firms. Using a lens model, Shields identified several factors important in the marketing strategies for small CPA firms. Danos and Eichenseher (1986) addressed competition among the Big Eight firms from the perspective of auditor concentration. They found that market share positions of the Big Eight firms may not be detrimental to competition.

These earlier studies provide a framework for the development of the current study. However, several issues existed in the earlier studies that required refinement in the design of this study. The first issue is that some of the prior studies involving auditor choice (e.g.,

Management Analysis Center, 1977; Eichenseher and Shields, 1980) did not differentiate between the auditor change process, the auditor retention process, and the auditor selection process.¹ These could be distinct decisions involving different variables and may result in different evaluations by clients. For example, the change process usually involves a negative aspect—dissatisfaction with some trait of the currently engaged accounting firm (e.g., dissatisfaction with the working relationship or failure to produce timely reports), whereas an initial selection of a new firm is generally based on positive impressions of firms under consideration (e.g., strong reputation or industry specialization). A retention decision may involve both the current accounting firm and newly considered firms and, therefore, may have a mixture of attributes to consider. That is, a retention decision may include the evaluation of some criteria, such as quality of services performed or ability to meet deadlines, that can only be assessed through a prior association with a CPA firm and may not even enter into an initial selection. To minimize confounding of the decision process, the current study focuses on the initial selection process only. However, the attributes involved in an initial selection would also be relevant to a change or retention decision.

A second issue in some prior research is the failure to distinguish between a selection process that involves only very large CPA firms and one that also includes local or regional accounting firms (e.g., Berlin and Walsh, 1972; Wood and Ball, 1978; and Management Analysis Center, 1977). Some factors, like location of the office or provision of a full range of auditing and related services, would not enter into a selection decision when only national accounting firms are considered. For this reason, the current study only includes attributes relevant to the selection of large, national accounting firms.

A third area of concern is the narrow focus on the importance of fee. The interest in price-cutting, or "low-balling," has precipitated several studies with contradictory findings concerning the existence of price-cutting (Francis and Simon, 1987; Francis, 1984; Simon and Francis, 1988; Simunic, 1980; Turpen, 1990) and its effects (DeAngelo, 1981). The diversity of the conclusions in these studies may be due to the fact that the importance of fee has often been investigated independently of the total selection process, which in reality involves trade-offs among important criteria.

Because client perceptions are complex considerations of alternatives that fall along more than a single dimension, the current study was designed as a multiattribute choice problem. In a multiattribute selection process, respondents ("consumers") must judge the relative value of the identified criteria and must be able to trade off unfavorable conditions of some attributes for favorable conditions in others. Clearly, auditor selection by

clients is a multivariate process that cannot be compressed into a single objective function like cost minimization.

Selection of Attributes

To determine the relevant attributes to be included in the current study, research studies conducted prior to the inception of this study (Berlin and Walsh, 1972; Wood and Ball, 1978; Management Analysis Center, 1977; Deloitte Haskins and Sells, 1978; George and Solomon, 1980; and Eichenseher and Shields, 1980) were examined. There were 34 criteria mentioned in these previous studies involving the selection process. These criteria were evaluated and collapsed into four underlying dimensions, as follows. A few of the 34 criteria were immediately omitted from this study because they involved a change or retention decision and did not necessarily enter into the selection process. (See prior discussion.) Many of the remaining characteristics were in fact similar descriptions of a more global dimension. For example, "overall reputation," "reputation within the profession," "not being involved in embarrassing litigation," and "recommendations by professionals," are all specific ways of describing a firm's reputation. Similarly, "technical competence of the staff," "accessibility of top people," and "personal chemistry" are all reflections of a firm's personnel.

Based upon the remaining characteristics from the six studies reviewed, a judgmental formulation yielded eight dimensions. Four of these dimensions--"services provided by CPA firm," "location of CPA firm," "ethical standards of CPA firm," and "proposal process of CPA firm"--were judged to be attributes that would be hard to differentiate in a selection process that involves only the largest accounting firms. In addition, it is important in a conjoint analysis (such as used here) to eliminate insignificant attributes in order to best measure the important ones (Kohli, 1988). As a result, four dimensions, or factors, emerged as the research attributes important to (1) the evaluation of a large accounting firm (as opposed to a local or regional firm) and (2) the initial selection of an accounting firm (as opposed to a retention or change decision).

These four factors--reputation, personnel, industry experience, and fee--have been identified in past research with consensus as being important to a client's initial selection of a large accounting firm. Additionally, these are the dimensions along which the largest accounting firms have aggressively attempted to differentiate themselves. Further, intensive interviews with partners of each of the Big Eight firms confirmed the significance of these four attributes in the marketplace. Therefore, these four attributes were used to structure the multiattribute choice problem presented to client representatives.

Design of the Study

To measure both the concurrent (stratified) and longitudinal perceptions involved in public corporation's selections of audit firms, this study was conducted in three phases. Phase I was completed in 1981 and involved only Big Eight clients with sales over \$200 million (large corporations). Phase II was conducted in 1984 and involved only Big Eight clients with sales under \$25 million (small corporations). Finally, Phase III was completed in 1987 to compare both large and small client perceptions within the same time frame.²

Data Collection

Data for each phase of the study were collected through national mail surveys. This national scope permitted a cross-section of responses and minimized any regional bias to overall perceptions of audit firms.

Because the study was designed as a multiattribute choice problem, several factors had to be considered in choosing the survey population. For example, one desirable condition in a study of this nature is that the respondents should have reasonably congruent perceptions of the audit firm profiles; therefore, identifiable intervening variables must be controlled to the extent possible. A homologous group of survey respondents minimizes the effect of intervening variables. For this reason, public companies of two sizes--(1) sales over \$200 million and (2) sales under \$25 million--listed as Big Eight clients in *Who Audits America* constitute the survey population. These groupings, based both on corporate sales volume and on the nature of reporting requirements (SEC jurisdiction), provide some control over the size of the client companies, the nature of their relationships with audit firms, and the size of the audit firms involved.

Individual subjects were needed to respond to the survey because perceptions of individuals can best be measured. Within a corporation, various individuals can be identified who are involved in the auditor selection process. In practice, the choice of auditors is generally made by top management acting for stockholders. The selection of the audit firm is then ratified by the audit committee, board of directors, and the stockholders. However, some of the prior research cited has indicated that chief financial officers (CFOs) are in a position to influence the decision. Their expertise and close working relationship with the auditors are additional validation of their choice as the client representatives in the study.³

In Phase I, completed in 1981, a survey of 125 randomly selected large Big Eight audit clients were surveyed. The response rate was 76% usable responses. Kendall's coefficient of concordance (W) was calculated

for the respondents' preference rankings and was found to be .750, a high degree of agreement among the rankings.

To examine the effect of client company size on the selection process, Phase II of the study was undertaken in 1984, whereby 120 randomly selected CFOs were surveyed as representatives of small Big Eight audit clients. The response rate to this survey was 46%. Kendall's coefficient of concordance for this group of respondents was found to be .723, which also reflects a high degree of agreement among the rankings.

The differences in the results from the first two phases, presented in a later section, could be due to the size of the corporations responding, but could also be explained by changes in the accounting marketplace in the intervening three years. Therefore, to investigate the stability of client evaluations of accounting firm attributes over time as well as to gather additional information about the effect of corporation size on the evaluation of an audit firm, a third phase of the study was undertaken.

