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AN EMPIRICAL INVESTIGATION OF CANDIDATE ATTRIBUTES SIGNIFICANTLY AFFECTING RECRUITING OF ACCOUNTING GRADUATES BY A NATIONAL CPA FIRM

Temple University PH D. 1986

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AN EMPIRICAL INVESTIGATION OF CANDIDATE ATTRIBUTES SIGNIFICANTLY AFFECTING RECRUITING OF ACCOUNTING GRADUATES BY A NATIONAL CPA FIRM

A Dissertation

Submitted to

the Temple University Graduate Board

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ALEXANDER L. GABBIN
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CHAPTER 1

INTRODUCTION

Perhaps no decision is more important to the success of a public accounting practice than the selection of the right people for recruitment and promotion. Public accounting firms want and need to recruit good entry-level auditors in order to remain competitive in a dynamic and increasingly complex profession. The major public accounting firms compete with each other to attract the "best talent" to their respective firms. Based on a survey of eight national public accounting firms, Murdock [1980] notes that "aggressive recruiting is the key to the firm being successful in the future." [p. 108] If a firm misses out in recruiting, he says it "will certainly affect the long run future of the firm." [p. 108]

The pressure to aggressively recruit the "best talent" for entry-level staff positions could result in selection decisions which give too much weight to the technical skills of applicants to the exclusion of other important considerations. Portwood [1979] says that "in making judgments concerning employee selection ... organizations have traditionally concentrated on competence in task performance as the primary goal or standard for evaluation." [p. 163] He suggests that it may be necessary "to match individuals to specific job environments along multiple psychological as well as skill dimensions" since "such factors as commitment to the organization, role conformance, and degree of interpersonal

compatibility may be equally important to organizational effectiveness." [p. 163] Therefore, in addition to selecting technically competent applicants to join their professional staffs, public accounting firms may need to select applicants who also match well with the demands of public accounting.

Selections which consider both the technical and psychological aspects of the applicants may be necessary in order to avoid high rates of auditor turnover. Although a certain amount of audit employee turnover is inevitable and can be beneficial for the staff member and the firm, eliminating undesirable turnover could benefit the firms in two ways. First, the firms may realize savings. Doll [1983], a national recruitment manager at Price Waterhouse in New York City, states that $10,000 is a conservative estimate of the cost to the firm for each person who leaves. He feels that if a goal was set "to reduce the turnover of outstanding staff by 10 percent ... significant savings in money (training costs, agency fees or advertisement costs) will result." [p. 82] Second, the firm may benefit in the long run with improved job efficiency. For example, Welker [1974] identifies three reasons why an "excessive turnover rate is apt to produce ... unsatisfactory audit performances" and suggests that "the introduction of new, more efficient selection and placement techniques should be a continual policy of every CPA firm." [p. 514]

From the perspective of accounting graduates applying for entry-level audit staff positions, employment in a public accounting firm, especially the national and international

practices, offers many advantages. Public accounting firms offer college graduates excellent opportunities to improve technical and interpersonal skills. New staff members participate in a series of seminars and training sessions which supplement the close supervision they receive on initial job assignments. The organizational structure of the firms also facilitates professional development. Major firms have clearly defined levels of responsibility for audit engagements and promotion timetables for assigning additional responsibilities to younger staff members. In fact, this structural aspect of the public accounting profession contributes to its "up or out" reputation. Staff members must demonstrate the ability to assume increased levels of responsibility in order to remain with the firm. Furthermore, some firms formally assign mentors to new recruits. In other firms experienced staff informally guide the professional development of new recruits. These relationships have been described as "peer pal form of mentor-like dyads." [Dirsmith and Covaleski, p. 36]

The major public accounting firms encourage and provide meaningful support to accounting students who desire to pass the AICPA certified public accountant's examination and become certified. This support includes scheduling job assignments to allow individuals to attend CPA review classes, providing reference materials and in-house review sessions, and permitting staff release time to take the CPA exam. Another desirable feature of employment with a major public accounting firm is the transferability of the work experience to other employers if the

individual does not stay to become a partner. For example, Alvis [1983] states "that it is easier to go from a large public accounting firm to a smaller public accounting firm or industry than vice versa." [p. 2] In addition, staff who leave at the manager level versus the senior level generally "get better positions and more money." [Doll, 1983, p. 77]

The need for major public accounting firms to hire and retain quality staff and the desire of accounting students to secure employment with one of the major firms suggest that the campus interview is a critical stage in merging the self-interests of these two groups. Scott, Pavlock, and Latham [1985] estimated that "60 percent to 90 percent of CPA firms' new professional staff...most often were selected on the basis of on-campus interviews." [p. 60] For the public accounting firms, Murdock [1980] found that the on-campus recruiting effort is very costly "in terms of time, effort, and out-of-pocket expenses," [p. 107] yet "the firms have difficulty in identifying reasons for successful recruitment." [p. 108] Stolle [1977] warns firms that "recruiting college graduates into public accounting ... cannot be left to haphazard processes if firm visibility on the campuses and viability in the work arena are to be maintained." [p. 474] From the perspective of employment-conscious students seeking entry-level audit positions with public accounting firms, the data collected by Murdock [1980] implied that many students are not successful in their attempts to receive job offers which result from on-campus recruiting. Less than 25 percent of the college

students who interviewed on campus with the firms in Murdock's [1980] survey received invitations to visit a firm's office for follow-up interviewing. Furthermore, an average of only 60 percent of the job applicants who were invited to the firm's office for follow-up interviewing received job offers. These data suggest that approximately 85 percent of the college students who participate in on-campus interviews are unsuccessful in receiving the job offers they seek.

Thus, both college students seeking entry-level audit positions in public accounting and the public accounting firms could benefit from improvements in the campus recruiting process. A primary benefit to students would be the increased likelihood that they would receive employment offers with the firms they prefer to join. From the public accounting firm's perspective, the benefit would be two-fold. First, the firms would benefit directly by increasing the likelihood that they will select and retain high quality staff. Second, they would benefit indirectly from an increased awareness on the part of college students and faculty regarding the attributes which affirms seek in new employees. Khairullah and Khairullah (1983) suggest that for undergraduate programs in accounting, "a primary goal is to prepare the students for a career in accounting." [p. 1] To the extent that college faculty and students lack reliable information about the selection criteria of public accounting firms, inappropriate advice on the part of the faculty counseling students and suboptimal actions and strategies on the part of the student job applicant could result.

By knowing the attributes which the firms desire in new employees, the students can choose either of two alternatives. They can better prepare themselves for careers in auditing or they can change their career goals prior to interviewing with a public accounting firm. In either case, the public accounting firms will benefit indirectly since the students who do interview will more closely fit the firm's ideal.

Scott, Pavlock, and Latham [1985] contend that "there is little mystery about what CPA firms look for in candidates for professional staff positions." [p. 60] Consistent with this viewpoint about student awareness, Alvis [1983] feels that many know the usual factors considered important by the accounting profession. However, a "laundry list" of desirable student attributes is of limited usefulness. As a factor influencing a public accounting firm to choose one recruit over another, attributes may differ in terms of relative importance in the recruitment decision. For example, Libby [1981] describes three different processes by which attributes could be used to reach a decision. A high score on one attribute may off-set or compensate for a low score on another attribute. A second possibility is that regardless of the scores on most of a student's attributes, candidates whose score on any attribute is below the firm's minimum standard will be rejected. In the third model, students who are successful in being recruited must receive an exceptionally high score on at least one attribute. According to Libby [1983], "research suggests that many decisions are made using some

combination of rules." [p. 46]

Research that would determine the extent to which different candidate attributes affect the firm's selection of entry-level auditors could benefit public accounting firms by increasing their success in recruiting and retaining high quality staff. In addition, this type of research will permit public accounting firms to document more effectively the basis for recruitment and promotion decisions. Effective documentation of personnel selection decisions is especially important in public accounting. Discrimination suits against any major public accounting firm could be both costly and embarrassing to a profession that relies heavily on public opinion and public trust. Litigation accusing public accounting firms of race, sex, or religious discrimination would weaken the ability of the profession to continue to resist overt government regulation. Therefore, it is important that public accounting firms be able to defend recruitment and promotion decisions.

In Miner's [1969] review of the strengths and weaknesses of the interviewing process "based on studies using selection models ... and on other scientific research procedures" [p. 45], he warned that "one should not expect perfect success from these studies." [p. 50] This theme is repeated by Thompson [1967], who discussed a standard for assessing actions similar to selection and retention decisions that are the focus of this study. In closed systems where knowledge of cause/effect relationships is complete, where every combination of variables is known or can be computed, and

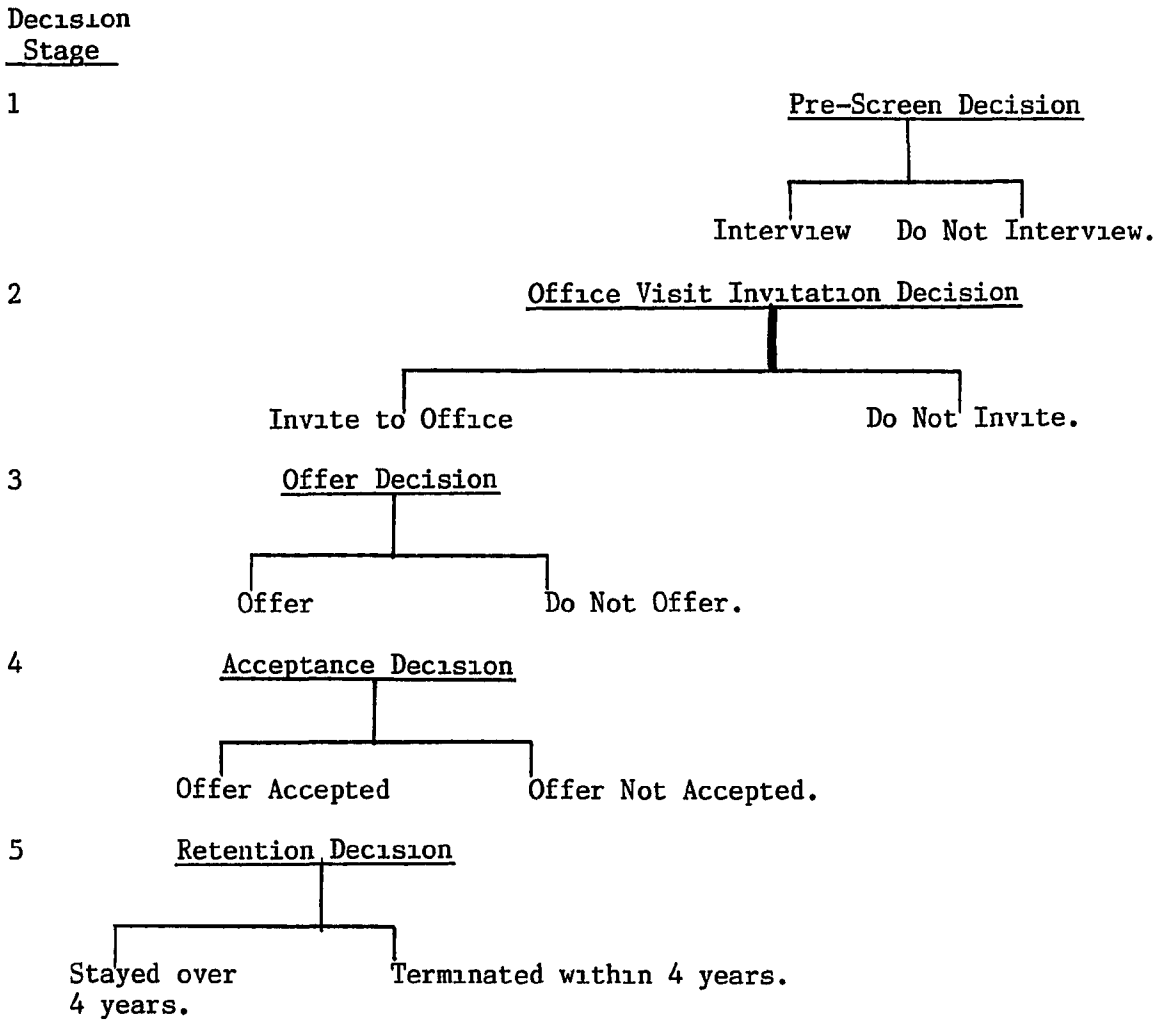
where all consequences of actions are contained within the system, it is possible to assess actions in terms of a maximizing strategy. Thompson [1967] relates maximizing strategies to "efficiency tests," where attempts are made to select "perfect" actions. However, situations that are characterized by complexity and the inability to assess the net effects of causal action require a different assessment strategy. In this case, Thompson [1967] states that "the appropriate test is not the economic one but the instrumental one - whether a desired state of affairs is achieved." [p. 86] Therefore, in examining how different student attributes influence final choices, this study will be based on instrumental rather than efficiency considerations. No attempt will be made to find a global set of attributes, attribute weights, or decision models that will result in optimal choices. Instead, the goal is to find sets of attributes, attribute weights, and decision models that distinguish between successful and unsuccessful recruits. Accounting students and public accounting firms could benefit from this information.

Purpose of This Study

This research addresses the problem of on-campus recruiting. The primary objective is to determine the relative importance of applicant attributes in discriminating between students who receive office visit invitations and/or job offers and students who do not. A secondary concern is to ascertain the extent to which these same attributes are effective in discriminating between audit staff members who perform well enough to remain with the firm and audit employees who voluntarily (performance was acceptable at termination) or involuntarily (performance was unacceptable) leave the audit staff.

Figure 1

Auditor Selection Decision Stages



In the previous section, it was demonstrated that personnel selection and promotion decisions are important to both accounting students and public accounting firms. Unfortunately, the research efforts of accounting scholars have not been commensurate with the needs of both groups for more guidance in this area. By analyzing interview evaluation forms associated with personnel selection decisions, this study is designed to help fill the current void in existing research.

Auditor Selection Decision Stages

To determine the relative importance of applicant attributes in selecting auditors, it is important to understand the stages in the selection process. Figure 1 illustrates five auditor selection stages. Decision stage 1 is the prescreening stage. It is at this stage that the college placement office and the public accounting firm collaborate to screen-out accounting students whom the firm will not consider for employment. Obvious candidates for inclusion in the set of accounting students screened-out in stage 1 include accounting majors with low grade point averages. Decision stage 1 is the initial hurdle accounting students must clear in attempting to show evidence of possessing the characteristics considered important by the firm.

Two features of this stage deserve special mention. First, the firm's "interview" versus "do not interview" decision is based

primarily on information supplied by the accounting student in the resume or perhaps on a campus placement interview registration sheet. Second, the minimum attribute standards which must be exceeded in order for applicants to reach the interview stage may fluctuate somewhat from one interviewing season to another. A slight fluctuation in the firm's minimum attribute standards may occur in response to changing manpower needs of the firm and the current supply of high quality accounting graduates.

Decision stage 2 is the on-campus interview. A major distinction between stage 1 and stage 2 is that additional student attributes will be evaluated by the firm's interviewer and recorded on an interview evaluation form. In his study, Alvis [1983] noted that "many of the campus recruiters receive training in interviewing techniques" and that "the representative of the firm is normally ...either a manager or partner of the firm." [p. 21] The need for the accounting student to show evidence of possessing desirable qualities is critical in stage 2. However, the firm's interviewer will be reacting to a larger set of student attributes before a decision is made regarding the desirability of inviting the candidate into the office for follow-up interviewing.

At stage three, candidates are screened to determine those who will receive offers. A major concern at this stage is likely to be whether or not a candidate matches well with the work environment of the host office. Candidates who were offered employment with the firm decide whether or not to accept the firm's offer at decision

stage 4. In the final analysis, a major purpose of the entire auditor selection process is the identification of individuals who are interested in a career with the firm and whom the firm sees as contributing to the success of the firm's practice. It is in this sense that the recruiting process may be described as "successful." Although most staff auditors never stay to become partners in the firm, a reasonable assumption is that those staff auditors who remain with the firm for four or more years possess both an interest in a career with the firm and a desirable combination of personal attributes and skills from the firm's perspective. Therefore, "successful" recruitment selections are separated from "unsuccessful" (voluntary or involuntary termination) staff selections at decision stage 5.

The current study will focus on decision stage 2 through decision stage 5. Among the specific questions this study intends to answer are the following:

Organization of This Study

Chapter II will examine the literature on the problem of selecting auditors. Particular attention is focused on the identification of the characteristics of individuals who are likely to be successful. Chapter III presents a description and justification of the research methodology used in this study. Chapter IV presents the collection and analysis of the data. Chapter V describes the conclusions drawn from this study and discusses the implications for future research.

CHAPTER 2

LITERATURE REVIEW

The studies examined in this chapter are divided into three categories. The first category consists of studies by Seaton and White (1973), Murdock (1980), and Blitstein (1981). These studies identified characteristics which public accounting firms evaluate in the job interviewing process. The second category consists of studies by Kochanek and Kochanek (1977) and Adams (1980). These studies focused on the perceptions of public accounting firm partners and college students who were pursuing an undergraduate accounting degree. In the Kochanek and Kochanek (1977) study, the perceptions of accounting firm partners are compared to the perceptions of accounting students to determine if there is a difference in perception of the factors that are important to success in public accounting. In the Adams (1980) study, accounting student perceptions of the selection criteria of national public accounting firms are compared to the student perceptions of the selection criteria of local/regional public accounting firms to determine if students perceive a difference in the factors which are important to hiring decisions between these two employer classifications. The third category of studies consists of research by Khairullah and Khairullah (1983) and Alvis (1983). These studies focused on building models to evaluate how successful graduating accounting majors would be in receiving jobs in public accounting.

An extensive body of research literature exists on employee recruitment and retention. Numerous studies examine employee selection criteria (Myers and Fine, 1985; Davey, 1984; Heilman, 1984), the validity of interviews (Van Wert, 1983; Lawske, 1983), and performance assessment (Lapointe, 1983; Portwood, 1979). However, only a few studies have focused on accountants pursuing careers in public accounting. Murdock (1980) notes in his study that public accounting is a dynamic profession, characterized by "aggressive recruiting" among the national firms. [p. 108] As a result, employee selection procedures of public accounting firms may differ in some significant ways from employee selection procedures of firms in general. This study attempts to identify the factors that are most important to public accounting firms by focusing only on those studies which relate primarily to the recruitment and retention of entry-level auditors in public accounting.

The following sections will describe the prior research that is the basis for this current study on the relationship between attributes of job applicants and the recruiting practices of CPA firms. These sections will demonstrate that the identification of the important attributes vary from study to study. Furthermore, each study suffers from one or more of the following general weaknesses:

1. The study did not isolate job applicants interviewing for entry-level auditing staff positions of a major public accounting firm from job applicants interviewing for other jobs.

2. The study did not evaluate actual auditor selection decisions.

3. The study did not consider the differential effect that applicant attributes may have on auditor selection decisions at different stages in the employment selection process.

As an extension of the prior research described in the following sections, this study will address important issues that either were not covered or were covered inadequately in the prior studies.

"Important Characteristics" Studies

To determine the differences in recruitment practices of CPA firms, Seaton and White (1973) surveyed a cross section of firms in Arkansas, Kansas, Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, and Texas. The authors asked the firms to identify the personal characteristics they sought in new employees. Table 1 shows the characteristics mentioned most frequently in their survey.

In interpreting the survey results, Seaton and White (1973) conclude that the largest number of respondents select new employees who have an aggressive attitude toward their job. "Ambition" accounts for 18.6 percent of the total response and ranks first as the most frequently mentioned characteristic. Seaton and White (1973) included in the "ambition" classification survey responses which identified characteristics reflecting "a desire to learn and advance." [p. 87] "Personality" factors account for 14.6 percent of the total response and ranks second as the most

frequently mentioned characteristic. "Grades," "appearance," and "ability" characteristics follow "personality" very closely in terms of frequency of occurrence. Thus, the Seaton and White (1973) study identifies five frequently mentioned characteristics which account for 73.3 percent of all responses. This result could mean that most CPA firms give employment selection preference to individuals possessing the first five personal characteristics shown in Table 1.

There are three major limitations in the Seaton and White (1973) study. First, Table 1 shows the number of times CPA firms indicated a preference for each characteristic. The implicit assumption of this methodology is that the characteristics mentioned most frequently are the characteristics most important to the CPA firms when selecting new employees. However, the Seaton and White (1973) data are of limited usefulness to those public accounting firms that are interested in improving the effectiveness of their personnel selection decisions or to those accounting majors interested in securing employment with a public accounting firm. The first limitation of the Seaton and White (1973) study can be demonstrated by referring to Table 2. Table 2 describes an employee selection situation where there are two job applicants, "PA" and "PB", and two states of nature, "C1" and "Not C1". The characteristic "C1" is assumed to be a necessary characteristic which job applicants must possess at the level x in order to be hired by a public accounting firm. The state of nature "not C1" indicates that the job applicants do not possess the essential "C1"

TABLE 1

Characteristics Sought in New Employees

Characteristic	Percent of Response
Ambition	18.6
Personality	14.6
Grades	13.7
Appearance	13.2
Ability	13.2
Maturity	5.1
Experience	4.4
Character	4.0
Expression	2.9
All Other Factors	10.3
	100.0

Source: Lloyd Seaton, Jr., and Jackson A. White, "Recruiting Practices of CPA Firms." Journal of Accountancy, May 1973, pp. 86-87.

characteristic in sufficient quantity. In terms of the Seaton and White (1973) study, "C1" could be the characteristic "ambition."