In Phase III of the study, the focus was on the stability of client perceptions--over time and in consideration of sensitization to the marketing atmosphere. Two additional surveys were simultaneously conducted on random samples of both large client companies (Phase

IIIa) and small client companies (Phase IIIb). The response rates were 41% and 40%, respectively. Kendall's coefficient of concordance was .725 for the large clients and .710 for the small clients. Table 1 summarizes the data collection results from all three phases.

In each phase of the study, the identical survey instrument was used. Since the attributes being studied could have been construed differently by individuals and this could have led to overlapping of interpretation of the variables, the CFOs first were provided with guideline definitions of the four research attributes--reputation, personnel, industry experience, and fee. These attributes were operationalized by providing the respondents with the specific descriptions that had been used in the prior research studies involving auditor selection and cited earlier. Reputation was defined as perception of the overall reputation of the firm and its partners, public and community endeavors undertaken by firm members, awareness of any litigation involving the firm, and recommendations and referrals from business associates. Personnel included personalities of the audit team, depth and technical competence of the firm's personnel, perceived accessibility and responsiveness of the partners and other staff members, and any personal connections with firm members. Industry experience meant experience in the client's field, and fee was the proposed fee to perform the next year's

Table 1
Summary of Study Design

| | <u>Phase I</u> | <u>Phase II</u> | <u>Phase IIIa</u> | <u>Phase IIIb</u> |
|--------------------------------------|----------------|-----------------|-------------------|-------------------|
| Time Frame | 1981 | 1984 | 1987 | 1987 |
| Size of Audit Client * | Large | Small | Large | Small |
| Sample Size | 125 | 120 | 125 | 120 |
| Number of Usable Responses | 95 | 55 | 51 | 48 |
| Usable Response Rate | 76 % | 46 % | 41 % | 40 % |
| Kendall's Coefficient of Concordance | .750 | .723 | .725 | .710 |

* Large audit clients are those with sales over \$200 million.
Small audit clients are those with sales under \$25 million.

accounting services. The respondents were instructed to consider any other criteria (size, geographic location, range of services provided, or ethical standards) to be equivalent for all candidate firms.

The respondents were then asked to rank order nine hypothetical CPA firm profiles in order of preference. In this study, there were four attributes of interest with three levels each. The levels represented above average, average, or below average conditions of each attribute, thereby leading to a total number of possible descriptions of 3^4 or 81. To reduce this number to a manageable size for a survey, while still maintaining orthogonality, a fractional factorial design suggested by Addelman (1962) was used. This plan specified nine profiles as identified in Exhibit I.⁴

Each profile contained a randomized description (level) of each of the four characteristics being studied. To minimize lexicographic processing by the respondents, the nine firm profiles presented in the survey (again refer to the Appendix) were balanced as to the attribute appearing first and then randomized within. To rank the nine profiles, respondents had to trade off unfavorable conditions of some attributes for favorable conditions of others.

Analysis Approach

The data were analyzed using a method from the field of mathematical psychology and psychometrics: numerical conjoint measurement (NCM). Although conjoint measurement has been used extensively in marketing research, its use in accounting research has been limited.⁵

Conjoint measurement is an approach used to measure the relative importance of each single attribute in contributing to an overall consideration of a concept. In other words, it is possible to measure simultaneously the joint effects of the attributes--the independent variables--on the order of the dependent variable--a judge's rank or rating of attitudes about the attributes. By doing this, the output of a conjoint analysis--relative importance--is measured on an interval scale, although the input involves only the ordinal properties of the data.

The ability to use ordinal data rather than interval data on a dependent variable of interest causes conjoint measurement to be a method of particular interest in evaluating perceptions, primarily because subjects find expression of preference or perception easier using ordinal responses. Additionally, variables of interest such as attitudes are difficult to measure on stronger scales such as interval or ratio.

The main idea in NCM is to find a monotonic transformation of the original data such that the transformed

data can be expressed as the sum of main effects. To do this, either analysis of variance or dummy variable regression analysis can be used. Many studies have transformed the data by using a computer program known as MONANOVA (Kruskal and Carmone, 1969), when the additive model was assumed to represent the structural form of the judgment process. For the purposes of this study, the additive model was considered appropriate, since substantial evidence exists to indicate that a simple additive model is capable of capturing most of the predictable judgment variance even though the actual judgment model may not be additive (Messier and Emery, 1980; Emery et al., 1982).

Since one of the objectives of this study was to compare results over three phases, it was considered prudent to employ the same conjoint measurement procedure (NCM, assuming an additive model) and the same transformation program (MONANOVA) in the data evaluation. In addition, despite refinements in conjoint methodology, NCM has been proven to be robust (Emery et al., 1982).

The basics of MONANOVA--a monotone regression--are the same as those of an iterative regression. However, in a monotone regression, an attempt is made to fit a monotone function that estimates distances between the objects or factors in such a way that the subject's rank order of the factors is maintained. The monotone regression starts with a configuration of independent variables (objects) in some dimension and then estimates the distances between the objects that produce the monotone function that is best fitting in terms of minimizing deviations between the initial distances and the estimated distances. While the criterion for terminating an iterative regression is a set of weights that is maximally correlated with the dependent variable, in a monotone regression the best fit is the set of weights that minimizes those deviations between the original transformed variables and the fitted values. This minimization statistic is called STRESS. Actual STRESS values achieved for this study are discussed below.

Aggregation of Responses

The responses in each of the phases were treated as groupings comprised of all the respondents taken as a whole. This group procedure allows the interpretation of data regarding attribute preferences for large accounting firms as a segment of the accounting marketplace. In other words, this study did not concentrate on the preferences of an individual Big Eight client. Instead, the study was directed at the way in which Big Eight clients as a (consumer) group attach importance to certain attributes of CPA firms. Consequently, the aggregation of individual client preference rankings--as opposed to individual perception analysis--was deemed

Exhibit I Orthogonal Design of the Research Instrument (Attribute/Level Descriptions)

FIRM 1

REPUTATION: The CPA firm's reputation is excellent.

PERSONNEL: We are favorably impressed with the personnel of the CPA firm.

INDUSTRY EXPERIENCE: The CPA firm has a great deal of experience in our industry.

FEE: The proposed fee is appreciably higher than our company had anticipated.

FIRM 2

REPUTATION: The CPA firm's reputation is mediocre.

PERSONNEL: We are favorably impressed with the personnel of the CPA firm.

INDUSTRY EXPERIENCE: The CPA firm has some experience in our industry.

FEE: The proposed fee is significantly lower than our company had anticipated.

FIRM 3

REPUTATION: The CPA firm's reputation is poor.

PERSONNEL: We are favorably impressed with the personnel of the CPA firm.

INDUSTRY EXPERIENCE: The CPA firm has no experience in our industry.

FEE: The proposed fee is about what our company had anticipated.

FIRM 4

REPUTATION: The CPA firm's reputation is excellent.

PERSONNEL: We are indifferent about the personnel of the CPA firm.

INDUSTRY EXPERIENCE: The CPA firm has some experience in our industry.