In Box I of Table 2, both job applicant "PA" and job applicant "PB" possess the same level of the requisite characteristic "C1". In Box III, neither job applicant has the "C1" characteristic at the minimum x level. In Box II, job applicant "PA" possesses the "C1" characteristic but job applicant "PB" does not. In Box IV, only job applicant "PB" possesses the "C1" characteristic. If a public accounting firm is faced with a personnel selection situation similar to Box I, the "C1" characteristic will not be effective in discriminating between the job applicant who is selected and the job applicant who is not selected. The discriminating potential of a characteristic is a function of two factors. First, the characteristic has to be one which new employees must possess as a pre-condition to employment. If a job applicant's height is not a pre-condition to employment, it will not discriminate between job applicants who are hired and job applicants who are not hired. The second factor is that the necessary characteristic must not be distributed uniformly among the job applicants. For example, if all applicants have the same grades, then grades will not discriminate between job applicants who are hired and job applicants who are not hired.

Since both applicants in Box I possess the same amount of the requisite characteristic "C1", the public accounting firm must base its selection of job applicant "PA" or job applicant "PB" on some

TABLE 2

Discriminating Potential of Characteristics

		Person "B"	
		PB-C1	PB-Not C1
Person A	PA-C1	I	II
	PA-Not C1	IV	III

PA-C1: Person "A" possesses characteristic "C1" at level x

PB-C1: Person "B" possesses characteristic "C1" at level x

PA-Not C1: Person "A" does not possess characteristic "C1" at level x

PB-Not C1: Person "B" does not possess characteristic "C1" at level x

factor other than the "C1" characteristic. A public accounting firm that is faced with a personnel selection decision similar to Box II or Box IV will be able to reach a selection decision by using the "C1" information. Box II leads to the selection of job applicant "PA" and Box IV will result in the hiring of job applicant "PB". Box III will result in both applicants being rejected in this example. However, if the "C1" characteristic is "desirable" rather than being "necessary", Box III will be similar to Box I in that the public accounting firm will have to base its selection decision on some factor that does discriminate between job applicant "PA" and job applicant "PB".

The first major limitation of the Seaton and White (1973) study is that the data provided in Table 1 only identify employee characteristics that firms seek. These data do not assist the public accounting firm faced with the personnel selection situation in Box I of Table 2. It is not enough to identify personal characteristics of new employees that CPA firms seek. The characteristics of job applicants that will be useful to firms that are attempting to improve personnel selection decisions are those characteristics which are capable of discriminating between successful and unsuccessful job applicants. Thus, the failure of the Seaton and White (1973) study to determine the relative contribution of each characteristic in personnel selection decisions restricts the usefulness of their survey for public accounting firms and accounting majors.

The second major limitation of the Seaton and White (1973)

study is that the ranking of characteristics in Table 1 is based on factors which the respondents say they look for in new employees. To the extent that the characteristics which the respondents say they seek in new employees differ from the characteristics which the firms actually use in selection decisions, the results in Table 1 will be misleading. For example, accounting majors who want to secure employment with a public accounting firm need to know the characteristics which are critical in personnel selection decisions. As seen in Table 2, some characteristics may discriminate between job applicants who receive job offers and job applicants who do not receive offers. This situation exists for Box II and Box IV, where person "A" will be selected if the state of nature is Box II, and person "B" will be selected if the state of nature is Box IV. Box I and Box III describe situations in which characteristics will not discriminate between job applicants who will be selected and those who will not be selected. However, an important distinction between Box I and Box III is that job applicants in the situation represented by Box III will not be selected if the missing characteristic ("not C1") is essential -- that is, if it is a pre-condition for any job applicant hired by the public accounting firm. To increase their chances of getting a job with a public accounting firm, students need to know if a characteristic is essential and if it discriminates between successful and unsuccessful job applicants. The characteristics ranked in Table 1 may not be useful to accounting students in preparing for job interviews since there may be a significant

difference between the characteristics which firms say they seek in new employees and the characteristics which public accounting firms actually use in making personnel selection decisions.

A third limitation of the Seaton and White (1973) study is that they ignore the distinction between new employee characteristics which are important and those which are not important to public accounting firms. Since "ability" accounted for 13.2 percent of the responses in Table 1 and "expression" accounted for only 2.9 percent of the responses, the implication is that characteristics reflecting a job applicant's "ability" are more highly sought after in new employees than characteristics reflecting "expression." Table 3 describes 9 possible states of nature that are based on the importance of "ability" and "expression" in hiring decisions of public accounting firms. The usefulness of the Seaton and White (1973) study is limited to eliminating Boxes 4, 7, and 8 from the set of possibilities in Table 3, since these boxes imply that "expression" ranks higher than "ability" as a factor public accounting firms seek in new employees. However, the factor "ability" may be "essential" (Boxes 1, 2 and 3), "desirable" (Boxes 5 and 6), or "not relevant" (Box 9). Likewise, the factor "expression" may be "essential" (Box 1), "desirable" (Boxes 2 and 5), or "not relevant" (Boxes 3, 6, and 9). Seaton and White's (1973) ranking of the "ability" factor relative to the "expression" factor does not address the critical issue of whether either factor is important in recruitment decisions.

In an effort to provide more data on large CPA firms to

TABLE 3

Comparing the Importance of Characteristics in Recruitment Decisions

	"Expression"			
		Essential	Desirable	Not Relevant
"Ability"	Essential	1	2	3
	Desirable	4	5	6
	Not Relevant	7	8	9

accounting graduates, the Omicron Chapter of Beta Alpha Psi at the Ohio State University organized a series of panel discussions. National personnel directors from Arthur Andersen and Company; Coopers and Lybrand; Deloitte, Haskins and Sells; Ernst and Whinney; Alexander Grant and Company; Peat, Marwick, Mitchell and Company; Price Waterhouse; and Arthur Young and Company participated in six panel discussions between October 15, 1977 and August 17, 1978. Prior to the scheduled discussions, each participating firm received a standard set of questions on accounting careers. Murdock (1980) indicated in his study of the discussions that all of the participating firms look for "technically competent" students with the same general qualities. These qualities are "intelligence," "personality," "motivation," and "ability to communicate." Also, the personnel directors look for persons who "fit in" well with other members of their firms. This "fit in" quality usually is evaluated by a group of interviewers during the office visit. The firms consider "grades" to be one, but not the only, indicator of "motivation." Murdock (1980) suggests that the qualities identified by the panel participants are not time-dependent - that is, good career accountants today have the same qualities good accountants had in previous years.

The Murdock study (1980) provides useful information to accounting graduates about the qualities most sought after in applicants by eight of the nine largest public accounting firms. However, this study suffers from some of the weaknesses noted in

the Seaton and White (1973) study. A major limitation of the Murdock (1980) study is that it provides no information about the degree of importance each quality has in employee selection decisions of the firm. Furthermore, the study could have been strengthened by comparing the qualities identified by the panel participants to actual data generated from recruiting activities of the accounting firms.

Blitstein (1981) asked recruiters for government agencies, industry, and financial institutions to rate characteristics as "very important," "important," or "not important" for business students who are successful in obtaining employment and for employees who are successful in receiving job promotions. Table 4 summarizes the results of his survey for the "very important" and "not important" categories. The three student characteristics considered by employers to be the most important determinants of employment offers to college students were "oral communication skills," "personality," and "poise." Employers considered "school attended," "recommendations," and "social graces" to have the least effect on the likelihood of a college student's obtaining employment. The percentage of respondents who rated these factors as "not important" were 47.3%, 30.3%, and 29.2% for "school attended," "recommendations," and "social graces" respectively. The student's "grade point average" and "written communication skills" were of medium importance. Only 38.3% of the employers rated "written communication skills" as "very important," while 9.5% said it was "not important" in obtaining employment. For

TABLE 4

Important Factors in Obtaining Employment and Receiving Job Promotions

	Factors In Obtaining Employment		Factors In Receiving Promotions	
	Very Important	Not Important	Very Important	Not Important
Grade Point Average	23.7%	11.8%	2.2%	65.5%
Oral Communication Skills	69.0	1.0	73.3	1.0
Written Communication Skills	38.3	9.5	61.7	3.2
Poise	42.9	0	43.0	5.4
Appearance	37.9	5.2	29.0	2.2
Social Graces	6.3	29.2	8.8	30.0
Personality	44.1	4.3	52.7	3.2
School Attended	1.0	47.3	0	87.1
Recommendations	16.9	30.3	11.3	55.0

Source: Allen Blitstein, "What Employers are Seeking in Business Graduates." The Collegiate Forum (Dow Jones and Company, Inc.), Winter 1980/81, p. 7.

"grade point average," only 23.7% said it was "very important," while 11.8% rated it "not important." A comparison of the factors that are important in obtaining employment and the factors that are important in receiving subsequent promotions reveals that "communication skills," and "personality" may be relatively more important for receiving promotions, while "grade point average," "appearance," and "recommendations" may be relatively more important for obtaining employment. Finally, few respondents rated "school attended" to be a "very important" consideration in either hiring decisions or promotion decision of employers. However, this factor does seem to be more important in hiring decisions than promotion decisions. While 87.1% of the respondents indicated that "school attended" was "not important" for receiving promotions, only 47.3% of the respondents rated it "not important" for college students obtaining employment.

Weaknesses noted in the Seaton and White (1973) study are applicable to the Blitstein (1981) survey. In particular, the relative contribution of each factor to hiring and/or promotion decisions has not been determined. Also, the questionnaire responses should be compared to actual data from the recruitment and promotion activities of firms to ascertain if there is agreement between these two data sources.

"Differences in Perception" Studies

Kochanek and Kochanek (1972) investigated sixteen "personality" factors and four "education-related" factors to

ascertain: (1) the degree of concordance in perceptions between public accounting firm partners and senior accounting majors with regard to the traits which are important to professional success in public accounting, and (2) the extent to which a sample of accounting majors possess characteristics judged desirable by public accounting firm partners. The study consisted of 76 senior accounting majors enrolled at a major university and 75 CPA partners. The students completed an 187-item personality factor test, and both the students and partners completed a questionnaire which required them to rate the importance of the 16 personality factors and 4 education-related factors on a scale of 1 (no importance) to 5 (essential).

Table 5 shows the results of the comparison of partner and student responses to the questionnaire. The Chi-Square test results revealed that the partners placed more importance on "imaginative" personality ($p < .01$) and "ability to write" ($p < .02$) than did the students. Conversely, responding students placed significantly more importance on an "outgoing, warmhearted, easygoing" personality ($p < .02$); a "happy-go'lucky, enthusiastic" attitude ($p < .001$), and a "relaxed, tranquil, unfrustrated" manner ($p < .01$) than did the partners.

Table 6 ranks the factors on the basis of the rating of each factor in terms of its perceived importance. Table 6 only ranks those factors where 80 percent or more of the responses rated the factor "essential" (rating of 5) and/or of "considerable importance" (rating of 4). Although partner and student

TABLE 5

Perceived Importance of Personality and Education Factors Relative to Professional Success in Public Accounting

Factor	Relative Importance	Chi-Square Score	Significance
A. Outgoing, warmhearted easygoing	Students > Partners	12.72	P <.02
B. Bright, high intelligence	(1)	(1)	(1)
C. Emotionally stable, mature	(1)	(1)	(1)
E. Assertive, aggressive, competitive	(1)	(1)	(1)
F. Happy-go-lucky, enthusiastic	Students > Partners	28.06	P <.001
G. Conscientious, persistent	(1)	(1)	(1)
H. Venturesome, socially bold	(1)	(1)	(1)
I. Tough-minded, self-reliant	(1)	(1)	(1)
L. Suspicious, hard to fool	(1)	(1)	(1)
M. Imaginative	Partners > Students	18.12	P <.01
N. Astute, polished, socially aware	(1)	(1)	(1)
Q. Self-assured, secure	(1)	(1)	(1)
Q . Experimenting, free thinking	(1)	(1)	(1)
Q . Self sufficient, resourceful	(1)	(1)	(1)

Q . Controlled, exacting will power	(1)	(1)	(1)
Q . Relaxed, tranquil, unfrustrated	Students > Partners	14.76	P <.01
W. Knowledge of detailed accounting rules and procedures	(1)	(1)	(1)
X. Knowledge of broad accounting principles	(1)	(1)	(1)
Y. Ability to relate and communicate with people	(1)	(1)	(1)
Z. Ability to write	Partners > Students	12.76	P <.02

(1) No statistically significant differences between partner and student perceptions of the importance of the factor.

Source: Richard F. Kochanek, and Thomas T. Kochanek, "Perceived Personality Characteristics Requisite to the Accountant's Success: Two Perspectives." The Accounting Journal, Volume 1, Spring 1977, pp. 135-146.

TABLE 6

Ranking of Student and Partner Perceptions

Rank	Factors	Students	%(1)	Factors	Partners	%(1)
1	Y.	Ability to relate to and communicate with people	97	X.	Knowledge of broad accounting principles	99
				Y.	Ability to relate to communicate with people.	99
2	X.	Knowledge of broad accounting principles	92	C.	Emotionally stable, mature	95
				Z.	Ability to write	95
3	G.	Conscientious, persistent	88	M.	Imaginative	92
4	C.	Mature	87	Q.	Self sufficient, resourceful	88
5	Q.	Self sufficient, resourceful	83	G.	Conscientious, persistent	86
	Z.	Ability to write	83			
6	Q.	Self-assured, secure	81	W.	Knowledge of detailed accounting rules and procedures	84
7	W.	Knowledge of detailed accounting rules and procedures	80			

(1) Percent of respondents who rated the factor "essential" or of "considerable importance."

Source: Richard F. Kochanek, and Thomas T. Kochanek, "Perceived Personality Characteristics Requisite to the Accountant's Success: Two Perspectives." The Accounting Journal, Volume 1, Spring 1977, pp. 135-146.

perceptions are significantly different on five factors (Table 5), only two of the five factors rank among the major factors which are perceived to be "essential" or of "considerable importance." Table 6 reveals that an "imaginative" personality ranks third among partners with 92 percent of the partners rating it as "essential" or of "considerable importance." An "ability to write" ranks second among the partners and fifth among the students, with 95 percent of the partners and 83 percent of the students rating this factor as "essential" or of "considerable importance."

The Kochanek and Kochanek (1977) study suggests that partners perceive an "imaginative" personality to be a major factor related to professional success in public accounting, whereas students perceive this factor to be significantly less important. Correcting this difference in perceptions could improve student efforts to secure audit staff jobs and public accounting firm efforts to attract and retain quality staff. The Kochanek and Kochanek (1977) study also suggests that both public accounting partners and accounting students perceive an "ability to write" to be a major factor related to success in public accounting. However, the Seaton and White (1973) study implied that "expression" may not be an important characteristic which public accounting firms seek in new employees. Therefore, these two studies may have generated contradictory results regarding the importance of the "ability to write"/"expression" characteristic.

The Kochanek and Kochanek (1977) study has two major limitations. First, this study fails to identify those factors

which discriminate between accounting students who are likely to be successful in receiving job offers with a public accounting firm and accounting students who are not likely to be successful. As a result of their analysis, an assessment of the importance of the factors can be made. An important factor is any characteristic which candidates who are likely to be acceptable to public accounting firms possess. However, information which may be useful in distinguishing between acceptable and unacceptable candidates may not be useful in distinguishing between "acceptable candidates" who will receive public accounting job offers and "acceptable candidates" who are not likely to receive job offers. Identifying the job candidates who are likely to be successful in securing job offers requires both the identification of important characteristics and a determination of the relative contribution of each characteristic in hiring decisions.

The second limitation of the Kochanek and Kochanek (1977) study is that the method they used to identify statistically significant differences in partner-student perceptions is biased in favor of finding significant differences when none may exist. Table 5 indicates that twenty different factors were tested individually using chi-square. By random chance alone, repeated use of the chi-square test on twenty separate data samples could result in significant differences for some of the samples. Therefore, Kochanek and Kochanek (1977) have not fully supported their findings of significant differences.

Adams (1980) focused entirely on the perceptions of students

in a study which compared national accounting firms to local/regional accounting firms. The data base supporting the Adams (1980) study consisted of 99 accounting seniors (58 males and 41 females) from a university in a large metropolitan area. The study examined and evaluated variables which students perceived as being potentially important in the recruiting process. Thus, this study assesses various selection criteria from the student's perspective.

Survey respondents rated the selection criteria (factors) shown in Table 7 on importance scales of 1 (extremely important) to 5 (little or no importance.) The mean of the student ratings for each factor reflects the student perception of the factor's importance to accounting firms. Adams (1980) compares the student perceptions about the national firms to the student perception about the local/regional firms to determine if there is agreement among the students as to which factors are generally important for both employer groups. Table 7 ranks the factors from most to least important for both the national firms and the local/regional firms. Also, Adams (1980) assesses the degree of importance students attach to the various factors. The assessment involves a comparison of the mean importance rating between national and local/regional firms on a factor - by - factor basis to determine if there is a statistically significant difference in student perceptions of the two employer groups.

The data in Table 7 suggest that there are similarities in the student perceptions of national and local/regional firms. For

TABLE 7

Student Perceptions of the Relative Importance of
Employee Selection Factors Used By
National, Local and Regional
Accounting Firms

	Accounting Firms			
	National		Local/Regional	
Rank	Factor	Mean Rating (1)	Factor	Mean Rating (1)
1	Academic Performance	1.414	Academic Performance	1.859
2	Ability to Communicate	1.747	Ability to Communicate	2.212
3	Appearance	2.162	Work Experience	2.216
4	Leadership Qualities	2.306	Personality	2.485
5	Personality	2.465	Appearance	2.495
6	Age	2.474	Faculty Recommendation	2.525
7	Faculty Recommendation	2.525	Leadership Qualities	2.606
8	College Attended	2.626	Location Preference	2.667
9	Work Experience	2.636	Age	2.969
10	Location Preference	2.909	College Attended	3.010
11	Extracurricular Activities	2.959	Extracurricular Activities	3.296
12	Sex	3.566	Sex	3.394
13	Race	3.727	Race	3.465
14	Family Background	3.878	Family Background	3.859

(1) Rating Scale
1 = Extremely Important
2 = Very Important
3 = Moderately Important
4 = Minor Importance
5 = Little or No Importance

Source: Bettie M. Adams, "Student Perceptions and Evaluation of Employee Selection Criteria Used by Public Accounting Firms for Entry-Level Positions." Proceedings of the 32 Annual Meeting, Southeast Regional Meeting, A.A.A., 1980, pp. 265-269.

example, four of the top five factors (academic performance, ability to communicate, appearance, and personality) are common to both employer groups. In terms of the factors which are least important, students perceive "sex," "race," and "family background" to be relatively unimportant to both employer groups. Thus, the accounting students perceive the accounting firms to be similar in terms of the factors which relatively are most important and least important to the firms in evaluating job applicants.

However, the students perceive the national accounting firms to be different from the local/regional firms in terms of the level of importance the firms attach to selection criteria. Table 8 compares the differences between both employer groups for each factor. Students perceive that local/regional firms place more weight on "work experience" and "race" in evaluating job applicants than do the national firms. Students perceive national firms to weigh "age," "academic performance," "extracurricular activities," "appearance," "ability to communicate," leadership qualities," and "college attended" more heavily than local/regional firms. Although Table 8 indicates that the above differences in student perceptions are statistically significant at the .05 level or higher, the significance level may be substantially lower than the .05 level. Adams (1980) repeated the t-test for each of the 14 factors in Table 7. This process increases the possibility of random error.

"Decision Model" Studies

TABLE 8

Student Comparison of Employee Selection Criteria Between National and Local/Regional Accounting Firms

Factor	Mean Rating: National Firms	Mean Rating: Local/Regional Firms	t-test Significance Level	
Age	2.489	2.968	.001	(1)
Sex	3.566	3.394	.132	
Academic Performance	1.414	1.857	.001	(1)
Extracurricular Activities	2.969	3.289	.002	(1)
Work Experience	2.639	2.217	.001	(1)
Appearance	2.162	2.495	.001	(1)
Ability to Communicate	1.748	2.212	.001	(1)
Family Background	3.878	3.847	.765	
Leadership Qualities	2.306	2.622	.003	(1)
College Attended	2.622	3.010	.001	(1)
Faculty Recommendations	2.525	2.525	1.000	
Race	3.727	3.465	.013	(1)
Personality	2.465	2.485	.824	
Location Preference	2.909	2.667	.073	

(1) Significant at 5 Percent Level of Significance.

Source: Bettie M. Adams, "Student Perceptions and Evaluations of Employee Selection Criteria Used by Public Accounting Firms for Entry Level Positions." Proceedings of the 32 Annual Meeting, Southeast Regional Meeting, A.A.A., 1980, pp. 265-269.

Khairullah and Khairullah (1983) developed a model which they feel may be useful in measuring the likelihood of success for graduating seniors who attempt to secure positions in public accounting. The authors used a computer program package called Linear Programming Techniques for Multidimensional Analysis of Preference Judgments (LINMAP) to generate an "ideal point" model based on an analysis of job applicant attributes. An assumption of the technique is that the decision maker (public accounting firm) has an "ideal point" denoting the most preferred location in an n-dimensional attribute space. Alternatives closer to the "ideal point" are considered to have a higher preference. Also, the LINMAP program calculates attribute weights which reveal the relative importance of the job applicant attributes.

The model developed in the Khairullah and Khairullah (1983) study uses survey data from 25 representatives (20 male, 5 female) of five national CPA firms. All of the respresentatives were involved in their firm's recruiting efforts. Each respondent prepared a preference ranking of 27 profiles presented to them and assigned an attribute weight ranging from 0 (unimportant) to 10 (extremely important) to each of 7 job applicant attributes. The authors used a fractional factorial design to develop the profiles. Also, they surveyed 23 senior year college students and 11 faculty members to determine the job applicant attributes that appeared to them to be most relevant in securing jobs in public accounting. The LINMAP program analyzed the respondents' ranking of the 27

profiles to determine attribute preferences of the recruiters. Khairullah and Khairullah (1983) compared the attribute preferences revealed by the LINMAR model to the preferences which the recruiters indicated they used by means of the 0 to 10 importance scale. Table 9 shows the attributes used in the study. According to Khairullah and Khairullah (1983), there is substantial agreement between the model of revealed preferences and the attribute importance ratings stated by the study participants. The variable "sex" was unimportant with both approaches. Both the model and the recruiter importance ratings favored job applicants with higher levels of the ability to communicate and express oneself," "maturity," and "overall grade point average" attributes. Also, both the model and the recruiter importance ratings placed secondary importance on the variables "degree of aggressiveness" and "participation in extra-curricular activities." However, the model of "revealed preferences" contradicted the attribute importance ratings assigned by the recruiters for the attribute "appearance." The model found this attribute to be irrelevant, but the recruiters rated "appearance" 6 on a scale of 1 to 10.

Although Khairullah and Khairullah (1983) suggest that LINMAP models may be used to predict the chances of success of college students in securing public accounting jobs, their study stops short of making and testing such predictions. Nevertheless, a major accomplishment of their study is their application of a modeling technique that computes the relative importance of each attribute used in the selection of job applicants for job offers.

TABLE 9

Attributes Used to Generate
the 27 Job Applicant Profiles

Attribute	Levels
Sex	Male Female
Degree of Aggressiveness	Not Aggressive Moderately Aggressive Very Aggressive
Ability to Communicate or Express Oneself	Has Great Difficulty Has Some Difficulty Communicates Well
Overall Grade Point Average	2.5 to 3.0 3.0 to 3.5 Over 3.5
Maturity	Immature Fairly Mature Very Mature
Appearance	Appropriate Inappropriate
Participation in Extra-curricular Activities	None Few Many

Source: Zahid Y. Khairullah, and Durriya Khairullah, "Importance of Characteristics of Graduating Seniors With Respect to Positions in Public Accounting." Lecture Notes in Economics and Mathematical Systems, Vol. 209, Springer-Verlaz, 1983.

In addition, the authors were successful in using the model to verify the importance rating which the respondents said they attached to each attribute in hiring decisions, for 6 of the 7 attributes tested.

Alvis (1983) used the two-group discriminate analysis technique to identify attributes of accounting students which have a statistically significant effect on employment offers from international accounting firms. An implicit assumption of his study is that there exists a general group of characteristics which are weighted during the recruitment process. To determine the student characteristics which have statistical significance in job offer decisions, Alvis (1983) analyzed 44 different attributes of accounting students. He used discriminate analysis to find the linear combination of the attributes that best separated the group of students who were successful in receiving employment offers from the group of accounting students who were not successful. The data used in the analysis came from questionnaires completed by 172 accounting majors (97 male, 75 female) who graduated from 8 different colleges at the end of the 1979-1980 school year.

Table 10 shows the attributes of accounting students which Alvis (1983) found to have a statistically significant effect on employment offers. The discriminate models developed at the .001 and .010 levels of significance are identical. "Accounting grade point average" (AGPA) and "ease of handling interview" (POISE) were the only student attributes that were important in separating the group of students who were successful in receiving employment

TABLE 10

Standardized Discriminate Functions
for Distinguishing Between Successful
and Unsuccessful Job Applicants

Standardized Coefficients of Variables Significantly Affecting Employment Offers

Variable	Levels of Significance			
	0.001	0.010	0.050	0.100
1. AGPA	0.7906	0.7906	0.6366	0.5764
2. POISE	0.6760	0.6760	0.6200	0.5136
3. BAP	*	*	0.4577	0.4735
4. INTQ	*	*	*	0.3104
5. DEGREE	*	*	*	0.3551
6. SCHOL	*	*	*	0.3168

*Not significant.

Source: John M. Alvis, An Empirical Investigation of Personal Characteristics Significantly Affecting Employment Offers from International Accounting Firms to Accounting Graduates, unpublished dissertation, University of Arkansas, 1983.

offers from the group of students who were not successful. At the .050 level of significance, the discriminate model adds "membership in Beta Alpha Psi" (BAP) as a factor which has a statistically significant effect on employment offers. At the .100 level of significance, the factors "intensity of questions raised by the respondent as compared to other students" (INTQ), "other undergraduate degrees" (DEGREE), and "percentage of college expenses provided by scholarships and grants" (SCHOL) were added to the discriminate model. According to Alvis (1983), one of the most important findings of his study was that "accounting grade point average" (AGPA) may be the most discriminating factor for accounting students who seek entry-level employment with international public accounting firms. As seen in Table 10, the standardized coefficients of "accounting grade point average" (AGPA) indicate that it had the largest effect on the offer of employment.

The Alvis (1983) study has two major limitations. First, the data used in the study are based on a survey of students rather than a survey of public accounting recruiters and partners. Since employment offers are based on the firm's evaluation of the student, discriminate models should be developed based on attributes that are used in the firm's recruitment decision process. Students could adjust their perceptions of relevant attributes to conform to the expectations of the public accounting firms. Adjusting the expectations of students to the expectations of public accounting firms would improve students' chances of

getting employment offers. A second limitation of the Alvis (1983) study is that the students who did respond to the questionnaire may be significantly different from the students who did not respond. Alvis (1983) relied on student leaders in each university's Beta Alpha Psi chapter to identify 1979-1980 graduates, distribute questionnaires, and collect responses. Graduates who had not received employment offers from a public accounting firm or who did not want confidential information handled by students may not have responded to the survey.

Summary

Table 11 and Table 12 summarize the studies on attributes of successful job applicants. As seen in Table 11, the important attributes vary from study to study. In addition, all of the existing research on the relationship between characteristics of job applicants and the recruiting practices of public accounting firms suffer from one or more of the following general weaknesses. First, prior studies did not isolate job applicants interviewing for entry-level auditing staff positions of a major public accounting firm from job applicants interviewing for other jobs, such as tax specialist or cost accountant. Khairullah and Khairullah (1983) state that "developing a model which would be applicable to all areas of accounting is difficult because the expectations and requirements would be different among different types of employers and jobs." (p. 1) Hence, there may be important differences in employer expectations when job applicants are being

TABLE 11

Successful vs. Unsuccessful Job Applicants
Discriminating Factors

Attributes	Seaton and White	Murdock(1)	Blitstein	Kochanek & Kochanek-Partners	Kochanek & Kochanek-Students	Adams	Khairullah and Khairullah	Alvis(2)
GPA	✓	✓				✓	✓	✓
Membership in Beta Alph Psi								✓
Maturity				✓			✓	
Comm. Skills	x	✓	✓	✓		✓	✓	
Intelligence		✓						
Appearance						✓	x	
Personality	✓	✓	✓	✓				
Relating to People				✓	✓			
Poise			✓					✓
Ambition	✓							
Conscientious, Persistent					✓			
Technical Competence		✓		✓	✓			

(1) Study did not rank attributes
(2) Significant at 5% level of significance
✓ Ranked among top 3 attributes
x Ranked among lowest 3 attributes

Table 12
Studies on Attributes of Successful Job Applicants

Study	Data Source	Data Base	Data
Seaton and White (1973)	Recruiters	297 CPA firms in 8 midwestern states	Respondents asked to describe personal characteristics sought in new Employees.
Murdock (1980)	8 National personnel directors or equivalents	8 of the 9 largest CPA firms	During 6 discussions, panelist discussed careers within large public accounting firms.
Blitstein (1981)	Recruiters	Business firms, government agencies, financial institutions	Respondents asked to list how important factors were in a student obtaining employment.
Kochanek and Kochanek (1977)	76 Accounting Seniors and 75 CPA Partners	A Connecticut university and sample of CPA's	Respondents asked to indicate the importance of 16 personality and four education-related factors to success in public accounting.
Adams (1980)	Accounting Students	A university in a large metropolitan area	Subjects asked to rate and rank-order various selection criteria.
Khairullah and Khairullah (1983)	25 Respondents	5 major Accounting Firms	Subjects asked to prepare preference ranking, assign attribute weights, and assign relative importance weights to attribute levels for 27 different profiles of graduating seniors.
Alvis (1983)	172 Accounting Seniors	8 universities in one geographical area	Successful and unsuccessful job candidates asked to provide descriptive information and make self-evaluations about 44 variables.

selected for the audit staff as opposed to other accounting-related positions. Second, prior studies have relied on panel discussions (Murdock, 1980), questionnaire responses from recruiters (Blitstein, 1981; Seaton and White, 1980), questionnaire responses from students (Alvis, 1983; Adams, 1980), or experimental cases (Khairullah and Khairullah, 1983) to gather data for analyzing employee selections. Actual auditor selection decisions using public accounting firms' evaluations of job applicants have not been studied. Adams (1980) has suggested that "objective comparisons of student perceptions with actual data generated from the accounting profession ... may provide important insights into both the recruiting and counseling functions." (p. 269) Finally, prior studies have ignored the different stages in the employment process. Figure 1 (Chapter 1) outlines five decision stages. The attributes of job applicants which may have a statistically significant effect on decisions at each stage may differ. Thus, it may be useful to analyze the discriminating ability of job applicant attributes at different levels in the employment selection process.

CHAPTER 3

RESEARCH METHODOLOGY

The major objectives of this research are: (1) to determine the relative importance of applicant attributes in discriminating between students who receive office visit invitations and/or job offers and students who do not; (2) to ascertain the extent to which these same attributes are effective in discriminating between audit staff members who perform well enough to remain with the firm and audit employees who leave the audit staff. The first section of this chapter discusses a lens model formulation of the research problem. The second section describes the data and the method used to collect them. Section three discusses the analytical techniques used to determine the attributes which discriminate between successful and unsuccessful job applicants and/or staff members. The fourth section outlines the hypotheses to be tested.

Lens Model

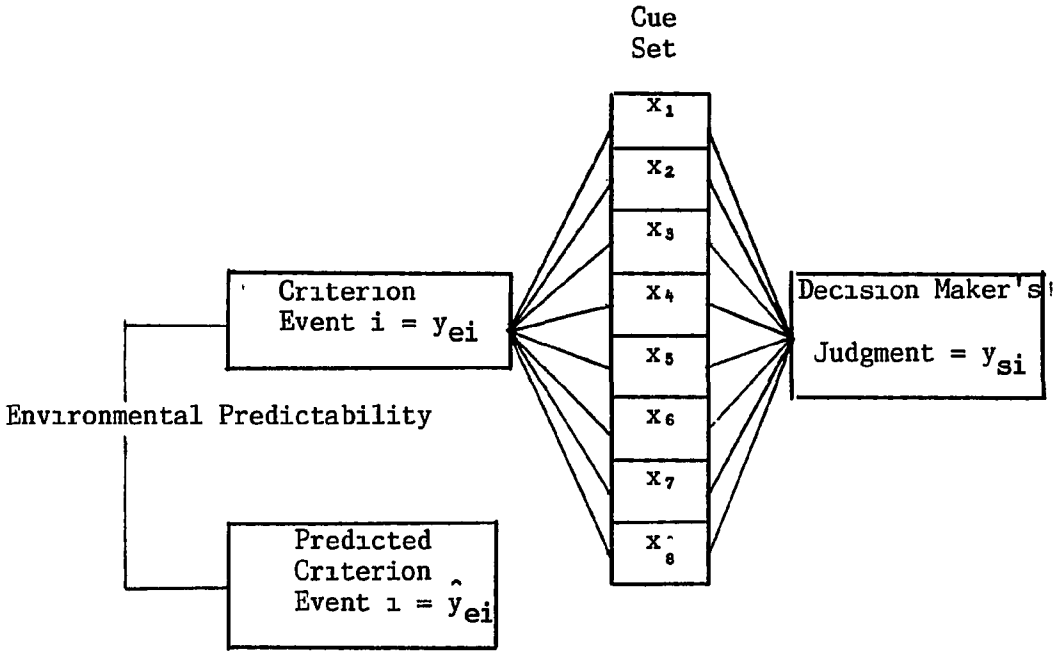
According to Libby (1981), the lens model (regression approach to modeling) framework has been used to analyze judgments in accounting contexts in more than 30 studies. Surprisingly, a simple regression model appears to highlight some important characteristics of decision making under uncertainty. Although most studies using a regression-related modeling technique have been either laboratory or field experiments, three noted exceptions are Horrigan (1966), Dawes (1971), and Brown (1981). In these

three cases, archival data resulting from actual decisions were analyzed. Horrigan (1966) studied bond raters, Dawes (1971) studied a graduate admissions committee, and Brown (1981) studied respondents to FASB discussion memoranda. Libby (1981) states that these studies are extremely important and should receive more research attention. The current research continues the Horrigan (1966), Dawes (1971), and Brown (1981) tradition in using the lens model framework to study actual decisions.

Figure 2 shows the auditor selection model used in the current study. This model focuses on the relationship between four elements of the lens model. These elements are the task environment (cue set x_1 to x_8), the criterion event (y_{ei}), the decision maker's estimate of the event (y_{si}), and the predicted criterion event ($\hat{y}_{ei}$). Table 13 identifies each variable included in the two cue sets used in the current study. Each cue set corresponds to attributes evaluated by the firm at different stages in the auditor selection process. At decision stage 2 (Chapter 1, Figure 1), the firm rates the attributes in cue set I in its evaluation of each accounting student participating in on-campus interviews. The firm considers these assessments of the students in selecting those students to invite into the office for follow-up interviewing. The major focus of this study is determining the extent to which these attribute ratings are effective in discriminating between accounting students who are and are not selected for follow-up interviewing. Also, this study will examine the extent to which these attribute ratings are effective in

Figure 2

Auditor Selection Model



Source: Robert Libby, Accounting and Human Information Processing: Theory and Applications, (Englewood Cliffs, N.J.: Prentice Hall, 1981), p. 19.

TABLE 13

Auditor Selection Model Cue Sets

Variable	Cue Set I	Cue Set II
x_1	Leadership, Intellectual Ability	Technical Knowledge
x_2	Attitude, Motivation, Goals	Analytical Ability Judgment
x_3	Judgment, Maturity	Written Expression
x_4	Communication Skills	Verbal Expression
x_5	Presence	Performance
x_6	Rating of Potential	Attitude
x_7	Overall GPA	Client Relations
x_8	Accounting GPA	Development of Personnel

discriminating between students who do and do not receive job offers (decision stage 3) and student who accept and do not accept the firm's job offer (decision stage 4). The firm uses the variables in cue set II to evaluate the performance of audit staff employees on audit engagements. Both cue I and cue set II will be examined to determine the extent to which these attributes are useful in identifying individuals who will be successful with the firm.

Table 14 describes the criterion events and the possible outcomes for each event. The focus of the current research is the left side of the model in Figure 2 - that is, the relationship of the cue set (x_1 to x_8) to the criterion events. A major contribution of the current study will be determining the relative importance of each variable in discriminating between successful and unsuccessful job applicants and/or audit staff members. Those variables that lack importance in actual auditor selection decisions may be eliminated from the cue set. By emphasing only the important attributes in auditor selection decisions, the interviewers would increase the likelihood that they will select and retain high quality staff. Likewise, college students would benefit from emphasizing the important attributes by increasing the likelihood that they would receive employment offers with the firms they prefer to join. Identifying the important attributes in auditor selection decisions will involve using the auditor selection cue set of a national CPA firm to develop prediction models, using the prediction models to predict the criterion events

TABLE 14

Auditor Selection Model Events and Outcomes

Criterion Events	Outcomes
y_{e1} = Office Visit Decision	a. Firm extends office visit invitation b. Firm terminates recruiting process
y_{e2} = Job Offer Decision	a. Firm offers job to job applicant b. Firm terminates recruiting process
y_{e3} = Offer Acceptance Decision	a. Job applicant accepts job offer b. Job applicant terminates interviewing process
y_{e4} = Retention Decision	a. Auditor terminates employment prematurely b. Auditor does not terminate employment prematurely

($\hat{y}_{ei}$), and comparing the actual event (y_{ei}) to the predicted event ($\hat{y}_{ei}$). Models that predict criterion events at a rate significantly better than chance contain those variables which are most useful in auditor selection decisions.

Data Base

The data base for the current study consists of information collected from different offices of a national CPA firm. The criterion used in selecting the specific offices for the study was that the research results based on them could be generalized to the firm's entire recruitment program. To insure that the offices were representative, the firm's National Director of Personnel participated in the selection. Discussions with the National Director of Personnel resulted in the selection of the offices in Harrisburg, Pennsylvania; Rockville, Maryland; Philadelphia, Pennsylvania; and New York, New York as sites for data collection. The National Director of Personnel was confident that any auditor selection research results based on these offices could be generalized to the firm's entire recruitment program. Nationwide, the firm has approximately 3,400 professional staff and 43 offices. In a typical year the firm interviews 3,000 students on college campuses. The offices in this study usually account for approximately 23 percent of that total.

Table 15 describes six categories of college students and employees that were used to study the criterion events in Table 14. Examining the relationship of cue set I (Table 13) to the "office

TABLE 15

Auditor Selection Outcome Categories

Category	Description
1. Successful Auditors	Auditors who were employed by the firm for four years or more.
2. Premature Terminations	Auditors who terminated their employment with the firm prior to their third employment anniversary.
3. Accepted offer	Job applicants who accepted the firm's job offer after interviewing in the firm's office. The applicant's invitation to the office interview was based on the results of the applicant's campus interview.
4. Rejected offer	Job applicants who rejected the firm's job offer after interviewing in the firm's office. The applicant's invitation to the office interview was based on the results of the applicant's campus interview.
5. No offer given	Job applicants who did not receive a job offer after interviewing in the firm's office. The applicant's invitation to the office interview was based on the results of the applicant's campus interview.
6. No office invitation	Job applicants did not receive invitations to visit the firm's office after interviewing on campus with the firm.

visit decision" (Table 14) involved comparing the "no office invitation" category to the combination of the "no offer given," "rejected offer," and "accepted offer" categories (Table 15). The combination of the above three categories ("no office invitation," "no offer given," and "rejected offer") represent job applicants who received office visit invitations based on their campus interviews with the firm. The "successful auditors" and "premature terminations" categories were excluded from the group who received office visit invitations because these individuals did not interview on campus during the same time period as the other categories. Examining the relationship between cue set I (Table 13) and the "job offer decision" (Table 14) involved comparing the "no offer given" category to the combination of the "rejected offer" and "accepted offer" categories (Table 15). Studying the impact of cue set I (Table 13) on the "offer acceptance decision" (Table 14) involved comparing the "rejected offer" category of job applicants to the "accepted offer" category (Table 15). Finally, comparing the "successful auditors" category to the "premature terminations" category of employees revealed the impact of cue set I and cue set II (Table 13) on the "retention decision" criterion event (Table 14).

For college students who interview with the firm on campus, the firm uses experienced interviewers to evaluate the students. All interviewers receive intensive training by the firm. This training includes mock interview sessions and instructions regarding the firm's interview approach and goals. In evaluating

each student, the firm's interviewer rates the student as "outstanding," "desirable," "average", or "questionable" for variables x_1 through x_6 in cue set I (Table 13). The interviewer records these ratings on a standard form (Appendix A) used by all the firm's offices for on-campus interviews. The same standard form was used for the time period covered in this study. For the information regarding the student's "overall GPA" (x_7) and "accounting GPA" (x_8), the interviewer gets this information from the student's resume or the college's placement office.

The firm uses the variables in cue set II (Table 13) to evaluate the performance of their audit staff employees on audit engagements. The firm has a standard form (Appendix B) that is used by all the firm's offices. The ratings for each variable are "exceeds requirements," "meets requirements," and "needs improvement." This form remained unchanged during the period of this study.

The attributes included in this study (cue set I and cue set II) are basically of two types. The first type consists of subjective measures which require interviewer evaluations. This type includes assessments of qualities such as "leadership, intellectual ability" (x_1 in cue set I) and "analytical ability and judgment" (x_2 in cue set II). These assessments are highly subjective since the values assigned depend on the interviewer's frame of reference, experience, expectations, and biases. A second type of attributes consists of measures which are objective -- that is, independent of individuals interviewing the job candidate.

These factors include overall grade point average and accounting grade point average. Since the firm in this study uses experienced interviewers to evaluate students in on-campus interviews, the possibility of rater bias for variables x_1 through x_6 in cue set I is assumed to be minimal. According to Miner (1969), firms can overcome the problem of rater bias:

> "Interviewers can be trained to follow similar patterns in their questioning and to evaluate responses using the same standards. When more structured interview techniques are used, when the questions asked are standardized and responses are recorded systematically, the consistency of the judgmental process increases markedly. Within limits, it does not matter which interviewer is used; the results tend to be similar." [p. 106-107]

With regard to cue set II, the ratings used for each variable are based on three performance evaluations randomly selected from each audit staff employee's personnel file for the most recent year that evaluations were available. The firm requires supervisors to evaluate each audit staff employee who works on an assignment for 35 hours or more. The decision to select three of the employee's performance evaluations to develop average ratings for each attribute was arbitrary. Since most employees stay with the firm for the entire first year, it was felt that all employees would have at least three performance evaluations in their files. The process of selecting three performance evaluations to compute average ratings was followed to lessen the possibility of rater bias in cue set II due to differences in the training of the

supervisors who rated the employees on each audit job. The primary concern with regard to cue set II is an index of the performances of employees in the "premature terminations" category that can be compared to a similar performance index for employees in the "successful auditors" category.