FEE: The proposed fee is about what our company had anticipated.

FIRM 5

REPUTATION: The CPA firm's reputation is mediocre.

PERSONNEL: We are indifferent about the personnel of the CPA firm.

INDUSTRY EXPERIENCE: The CPA firm has no experience in our industry.

FEE: The proposed fee is significantly higher than our company had anticipated.

FIRM 6

REPUTATION: The CPA firm's reputation is poor.

PERSONNEL: We are indifferent about the personnel of the CPA firm.

INDUSTRY EXPERIENCE: The CPA firm has a great deal of experience in our industry.

FEE: The proposed fee is significantly lower than our company had anticipated.

FIRM 7

REPUTATION: The CPA firm's reputation is excellent.

PERSONNEL: We have some negative impressions of the personnel of the CPA firm.

INDUSTRY EXPERIENCE: The CPA firm has no experience in our industry.

FEE: The proposed fee is significantly lower than our company had anticipated.

FIRM 8

REPUTATION: The CPA firm's reputation is mediocre.

PERSONNEL: We have some negative impressions of the personnel of the CPA firm.

INDUSTRY EXPERIENCE: The CPA firm has a great deal of experience in our industry.

FEE: The proposed fee is about what our company had anticipated.

FIRM 9

REPUTATION: The CPA firm's reputation is poor.

PERSONNEL: We have some negative impressions of the personnel of the CPA firm.

INDUSTRY EXPERIENCE: The CPA firm has some experience in our industry.

FEE: The proposed fee is appreciably higher than our company had anticipated.

essential to the assessment of attribute significance at the segment level (Kohli, 1988).

Various possibilities exist for the aggregation of individual client preference rankings (Green and Rao, 1971). For example, each respondent's scale values could be determined separately and then grouped; or, average rankings could be obtained for a group as a whole and then analyzed. A third possibility is to identify groups with similar points of view and develop a separate set of scales for each group. This third approach was used in the current study because of its value in linking between-group differences with other (background) characteristics of the evaluators (Green and Rao, 1971, p. 360).

NCM was performed on each grouping (i.e., research phase) comprised of respondents considered to have similar points of view (publicly-traded Big Eight clients of the same relative size).⁶ The total number of responses included in the group was equal to the number of replications per cell in the MONANOVA program. That is, all respondents' scale values for each of the nine

individual hypothetical firm profiles were entered simultaneously in the MONANOVA program (see Kruskal and Carmone, 1969). This approach yields the actual group utilities or part-worths functions derived for the attributes. Therefore, the conjoint analysis of the group reflects the actual preferences for the group as a whole.

The STRESS factors for each research phase are shown in Table 2. Since a group conjoint analysis was performed, STRESS has no logical, theoretical interpretation. STRESS factors are rules of thumb for evaluating a fit between an individual's model and a data set. Thus, interpretation of STRESS achieved on a group analysis is a complex problem in subjectivity, where a zero STRESS factor is not expected, but a relatively low factor would be desired. The problem is in deciding what STRESS is acceptable for relative lowness, when no ad hoc rules exist for interpreting STRESS on a group analysis (Messier and Emery, 1980).

Because of the interpretation problems related to the STRESS measure, a second measure of fit, known as

Table 2
Summary of Fitness Factors

| <u>Group</u> | <u>Number in Group</u> | <u>STRESS*</u> | <u>PRECAP</u> |
|----------------------------------|------------------------|----------------|---------------|
| Phase I: Large Clients (1981) | 95 | .332 | .801 |
| Phase II: Small Clients (1984) | 55 | .417 | .758 |
| Phase IIIa: Large Clients (1987) | 51 | .335 | .789 |
| Phase IIIb: Small Clients (1987) | 48 | .269 | .783 |

* STRESS is computed as follows [Green, 1978]:

$$\text{STRESS} = \left[\frac{\sum_{i=1}^n (Z_i - z_i(\beta))^2}{\sum_{i=1}^n (z_i(\beta) - \bar{z}(\beta))^2} \right]^{1/2}$$

where

$\bar{z}(\beta)$ = mean of the predicted values $z_i(\beta)$

n = number of items to be ranked

predictive capability or PRECAP, was also determined. PRECAP is the percentage of correct (relative to the original data set) two-pair comparisons within the scaled data set. The PRECAP measure is determined as a linear transformation $[(1+\tau)/2]$ of Kendall's tau (Emery et al., 1982). The PRECAP measures for each phase of this study, shown in Table 2, indicate that the additive model is a reasonable assumption for this group analysis. In fact, these PRECAP measures suggest a remarkably good fit for such large groups.⁷

Results

The results of a conjoint analysis are the utilities or part-worths functions associated with the attributes being studied and the relative importances of the attributes that can be inferred from those functions. The utility of an attribute is its value to the decision maker. That is, utility is a measure of willingness to trade or give up some of one characteristic to get more of another. The attributes that are most important to a decision maker will have the highest utilities. Conversely, the least significant characteristics will have the lowest utilities. A positive slope indicates that the utility for an attribute increased as the attribute description became more desirable. A steep slope indicates that an attribute strongly contributed to the evaluation, while a flatter slope shows that a variable had little effect.

Although the utility scales provide some indication of the importance of the attributes, another way to infer the relative importance of each attribute is to measure

the ratio of its scale value range to the sum of all four factors' scale value ranges. The computation of these normalized weights are reported in Table 3.

Because both the utility functions and the relative importances of the attributes provide valuable information for the analysis, each is examined from two perspectives in the following sections. First, comparisons are made between (1) the two large client groups (Phase I versus Phase IIIa) and (2) the two small client groups (Phase II versus Phase IIIb), both over time. Second, the large client group is compared with the small client group within the same time period (Phase IIIa versus Phase IIIb).