Table 16 shows the number of job applicants and employees of the firm included in the current study. In addition, Table 17 and Table 18 indicate the number of male subjects and the number of female subjects respectively for the six different outcome categories. Selecting employees of the firm for the "successful auditor" category involved searching the firm's personnel files for employees who remained employed with the firm for four years or more. Likewise, selecting employees for the "premature terminations" category involved searching the firm's personnel files for employees who terminated their employment prior to their third employment anniversary. Employees who terminated their employment with the firm during the period September 1, 1980 to November 30, 1984 were placed in the "successful auditors" or "premature terminations" categories depending upon their length of service with the firm. Restricting the period to September 1, 1980 to November 30, 1984 reduced the possibility of introducing a bias in the analysis due to significantly different time periods being studied. In particular, over long periods of time the definition of minimum acceptable skills and performances changes in response to environmental influences. These influences include the complexity of public accounting technical pronouncements, the type

TABLE 16

Data Sample - All Subjects

Category	Office				
	Harrisburg	Rockville	New York	Philadelphia	Total
1. Successful Auditors	13	7	10	13	43
2. Premature Terminations	13	11	15	14	53
3. No Offer Given	14	13	15	12	54
4. Rejected Offer	8	11	15	23	57
5. No Office Invitation	16	35	16	16	83
6. Accepted Offer	--	14	16	29	59
	64	91	87	107	349

TABLE 17

Data Sample - Male Subjects

Category	Office				
	Harrisburg	Rockville	New York	Philadelphia	Total
1. Successful Auditors	8	2	8	10	28
2. Premature Terminations	9	5	8	11	33
3. No Offer Given	9	5	3	6	23
4. Rejected Offer	4	3	11	15	33
5. No Office Invitation	7	21	9	12	49
6. Accepted Offer	--	5	8	10	23
	37	41	47	64	189

TABLE 18

Data Sample - Female Subjects

Category	Office				
	Harrisburg	Rockville	New York	Philadelphia	Total
1. Successful Auditors	5	5	2	3	15
2. Premature Terminations	4	6	7	3	20
3. No Offer Given	5	8	12	6	31
4. Rejected Offer	4	8	4	8	24
5. No Office Invitation	9	14	7	4	34
6. Accepted Offer	--	9	8	19	36
	27	50	40	43	160

of clients audited by the firm, the manpower needs of the firm, and the supply of high quality accounting graduates. Unless a study is restricted to a time period that limits the potential impact of environmental influences, differences in attribute ratings may reflect differences in changing standards rather than differences in employee skills or performances. The selection of the September 1, 1980 to November 30, 1984 time period for this study was designed to balance the need for an adequate sample size of employees in the "successful auditor" category with the need to minimize the possibility of any time-period bias.

Table 16 shows a breakdown by office of the employees satisfying the above criteria. The "successful auditors" and "premature terminations" categories contain 43 and 53 employees respectively. Cue set I data for these employees consist of the interviewer's ratings and grade point average notations recorded on the standard interview evaluation form. Cue set II data for each employee consist of the average ratings from three performance evaluation forms.

College students who interviewed with the firm in on-campus interviews and office interviews during the September, 1982 to November 30, 1984 period were placed in the "no offer given," "rejected offer," "no office invitation," and "accepted offer" categories. The larger number of employees in the above categories permitted a reduction in the time period for analyzing the attribute ratings. This reduction from four to two years decreases further the possibility of any time-period bias in the attribute

ratings. Table 16 shows a breakdown by office of the college students interviewing in those offices. The "no offer given," "rejected offer," "no office invitation," and "accepted offer" categories contain 54, 57, 83, and 59 subjects respectively. The cue set I data for these subjects consist of the interviewer's ratings and grade point average notations recorded on the standard interview evaluation form.

Cue set II data for each employee consist of the average ratings from three performance evaluation forms.

Data Analysis

The statistical technique used in this study to measure the relationship of the attributes in cue set I and cue set II (Table 13) to the criterion events (Table 14) is two-group discriminant analysis. The mathematical objective of discriminate analysis is to weight and linearly combine discriminating variables so that previously defined groups will be as statistically distinct as possible. The discriminating variables are characteristics on which the groups are expected to differ. Welker (1974) describes linear multiple discriminate analysis (LMDA) as:

> "a statistical procedure which linearly differentiates between two or more overlapping, multivariate populations -- similar but separate populations which have a common set of measurable characteristics -- for the purpose of allocating new elements to its related population when the originating population is

> unknown. The analysis is similar to linear multiple regression. Both are linear prediction models but differ in that multiple regression analysis uses quantitative explanatory variables to predict a quantitative variable, whereas LMDA uses quantitative explanatory variables to predict a qualitative variable." [p. 515]

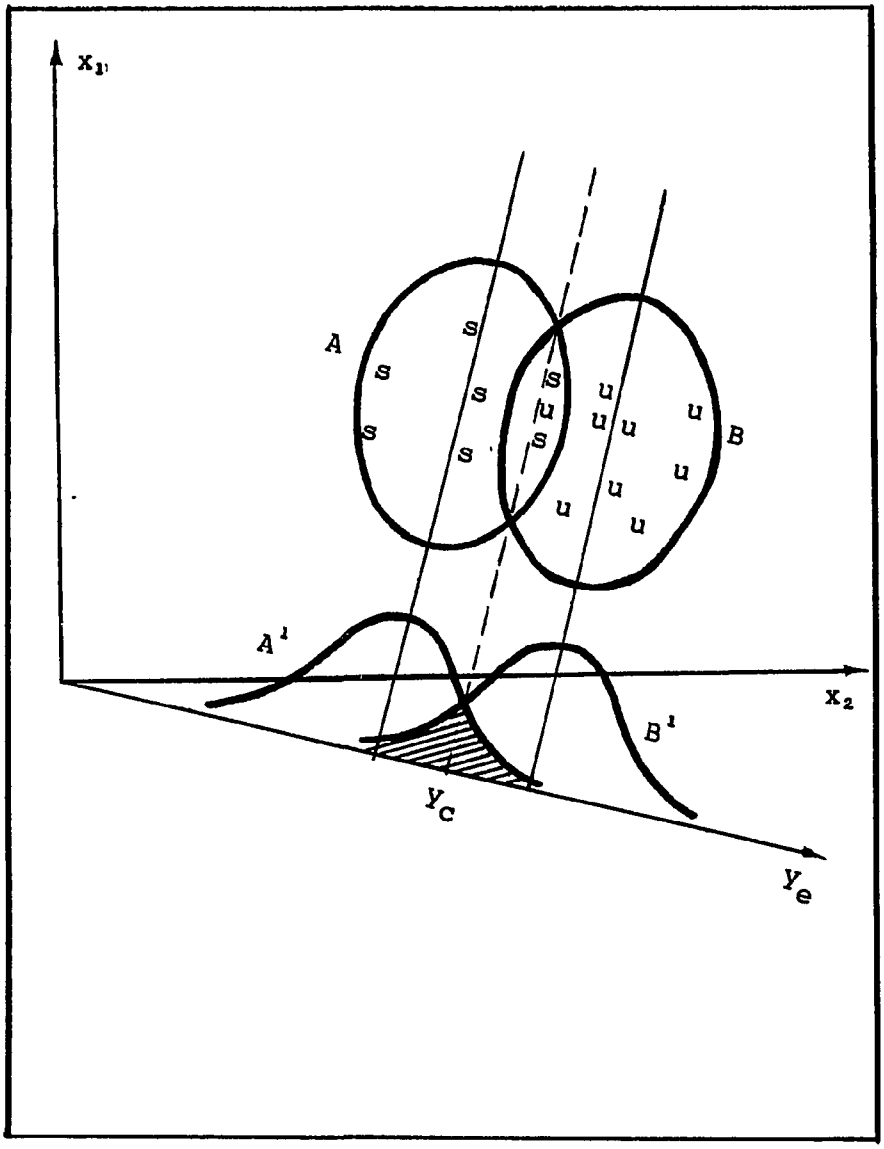
In this study, the groups are the outcomes in Table 14. There are two outcomes (groups) for each of the four criterion events. The variables x_1 through x_8 from cue set I and cue set II in Table 13 are the discriminating variables.

Figure 3 illustrates the major aspects of two-group discriminate analysis for a simple case with two discriminating variables. The two groups (multivariate populations) are "A" and "B". The characteristics that are common to both groups are variables x_1 and x_2. The "s" in Figure 3 represents job applicants and employees of the firm who belong to an "a" outcome category in Table 14. The "s" means that the individual belongs to a "successful" group. The "u" in Figure 3 represents job applicants and employees who belong to a "b" outcome category in Table 14. The "u" means that the individual belongs to an "unsuccessful" group.

Discriminate analysis linearly combines the characteristics "x_1" and "x_2" for individuals "s" and "u" so that the "s's" of group A will be separated as much as possible from the "u's" of group B. Figure 3 shows a clustering of the "s" individuals into a set of x_1 x_2 combinations (group A) and a clustering of the "u" individuals into a different set of $x_1x_2$combinations (group B). Unless perfect

Figure 3

Two-Group Discriminate Analysis With Two Discriminating Variables



discrimination between "s"-type individuals and "u"-type individuals is possible, the $x_1 x_2$ measurements for the "s" and "u" individuals will be equal in some cases. The intersection of group A and group B in Figure 3 illustrates the extent to which the x x measurements overlap after achieving the best possible separation of "s's" and "u's" based on the x_1 and x_2 variables.

Discriminate analysis separates the "s" individuals and the "u" individuals into group A and group B by transforming the x and x measurements of each individual into a one-dimensional scalar. The function for computing the scalar associated with each individual is of the form $y_{ei} = w_{i1}x_{i2} + w_{i1}x_2$. "$y_{ei}$" is the discriminant score on function 1 and "w_{i1}" and "w_{i2}" are weighting coefficients. The scalar value "y_c" in Figure 3 represents a plane of individuals such that as many "s" individuals as possible are on one side of the plane (group A) and as many "u" individuals as possible are on the other side of the plane (group B). Thus, "y_c" defines the space where the likelihood of an individual's membership to either group A or group B is exactly equal. Discriminate analysis computes the critical "y_c" value (boundary function) by finding the best "w_{i1}" and "w_{i2}" combination consistent with the statistical decision rule of maximizing the between-group variance relative to the within-group variance expressed in ratio form.

The curves A^1 and B^1 in Figure 3 represent the distributions of the y_{ei} scalars (discriminate scores) computed for each "s" and "u" individual. The failure of the characteristics x_1 and x_2 to

discriminate perfectly between "s" individuals and "u" individuals result in some overlap between distributions A^1 and B^1. The shaded area in Figure 3 indicates the extent of the overlap. Although the overlap associated with the line "y_c" is smaller than the overlap which would be associated with any other boundary function separating group A and group B, the possibility does exist that the group membership of an individual may be predicted incorrectly.

Figure 3 illustrates the two-group discriminate analysis technique when there are two discriminating variables. The current study analyzes two sets of discriminating variables (cue set I and cue set II) with each set containing eight attributes used by a national CPA firm in personnel selection decisions. The process for determining the discriminating ability of these attributes involved using the two-group discriminate process described in Figure 3 to develop discriminate models (y_{ei} in Figure 2), using the discriminate models to predict the group membership of job applicants and employees ($\hat{y}_{ei}$ in Figure 2), and evaluating the predictive accuracy of the models. The Rao's V stepwise discriminate analysis program in the second edition of Statistical Package For the Social Sciences (SPSS) produced discriminate models for each criterion event in Table 14. Also, the SPSS discriminate analysis computer program used the discriminate models to predict the group classification of the subjects in Table 16. According to Klecka (1975), "the use of a stepwise procedure results in an optimal set of variables being selected." [p. 448] Of the six discriminate analysis procedures available in SPSS, Rao's V is a

generalized distance measure which produces the largest overall separation of the groups. Therefore, the Rao's V criterion is consistent with the objectives of this study.

To evaluate the predictive accuracy of a discriminate model, Alvis (1983) recommends a "split-sample" validation technique. This technique avoids the prediction bias associated with using a model to predict the classification of cases that were used also in the development of the model. Implementing the "split-sample" process involved dividing the subjects in Table 16 into two samples -- an "analysis sample" and a "hold-out sample." The "analysis sample" provided the data for developing the discriminate models. Testing the predictive accuracy of the models involved using the "analysis sample" models to predict the group classification of subjects in the "hold-out sample." Alvis (1983) states that "the overall measurement of how well the discriminate model classifies the cases is known as the "hit-ratio." The hit-ratio is similar to the coefficient of determination in regression analysis." [p. 69] A discriminate model's "hit-ratio" is the weighted-average percentage of cases correctly classified into the different groups. The criterion used in this study to determine the acceptability of a discriminant function's "hit-ratio" is the proportional chance criterion. According to Clark and Sweeney (1985), "the proportional chance criterion can be used to determine a priori the probability of an individual case being classified correctly." [p. 512] The formula is $C = P^2 + (1-P)^2$, where "P" is the proportion of subjects in group A and "1-P" is the proportion

of subjects in group B. "C" indicates the proportion of subjects that could be correctly classified by chance. To be acceptable in this study, a discriminate model's hit-ratio must be greater than the results which could have been obtained by chance. Alvis (1983) suggests that "if the classification accuracy is at least 25% greater than by chance, the model performs significantly better than chance classification." [p. 96]

Assessing the relative importance of the attributes in Table 13 involves expressing the discriminant model in standardized form. Since the standardized discriminate models contain only the standardized coefficients of the statistically significant independent variables, the magnitude of each standardized coefficient indicates the relative strength of the variable in determining the classification of the subjects. For example, Welker states that "the measures with large coefficients relative to the other coefficients in the discriminate function...have the greatest impact in discriminating between the populations and, therefore, should be given extra attention by the manager so as to minimize measurement errors." [p. 19]

Research Hypotheses

This study examines four hypotheses for each criterion event in Table 14. The SPSS discriminant analysis program discussed in the previous section uses the data in Table 16 to develop discriminant models for each hypothesis to be tested. Each hypothesis is accepted or rejected based on the ability of the

discriminate model to classify job applicants and employees at a rate significantly better than chance. The hypotheses are as follows:

Office Visit Decision

H1: In terms of grade point average and recorded attributes, there is no statistically significant difference between job applicants who are interviewed on campus and receive office visitation invitations and those who do not receive an invitation for follow-up interviewing.

H2: For male students, there is no statistically significant difference in grade point average and recorded attributes between job applicants who receive office interview invitations and job applicants who do receive offers for follow-up interviewing.

H3: For female students, there is no statistically significant difference in grade point average and recorded attributes between job applicants who receive office interview invitations and job applicants who do not receive offers for follow-up interviewing.

H4: For students who receive office interview invitations, there is no statistically significant difference in grade point average and recorded attributes between male and female students.

Job Offer Decision

H5: In terms of grade point average and recorded attributes, there is no statistically significant difference between candidates who receive job offers and candidates who do not receive job offers.

H6: For male candidates, there is no statistically significant difference in grade point average and recorded attributes between candidates who receive job offers and candidates who do not receive job offers.

H7: For female candidates, there is no statistically significant difference in grade point average and recorded attributes between candidates who receive job offers and candidates who do not receive job offers.

H8: For candidates who receive job offers, there is no statistically significant difference in grade point average and recorded attributes between male and female candidates.

Offer Acceptance Decision

H9: In terms of grade point average and recorded attributes, there is no statistically significant difference between prospective employees who accept the firm's job offer and those prospective employees who do not accept the firm's offer.

H10: For male candidates, there is no statistically significant difference in grade point average and recorded attributes between prospective employees who accept the firm's job offer and those candidates who do not accept the firm's offer.

H11: For female candidates, there is no statistically significant difference in grade point average and recorded attributes between prospective employees who accept the firm's job offer and those candidates who do not accept the firm's offer.

H12: For prospective employees who accept the firm's job offer, there is no statistically significant difference in grade point average and recorded attributes between male and female employees.

Retention Decision

H13: In terms of grade point average and recorded attributes, there is no statistically significant difference between senior auditors and audit staff who terminate prematurely.

H14: For male auditors, there is no statistically significant difference in grade point average and recorded attributes between senior auditors and audit staff who terminate prematurely.

H15: For female auditors, there is no statistically significant difference in grade point average and recorded attributes between senior auditors and audit staff who terminate prematurely.

H16: For senior auditors, there is no statistically significant difference in grade point average and recorded attributes between male and female senior auditors.

The attributes of job applicants and employees are examined at different stages in the personnel selection process to determine if the importance of attributes vary between stages. Also, the sex of individuals is examined to determine if the attributes which are important for males differ from the attributes which are important for females.

Summary

Chapter 3 has presented an overview of the current study. This chapter developed a lens model formulation of the research problem, described the data base used in the analysis of the problem, and discussed the discriminant analysis procedure for identifying attributes which are statistically significant in discriminating between successful and unsuccessful job applicants and employees. The chapter concluded by stating the hypotheses examined in this study.

CHAPTER 4

RESEARCH RESULTS

This chapter analyzes the attributes used by a national CPA firm to assess job applicants during on-campus interviews and to evaluate audit staff members during audit assignments. The primary focus of this analysis is determining the relative importance of each attribute in office visit decisions, job offer decisions, offer acceptance decisions, and retention decisions. To determine the relative importance of the attributes, this chapter develops discriminant models for each hypothesis, reports the standardized coefficients of each significant attribute in the discriminant models, and tests the classification accuracy of the discriminant models on external samples. For each hypothesis, this chapter develops discriminate models at three different levels of significance (0.01, 0.05, and 0.10) in order to assess the extent to which acceptance or rejection of the hypothesis is sensitive to the model's level of significance. Also, this chapter reports the standardized coefficient of each attribute in the discriminate models in order to evaluate the importance of each attribute relative to the other attributes in the model. Finally, this chapter tests each discriminate model's predictions against a proportional chance criterion to determine the usefulness of the models. In this study, "useful" models are those which discriminate between successful and unsuccessful job applicants and audit staff members at a level significantly better than chance.

H1: Office Visit Decision - All Job Applicants

The subjects in Table 16 (Chapter 3) that were used to test hypothesis "H1" consist of 253 job applicants from the "no offer given" (54 applicants), "rejected offer" (57 applicants), "no office invitation" (83 applicants), and "accepted offer" (59 applicants) categories. The 83 applicants from the "no office invitation" category were placed in a "no office visit invitation" group. The remaining 170 applicants from the "no offer given," "rejected offer" and "accepted offer" categories were placed in a "office visit invitation" group. Of the 83 applicants in the "no office visit invitation" group, 42 applicants were randomly selected for the analysis sample, and the remaining 41 applicants were placed in the hold-out sample. Likewise, 85 applicants from the "office visit invitation" group (170 applicants) were randomly selected for the analysis sample, and the remaining 85 applicants were placed in the hold-out sample.

Table 19 shows the discriminant model at the 0.01, 0.05, and 0.10 levels of significance. The discriminant model at each level of significance contains a constant and two discriminating variables - "overall rating of potential" and "accounting GPA." Table 19 is an important finding in this study. In particular, the model suggests that "overall rating of potential" and "accounting GPA" are potentially the most important attributes of accounting students in discriminating between students who receive and students who do not receive office visit invitations for follow-up interviewing.

TABLE 19

Unstandardized Coefficients of Attributes Significantly Affecting Office Visit Invitations For All Job Applicants

	Levels of Significance		
Attribute	0.01	0.05	0.10
Constant	-10.6651	-10.6651	-10.6651
Overall Rating of Potential	.9976	.9976	.9976
Accounting GPA	1.4466	1.4466	1.4466
Communication Skills	*	*	*
Judgment, Maturity	*	*	*
Leadership, Intellectual Ability	*	*	*
Presence	*	*	*
Attitude, Motivation, Goals	*	*	*
Overall GPA	*	*	*

*Not Significant

Table 20 shows the standardized coefficients for the variables in the discriminate model. An important finding in Table 20 is the dominance of the "overall rating of potential" attribute in office visit decisions. The discriminate model indicates that "overall rating of potential" is almost twice as important as "accounting GPA" in discriminating between accounting students who do and do not receive office visit invitations.

The attributes which are not included in either discriminant model are identified by the symbol "*" in Table 19 and Table 20. The absence of these attributes from the model suggests two possibilities. One possibility is that these attributes are not useful in discriminating between accounting students who received and who did not receive office visit invitations. An attribute will not discriminate between different groups of accounting students if all the students receive similar ratings on that attribute or if the attribute is disregarded in selection decisions because the attribute is unimportant. The second possibility is that the omitted attributes are highly correlated with attributes already included in the models. In this case, the omitted attributes add little information to the existing models.

Thus, the models in Table 19 suggest two important conclusions. First, accounting students who will and will not be successful in receiving office visit invitations can be identified based on the ratings they receive on the firm's standardized campus interview form. Second, the ""overall rating of potential" and "accounting GPA" attributes are potentially the most important

TABLE 20

Standardized Coefficients of Attributes Significantly Affecting Office Visit Invitations For All Job Applicants

	Levels of Significance		
Attribute	0.01	0.05	0.10
Overall Rating of Potential	.9203	.9203	.9203
Accounting GPA	.4949	.4949	.4949
Communication Skills	*	*	*
Judgment, Maturity	*	*	*
Leadership, Intellectual Ability	*	*	*
Accounting GPA	*	*	*
Presence	*	*	*
Attitude, Motivation, Goals	*	*	*
Overall GPA	*	*	*

*Not Significant

factors used by the firm in selecting the accounting students who will be invited into the office for follow-up interviewing.

Table 21 shows a classification matrix for the predictions of the two-variable discriminant model in Table 19. For the 127 cases in the analysis sample, the model correctly classified 71.4 percent of the college students who did not receive invitations for follow-up interviewing (the "No OVI" group) and 94.1 percent of the college students who did receive office visit invitations (the "OVI" group). For the 126 cases in the hold-out sample, the model correctly classified 65.8 percent of the "no office visit invitation" group (No OVI) and 90.6 percent of the "office visit invitation" group (OVI). For the analysis sample and hold-out sample combined, the model correctly classified 68.7 percent and 92.3 percent respectively of the "No OVI" and "OVI" groups.

Table 22 computes the hit-ratio for the discriminant model and compares the hit-ratio to the proportional chance criterion. For the analysis sample, the hit ratio on line 5 is 86.61 percent. Since this hit-ratio is larger than 125 percent of the proportional chance criterion on line 12 (69.68 percent), the discriminate model has correctly identified college students who received and who did not receive invitations for follow-up interviewing at a rate significantly better than chance. This interpretation of the model's performance is consistent with Hair, et al (1979), who suggests that "if classification accuracy is at least 25 percent greater than by chance, the discriminate model performs significantly better than chance classification." [p. 103]

TABLE 21

Office Visit Decision Model Classification Matrix
For All Job Applicants at 0.01, 0.05 and
0.10 Level of Significance

Actual Group		Predicted Group			Percent Correctly
Group	Cases	No OVI	OVI	TOTAL	Classified
Analysis Sample:					
No Office Visit Invitation (No OVI)	42	30	12	42	71.4%
Office Visit Invitation (OVI)	85	5	80	85	94.1%
	127			127	
Hold-Out Sample:					
No Office Visit Invitation (No OVI)	41	27	14	41	65.8%
Office Visit Invitation (OVI)	85	8	77	85	90.6%
	126			126	
Total Sample:					
No Office Visit Invitation (No OVI)	83	57	26	83	68.7%
Office Visit Invitation (OVI)	170	13	157	170	92.3%
	253			253	

TABLE 22

Computation of Hit Ratio and Proportional Chance Criterion for the Office Visit Decision Model of All Job Applicants at 0.01, 0.05 and 0.10 Levels of Significance

	Sample		
	Analysis	Hold-out	Total
1. No OVI(1)-Correct Classification	30	27	57
2. OVI(2)-Correct Classification	80	77	157
3. Total - Correct Classification	110	104	214
4. Sample Size	127	126	253
5. Hit Ratio (Row 3 ÷ Row 4)	.8661	.8254	.8458
6. No OVI - Number of Cases	42	41	83
7. OVI - Number of Cases	85	85	170
8. Total - Number of Cases	127	126	253
9. No OVI Proportion (Row 6 ÷ Row 8)	.3307	.3254	.3281
10. OVI Proportion (Row 7 ÷ Row 8)	.6693	.6746	.6719
11. PCC(3) [(Row 9)^2 + (Row 10)^2 = C]	.5574	.5610	.5590
12. 1.25 C	.6968	.7013	.6988

(1) No OVI = No Office Visit Invitation group
(2) OVI = Office Visit Invitation group
(3) PPC = Proportional Chance Criterion

A major concern in this study is the classification accuracy of discriminate models with regard to external samples -- that is, a sample of cases that were not used during the model development phase of the SPSS discriminate analysis program. Table 22 shows a hit-ratio of 82.54 percent (line 5) for the hold-out sample (external sample) compared to 70.13 percent (line 12) for 125 percent of the proportional chance criterion. Thus, the classification accuracy of the discriminate model is significantly better than chance also for the hold-out sample. Testing the prediction accuracy of the model on an external sample avoids the prediction bias associated with using a model to predict the classification of cases that also were used in the development of the model.

The ability of the models in Table 19 to predict the correct classification of the "unknown students" (the hold-out samples) at a rate significantly better than chance demonstrates that in terms of grade point average and the other attributes evaluated in on-campus interviews (cue set I, Table 13, Chapter 3), there does appear to be a statistically significant difference between accounting students who receive and those who do not receive an invitation for follow-up interviewing. Therefore, hypothesis "H1" (Chapter 3) is rejected. Furthermore, Table 20 suggests that the two most important attributes for all job applicants are "overall rating of potential" and "accounting GPA." The most important attribute is "overall rating of potential." It is almost twice as important as the "accounting GPA" attribute in office visit

decisions.

H2: Office Visit Decision - Male Job Applicants

Hypothesis "H2" focuses on the male subjects in the "no office visit invitation" and "office visit invitation" groups in Table 21. For the "no office visit invitation" group, 25 of the 42 analysis sample applicants were male, and 24 of the 41 hold-out sample applicants were male. For the "office visit invitation" group, the number of males in the analysis sample and hold-out sample respectively was 43 and 36 male applicants.

Table 23 shows the discriminant models at the 0.01, 0.05 and 0.10 levels of significance for the male accounting students who interviewed on-campus with the firm. The discriminant model at the 0.01 level of significance contains a constant and the "overall rating of potential" attribute. At the 0.05 and 0.10 levels of significance, the model has a constant and two discriminating variables - "overall rating of potential" and "overall GPA." Table 24 reports the standardized coefficients of variables in the models.

The discriminate models in Tables 23 and 24 for male job applicants are both similar to and different from the discriminant models in Tables 19 and 20 for all job applicants. The similarity in the tables is that the "overall rating of potential" attribute is significant in the models for all job applicants (Tables 19 and 20) and in the models for male job applicants (Table 23 and 24). The dissimilarity in the models is that the attribute "accounting

TABLE 23

Unstandardized Coefficients of Attributes Significantly Affecting Office Visit Invitations For Male Job Applicants

	Levels of Significance		
Attribute	0.01	0.05	0.10
Constant	-6.6911	-11.2759	-11.2759
Overall Rating of Potential	1.1709	1.0892	1.0892
Overall GPA	*	1.5437	1.5437
Communication Skills	*	*	*
Judgment, Maturity	*	*	*
Accounting GPA	*	*	*
Presence	*	*	*
Attitude, Motivation, Goals	*	*	*
Leadership, Intellectual Ability	*	*	*

*Not Significant

TABLE 24

Standardized Coefficients of Attributes Significantly Affecting Office Visit Invitations For Male Job Applicants

	Levels of Significance		
Attribute	0.01	0.05	0.10
Overall Rating of Potential	1.0000	.9302	.9302
Overall GPA	*	.5025	.5025
Communication Skills	*	*	*
Judgment, Maturity	*	*	*
Accounting GPA	*	*	*
Presence	*	*	*
Attitude, Motivation, Goals	*	*	*
Leadership, Intellectual Ability	*	*	*

*Not Significant

GPA" does not discriminate between male accounting students (Table 23 and 24) who do and do not receive invitations for follow-up interviews. This attribute is significant in the models which distinguish between male and female accounting students (Table 19 and 20). Since "accounting GPA" and "overall GPA" both convey information about a student's academic performance, the models for male job applicants (Tables 19 and 20) and all job applicants (Tables 23 and 24) have similar implications.

Table 25 shows the classification matrix for the predictions of the discriminant model in Table 23 at the 0.01 level of significance. Of the 68 cases in the analysis sample, the model correctly classified 56.0 percent of the male accounting students who did not receive invitations for follow-up interviews (the "No OVI" group) and 93.0 percent of the accounting students who did receive invitations (the "OVI" group). For the 60 cases in the hold-out sample, the model correctly classified 33.3 percent of the "no office visit invitation" group (no OVI) and 97.2 percent of the "office visit invitation" group (OVI). For both samples combined, the models correctly classified 44.9 percent and 94.9 percent respectively of the "no OVI" and "OVI" groups.

For the discriminant model of male accounting students at the 0.01 level of significance, Table 26 compares the hit-ratio to the proportional chance criterion. The analysis sample hit-ratio is 79.41 percent (line 5). Since the hit-ratio for this model is larger than 125 percent of the proportional chance criterion (66.88 percent on line 12), the discriminate model of males at the 0.01

TABLE 25

Office Visit Decision Model Classification Matrix
For Male Job Applicants at
0.01 Level of Significance

Actual Group		Predicted Group			Percent Correctly
Group	Cases	No OVI	OVI	TOTAL	Classified
Analysis Sample:					
No Office Visit Invitation (No OVI)	25	14	11	25	56.0%
Office Visit Invitation (OVI)	43	3	40	43	93.0%
	68			68	
Hold-Out Sample:					
No Office Visit Invitation (No OVI)	24	8	16	24	33.3%
Office Visit Invitation (OVI)	36	1	35	36	97.2%
	60			60	
Total Sample:					
No Office Visit Invitation (No OVI)	49	22	27	49	44.9%
Office Visit Invitation (OVI)	79	4	75	79	94.9%
	128			128	

TABLE 26

Computation of Hit Ratio and Proportional Chance Criterion for the Office Visit Decision Model of Male Job Applicants at 0.01 Level of Significance

		Sample		
		Analysis	Hold-out	Total
1.	No OVI(1)-Correct Classification	14	8	22
2.	OVI(2)-Correct Classification	40	35	75
3.	Total - Correct Classification	54	43	97
4.	Sample Size	68	60	128
5.	Hit Ratio (Row 3 ÷ Row 4)	.7941	.7167	.7578
6.	No OVI - Number of Cases	25	24	49
7.	OVI - Number of Cases	43	36	79
8.	Total - Number of Cases	68	60	128
9.	No OVI Proportion (Row 6 ÷ Row 8)	.3676	.4000	.3828
10.	OVI Proportion (Row 7 ÷ Row 8)	.6324	.6000	.6172
11.	PCC(3) $[(\text{Row } 9)^2 + (\text{Row } 10)^2 = C]$	.5350	.5200	.5274
12.	1.25 C	.6688	.6500	.6593

(1) No OVI = No Office Visit Invitation group
(2) OVI = Office Visit Invitation group
(3) PPC = Proportional Chance Criterion

level of significance does correctly identify accounting students who received and who did not receive office visit invitations at a rate significantly better than chance. This conclusion is reinforced by the success of the model in classifying male students in the hold-out sample. The hit-ratio for the hold-out sample is 71.67 percent (line 5). By comparison, 125 percent of the proportional chance criterion (line 12) is 65.00 percent. Hence, the performance of the discriminate model in classifying male accounting students at a rate that is better than chance appears to be independent of any prediction bias that may have been associated with the analysis sample.

Table 27 shows the classification matrix for the predictions of the discriminant model in Table 23 at the 0.05 and 0.10 levels of significance. Of the 68 cases in the analysis sample, the model correctly classified 56.0 percent of the male accounting students who did not receive invitations for office interviews with the firm ("no OVI" group) and 90.7 percent of the male accounting students who did receive invitations ("OVI" group). Also, this model correctly classified 37.5 percent and 91.7 percent of the "no OVI" and "OVI" groups respectively in the external sample of male accounting students (hold-out sample.) For both samples combined, the model correctly classified 46.9 percent of the "no office visit invitation" group (no OVI) and 91.1 percent of the "office visit invitation" group (OVI).

The addition of the "overall GPA" variable to the discriminant model containing only the "overall rating of potential" attribute

TABLE 27

Office Visit Decision Model Classification Matrix
For All Job Applicants at 0.05 and
0.10 Level of Significance

Actual Group		Predicted Group			Percent
Group	Cases	No OVI	OVI	TOTAl	Correctly Classified
Analysis Sample:					
No Office Visit Invitation (No OVI)	25	14	11	25	56.0%
Office Visit Invitation (OVI)	43	4	39	43	90.7%
	68			68	
Hold-Out Sample:					
No Office Visit Invitation (No OVI)	24	9	15	24	37.5%
Office Visit Invitation (OVI)	36	3	33	36	91.7%
	60			60	
Total Sample:					
No Office Visit Invitation (No OVI)	49	23	26	49	46.9%
Office Visit Invitation (OVI)	78	7	72	79	91.1%
	128			128	

for male accounting students does not seem to improve the model's performance. There is no improvement in predicting the "office visit invitation" group for the analysis sample. Table 25 indicates that the model using only the "overall rating of potential" attribute correctly classified 93.0 percent of male students who received office invitations. For the model using both the "overall rating of potential" attribute and the "overall GPA" variable, Table 27 indicates that 90.7 percent of the males in the analysis sample were correctly classified. Likewise, prediction accuracy for males receiving office visit invitations decreased from 97.2 percent in Table 25 to 91.7 percent in Table 27 in the hold-out sample. There is some improvement in prediction accuracy for the "no office visit invitation" group. Prediction accuracy for the total sample increased from 44.9 percent (Table 25) to 46.9 percent (Table 27). Nevertheless, the data in Tables 25 and 27 suggest that the addition of the "overall GPA" variable to the discriminate model for male accounting students may not improve the model's overall classification accuracy.

To determine if the two-variable discriminate model ("overall rating of potential" and "overall GPA") classifies male accounting students at a rate significantly better than chance, Table 28 compares the hit-ratio to the proportional chance criterion. For the analysis sample, the hit-ratio is 77.94 percent (line 5), and the 125 percent of the proportional chance criterion (line 12) is 66.80 percent. Likewise, the hit ratio and 125 percent of the proportional chance criterion for the hold-out sample is 70.00

TABLE 28

Computation of Hit Ratio and Proportional Chance Criterion for the Office Visit Decision Model of Male Job Applicants at 0.05, and 0.10 Level of Significance

		Sample		
		Analysis	Hold-out	Total
1.	No OVI(1)-Correct Classification	14	9	23
2.	OVI(2)-Correct Classification	39	33	72
3.	Total - Correct Classification	53	42	95
4.	Sample Size	68	60	128
5.	Hit Ratio (Row 3 ÷ Row 4)	.7794	.7000	.7422
6.	No OVI - Number of Cases	25	24	49
7.	OVI - Number of Cases	43	36	79
8.	Total - Number of Cases	68	60	128
9.	No OVI Proportion (Row 6 ÷ Row 8)	.3676	.4000	.3828
10.	OVI Proportion (Row 7 ÷ Row 8)	.6324	.6000	.6172
11.	PCC(3) [(Row 9)^2 + (Row 10)^2 = C]	.5350	.5200	.5274
12.	1.25 C	.6680	.6500	.6593

(1) No OVI = No Office Visit Invitation group
(2) OVI = Office Visit Invitation group
(3) PPC = Proportional Chance Criterion

percent and 65.00 percent respectively. Therefore, the discriminate model of male accounting students at the 0.05 and 0.10 levels of significance does perform at a rate significantly better than chance.

The ability of the models in Table 23 to predict the correct classification of male accounting students at a rate significantly better than chance demonstrates that in terms of grade point average and the other attributes the firm evaluates in on-campus interviews (cue set I, Table 13, Chapter 3), there does appear to be a statistically significant difference between male accounting students who receive and those who do not receive office visit invitations. Therefore, this study rejects hypothesis "H2" (Chapter 3). Table 23 indicates that the "overall rating of potential" and "overall GPA" variables may be important factors significantly affecting office visit invitations for male accounting students. Furthermore, the comparison of Table 25 and 27 reveals that the discriminating model consisting of both the "overall rating of potential" and "overall GPA" variables does not classify male accounting students substantially better than the simpler model consisting of only the "overall rating of potential" attribute. This observation suggests that "overall rating of potential" may be a critical attribute in the firm's selection of male accounting students.

H3: Office Visit Decision - Female Job Applicants

Hypothesis "H3" focuses on the female subjects in the "no

office visit invitation" and "office visit invitation" groups. For the "no office visit invitation" group, 17 of the 42 analysis sample applicants in Table 21 were females, and 17 of the 41 hold-out sample applicants in Table 21 were female. For the "office visit invitation" group, the number of females in the Table 21 analysis sample and hold-out sample respectively was 42 and 49 female applicants.

For female accounting students who interviewed on-campus with the firm, Table 29 shows the discriminant models at the 0.01, 0.05, and 0.10 levels of significance. At the 0.01 level of significance, the discriminant model contains a constant and one discriminating variable -- the "overall rating of potential" attribute. For the model at the 0.05 and 0.10 levels of significance, the "accounting GPA" variable is also significant in discriminating between female accounting students who do and do not receive office visit invitations. Thus, the models for female accounting students are consistent with the models for male accounting students in focusing on the "overall rating of potential" attribute and a measure of the student's academic performance ("overall GPA" for male accounting students and "accounting GPA" for female accounting students.)

Table 30 shows the standardized coefficients for the variables in Table 29. The standardized coefficient of each variable is important since these coefficients indicate the influence of each attribute relative to the other attributes in the discriminant model. For the two-variable model at the 0.05 and 0.10 levels of

TABLE 29

Unstandardized Coefficients of Attributes Significantly Affecting Office Visit Invitations For Female Job Applicants

	Levels of Significance		
Attribute	0.01	0.05	0.10
Constant	-5.7955	11.3490	11.3490
Overall Rating of Potential	1.0002	.9150	.9150
Accounting GPA	*	1.7488	1.7488
Judgment, Maturity	*	*	*
Communication Skills	*	*	*
Presence	*	*	*
Overall GPA	*	*	*
Attitude, Motivation, Goals	*	*	*
Leadership, Intellectual Ability	*	*	*

*Not Significant

TABLE 30

Standardized Coefficients of Attributes Significantly Affecting Office Visit Invitations For Female Job Applicants

	Levels of Significance		
Attribute	0.01	0.05	0.10
Overall Rating of Potential	1.0000	.9148	.9148
Accounting GPA	*	.5196	.5196
Judgment, Maturity	*	*	*
Communication Skills	*	*	*
Presence	*	*	*
Overall GPA	*	*	*
Attitude, Motivation, Goals	*	*	*
Leadership, Intellectual Ability	*	*	*

*Not Significant

significance, Table 30 reveals that the "overall rating of potential" attribute is more dominant than "accounting GPA" in distinguishing between female accounting students who receive and do not receive invitations for follow-up interviewing with the firm. This finding reinforces earlier indications of the importance of the "overall rating of potential" attribute in discriminating between accounting students who are and are not successful in on-campus interviews. It is the most influential discriminating variable for all job applicants (Table 20), male job applicants (Table 24), and female job applicants (Table 30).

Table 31 shows the classification matrix for the predictions of the discriminant model at the 0.01 level of significance in Table 30. For the 59 female accounting students in the analysis sample, the model correctly classified 76.5 percent of the female students who did not receive invitations for follow-up interviews (the "no OVI" group) and 90.4 percent of the female accounting students who did receive office visit invitations (the "OVI" group). For the 66 cases in the hold-out sample, the discriminant model correctly classified 64.7 percent of the "no office visit invitation" group (No OVI) and 93.9 percent of the "office visit invitation" group. For the analysis sample and hold-out sample combined, the discriminant model for female accounting students at the 0.01 level of significance correctly predicted 70.6 percent and 92.3 percent respectively of the "No OVI" and "OVI" groups.

Table 32 computes the hit-ratio for the discriminant model of female accounting students at 0.01 level of significance. Also,

TABLE 31

Office Visit Decision Model Classification Matrix
For Female Job Applicants at
0.01 Level of Significance

Actual Group		Predicted Group			Percent Correctly
Group	Cases	No OVI	OVI	TOTAL	Classified
Analysis Sample:					
No Office Visit Invitation (No OVI)	17	13	4	17	76.5%
Office Visit Invitation (OVI)	42	4	38	42	78.8%
	59			59	
Hold-Out Sample:					
No Office Visit Invitation (No OVI)	17	11	6	17	64.7%
Office Visit Invitation (OVI)	49	3	46	49	93.9%
	66			66	
Total Sample:					
No Office Visit Invitation (No OVI)	34	24	10	34	70.6%
Office Visit Invitation (OVI)	91	7	84	91	92.3%
	125			125	

TABLE 32

Computation of Hit Ratio and Proportional Chance Criterion for the Office Visit Decision Model of Female Job Applicants at 0.01 Level of Significance

		Sample		
		Analysis	Hold-out	Total
1.	No OVI(1)-Correct Classification	13	11	24
2.	OVI(2)-Correct Classification	38	46	84
3.	Total - Correct Classification	51	57	108
4.	Sample Size	59	66	125
5.	Hit Ratio (Row 3 ÷ Row 4)	.8644	.8636	.8640
6.	No OVI - Number of Cases	17	17	34
7.	OVI - Number of Cases	42	49	91
8.	Total - Number of Cases	59	66	125
9.	No OVI Proportion (Row 6 ÷ Row 8)	.2881	.2576	.2720
10.	OVI Proportion (Row 7 ÷ Row 8)	.7119	.7424	.7280
11.	PCC(3) [(Row 9)^2 + (Row 10)^2 = C]	.5898	.6176	.6040
12.	1.25 C	.7373	.7720	.7550

(1) No OVI = No Office Visit Invitation group
(2) OVI = Office Visit Invitation group
(3) PPC = Proportional Chance Criterion

Table 32 compares the hit-ratio (line 5) to 125 percent of the proportional chance criterion (line 12) to test the ability of the discriminant model to perform at a rate significantly better than chance. The analysis sample hit-ratio is 86.44 percent (line 5). Since this hit-ratio is larger than the 125 percent of the proportional chance criterion on line 12 for the analysis sample (73.73 percent), the discriminant model of female accounting students at 0.01 level of significance does perform at a rate significantly better than chance for this sample.. Table 32 shows a hit-ratio of 86.36 percent (line 5) for the hold-out sample and 77.20 percent (line 12) for 125 percent of the proportional chance criterion. Since the hit-ratio for the external sample is larger than 125 percent of the proportional chance criterion (line 12), the discriminate model for female accounting students at the 0.01 level of significance performs a rate that is better than chance for female students populations other than those included in the analysis sample. Thus, the "overall rating of potential" attribute appears to be important in discriminating between female accounting students who do and do not receive office visit invitations.