Utility Functions: Comparisons over Time

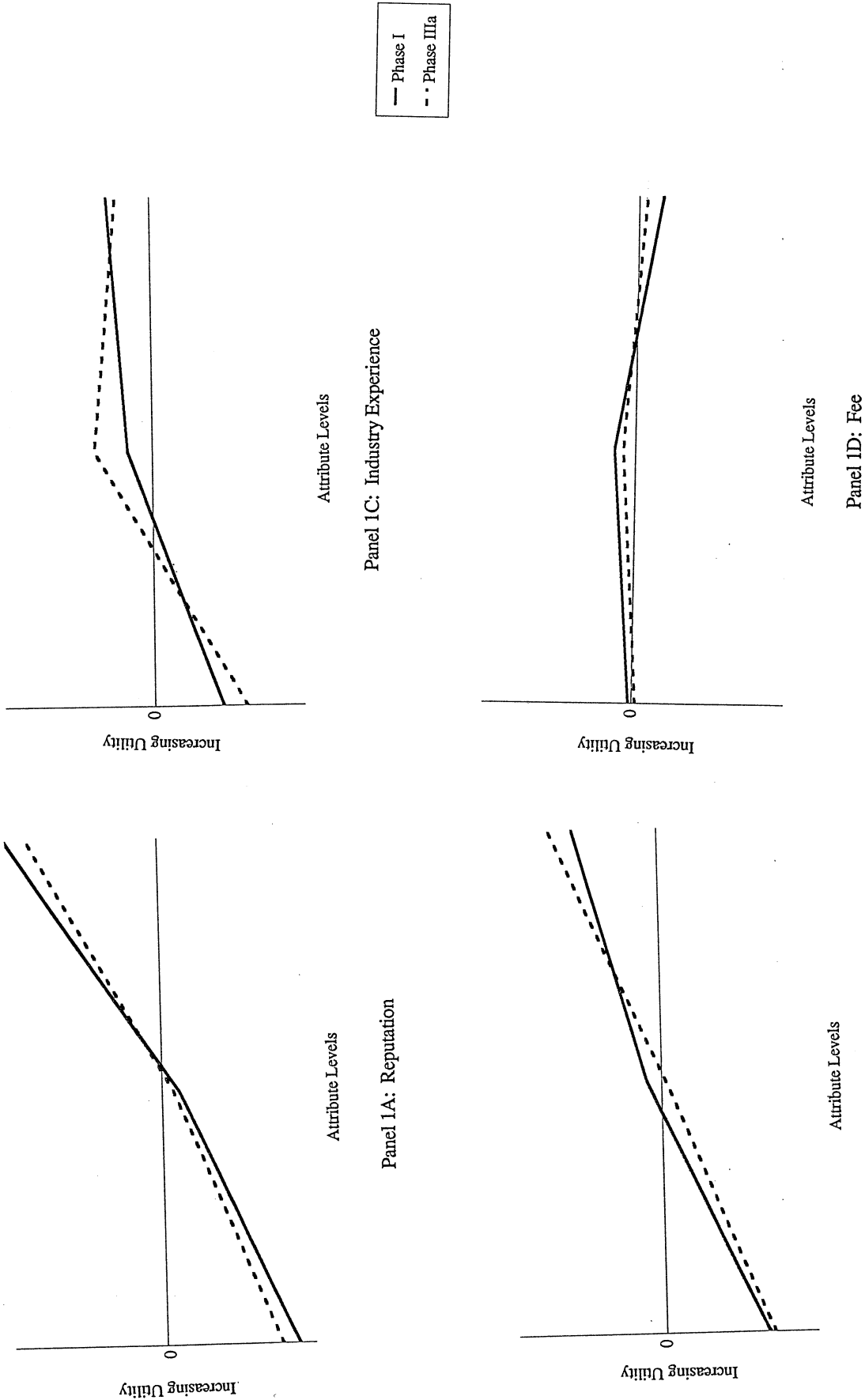
Figure 1 (large clients) and Figure 2 (small clients) present the utility functions for each attribute compared over time. In both Figures 1 and 2, the attributes reputation and personnel have steep slopes indicating their importance to the decision makers (although the slopes in Figure 2 are slightly flatter). The slopes for industry experience and fee are relatively flat suggesting that these attributes are less important to the decision-making process.

Probably the most interesting aspect of Figures 1 and 2 is the overall consistency of both the slopes and the shapes of the utility functions for each attribute across time and size of client. The CFOs' evaluations of each attribute's importance appear to be relatively stable,

Table 3
Summary of Utility Ranges

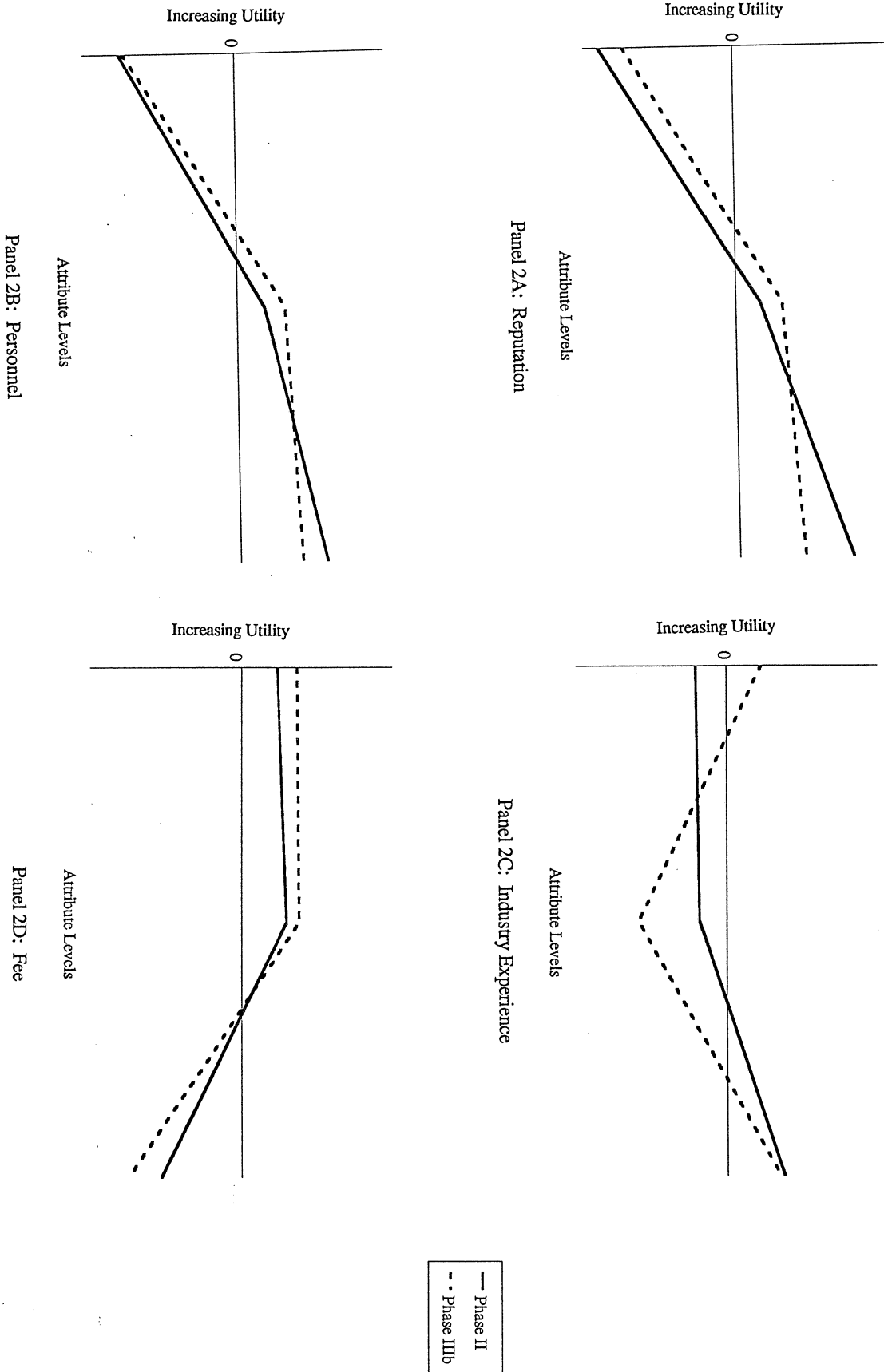
| <i>Attributes</i> | <i>Phase I</i> | | <i>Phase II</i> | | <i>Phase IIIa</i> | | <i>Phase IIIb</i> | |
|---------------------|----------------|----------|-----------------|----------|-------------------|----------|-------------------|----------|
| | <u>Range</u> | <u>%</u> | <u>Range</u> | <u>%</u> | <u>Range</u> | <u>%</u> | <u>Range</u> | <u>%</u> |
| Reputation | 3.805 | 45.2 | 3.297 | 38.0 | 3.284 | 38.8 | 2.346 | 26.7 |
| Personnel | 2.519 | 30.0 | 2.698 | 31.0 | 2.908 | 34.4 | 2.300 | 26.2 |
| Industry Experience | 1.482 | 17.6 | 1.162 | 13.3 | 1.995 | 23.6 | 1.872 | 21.3 |
| Fee | 0.607 | 7.2 | 1.543 | 17.7 | 0.274 | 3.2 | 2.263 | 25.8 |
| TOTAL | 8.413 | 100.0 | 8.700 | 100.0 | 8.461 | 100.0 | 8.781 | 100.0 |

Figure 1*
Utility Functions by Attribute: Large Clients
Phase I (1981) versus Phase IIIa (1987)



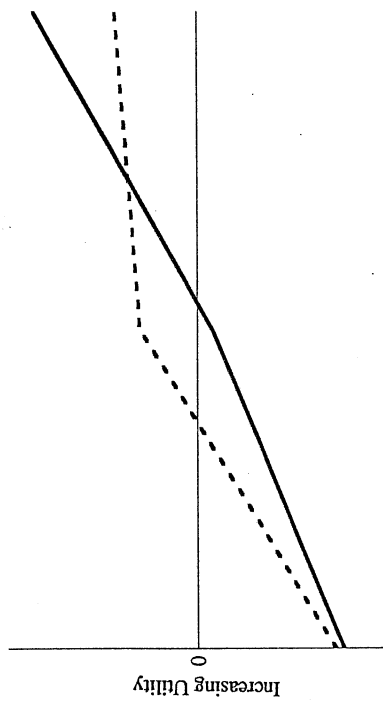
*Note: The attribute/level descriptions from left to right represent below average, average, and above average levels of the attribute.

Figure 2*
 Utility Functions by Attribute: Small Clients
 Phase II (1984) versus Phase IIIb (1987)



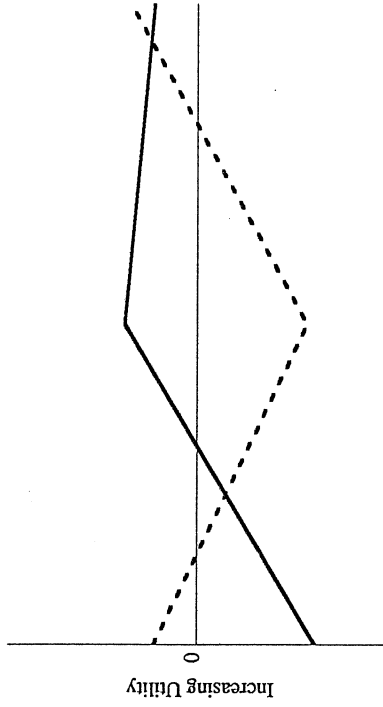
*Note: The attribute/level descriptions from left to right represent below average, average, and above average levels of the attribute.

Figure 3*
Utility Functions by Attribute: Large versus Small Clients
Phase IIIa (1987) versus Phase IIIb (1987)



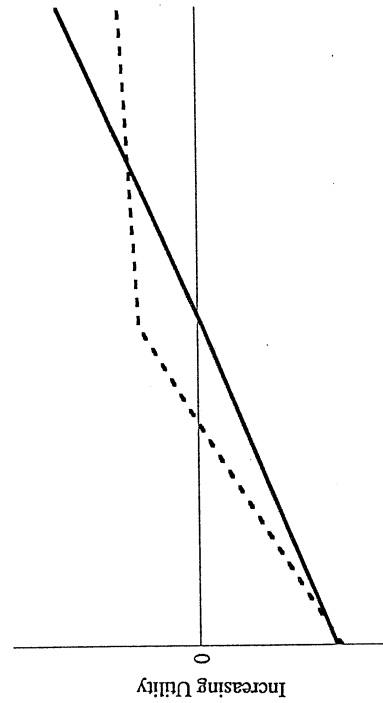
Attribute Levels

Panel 3A: Reputation



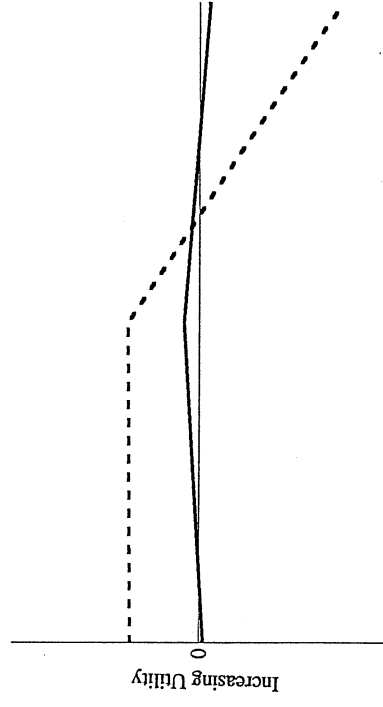
Attribute Levels

Panel 3C: Industry Experience



Attribute Levels

Panel 3B: Personnel



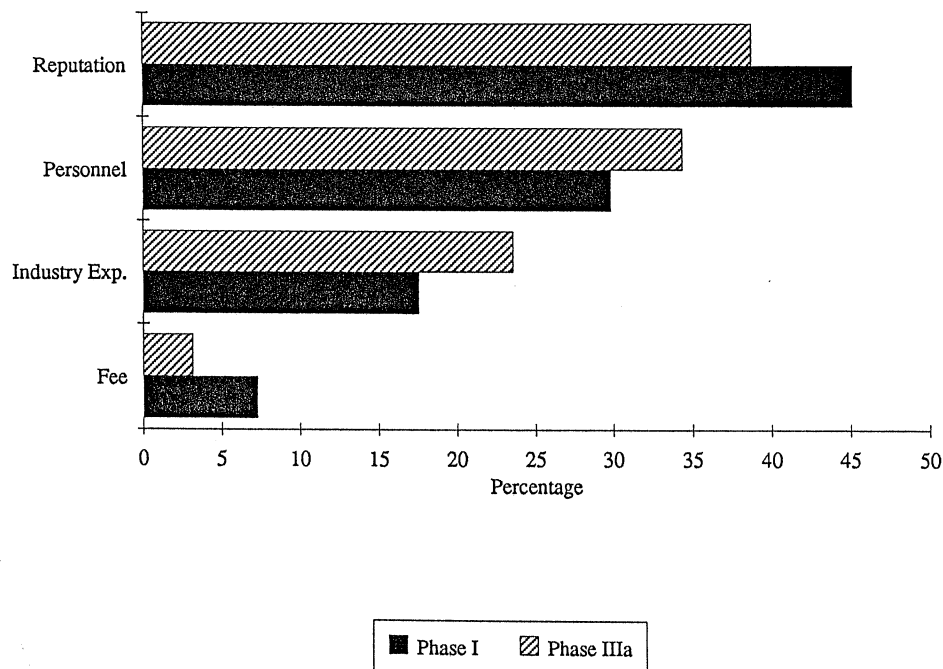
Attribute Levels

Panel 3D: Fee

— Large
- - Small

*Note: The attribute/level descriptions from left to right represent below average, average, and above average levels of the attribute.