For the discriminant model at the 0.05 and 0.10 levels of significance, Table 30 identifies two discriminating variables -- "overall rating of potential" and "accounting GPA." Table 33 shows the classification matrix of female accounting students using the discriminant model containing these variables. Comparison of Table 33 to Table 31 reveals that the addition of the "accounting GPA" variable to the model improves the model's prediction accuracy for

TABLE 33

Office Visit Decision Model Classification Matrix
For Female Job Applicants at
0.05 and 0.10 Levels of Significance

Actual Group		Predicted Group			Percent Correctly
Group	Cases	No OVI	OVI	TOTAL	Classified
Analysis Sample:					
No Office Visit Invitation (No OVI)	17	13	4	17	76.5%
Office Visit Invitation (OVI)	42	3	39	42	92.9%
	59			59	
Hold-Out Sample:					
No Office Visit Invitation (No OVI)	17	17	0	17	100.0%
Office Visit Invitation (OVI)	49	6	43	49	87.8%
	66			66	
Total Sample:					
No Office Visit Invitation (No OVI)	34	30	4	34	88.2%
Office Visit Invitation (OVI)	91	9	82	91	90.1%
	125			125	

the "no OVI" group. The percent of cases correctly classified for the analysis sample and hold-out sample "No OVI" groups are 76.5 percent and 64.7 percent respectively for the model at the 0.01 level of significance (Table 31). For the models containing both the "overall rating of potential" and "accounting GPA" factors (Table 33), the comparable percent of cases correctly classified are 76.5 percent and 100.0 percent respectively for the analysis sample and hold-out sample "OVI" groups. Thus, a discriminate model containing the additional attribute may improve the classification accuracy of female accounting students in the "No OVI" group.

To determine if the classification accuracy of the model is substantially better than chance, Table 34 computes the hit-ratio and proportional chance criterion for the discriminant model containing the "overall rating of potential" and "accounting GPA" attributes. For the analysis sample, the hit ratio in Table 34 is 88.14 percent (line 5). This hit-ratio is larger than 125 percent of the proportional chance criterion on line 12 (73.73 percent). Likewise, the hit-ratio for the hold-out sample in Table 34 (90.91 percent) is larger than 125 percent of the proportional chance criterion (77.20 percent) for this sample. Therefore, it appears that the model consisting of the "overall rating of potential" and the "accounting GPA" attributes does classify female accounting students at a rate significantly better than chance.

Table 32 and Table 34 demonstrate that each model in Table 29 predicts whether female accounting students will or will not

TABLE 34

Computation of Hit Ratio and Proportional Chance Criterion for the Office Visit Decision Model of Female Job Applicants at 0.05 and 0.10 Levels of Significance

		Sample		
		Analysis	Hold-out	Total
1.	No OVI(1)-Correct Classification	13	17	30
2.	OVI(2)-Correct Classification	39	43	82
3.	Total - Correct Classification	52	60	112
4.	Sample Size	59	66	125
5.	Hit Ratio (Row 3 ÷ Row 4)	.8814	.9091	.8960
6.	No OVI - Number of Cases	17	17	34
7.	OVI - Number of Cases	42	49	91
8.	Total - Number of Cases	59	66	125
9.	No OVI Proportion (Row 6 ÷ Row 8)	.2881	.2576	.2720
10.	OVI Proportion (Row 7 ÷ Row 8)	.7119	.7424	.7280
11.	PCC(3) [(Row 9)^2 + (Row 10)^2 = C]	.5898	.6176	.6040
12.	1.25 C	.7372	.7720	.7550

(1) No OVI = No Office Visit Invitation group
(2) OVI = Office Visit Invitation group
(3) PPC = Proportional Chance Criterion

receive office visit invitations at rates significantly better than chance. Therefore, hypothesis "H3" (Chapter 3) is rejected. There does appear to be a statistically significant difference in attributes between female accounting students who receive and do not receive office visit invitations. The variables which appear to significantly affect office visit invitations are "overall rating of potential" and "accounting GPA." The most important attribute in each model is "overall rating of potential."

H4: Office Visit Decision - Successful Job Applicants

The purpose of this hypothesis is to determine if there are significant differences in attributes between the male and female accounting students who received office visit invitations. The concern addressed in this hypothesis is whether males or females rate significantly higher on any of the attributes. The SPSS discriminate analysis computer program indicated that no discriminate model for the analysis sample was significant. Therefore, hypothesis "H4" cannot be rejected. For students who receive office interview invitations, there does not appear to be a statistically significant difference in grade point average and recorded attributes between male and female students.

Job Offer Decision: H5, H6, H7, and H8

Hypotheses H5, H6, H7, and H8 (Chapter 3) focus on the relationship, if any, between the student attributes the firm evaluates during the on-campus interviews (decision stage 2, Figure

1, Chapter 1) and the firm's ultimate selection of students to whom the firm extends job offers (decision stage 3, Figure 1, Chapter 1). The objective of these hypotheses is to determine whether accounting students who do and do not receive job offers differ in terms of attributes which the firm evaluates during the on-campus interview. A finding that there are significant differences in these attributes would benefit the firm and students. It would provide the firm with an opportunity to improve further the selection of accounting students for office visit invitations. In selecting students for office visits, the firm would prefer to select those individuals who have a higher probability of receiving job offers. Likewise, students could benefit by cultivating and emphasizing those attributes which increase their chances of receiving job offers.

For each hypothesis tested, the SPSS discriminate analysis indicated that no discriminate model was significant at the 0.01, 0.05, and 0.10 levels of significance. Therefore, hypotheses H5, H6, H7, and H8 in Chapter 3 cannot be rejected. The student attributes evaluated during on-campus interviews (decision stage 2, Figure 1, Chapter 1) may not be useful in discriminating between accounting students who receive and do not receive job offers with the firm (decision stage 3, Figure 1, Chapter 1).

H9: Offer Acceptance Decision - All Job Applicants

Table 35 shows the discriminant models at the 0.05 and 0.10 levels of significance for the sample of accounting students who

TABLE 35

Unstandardized Coefficients of Attributes Significantly Affecting Offer Acceptance Decisions of Job Applicants

	Levels of Significance		
Attribute	0.01	0.05	0.10
Constant		-6.3276	-12.4353
Leadership, Intellectual Ability	*	1.0012	.7481
Accounting GPA	*	*	2.1703
Overall Rating of Potential	*	*	*
Attitude, Motivation, Goals	*	*	*
Judgment, Maturity	*	*	*
Communication Skills	*	*	*
Presence	*	*	*
Overall GPA	*	*	*

*Not Significant

received job offers from the firm. The SPSS discriminate analysis program could not identify a discriminate model that was significant at the 0.01 level of significance. The subjects in Table 16 (Chapter 3) that were used to test hypothesis "H9" consist of 116 job applicants from the "accepted offer" (59 applicants) and "rejected offer" (57 applicants) categories. Of the 59 applicants in the "accepted offer" category, 30 applicants were randomly selected for the analysis sample, and the remaining 29 applicants were placed in the hold-out sample. Likewise, 28 applicants from the "rejected offer" category (57 applicants) were randomly selected for the analysis sample, and the remaining 29 applicants were placed in the hold-out sample.

The discriminate model at the 0.05 level of significance contains a constant and the "leadership, intellectual ability" attribute. At the 0.10 level of significance, the model has a constant and two discriminating variables -- "leadership, intellectual ability" and "accounting GPA." Table 36 reports the standardized coefficients of variables in the models. For the model at the 0.10 level of significance, the "leadership, intellectual ability" and "accounting GPA" variables are relatively equal in terms of their ability to distinguish between accounting students who accept and accounting students who reject the firm's employment offer.

Table 37 shows a classification matrix for the predictions of the discriminant model at the 0.05 level of significance. For the 58 cases in the analysis sample, the model correctly classified

TABLE 36

Standardized Coefficients of Attributes Significantly Affecting Offer Acceptance Decisions of Job Applicants

	Levels of Significance		
Attribute	0.01	0.05	0.10
Leadership, Intellectual Ability	*	1.0000	.7473
Accounting GPA	*	*	.7329
Overall Rating of Potential	*	*	*
Attitude, Motivation, Goals	*	*	*
Judgment, Maturity	*	*	*
Communication Skills	*	*	*
Presence	*	*	*
Overall GPA	*	*	*

*Not Significant

TABLE 37

Offer Acceptance Decision Model Classification Matrix
For All Job Applicants at
0.05 Level of Significance

Actual Group		Predicted Group			Percent Correctly
Group	Cases	Accepted Offer	Rejected Offer	TOTAL	Classified
Analysis Sample:					
Accepted Offer	30	17	13	30	56.7%
Rejected Offer	28	6	22	28	78.6%
	58			58	
Hold-Out Sample:					
Accepted Offer	29	14	15	29	48.3%
Rejected Offer	29	11	18	29	62.1%
	58			58	
Total Sample:					
Accepted Offer	59	31	28	59	52.5%
Rejected Offer	57	17	40	57	70.2%
	116			116	

56.7 percent of the accounting students who accepted the firm's employment offer and 78.6 percent of those students who rejected offers. For the 51 cases in the hold-out sample, the model correctly classified 48.3 percent of students who accepted offers and 62.1 percent of students who rejected offers. For both samples combined, the model correctly classified 52.5 percent and 70.2 percent respectively of the "accepted offer" and "rejected offer" groups.

Table 38 computes the hit-ratio for the discriminant model at the 0.05 level of significance and compares the hit ratio to the proportional chance criterion. For the analysis sample, the hit ratio is 67.24 percent (line 5). Since this ratio is larger than 125 percent of the proportional chance criterion (62.57 percent on line 12), the model has correctly identified accounting students in the analysis sample who accepted and rejected employment offers at a rate significantly better than chance. However, a major concern in this study also is the classification accuracy of discriminate models with regard to an external sample -- that is, a sample of cases that were not used during the model development phase of the SPSS discriminate analysis program. Table 38 indicates that the model does not classify accounting students in the hold-out sample at a rate significantly better than chance. The hit-ratio for the hold-out sample (55.17 percent on line 5) is less than 125 percent of the proportional chance criterion (62.50 percent on line 12).

Table 39 shows the classification matrix for the predictions of the discriminate model at the 0.10 level of significance. As

TABLE 38

Computation of Hit Ratio and Proportional Chance Criterion for the Offer Acceptance Decision of Job Applicants at 0.05 Level of Significance

		Sample		
		Analysis	Hold-out	Total
1.	Ac. Offer(1)-Correct Classification	17	14	31
2.	Rj. Offer(2)-Correct Classification	22	18	40
3.	Total - Correct Classification	39	32	71
4.	Sample Size	58	58	116
5.	Hit Ratio (Row 3 ÷ Row 4)	.6724	.5517	.6120
6.	Ac. Offer - Number of Cases	30	29	59
7.	Rj. Offer - Number of Cases	28	29	57
8.	Total - Number of Cases	58	58	116
9.	Ac. Offer Proportion (Row 6 ÷ Row 8)	.5172	.5000	.5086
10.	Rj. Offer Proportion (Row 7 ÷ Row 8)	.4828	.5000	.4914
11.	PCC(3) [(Row 9)^2 + (Row 10)^2 = C]	.5006	.5000	.5002
12.	1.25 C	.6257	.6250	.6252

(1) Ac. Offer = Accepted Offer Group
(2) Rj. Offer = Rejected Offer Group
(3) PPC = Proportional Chance Criterion

TABLE 39

Offer Acceptance Decision Model Classification Matrix
For All Job Applicants at
0.10 Level of Significance

Actual Group		Predicted Group			Percent
Group	Cases	Accepted Offer	Rejected Offer	TOTAL	Correctly Classified
Analysis Sample:					
Accepted Offer	30	20	10	30	66.7%
Rejected Offer	28	8	20	28	71.4%
	58			58	
Hold-Out Sample:					
Accepted Offer	29	19	10	29	65.5%
Rejected Offer	29	16	13	29	44.8%
	58			58	
Total Sample:					
Accepted Offer	59	39	20	59	66.1%
Rejected Offer	57	24	33	57	57.9%
	116			116	

indicated in Table 35, this model uses both the "leadership, intellectual ability" and "accounting GPA" variables to classify accounting students. Comparing Table 39 to Table 37 reveals that the model using both the "leadership, intellectual ability" and "accounting GPA" variables improves the classification of accounting students into the "accepted offer" group. For the analysis sample and hold-out sample in Table 39, the model correctly classified 66.7 percent and 65.5 percent respectively of the "accepted offer" students. This compares favorably against the performance of the model in Table 37 when only the "leadership, intellectual ability" variable is used. In Table 37, the model correctly classified 56.7 percent and 48.3 percent of the "accepted offer" students for the analysis sample and hold-out sample respectively. However, this improvement with regard to the "accepted offer" group is off-set by a lower classification performance with regard to the "rejected offer" group. In particular, the model at the 0.10 level of significance correctly classified 44.8 percent of the students in the "rejected offer" group for the hold-out sample (Table 39) compared to 62.1 percent correct classification (Table 37) using the model at the 0.05 level of significance.

Table 40 computes the hit-ratio and proportional chance criterion for the model at the 0.10 level of significance. Once again, the analysis sample does perform at a rate significantly better than chance. The hit-ratio for the analysis sample is 68.97 percent (line 5) compared to 62.57 percent for 125 percent of

TABLE 40

Computation of Hit Ratio and Proportional Chance Criterion for the Offer Acceptance Decision of Job Applicants at the 0.10 Level of Significance

		Sample		
		Analysis	Hold-out	Total
1.	Ac. Offer(1)-Correct Classification	20	19	39
2.	Rj. Offer(2)-Correct Classification	20	13	33
3.	Total - Correct Classification	40	32	72
4.	Sample Size	58	58	116
5.	Hit Ratio (Row 3 ÷ Row 4)	.6897	.5517	.6206
6.	Ac. Offer - Number of Cases	30	29	59
7.	Rj. Offer - Number of Cases	28	29	57
8.	Total - Number of Cases	58	58	116
9.	Ac. Offer Proportion (Row 6÷ Row 8)	.5172	.5000	.5086
10.	Rj. Offer Proportion (Row 7÷ Row 8)	.4828	.5000	.4914
11.	PCC(3) [(Row 9)^2 + (Row 10)^2 = C]	.5006	.5000	.5002
12.	1.25 C	.6257	.6250	.6252

(1) Ac. Offer = Accepted Offer Group
(2) Rj. Offer = Rejected Offer Group
(3) PPC = Proportional Chance Criterion

proportional chance criterion (line 12). The model does not perform significantly better than chance for the hold-out sample since the hit-ratio of 55.17 percent (line 5) is less than the 125 percent proportional change criterion (62.50 percent on line 12).

Based on the above analyses, hypothesis "H9" (Chapter 3) cannot be rejected. Neither model in Table 35 classifies accounting students at a rate significantly better than chance for the hold-out samples in Table 38 and Table 40. Nevertheless, the evidence in Table 38 and Table 40 is not all negative. Both models predict the correct classification of accounting students at a rate significantly better than chance for the analysis samples. Furthermore, a comparison of line 5 to line 11 in Table 38 and Table 40 indicates that both models correctly classify students at a rate better than chance for both the analysis sample and hold-out sample.

Thus, it appears that the ratings accounting students receive during on-campus interviews for the "leadership, intellectual ability" attribute and their "accounting GPA" convey information that may be marginally useful in discriminating between students who accept and students who reject the firm's employment offer. However, the criterion used in this study for rejecting an hypothesis is that the discriminate model must classify job applicants at a rate significantly better than chance. Therefore, hypothesis "H9" cannot be rejected since the hold-out sample results in Table 38 and Table 40 indicate that the models do not perform significantly better than chance.

H10: Offer Acceptance Decision - Male Job Applicants

Hypothesis "H10" focuses on the male subjects in the "accepted offer" and "rejected offer" groups in Table 37. For the "accepted offer" group, 15 of the 30 analysis sample applicants were male, and 8 of the 29 hold-out sample applicants were also male. For the "rejected offer" group, 18 of the 28 analysis sample applicants and 15 of the 29 hold-out sample applicants were male.

Table 41 indicates that a discriminate model consisting of only the "leadership, intellectual ability" attribute is significant at the 0.10 level of significance. Therefore, the standardized coefficient for this attribute is 1.0000. Table 42 shows the classification matrix for this model. For the male accounting students who rejected offers, the model correctly classified 77.8 percent and 60.0 percent of the cases in the analysis sample and hold-out sample respectively. The model was not as successful with regard to students in the "accepted offer" group. For the analysis sample and hold-out sample, the model correctly classified 66.7 percent and 50.0 percent respectively of the male accounting students.

Table 43 compares the hit-ratio to the proportional chance criterion for the discriminate model of male accounting students. The analysis sample hit-ratio of 72.72 percent (line 5) exceeds 125 percent of the proportional chance criterion (63.00 percent on line 12). Likewise, the hit-ratio of 66.07 percent for the analysis sample and hold-out sample combined (total column, line 5) exceeds

TABLE 41

Unstandardized Coefficients of Attributes Significantly Affecting Offer Acceptance Decisions of Male Job Applicants

	Levels of Significance		
Attribute	0.01	0.05	0.10
Constant			-7.5378
Leadership, Intellectual Ability	*	*	1.2060
Accounting GPA	*	*	*
Overall Rating of Potential	*	*	*
Attitude, Motivation, Goals	*	*	*
Judgment, Maturity	*	*	*
Communication Skills	*	*	*
Presence	*	*	*
Overall GPA	*	*	*

*Not Significant

TABLE 42

Offer Acceptance Decision Model Classification Matrix
For Male Job Applicants at
0.10 Level of Significance

Actual Group		Predicted Group			Percent Correctly
Group	Cases	Accepted Offer	Rejected Offer	TOTAL	Classified
Analysis Sample:					
Accepted Offer	15	10	5	15	66.7%
Rejected Offer	18	4	14	18	77.8%
	33			33	
Hold-Out Sample:					
Accepted Offer	8	4	4	8	50.0%
Rejected Offer	15	6	9	15	60.0%
	23			23	
Total Sample:					
Accepted Offer	23	14	9	23	60.9%
Rejected Offer	33	10	23	33	69.7%
	56			56	

TABLE 43

Computation of Hit Ratio and Proportional Chance Criterion for the Offer Acceptance Decision of Male Job Applicants at 0.10 Level of Significance

	Sample		
	Analysis	Hold-out	Total
1. Ac. Offer(1)-Correct Classification	10	4	14
2. Rj. Offer(2)-Correct Classification	14	9	23
3. Total - Correct Classification	24	13	37
4. Sample Size	33	23	56
5. Hit Ratio (Row 3 ÷ Row 4)	.7272	.5652	.6607
6. Ac. Offer - Number of Cases	15	8	23
7. Rj. Offer - Number of Cases	18	15	33
8. Total - Number of Cases	33	23	56
9. Ac. Offer Proportion (Row 6 ÷ Row 8)	.4545	.3478	.4107
10. Rj. Offer Proportion (Row 7 ÷ Row 8)	.5455	.6521	.5893
11. PCC(3) [(Row 9)² + (Row 10)² = C]	.5040	.5461	.5158
12. 1.25 C	.6300	.6826	.6447

(1) Ac. Offer = Accepted Offer Group
(2) Rj. Offer = Rejected Offer Group
(3) PPC = Proportional Chance Criterion

125 percent of the proportional chance criterion (64.47 percent on line 12). However, the discriminate model for male accounting students does not classify cases in the hold-out sample at a rate significantly better than chance. The hit-ratio for the hold-out sample (56.52 percent on line 5) is less than 125 percent of the proportional chance criterion (68.26 percent on line 12).

Since the discriminate model for male accounting students fails to classify cases in the hold-out sample at a rate significantly better than chance, hypothesis "H10" (Chapter 3) cannot be rejected. In terms of the variables in cue set I (Table 13, Chapter 3), there may not be a significant difference in the ratings received by male accounting students who accept and reject employment offers with the firm.

H11: Offer Acceptance Decision - Female Job Applicants

Hypothesis "H11" (Chapter 3) focuses on the female accounting students who accept and reject the firm's employment offer. The major objective of the hypothesis is to determine whether female accounting students who accept and reject the firm's employment offer (decision stage 4, Figure 1, Chapter 1) differ in terms of attributes which the firm evaluates during the on-campus interviews (decision stage 2, Figure 1, Chapter 1).