Figure 4
Relative Importance of Attributes: Large Clients
Phase I (1981) versus Phase IIIa (1987)



especially for the large client group. The shapes and slopes of the part-worths functions of the four attributes are practically identical for Phase I and IIIa (in Figure 1). This suggests that large clients' more recent perceptions of audit firm characteristics had not changed from six years earlier when competition in the marketplace began to accelerate. In both periods, the utility functions for reputation are relatively steep, while the functions for fee are relatively flat. It appears that the large client representatives consistently considered reputation to be more important in evaluating an audit firm than the level of the proposed fee. Representatives of small clients are perhaps a more diverse group than their counterparts in large companies. Yet, the four attributes were evaluated in a consistent manner by small clients over the three-year period from Phase II to Phase IIIb. Figure 2 emphasizes this stability.

Utility Functions: Comparison by Size

Differences between the utility functions of the large and small client groups become more evident from Figure 3. This figure compares the attribute evaluations of the two groups during the same time period. Two attributes--reputation and personnel--appear to have been evaluated in a fairly similar manner by both the

large and small client representatives. In contrast, the utility functions for industry experience and fee are very different for the two groups.

The stronger preference for fee by the small clients is an expected difference. Although similar in shape, the slope of the small clients' fee utility is much steeper than that of the larger client representatives, indicating more significance attached to that attribute. This result is consistent with previous studies (e.g., Francis and Simon, 1987; Simunic 1980) that have indicated that smaller companies are more sensitive to the price of the audit than larger companies. In contrast, the large client group was relatively insensitive to fee and exhibited negative preferences when the proposed fee varied significantly above or below their fee expectations. This suggests that the large client representatives had an unfavorable view of price-cutting while the small client group indicated a clear preference for a proposed fee that was significantly lower than anticipated.

The utility functions for industry experience exhibit an unexpected difference. Whereas the utility function for the larger clients reflects an increasing importance of industry experience as the attribute level improves (indicating a preference for above average industry

experience), the utility function for the smaller client representatives actually increases as the attribute level declines. This inconsistency suggests that the importance of industry experience is not as easily interpreted for the smaller companies. It is possible that some smaller companies consider the experience gained by auditing a competitor in the industry to be an advantage, whereas other smaller companies may consider this situation to be a disadvantage. Because of these possible mixed reactions, the perceptions of industry experience by smaller clients may be incongruous.

Relative Importance of Attributes: Comparisons over Time

The relative importances of the attributes, reported in Table 3, provide interval measures of the preferences represented in the utility functions. For clearer interpretation, these interval measures are presented in histogram form in Figures 4 through 6. Figure 4 shows that large client representatives expressed a clear preference for the attribute reputation in both Phase I

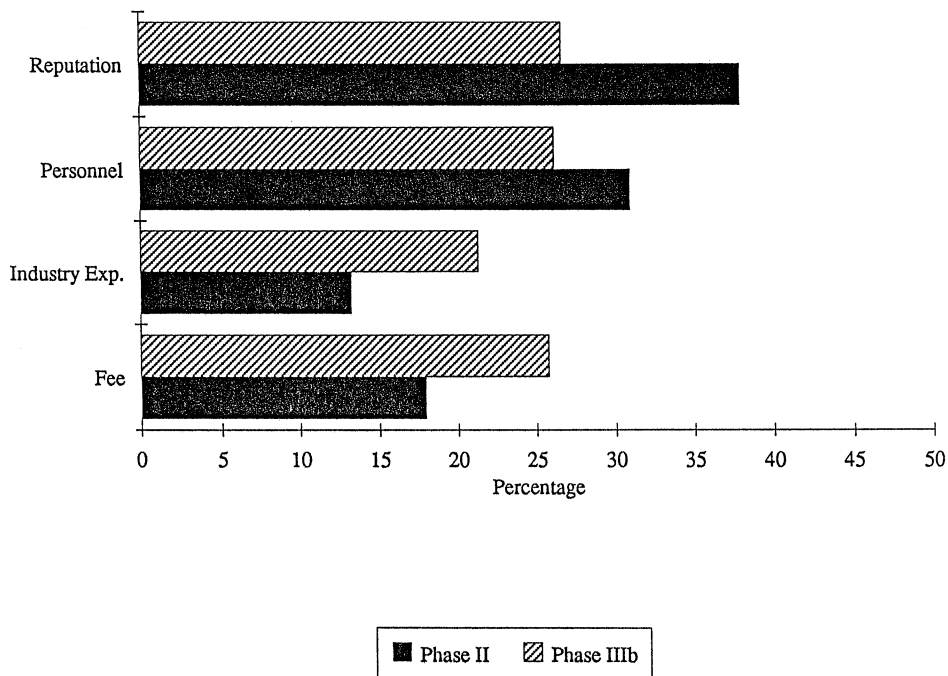
and Phase IIIa. A less dominant, but important, attribute to the large client representatives was personnel. Fee was considered relatively unimportant by the large clients in both years; in fact, it appears to have become even less important in the later time period.

For the small client representatives, reputation was also the dominant attribute in both periods (see Figure 5). However, in the later period (Phase IIIb), reputation and personnel were evaluated as being almost equally important by the smaller clients. Fee, ranking third in overall importance, was judged to be only slightly less important than reputation and personnel. (Table 3 indicates the virtual equivalence, in terms of relative importance, of these three attributes in Phase IIIb.)

Relative Importance of Attributes: Comparison by Size

The concurrent differences in relative importances of audit firm attributes between large and small clients are

Figure 5
Relative Importance of Attributes: Small Clients
Phase II (1984) versus Phase IIIb (1987)



presented in Figure 6. As noted earlier, reputation and personnel are the dominant attributes to both large and small clients, although the larger clients have stronger preferences for each of these attributes. It is not surprising that reputation and personnel were evaluated so highly by the respondents. Several prior research studies (Berlin and Walsh, 1972; Management Analysis Center, 1977; Deloitte Haskins & Sells, 1978) generally agreed that reputation and personnel were important factors to clients. The results of the current study confirm their importance and further provide interval measures of their importance.

In contrast, the relative importance of fee as judged by the two client size groups is very different. Fee was judged to be very important by the smaller clients and unimportant by the larger clients. Past research was inconclusive as to the importance of fee, since some studies showed that fee was important (Management Analysis Center, 1977) while others found that fee was insignificant to the selection process (Wood and Ball, 1978; Deloitte Haskins & Sells, 1978). The findings of

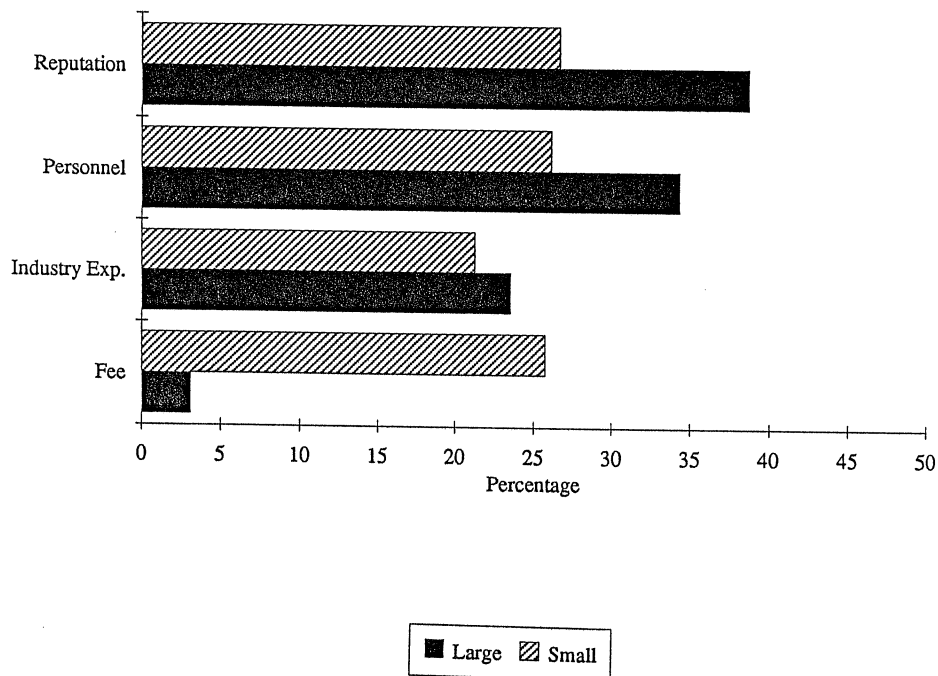
the current study suggest that the importance of the attribute fee greatly varies with the size of the client.

Summary and Conclusions

Marketing is an acknowledged and integral function of large accounting firms today. Although large accounting firms have always undertaken efforts to develop their practices, the recent marketplace for auditing services has been characterized by intense competition for clients, where firms have actively promoted themselves in terms of image, expertise, personnel, and low fees. However, little empirical evidence exists regarding the effects of competition on client company perceptions of audit firms. This study contributes to the understanding of the demand side of the marketplace for audit services. Such an understanding may help to determine appropriate behavior of accounting firms (that is, the supply side of the marketplace).

In this study, the importance of accounting firm attributes to clients' selections of audit firms was mea-

Figure 6
Relative Importance of Attributes: Large versus Small Clients
Phase IIIa (1987) versus Phase IIIb (1987)



sured for the first time. Using conjoint analysis, the relative importances of four attributes--reputation, personnel, industry experience, and fee--were determined in the context of the auditor selection process. The relative importances of these attributes were measured in a longitudinal study using different size client groups. The results of this study indicate that reputation is an important attribute in the auditor selection process and has consistently remained an important attribute over time and across client size. In addition, the findings of this study suggest that the attribute fee increased in its relative importance to small client representatives over time, but remained relatively unimportant to large client representatives compared with reputation.

These findings may be surprising to those firms that have participated in price-cutting strategies in the past. Recent empirical studies (Simon and Francis, 1988; Turpen, 1990) have shown that price cutting on audits of publicly-traded companies is a widespread practice among accounting firms. However, the results of the current study suggest that such price-cutting behavior may not be necessary to attract new audit clients, especially the largest of the publicly-traded companies. This is an especially important inference since such price-cutting behavior may not be in the best interest of the public. Instead, the results of this study indicate that audit firms may need to be more concerned with the reputation effects of their behavior than with actions involving fee differentiation.


There are several research design issues that should be noted in interpreting these results. First, because the conjoint measurement approach requires unambiguous attribute-level descriptions, the results may be sensitive to the scales used to convey the levels of the four attributes. That is, demand for an attribute may have been unintentionally created by the level descriptions provided. Second, client corporations were classified into two group sizes--large and small--based on sales revenue. Accordingly, the comparisons of large versus small client groups must be considered within this classification approach. Third, the focus of this study was on the initial selection of an auditor, therefore the results of this study cannot necessarily be generalized to other auditor choice decisions. The investigation of the auditor retention or change decision would be a logical extension of this study. Finally, although the respondents were instructed to consider any firm criteria not specifically identified in the profiles (for instance, size, geographic location, range of services provided, or ethical standards) to be equivalent among firms, it is possible that these other criteria may have influenced the relative importances attached to the four attributes. Specifically, the increasing importance of management advisory and tax services to the audit relationship (see Simunic, 1984; Knapp, 1985; Beck et al., 1988) may

have affected the results.

However, the results of this study are consistent with related studies on both reputation and fees. The importance of auditor reputation has been empirically supported in recent studies by Beatty (1989) and Wilson and Grimlund (1990). In addition, the importance of fee in the small client market has been confirmed by several studies (Simunic, 1980; Palmrose, 1986; Francis and Simon, 1987), although there are still contradictions regarding the existence of a Big Eight premium.

The current study contributes to the knowledge of the client's side of the market for auditing services. By analyzing perception data of consumers of audit services (client corporations), a better understanding of the auditor selection process has been achieved.

Suggestions For Future Research

Further research is needed on both the demand side and the supply side of the audit marketplace. Logical extensions of the study described here would be investigations that include auditor retention and change decisions and a comparative study involving perceptions of management, audit committee members, and chief financial officers. In general, research that investigates the environment of the auditor selection process is needed to understand the changing marketplace for audit services. 

Footnotes

1. Some recent studies have investigated the auditor change process specifically. For example, see Eichenseher, Hagigi, and Shields (1989) and Johnson and Lys (1990).
2. It is important to note here that, although the survey respondents were representatives of Big Eight clients of two different sizes, the nine CPA firm profiles included in the survey instrument were hypothetical firms described by a combination for four attributes (at three different levels) identified with all large accounting firms. That is, the respondents represent large and small Big Eight clients, but the firm profiles do not necessarily represent Big Eight CPA firms.
3. In recent years, audit committees have reportedly had a greater role in the auditor selection process. However, a recent study by Knapp (1991) indicates that audit committees may still rely heavily on the recommendations of management in the selection of the auditor. Of the 121 audit committee member respondents in Knapp's study, 64 percent reported that the audit committee's role was to approve management's selection of an auditor or to play only a minor role in the selection process. In fact, only 12 percent of the respondents in Knapp's study

indicated that the audit committee actually chose the auditor. This finding suggests that management personnel may still be appropriate representatives of the client's side of the auditor selection process. In addition, several studies (Lurie, 1972; Berlin and Walsh, 1972; Eichenseher and Shields, 1980; Shockley and Holt, 1983) have used CFOs as respondents in investigations of the auditor selection process. Given their significant influence, CFOs were deemed to be the most appropriate individuals to represent the clients' perceptions of audit firm characteristics.

4. The design of Exhibit I was completely tested for orthogonality using the proportional frequencies method described by Addelman (1962, p. 23) and was found sufficient. The results showed that each level of each attribute appears exactly once with each level of the other attributes. Since the data were scaled to an additive model, the potential disadvantage of this design--inability to detect interactions--was not considered a serious problem.
5. The American Accounting Association's Committee on Human Information Processing (AAA, 1978) suggested that conjoint measurement would be useful in the study of certain aspects of human information processing in accounting research. Examples of accounting research employing conjoint measurement include Moriarity and Barron (1976, 1979) and Schneider (1984, 1985). However, one limitation of the conjoint measurement approach is that there is not an adequate means of determining the significance of results from the analysis. That is, a conjoint analysis will always yield results, but these results may not always be subject to meaningful interpretation.
6. As discussed earlier, Kendall's coefficient of concordance of the respondents' preference rankings was calculated for each group. These measures, reported by research phase in Table 1, indicate a high degree of agreement among the rankings. This agreement suggests that the groups identified in this study do have similar points of view.
7. While the high values of the STRESS and PRECAP measures, reported in Table 2, appear fairly consistent, these measures could be the result of the small rank order size (9).