The SPSS discriminate analysis indicated that no discriminate model was significant at the 0.10 level of significance for hypothesis "H11." Therefore, hypothesis "H11" cannot be rejected. The attributes evaluated during on-campus interviews of female

accounting students may not be useful in discriminating between female accounting students who accept and reject the firm's employment offer.

H12: Offer Acceptance Decision - Successful Job Applicants

The major objective of hypothesis "H12" (Chapter 3) is to determine whether there are significant differences in attributes between male and female accounting students who accepted employment offers with the firm. The concern addressed by this hypothesis is whether males or females from the "accepted offer" group received significantly higher ratings on any of the attributes during their on-campus interviews. The SPSS discriminate analysis program indicated that no discriminate model was significant at the 0.10 level of significance. Therefore, hypothesis "H12" cannot be rejected. For male and female students who accept the firm's employment offer, there may not be a significant difference in grade point average and recorded attributes between the male and female students.

H13: Retention Decision - All Auditors

The subjects in Table 16 that were used to test hypothesis "H13" consist of the 43 employees from the "successful auditors" category (Table 16, Chapter 3) and the 53 employees from the "premature terminations" category. Of the 96 (43 plus 53) employees used to test "H13", 61 are male employees and 35 are female employees. For the "office visit," "job offer," and "offer

acceptance" decisions, subjects were divided evenly between the analysis sample and the hold-out sample to develop and test discriminate models. However, this procedure was not followed in selecting samples to test the "retention decision" hypotheses. To partially off-set the smaller number of male and female subjects available for model development and testing, greater weight was given to the model development phase by randomly selecting 75 percent of the subjects for the analysis sample and placing the remaining 25 percent of the subjects in the hold-out sample. As a result of this 75 percent to 25 percent sample selection rule, 32 (20 males and 12 females) of the 43 employees in the "successful auditors" category were randomly selected for the analysis sample, and the remaining 11 employees (8 males and 3 females) were placed in the hold-out sample. Likewise, 40 (23 males and 17 females) of the 53 employees in the "premature terminations" category were randomly selected for the analysis sample, and the remaining 13 employees (10 males and 3 females) were placed in the hold-out sample.

Table 44 indicates that a discriminate model consisting of the "development of personnel" attribute in cue set II (Table 13, Chapter 3) is significant at the 0.01 level of significance. For variables in cue set I (Table 13, Chapter 3), the SPSS discriminate analysis indicated that no discriminate model was significant at the 0.10 level of significance. Since no model was statistically significant for variables from cue set I, the implication is that the ratings received by the firm's auditors when they interviewed

TABLE 44

Unstandardized Coefficients of Cue Set II Attributes Significantly Affecting Retention Decisions For All Auditors

	Levels of Significance		
Attribute	0.01	0.05	0.10
Constant	-6.8598	-6.8598	-6.8598
Development of Personnel	2.1105	2.1105	2.1105
Technical Knowledge	*	*	*
Analytical Ability, Judgment	*	*	*
Written Expression	*	*	*
Verbal Expression	*	*	*
Performance	*	*	*
Attitude	*	*	*
Client Relations	*	*	*

*Not Significant

as students on-campus may not be useful in discriminating between those who remain with the firm for at least four years and those who terminate prematurely.

Table 45 shows the classification matrix for the discriminate model in Table 44. For both the analysis sample and hold-out sample, the model is less successful in classifying auditors from the "premature termination" group than the "successful auditors" group. The model correctly classifies 62.5 percent of the analysis sample auditors and 23.1 percent of the hold-out sample auditors who terminated prematurely. For cases in the "successful auditors" group, the model correctly classified 68.8 percent and 54.5 percent of the analysis sample and hold-out sample cases respectively.

Table 46 compares the hit-ratio to the proportional chance criterion. The analysis sample hit-ratio of 65.28 percent (line 5) exceeds 125 percent of the proportional chance criterion (63.25 percent on line 12). More importantly, the discriminate model consisting of the "development of personnel" variable does not classify cases in the hold-out sample at a rate significantly better than chance. The hit-ratio of 37.50 percent for the hold-out sample (line 5) is less than 125 percent of the proportional chance criterion (62.92 percent on line 12).

Based on the above analysis, hypothesis "H13" (Chapter 3) cannot be rejected. For the variables in cue set I (Table 13, Chapter 3), no discriminate model was significant; for the variables in cue set II (Table 13, Chapter 3), a model containing the "development of personnel" attribute is statistically

TABLE 45

Retention Decision Model Classification Matrix
For All Auditors

Actual Group		Predicted Group			Percent
Group	Cases	Successful Auditors	Premature Terminations	TOTAL	Correctly Classified
Analysis Sample:					
Successful Auditors	32	22	10	32	68.8%
Premature Terminations	40	15	25	40	62.5%
	72			72	
Hold-Out Sample:					
Successful Auditors	11	6	5	11	54.5%
Premature Terminations	13	10	3	13	23.1%
	24			24	
Total Sample:					
Successful Auditors	43	28	15	43	65.1%
Premature Terminations	53	25	28	53	52.8%
	96			96	

TABLE 46

Computation of Hit Ratio and Proportional Chance Criterion for the Retention Decision For All Auditors at 0.01 Level of Significance

		Sample		
		Analysis	Hold-out	Total
1.	S. Auditors(1)-Correct Classification	22	6	28
2.	P. Terminations(2)-Correct Classification	25	3	28
3.	Total - Correct Classification	47	9	56
4.	Sample Size	72	24	96
5.	Hit Ratio (Row 3 ÷ Row 4)	.6528	.3750	.5833
6.	S. Auditors - Number of Cases	32	11	43
7.	P. Terminations - Number of Cases	40	13	53
8.	Total - Number of Cases	72	24	96
9.	S. Auditors Proportion (Row 6 ÷ Row 8)	.4444	.4583	.4479
10.	P. Terminations - Number of Cases (Row 7 ÷ Row 8)	.5556	.5417	.5521
11.	PCC(3) [(Row 9)^2 + (Row 10)^2 = C]	.5060	.5034	.5054
12.	1.25 C	.6325	.6292	.6317

(1) S. Auditors = Successful Auditors Groups
(2) P. Terminations = Premature Terminations Group
(3) PPC = Proportional Chance Criterion

significant at the 0.01 level of significance, but the model does not consistently predict the correct group classification of auditors at a rate significantly better than chance. Therefore, this study does not reject the hypothesis (H13) that there is no significant difference between senior auditors and audit staff who terminate prematurely in terms of the variables in cue set I and cue set II.

H14: Retention Decision - Male Auditors

Table 47 identifies the "development of personnel" attribute as a variable which distinguishes males in the "successful auditors" group from males in the "premature terminations" group. However, the SPSS discriminate analysis indicated that no discriminate model was statistically significant for variables from cue set I. Table 48 shows the classification matrix for the discriminate model of male auditors, and Table 49 compares the hit-ratio to the proportional chance criterion. Since the hit-ratio for both samples (line 5) in Table 49 is less than 125 percent of the proportional chance criterion (line 12), hypothesis "H14" (Chapter 3) cannot be rejected.

H15: Retention Decision - Female Auditors

Table 50 shows the discriminate model for female auditors at 0.01 level of significance. The model consists of a constant and the "development of personnel" attribute. For variables in cue set I (Table 13, Chapter 3), the SPSS discriminate analysis indicated

TABLE 47

Unstandardized Coefficients of Cue Set II Attributes Significantly Affecting Retention Decisions For Male Auditors

	Levels of Significance		
Attribute	0.01	0.05	0.10
Constant		-6.6370	-6.6370
Development of Personnel	*	2.0282	2.0282
Technical Knowledge	*	*	*
Analytical Ability, Judgment	*	*	*
Written Expression	*	*	*
Verbal Expression	*	*	*
Performance	*	*	*
Attitude	*	*	*
Client Relations	*	*	*

*Not Significant

TABLE 48

Retention Decision Model Classification Matrix
For Male Auditors

Actual Group		Predicted Group			Percent
Group	Cases	Successful Auditors	Premature Terminations	TOTAL	Correctly Classified
Analysis Sample:					
Successful Auditors	20	13	7	20	65.0%
Premature Terminations	23	11	12	23	52.2%
	43			43	
Hold-Out Sample:					
Successful Auditors	8	4	4	8	50.0%
Premature Terminations	10	8	2	10	20.0%
	18			18	
Total Sample:					
Successful Auditors	28	17	11	28	60.7%
Premature Terminations	33	19	14	33	42.4%%
	61			61	

TABLE 49

Computation of Hit Ratio and Proportional Chance Criterion for the Retention Decision For Male Auditors

		Sample		
		Analysis	Hold-out	Total
1.	S. Auditors(1)-Correct Classification	13	4	17
2.	P. Terminations(2)-Correct Classification	12	2	14
3.	Total - Correct Classification	25	6	31
4.	Sample Size	43	18	61
5.	Hit Ratio (Row 3 ÷ Row 4)	.5813	.3333	.5081
6.	S. Auditors - Number of Cases	20	8	28
7.	P. Terminations - Number of Cases	23	10	33
8.	Total - Number of Cases	43	18	61
9.	S. Auditors Proportion (Row 6 ÷ Row 8)	.4651	.4444	.4590
10.	P. Terminations - Number of Cases (Row 7 ÷ Row 8)	.5349	.5556	.5410
11.	PCC(3) [(Row 9)^2 + (Row 10)^2 = C]	.5024	.5060	.5032
12.	1.25 C	.6280	.6325	.6290

(1) S. Auditors = Successful Auditors Groups
(2) P. Terminations = Premature Terminations Group
(3) PPC = Proportional Chance Criterion

TABLE 50

Unstandardized Coefficients of Cue Set II Attributes Significantly Affecting Retention Decisions For Female Auditors

	Levels of Significance		
Attribute	0.01	0.05	0.10
Constant	-7.0576	-7.0576	-7.0576
Development of Personnel	2.1931	2.1931	2.1931
Technical Knowledge	*	*	*
Analytical Ability, Judgment	*	*	*
Written Expression	*	*	*
Verbal Expression	*	*	*
Performance	*	*	*
Attitude	*	*	*
Client Relations	*	*	*

*Not Significant

that no discriminate model was statistically significant at the 0.10 level of significance.

Table 51 shows the classification matrix for the discriminate model for female auditors. Also, Table 52 compares the hit-ratio to the proportional chance criterion. Table 52 indicates that the model in Table 51 does correctly classify female auditors at a rate significantly better than chance for both the analysis and hold-out samples. This evidence suggests that the "development of personnel" variable contains information that may be useful in discriminating between female auditors in the "successful auditors" and "premature terminations" groups. Therefore, hypothesis "H15" (Chapter 3) is rejected.

H16: Retention Decision - Successful Auditors

The main purpose of hypothesis "H16" (Chapter 3) is to determine if there are significant differences between male and female auditors who remain with the firm for four or more years. The concern addressed by hypothesis "H16" is whether males or females in the "successful auditors" category received significantly different ratings for any of the attributes evaluated during their on-campus interviews (cue set I) or for any attributes evaluated on performance evaluations (cue set II). Since the SPSS discriminate analysis indicated that no model was significant at the 0.10 level of significance, hypothesis "H16" cannot be rejected.

TABLE 51

Retention Decision Model Classification Matrix
For Female Auditors

Actual Group		Predicted Group			Percent
Group	Cases	Successful Auditors	Premature Terminations	TOTAL	Correctly Classified
Analysis Sample:					
Successful Auditors	12	9	3	12	75.0%
Premature Terminations	17	1	16	17	94.1%
	29			29	
Hold-Out Sample:					
Successful Auditors	3	2	1	3	66.7%
Premature Terminations	3	0	3	3	100.0%
	6			6	
Total Sample:					
Successful Auditors	15	11	4	15	73.3%
Premature Terminations	20	1	19	20	95.0%
	35			35	

TABLE 52

Computation of Hit Ratio and Proportional Chance Criterion for the Retention Decision For Female Auditors

		Sample		
		Analysis	Hold-out	Total
1.	S. Auditors(1)-Correct Classification	9	2	11
2.	P. Terminations(2)-Correct Classification	16	3	19
3.	Total - Correct Classification	25	5	30
4.	Sample Size	29	6	35
5.	Hit Ratio (Row 3 ÷ Row 4)	.8621	.8333	.8571
6.	S. Auditors - Number of Cases	12	3	15
7.	P. Terminations - Number of Cases	17	3	20
8.	Total - Number of Cases	29	6	35
9.	S. Auditors Proportion (Row 6 ÷ Row 8)	.4138	.5000	.4286
10.	P. Terminations - Number of Cases (Row 7 ÷ Row 8)	.5862	.5000	.5714
11.	PCC(3) [(Row 9)^2 + (Row 10)^2 = C]	.5148	.5000	.5102
12.	1.25 C	.6435	.6250	.6378

(1) S. Auditors = Successful Auditors Groups
(2) P. Terminations = Premature Terminations Group
(3) PPC = Proportional Chance Criterion

Summary

Chapter 4 has analyzed the attributes used by a national CPA firm to assess job applicants during on-campus interviews and to evaluate audit staff members during audit assignments. The primary focus of this analysis was determining the relative importance of each attribute in office visit decisions, job offer decisions, offer acceptance decisions, and retention decisions by developing discriminate models to test the hypotheses in Chapter 3. The criterion for rejecting an hypothesis was the ability of the discriminate model to correctly classify cases in an external sample at a rate significantly better than chance.

CHAPTER 5

CONCLUSIONS

This chapter consists of three sections. The first section summarizes the results obtained from testing each of the research hypotheses. Section 2 discusses limitations of this study. Finally, section 3 focuses on implications of the current study and recommendations for future research.

Chapter 4 examined the usefulness of the "Initial Interview Evaluation" form (Appendix A) and the "Performance Evaluation" form (Appendix B) in discriminating between successful and unsuccessful audit staff job applicants and employees. In particular, the primary issue in this study was the discriminating ability of the attribute ratings on the "Initial Interview Evaluation" form (cue set I, Table 13, Chapter 3) in identifying audit staff job applicants who did and did not receive office visit invitations. A second concern was the discriminating ability of the attribute ratings on the "Performance Evaluation" form (cue set II, Table 13, Chapter 3) in identifying audit staff employees who did and did not terminate employment prematurely with the firm. Finally, this study explored issues such as the discriminating ability of the attribute ratings on the "Initial Interview Evaluation" form in job offer and offer acceptance decisions; the

discriminating ability of attribute ratings for males and females separately, and the differences in attribute ratings for successful male versus successful female job applicants and employees.

In terms of the attributes used to assess job applicants during on-campus interviews and to evaluate audit staff members during audit assignments, this study has shown that there appears to be significant differences between job applicants and audit staff members who are and are not successful with the firm. Furthermore, this study has identified the decision stages in the auditor selection process (Figure 1, Chapter 1) for which the firm's attribute ratings conveyed useful information. Finally, this study has determined the relative importance of each attribute in the auditor selection decisions.

Research Results

The primary issue was the usefulness of the attribute ratings on the "Initial Interview Evaluation" form in discriminating between accounting students who did and did not receive invitations for follow-up interviewing. The hypothesis (H1) that there was no difference between students who received and did not receive office visit invitations was rejected. A discriminate model containing the "overall rating of potential" and "accounting GPA" variables correctly classified accounting students at a rate significantly better than chance. The most important attribute was "overall rating of potential." It was almost twice as important as the "accounting GPA" variable in "office visit decisions."

The second area of concern was the usefulness of the attribute ratings on the "Performance Evaluation" form in discriminating between audit staff employees who did and did not terminate employment prematurely with the firm. The hypothesis (H13) that there was no difference between these two groups of auditors could not be rejected. No discriminate model correctly classified auditors at a rate significantly better than chance. However, the discussion later in this section will show that the "Performance Evaluation" form was useful in discriminating between female audit staff employees who did and did not terminate prematurely.

For "job offer decisions" (decision stage 2, figure 1, chapter 1), this study investigated the relationship between student attributes evaluated during on-campus interviews and the firm's selection of students to receive employment offers. The SPSS discriminate analysis indicated that no model was significant at the 0.10 level of significance. Therefore, the hypothesis (H5) that there was no difference between students who did and did not receive job offers could not be rejected.

The investigation of "job acceptance decisions" (decision stage 3, figure 1, chapter 1) involved examining the relationship between student attributes evaluated during on-campus interviews and the decisions of students to accept or reject the firm's employment offer. No model resulting from the SPSS discriminate analysis classified accounting students at a rate significantly better than chance for the hold-out samples. Therefore, the hypothesis (H9) that there was no difference between students who

accepted and rejected the firm's employment offer also could not be rejected.

Investigating the discriminating ability of attribute ratings for males and females separately produced mixed results. In terms of "office visit decisions," this study rejects both hypothesis "H2" and hypothesis "H3" regarding male and female accounting students respectively. A model containing the "overall rating of potential" and "overall GPA" factors distinguished male accounting students who received office visit invitations from male students who did not receive invitations. Likewise, "overall rating of potential" and "accounting GPA" distinguished female accounting students who received office visit invitations from female students who were not invited into the office for follow-up interviewing. This study also rejects hypothesis "H15" (retention decision) concerning female auditors. The "development of personnel" attribute (performance evaluation form) did discriminate between female auditors in the "successful auditors" and "premature terminations" groups. However, the hypotheses focusing on male students (H6) and female students (H7) for the "job offer decision"; male students (H10) and female students (H11) for the "offer acceptance decision", and male auditors (H14) for the "retention decision" could not be rejected. The attribute ratings for the above samples did not discriminate between the decision outcomes (Table 14, Chapter 3).

The final area examined focused on comparing the attribute ratings of successful male job applicants to the ratings received

by successful female job applicants. A finding that there are significant differences in the attribute ratings of male versus female applicants would imply that the firm has different perceptions about male and female job applicants. For each auditor selection decision (office visit, job offer, offer acceptance, and retention), the SPSS discriminate analysis indicated that no model was significant at the 0.10 level of significance. Therefore, the hypothesis that there was no difference between male and female students could not be rejected for H4 (office visit decision), H8 (job offer decision), H12 (offer acceptance decision), and H16 (retention decision).

Table 53 shows the models that correctly predicted the classification of audit staff job applicants and employees. This table demonstrates that the "Initial Interview Evaluation" form (Appendix A) is useful in discriminating between job applicants who receive and do not receive invitations for office interviews. For all job applicants and female job applicants, "overall rating of potential" and "accounting GPA" are the most important discriminating variables evaluated during on campus interviews. For male job applicants, the "overall rating of potential" and "overall GPA" attributes are the important discriminators. Table 53 demonstrates also that the "Performance Evaluation" form (Appendix B) is useful in discriminating between female audit staff employees who do and do not terminate employment prematurely. The firm's ratings on the "development of personnel" attribute is a significant discriminating variable.

TABLE 53

Discriminate Models Correctly Classifying Cases
at a Rate Significantly Better Than Chance

Hypothesis	Decision Stage	Sample	Discriminating Variable	Relative Weight	Evaluation Form
H1	Office Visit	All Job Applicants	ORP AGPA	.9203 .4949	IE(1)
H2	Office Visit	Male Job Applicants	ORP OGPA	.9302 .5025	IE(1)
H3	Office Visit	Female Job Applicants	ORP AGPA	.9148 .5196	IE(1)
H15	Retention	Female Audit Staff Employees	DP	N/A	PE(2)

ORP = Overall Rating of Potential
AGPA = Accounting Grade Point Average
OGPA = Overall Grade Point Average
DP = Development of Personnel

(1) IE = "Initial Interview Evaluation" form (Appendix A)
(2) PE = "Performance Evaluation" form (Appendix B)

In comparison to prior studies, the results in Table 53 confirm the findings of Seaton and White (1973), Adams (1980), Khairullah and Khairullah (1983), and Alvis (1983) regarding the importance of grade point average. Grade point average consistently ranked among the top three attributes used in employee selection decisions (Table 11, Chapter 2). However, the emergence of the "overall rating of potential" attribute as the most important discriminating variable for selecting job applicants is significant. As shown in Table 11 (Chapter 2), the identification of important attributes generally varies from study to study. One reason for the variation in prior studies could be that actual recruitment selections may be based on combinations of attributes which allow higher levels of some job applicant attributes to compensate for lower levels of other attributes. The dominance of the "overall rating of potential" attribute in the current study is consistent with a "compensatory model" (Libby, 1981, p. 46) of decision-making. The ratings job applicants receive on the "overall rating of potential" attribute could be the firm's way of assessing the applicant's net value to the firm, while allowing for variability among the applicants in terms of specific attributes. Reliance on a summary measure of potential could permit job applicants to emphasize their particular strengths during on-campus interviews. Also, it could give interviewers some flexibility in trading-off a job applicant's strengths and weaknesses.

The results in Table 53 have significant implications for public accounting firms seeking to recruit and retain qualified

students and for accounting students participating in on-campus interviews for entry-level audit positions. First, Table 53 suggests that the selection and promotion decisions of a national public accounting firm for the period covered in this study do not appear to be haphazard. Prediction models based on the firm's standardized interview and performance evaluation forms performed better than chance for "office visit invitation" and "retention" decisions. The significance of these models is two-fold. First, the models support the assumption that selection and promotion decisions are fair in the sense that written criteria are used in the decision process. Second, the models point to the potential that may exist for modeling audit staff selection and retention decisions using archival data. The modeling of decisions is a step toward understanding and ultimately improving the process by which decisions are made.