References

1. Addelman, S., "Orthogonal Main-Effect Plans for Asymmetrical Factorial Experiments," *Technometrics* (February 1962), pp. 21-46.
2. American Accounting Association, *Report of the Committee on Human Information Processing* (Sarasota, FL.: AAA, 1978).
3. Barlev, B., "The Initial Selection of Independent Public Accountants: An Empirical Investigation," *International Journal of Accounting, Education and Research* (Spring 1977), pp. 37-51.
4. Beatty, R., "Auditor Reputation and the Pricing of Initial Public Offerings," *The Accounting Review* (October 1989), pp. 693-709.
5. Beck, P., T. Frecka, and I. Solomon, "A Model of the Market for MAS and Audit Services: Knowledge Spillovers and Auditor-Auditee Bonding," *Journal of Accounting Literature* (1988), pp. 50-64.
6. Berlin, S., and F. Walsh, *Corporations and Their Outside Auditors* (Ottawa: The Conference Board, 1972).
7. Danos, P., and J. Eichenseher, "Long-Term Trends Toward Seller Concentration in the U.S. Audit Market," *The Accounting Review* (October 1986), pp. 633-650.
8. DeAngelo, L., "Auditor Independence, 'Low Balling,' and Disclosure Regulation," *Journal of Accounting and Economics* (August 1981), pp. 113-127.
9. Deloitte Haskins & Sells, *An Opinion Survey of the Public Accounting Profession: How the Profession is Viewed by Different Groups Which Have Regular Contact with It* (New York: Reichman Research, 1978).
10. Eichenseher, J., M. Hagigi, and D. Shields, "Market Reaction to Auditor Changes by OTC Companies," *Auditing: A Journal of Practice & Theory* (Fall 1989), pp. 29-40.
11. _____, and D. Shields, "Modeling the CPA Firm Change Criteria of Certain Corporate Chief Financial Officers," Working Paper Presented at the Southeastern Regional Meeting of the American Accounting Association, April 18, 1980.
12. Emery, D., F. H. Barron and W. Messier, "Conjoint Measurement and the Analysis of Noisy Data: A Comment," *Journal of Accounting Research* (Autumn 1982), pp. 450-458.
13. Francis, J., "The Effect of Audit Firm Size on Audit Prices," *Journal of Accounting and Economics* (August 1984), pp. 133-151.
14. _____, and D. Simon, "A Test of Audit Pricing in the Small-Client Segment of the U.S. Audit Market," *The Accounting Review* (January 1987), pp. 145-155.
15. George, W., and P. Solomon, "Marketing Strategies for Improving Practice Development," *Journal of Accountancy* (February 1980), pp. 79-84.
16. Green, P., *Analyzing Multivariate Data* (Hinsdale, IL.: The Dryden Press, 1978).
17. _____, and V. Rao, "Conjoint Measurement for Quantifying Judgmental Data," *Journal of Marketing Research* (August 1971), pp. 355-363.
18. Harris, S., ed., *Who Audits America?*, 4th, 12th, and 16th editions (Menlo Park, CA: Data Financial Press, 1979, 1984, 1986).
19. Johnson, B., and T. Lys, "The Market for Audit Services: Evidence from Voluntary Audit Changes," *Journal of Accounting & Economics* (January 1990),

- pp. 281-308.
20. Knapp, M., "Audit Conflict: An Empirical Study of the Perceived Ability of Auditors to Resist Management Pressure," *The Accounting Review* (April 1985), pp. 202-211.
 21. _____, "Factors that Audit Committee Members Use as Surrogates for Audit Quality," *Auditing: A Journal of Practice & Theory* (Spring 1991), pp. 35-52.
 22. Kohli, R., "Assessing Attribute Significance in Conjoint Analysis: Nonparametric Tests and Empirical Validation," *Journal of Marketing Research* (May 1988), pp. 123-133.
 23. Kruskal, J., and F. Carmone, "MONANOVA: A FORTRAN-IV Program for Monotone Analysis of Variance," *Behavioral Science* 14 (1969), pp. 165-166.
 24. Lurie, A., *Working with the Public Accountant* (New York: McGraw-Hill, 1972).
 25. Management Analysis Center, "On Switching (Rotating) Audit Firms," *Directors & Boards* (Spring 1977), pp. 51-60.
 26. Messier, W., and D. Emery, "Some Cautionary Notes on the Use of Conjoint Measurement for Human Judgment Modeling," *Decision Sciences* (October 1980), pp. 678-690.
 27. Moriarity, S., and F. H. Barron, "Modeling the Materiality Judgments of Audit Partners," *Journal of Accounting Research* (Autumn 1976), pp. 320-341.
 28. _____, and _____, "A Judgment-Based Decision of Materiality," *Studies on Auditing—Selections from the "Research Opportunities in Auditing Program," 1979. Supplement to Journal of Accounting Research* 17 (1979), pp. 114-135.
 29. Palmrose, Z., "Audit Fees and Auditor Size: Further Evidence," *Journal of Accounting Research* (Spring 1986), pp. 97-110.
 30. Schneider, A., "Modeling External Auditors' Evaluations of Internal Auditing," *Journal of Accounting Research* (Autumn 1984), pp. 657-678.
 31. _____, "The Reliance of External Auditors on the Internal Audit Function," *Journal of Accounting Research* (Autumn 1985), pp. 911-919.
 32. Shields, D., "Small CPA Firm Product Differentiation in the Small Business Market," *Accounting Organizations and Society* (1984), pp. 61-80.
 33. Shockley, R., and R. Holt, "A Behavioral Investigation of Supplier Differentiation in the Market for Audit Services," *Journal of Accounting Research* (Autumn 1983), pp. 545-564.
 34. Simon, D., and J. Francis, "The Effects of Auditor Change on Audit Fees: Tests of Price Cutting and Price Recovery," *The Accounting Review* (April 1988), pp. 255-269.
 35. Simunic, D., "The Pricing of Audit Services: Theory and Evidence," *Journal of Accounting Research* (Spring 1980), pp. 161-190.
 36. _____, "Auditing, Consulting, and Auditor Independence," *Journal of Accounting Research* (Autumn 1984), pp. 679-702.
 37. Turpen, R., "Differential Pricing on Auditors' Initial Engagements: Further Evidence," *Auditing: A Journal of Practice & Theory* (Spring 1990), pp. 60-76.
 38. Wilson, T., and R. Grimlund, "An Examination of the Importance of an Auditor's Reputation," *Auditing: A Journal of Practice & Theory* (Spring 1990), pp. 43-59.
 39. Wood, T., and D. Ball, "New Rule 502 and Effective Advertising by CPAs," *Journal of Accountancy* (June 1978), pp. 65-70.