Although the results of this study cannot be generalized to other public accounting firms or other time periods not covered by this study, Table 53 may be useful to other public accounting firms and students. To the extent that the auditor selection environment in this study is similar to the environment of other national public accounting firms, Table 53 suggests that firms may be able to improve their selection of job applicants and students may be able to improve their chances of being selected by focusing on overall potential of applicants to contribute to the firm rather than any specific personality or skill factor. Also, it appears that grade point average is significant in distinguishing

successful from unsuccessful job applicants.

Limitations of the Study

There are four major limitations associated with the results obtained in the current study and the conclusions based on these results. First, the study is limited to the auditor selection experiences and procedures of a specific firm. Although the results of this study are believed to be representative of that firm's auditor selection practices, the results cannot be generalized to other public accounting firms.

The second limitation concerns omitted variables and omitted values. This study assumes that personnel selection and promotion decisions are based on the information contained in the "initial interview evaluation" form (Appendix A) and the "performance evaluation" form (Appendix B). A bias is introduced in estimating the coefficients in the discriminate models if important variables used by the firm in personnel selection and promotion decisions have been omitted. Also, results are less than optimal if variables have missing values. The procedure followed in this study for missing values consisted of using average values during the classification phase of the SPSS program for variables with missing values. This procedure is consistent with prior research as an acceptable method for working with missing information in research studies (Lansing and Eapen, 1959, p. 25).

Third, the current study ignores the cost to the firm of incorrect classification of job applicants and employees in

assessing the desirability of a discriminate model. The assumption in this study is that discriminating variables which can be used to correctly classify cases at a rate significantly better than chance are useful to the firm. However, the firm may not be indifferent to the type of classification error made by a model. For example, incorrectly accepting undesirable job applicants may be more costly than incorrectly rejecting desirable applicants. The introduction of the firm's cost function into the analysis may affect conclusions regarding the discriminate models which are useful.

According to Welker (1974), two important conditions of discriminate analysis are: "(1) They must be multivariant normal, and (2) they must have identical densities about the population means with regard to the variations within each measure and the covariation between the measures." [p. 516] The fourth limitation of this study is that the multivariate normality assumption does not hold since the discriminate variables have only discrete values. Furthermore, as in most business research, the discriminate variables are not independent and tend, in general, to exhibit multicollinearity and unequal group dispersion matrices. These violations of the assumptive properties of discriminate analysis inhibit interpretation of the discriminate models. However, Welker (1974) states that "generally, small variation from these properties are allowable." [p. 518] In addition, Jackson (1983) states the following:

> "It turns out in practice that the discriminant analysis model is surprisingly robust. In other words, the discriminate procedure is found to work well even when its assumptions are not met. Investigators regularly use the technique when they do not believe that their groups have essentially the same variance structure... Further, investigators regularly use discriminator variables which are not normally distributed..." [p. 106]

The above limitations cause the conclusions based on the current research results to be less than optimal. Nevertheless, the procedures used are believed to yield results which are approximations of reality. Finally, the current research is consistent with similar studies [Alvis, 1983; Clark and Sweeney, 1985] in the area.

Implications and Recommendations

With regard to the on-campus interview, the research results suggest that the firm's selection of accounting students for follow-up interviews is not spurious. This is the major finding of the study. Successful students are rated higher in terms of the "overall rating of potential" attribute and they have higher grade point averages. The need for accounting students to demonstrate technical competence through grade point average has been documented in previous studies (Seaton and White, 1973); Adams, 1980; Khairullah and Khairullah, 1983; Alvis, 1983). However, a factor which may not be appreciated is the need for students to clearly demonstrate that they have the potential to be successful with the firm. The current study does not suggest that the other

attributes evaluated during the on-campus interview lack importance. Nevertheless, this research does indicate that more attention to overall potential and grade point average could lead to increased likelihood of recruitment success since these variables discriminate between successful and unsuccessful students with the firm.

In terms of performance evaluation, the research results suggest that female employees who terminate prematurely are rated significantly lower on the "development of personnel" attribute than employees who remain with the firm for at least four years. The relevance of the "development of personnel" attribute to the retention decision may relate to an assessment of the employee's supervisory potential. Additional study of this issue by the firm may provide useful insights.

Future research could improve or expand the current study in several directions. The use of non-linear models and the use of factor analysis to further reduce the number of variables in the analysis might provide better results. Also, incorporating into the analysis the cost to the firm of incorrect decisions may improve the usefulness of the models. The study could be extended to other public accounting firms to determine the usefulness of their evaluation forms in auditor selection and promotion decisions. Finally, discriminate models could be used to study and improve the recruitment decisions of the firm.

Summary

Chapter 5 has summarized the results obtained from testing the research hypotheses, discussed the limitations of the study, and identified recommendations for future research. By studying the actual decisions of a national public accounting firm, this research has identified the characteristics which discriminate between successful and unsuccessful individuals.

Appendix A

INTERVIEW EVALUATION

NAME _____ INTERVIEW FIRST ☐ SECOND ☐

POSITION _____ LOCATION PREFERENCE FIRST _____ SECOND _____

CANDIDATE CONTENT REMARKS (Content — related to job duties and responsibilities) _____

CANDIDATE CONTEXT REMARKS (Context — environmental factors) _____

LEADERSHIP, INTELLECTUAL ABILITIES (Self confident, effective, sincere, creative, diplomatic, imaginative, incisive) OUTSTANDING DESIRABLE AVERAGE QUESTIONABLE

ATTITUDE, MOTIVATION, GOALS (Energetic, alert, goal oriented, self-starter, positive, ambitious, dynamic) OUTSTANDING☐ DESIRABLE☐ AVERAGE☐ QUESTIONABLE☐

JUDGEMENT, MATURITY (Independent, logical, levelheaded, aware, perceptive) OUTSTANDING☐ DESIRABLE☐ AVERAGE☐ QUESTIONABLE

COMMUNICATION SKILLS (Articulate, persuasive, enthusiastic, tactful) OUTSTANDING☐ DESIRABLE☐ AVERAGE☐ QUESTIONABLE

PRESENCE (Grooming, poise, appearance) OUTSTANDING☐ DESIRABLE☐ AVERAGE☐ QUESTIONABLE

OVERALL RATING OF POTENTIAL — OUTSTANDING Should Invite or Refer* — DESIRABLE, AVERAGE, QUESTIONABLE Reject

DISPOSITION REJECT ☐ INVITE BACK TO OFFICE ☐ REFER TO _____ OFFICE ☐

REMARKS _____

INTERVIEWER _____ DATE _____

P-002 *(Complete I II, III on reverse) 3/81

I SPECIAL INTERESTS _____

II SUGGESTIONS FOR OFFICE VISIT _____

III REASON FOR OFFICE PREFERRED (REFERRAL) _____

IV OTHER COMMENTS OR NOTES _____

TELEPHONE REFERENCE CHECK

COMPANY		
COMPANY REPRESENTATIVE		
AND TITLE		
DATES OF EMPLOYMENT	FROM_____ TO_____	FROM_____ TO_____
STARTING POSITION		
STARTING SALARY		
POSITION WHEN LEFT		
DUTIES LAST POSITION		
LAST SALARY WAS		
RATE ABILITY AND WORK		
ATTENDANCE RECORD		
LATENESS		
ABSENTEEISM		
RELATIONSHIPS WITH OTHERS		
REASON FOR LEAVING		
WOULD YOU RE-HIRE		
(EXPLAIN)		
COMMENTS		
REFERENCE CHECKED BY		
DATE		

PERFORMANCE EVALUATION ACCOUNTING AND AUDITING PERSONNEL

Required after each assignment of 35 hours or more

NAME _____ CLASSIFICATION _____

CLIENT _____ DATES WORKED _____

INDUSTRY _____ AUDITED _____ UNAUDITED _____

DESCRIBE WORK ASSIGNED _____

EVALUATOR _____

HAS THE INDIVIDUAL WORKED ON A· DEMANDING ☐ ROUTINE ☐ ASSIGNMENT?

EXPLAIN _____

EXCEEDS REQUIREMENTS is characterized by consistently outstanding and exceptional performance. This rating requires an explanatory comment by the Evaluator.

MEETS REQUIREMENTS means that the Evaluatee meets obligations and performs responsibilities in a manner expected of a person at that staff level

NEEDS IMPROVEMENT indicates that the performance is below that which is normally expected from an individual at that particular person's job level. This rating requires suggestions be indicated to improve performance

The evaluator must support each caption with specific incidents or remarks.

TECHNICAL KNOWLEDGE

Did the individual possess adequate technical knowledge to function effectively at the level assigned? Did this knowledge encompass accounting principles, auditing standards, and tax accounting? Has the individual kept current on recent developments and new pronouncements on professional practice matters as they affected this engagement?

	Exceeds Requirements	Meets Requirements	Needs Improvement	Not Applicable
Self-Evaluation	☐	☐	☐	☐
Evaluator's Rating	☐	☐	☐	☐

ANALYTICAL ABILITY AND JUDGMENT

Did the individual recognize problems, develop relevant facts, formulate alternative solutions, and decide on appropriate conclusions? Did the individual distinguish between material and immaterial items? Was the individual practical in adapting theory and experience to the individual circumstances of this client?

	Exceeds Requirements	Meets Requirements	Needs Improvement	Not Applicable
Self-Evaluation	☐	☐	☐	☐
Evaluator's Rating	☐	☐	☐	☐

WRITTEN EXPRESSION

Evaluate the effectiveness of the individual's letters, reports, footnotes, memoranda and other forms of written communication

	Exceeds Requirements	Meets Requirements	Needs Improvement	Not Applicable
Self-Evaluation	☐	☐	☐	☐
Evaluator's Rating	☐	☐	☐	☐

VERBAL EXPRESSION.

In conversation did the individual communicate effectively? Were instructions understood the first time? Did the individual sell ideas, obtain acceptance and action?

	Exceeds Requirements	Meets Requirements	Needs Improvement	Not Applicable
Self-Evaluation	☐	☐	☐	☐
Evaluator's Rating	☐	☐	☐	☐

PERFORMANCE

Can you depend on the individual for sustained, productive work? Were assignments organized and completed accurately in a reasonable amount of time? Did the individual meet time estimates and document work papers properly?

	Exceeds Requirements	Meets Requirements	Needs Improvement	Not Applicable
Self-Evaluation	☐	☐	☐	☐
Evaluator's Rating	☐	☐	☐	☐

ATTITUDE

Did the individual demonstrate a positive and professional approach to the assignment? Did the individual respond in a positive way to suggestions and guidance? Did the individual seek out additional responsibilities? Did the individual project self-confidence?

	Exceeds Requirements	Meets Requirements	Needs Improvement	Not Applicable
Self-Evaluation	☐	☐	☐	☐
Evaluator's Rating	☐	☐	☐	☐

EVALUATOR'S COMMENT

CLIENT RELATIONS:

Did the individual relate well to this client? Were positive impressions created with this client?

	Exceeds Requirements	Meets Requirements	Needs Improvement	Not Applicable
Self-Evaluation	☐	☐	☐	☐
Evaluator's Rating	☐	☐	☐	☐

EVALUATOR'S COMMENT

DEVELOPMENT OF PERSONNEL:

Did the individual effectively assign available talent to get the work done? Was the individual readily accepted as a leader? Was the individual effective in supervision and in on-the-job training of others?

	Exceeds Requirements	Meets Requirements	Needs Improvement	Not Applicable
Self-Evaluation	☐	☐	☐	☐
Evaluator's Rating	☐	☐	☐	☐

EVALUATOR'S COMMENT

SUPERVISION AND ON-THE-JOB TRAINING RECEIVED BY EVALUATEE

Describe supervision and O-J-T. you received on this engagement

EVALUATEE'S COMMENT

EVALUATOR'S COMMENT

PRACTICE DEVELOPMENT:

Has initiative been shown in developing further MAS, Tax, or Audit engagements? Has individual capitalized upon referral sources resulting from clients (e g , bankers, attorneys)?

	Exceeds Requirements	Meets Requirements	Needs Improvement	Not Applicable
Self-Evaluation	☐	☐	☐	☐
Evaluator's Rating	☐	☐	☐	☐

EVALUATOR'S COMMENT

MAJOR STRENGTHS WHICH WERE EVIDENT: _____

SUGGESTED GOALS FOR IMPROVEMENT: _____

THIS INDIVIDUAL IS_____ IS NOT_____ READY FOR INCREASED RESPONSIBILITY EXPLAIN _____

GENERAL COMMENTS OF EVALUATEE: _____

SIGNATURES

EVALUATEE _____ DATE _____

EVALUATOR _____ TITLE _____ DATE DISCUSSED _____

PARTNER/MANAGER _____ DATE _____

REFERENCES

Adams, B. M., "Student Perceptions and Evaluation of Employee Selection Criteria Used by Public Accounting Firms for Entry-level Positions," Proceedings of the 32 Annual Meeting, Southeast Regional Meeting, American Accounting Association (1980), pp. 265-269.

Alvis, J. M., "An Empirical Investigation of Personal Characteristics Significantly Affecting Employment Offers From International Accounting Firms to Accounting Graduates," Ph.D. dissertation, (University of Arkansas, 1983).

Blitstein, A., "What Employers are Seeking in Business Graduates," The Collegiate Forum, (Winter 1980/81), p. 7.

Brown, P. R., "A Descriptive Analysis of Select Input Bases of the Financial Accounting Standards Board," Journal of Accounting Research, (Spring 1981), pp. 232-246.

Clark, R. L. and R. B. Sweeney, "Admission to Accounting Programs: Using a Discriminate Model as a Classification Procedure," The Accounting Review, (July 1985), pp. 508-518.

Davey, B. W., "Personnel Testing and the Search for Alternatives," Public Personnel Management, (Winter 1984), pp. 361-374.

Dawes, R. M., "A Case Study of Graduate Admissions: Application of Three Principles of Human Decision Making," American Psychologist, (February 1981), pp. 180-188.

Dirsmith, M. W. and M. A. Covaleski, "Informal Communications, Nonformal Communications and Mentoring in Public Accounting Firms," Accounting, Organizations and Society, (May 1985), pp. 149-170.

Doll, B. F., "Staff Turnover: How to Manage It," Journal of Accountancy, (December 1983), pp. 76-82.

Hair, J. F., Jr., R. E. Anderson, R. L. Tatham and B. J. Grablowsky, Multivariate Data Analysis, (Petroleum Publishing Company, 1979).

Heilman, M. E., "Information as a Deterrent Against Sex Discrimination: The Effects of Applicant Sex and

Information Type on Preliminary Employment Decisions," Organizational Behavior and Human Performance, (April 1984), pp. 174-186.

Horrigan, J. O., "The Determination of Long Term Credit Standing with Financial Ratios," Empirical Research in Accounting: Selected Studies 1966 - Supplement to Journal of Accounting Research, (1966), pp. 44-62.

Jackson, B. B., Multivariate Data Analysis, (Richard D. Irwin, Inc., 1983).

Khairullah, Z. and D. Khairullah, "Importance of Characteristics of Graduating Seniors with respect to Positions in Public Accounting," Lecture Notes in Economics and Mathematical Systems, (1983), Vol. 209.

Klecka, W. R., "Discriminate Analysis," in N. H. Nie, C. H. Hull, J. G. Jenkins, K. Steinbrenner and D. H. Bent (eds.) Statistical Package for the Social Sciences, Second Edition, (McGraw-Hill, 1975), pp. 434-467.

Kochanek, R. F. and T. T. Kochanek, "Perceived Personality Characteristics Requisite to the Accountant's Success: Two Perspectives," Accounting Journal, (Spring 1977), pp. 135-146.

Lapointe, J. R., "Human Resource Performance Indexes," Personnel Journal, (July 1983), pp. 545-553.

Lansing, J. B. and A. T. Eapen, "Dealing with Missing Information in Surveys," Journal of Marketing, (October 1959), pp. 21-27.

Lawshe, C. H., "A Simplified Approach to the Evaluation of Fairness in Employee Selection Procedures," Personnel Psychology, (Autumn 1983), pp. 601-608.

Libby, R., Accounting and Human Information Processing: Theory and Applications, (Prentice Hall, 1981).

Miner, J. B., "The Interview as a Selection Technique," Personnel Psychology, (1969), pp. 105-111.

Murdock, R., "Career Patterns in Eight Large Public Accounting Firms," The Ohio CPA Journal, (Summer 1980), pp. 107-111.

Myers, D. C. and S. A. Fine, "Development of a Methodology to Obtain and Assess Applicant Experiences for Employment,"

REFERENCES

Adams, B. M., "Student Perceptions and Evaluation of Employee Selection Criteria Used by Public Accounting Firms for Entry-level Positions," Proceedings of the 32 Annual Meeting, Southeast Regional Meeting, American Accounting Association (1980), pp. 265-269.

Alvis, J. M., "An Empirical Investigation of Personal Characteristics Significantly Affecting Employment Offers From International Accounting Firms to Accounting Graduates," Ph.D. dissertation, (University of Arkansas, 1983).

Blitstein, A., "What Employers are Seeking in Business Graduates," The Collegiate Forum, (Winter 1980/81), p. 7.

Brown, P. R., "A Descriptive Analysis of Select Input Bases of the Financial Accounting Standards Board," Journal of Accounting Research, (Spring 1981), pp. 232-246.

Clark, R. L. and R. B. Sweeney, "Admission to Accounting Programs: Using a Discriminate Model as a Classification Procedure," The Accounting Review, (July 1985), pp. 508-518.

Davey, B. W., "Personnel Testing and the Search for Alternatives," Public Personnel Management, (Winter 1984), pp. 361-374.

Dawes, R. M., "A Case Study of Graduate Admissions: Application of Three Principles of Human Decision Making," American Psychologist, (February 1981), pp. 180-188.

Dirsmith, M. W. and M. A. Covaleski, "Informal Communications, Nonformal Communications and Mentoring in Public Accounting Firms," Accounting, Organizations and Society, (May 1985), pp. 149-170.

Doll, B. F., "Staff Turnover: How to Manage It," Journal of Accountancy, (December 1983), pp. 76-82.

Hair, J. F., Jr., R. E. Anderson, R. L. Tatham and B. J. Grablowsky, Multivariate Data Analysis, (Petroleum Publishing Company, 1979).

Heilman, M. E., "Information as a Deterrent Against Sex Discrimination: The Effects of Applicant Sex and

Information Type on Preliminary Employment Decisions," Organizational Behavior and Human Performance, (April 1984), pp. 174-186.

Horrigan, J. O., "The Determination of Long Term Credit Standing with Financial Ratios," Empirical Research in Accounting: Selected Studies 1966 - Supplement to Journal of Accounting Research, (1966), pp. 44-62.

Jackson, B. B., Multivariate Data Analysis, (Richard D. Irwin, Inc., 1983).

Khairullah, Z. and D. Khairullah, "Importance of Characteristics of Graduating Seniors with respect to Positions in Public Accounting," Lecture Notes in Economics and Mathematical Systems, (1983), Vol. 209.

Klecka, W. R., "Discriminate Analysis," in N. H. Nie, C. H. Hull, J. G. Jenkins, K. Steinbrenner and D. H. Bent (eds.) Statistical Package for the Social Sciences, Second Edition, (McGraw-Hill, 1975), pp. 434-467.

Kochanek, R. F. and T. T. Kochanek, "Perceived Personality Characteristics Requisite to the Accountant's Success: Two Perspectives," Accounting Journal, (Spring 1977), pp. 135-146.

Lapointe, J. R., "Human Resource Performance Indexes," Personnel Journal, (July 1983), pp. 545-553.

Lansing, J. B. and A. T. Eapen, "Dealing with Missing Information in Surveys," Journal of Marketing, (October 1959), pp. 21-27.

Lawshe, C. H., "A Simplified Approach to the Evaluation of Fairness in Employee Selection Procedures," Personnel Psychology, (Autumn 1983), pp. 601-608.

Libby, R., Accounting and Human Information Processing: Theory and Applications, (Prentice Hall, 1981).

Miner, J. B., "The Interview as a Selection Technique," Personnel Psychology, (1969), pp. 105-111.

Murdock, R., "Career Patterns in Eight Large Public Accounting Firms," The Ohio CPA Journal, (Summer 1980), pp. 107-111.

Myers, D. C. and S. A. Fine, "Development of a Methodology to Obtain and Assess Applicant Experiences for Employment,"

Public Personnel Management, (Spring 1985), pp. 51-64.

Portwood, J. D., "Contribution Versus Competency: Analyzing a New Framework for Staffing Decisions," Human Resource Planning, (1979), pp. 163-174.

Seaton, L. and J. A. White, "Recruiting Practices of CPA Firms," Journal of Accountancy, (May 1973), pp. 86-87.

Scott, R. A., E. J. Pavlock and M. H. Lathan, Jr., "On-campus Recruiting: The Students Speak Up," Journal of Accountancy, (January 1985), pp. 60-72.

Stoile, C. D., "Perceived Differences Among Public Accounting Firms Which Affect Job Choices," The Accounting Review, (April 1977), pp. 474-478.

Thompson, J. D., Organizations in Action, (McGraw-Hill, 1967).

Van Wert, J. R., "Absence of Bias: How to Interview Impartially for the Best Fit," Management World, (October 1983), pp. 34-36.

Walker, R. B., "Discriminant Analysis as an Aid to Employee Selection," The Accounting Review, (July 1974), pp. 514-523.