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**THE EFFECTS OF AUDIT FIRM STRUCTURE AND
AUDITOR LOCUS OF CONTROL ON AUDITOR ACQUISITION,
COMPENSATION, PERFORMANCE, AND RETENTION**

**THE EFFECTS OF AUDIT FIRM STRUCTURE AND
AUDITOR LOCUS OF CONTROL ON AUDITOR ACQUISITION,
COMPENSATION, PERFORMANCE, AND RETENTION**

**A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy**

By

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**May 2002
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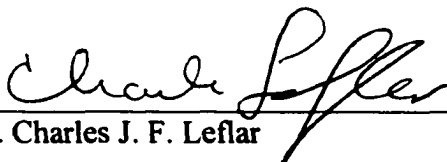
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Chapter 1 Introduction

The purpose of this study is to examine the effect of audit structure and auditor locus of control on human resource acquisition, compensation, performance, and retention. Data are drawn from a survey instrument of audit firm characteristics, a survey instrument of individual auditor characteristics, and examination of auditor personnel files.

1.1 Motivation

There has been little research on the effect of audit structure on human resource acquisition, compensation, and retention. Prior research has noted that auditors working for structured firms may experience greater job satisfaction than those working for unstructured firms (Bamber et al., 1989), but there has been no research examining whether these firms experience lower staff turnover or whether employee personalities correspond with audit structure to influence the cost of human resources.

1.1.1 Economic Incentive for Studying Audit Firms' Human Resources

Audit firms must be effective and efficient to survive in the competitive environment. Therefore, the auditors and firms must meet and maintain professional standards and at the same time minimize their costs (Arens and Loebbecke, 2000, McDaniel, 1990). Although social pressure (for example, lawsuits, bad publicity) from audit failures motivates firms to conduct effective audits, the competitive environment creates incentives for the firms to conduct audits more efficiently (Ludwig, 2000, McDaniel, 1990). The study of human resource acquisition, compensation, performance, and retention is important since labor cost is the major cost of accounting firms. An

understanding of the relation among factors influencing this cost is of primary importance in managing it.

1.1.2 The Impact of Audit Structure on Human Resources

During the 1980s, the accounting profession followed a trend towards a more structured audit methodology. A “structured audit methodology” is defined as:

A systematic approach to auditing characterized by a prescribed, logical sequence of procedures, decisions, and documentation steps, and by a comprehensive and integrated set of audit policies and tools designed to assist the auditor in conducting the audit (Cushing and Loebbecke 1986, page 32).

Structured firms tend to rely more on audit manual specifications, statistical sampling for materiality and sample size, structured internal control evaluations, checklists, and computer packages for judgment assistance as compared to unstructured firms.

Unstructured firms rely more heavily on the judgment of individual auditors.

The structure trend is possibly due to the external factors of increasing complexity of the business environment and data processing technology, increased regulation in auditing, increased competition among CPA firms, the threat of litigation, and academic findings highlighting detriments of unaided auditor judgments. Factors internal to the firms include the desire to reduce the variability of services and the cost of high staff turnover (Cushing and Loebbecke, 1986; Bowrin, 1998).

Human resources should be managed to provide excellent services to customers, but also as efficiently as possible, i.e., cost minimization. Structured audit methodologies claim to increase audit efficiency (McDaniel, 1990; Bamber et al., 1993), control audit risk (McDaniel, 1990), affect the distribution of audit staff at various levels (Kinney, 1986; Prawitt, 1995), improve communication among auditors within firms (Bamber et

al., 1989), and reduce audit costs (Gist, 1994). However, a structured audit approach may decrease flexibility, cause auditors to become less effective (by relying too much on audit tools), increase inefficiency in a less complex environment, and be very costly to implement (Cushing and Loebbecke, 1986). In addition,

some staff auditors may feel that structured tools reduce their opportunities to exercise discretion and judgment to an unacceptably low level, and shift too much control of audit decision making away from the field auditor. The [structured] firm may find that it attracts and retains only those auditors who are comfortable working in a highly structured environment. If those who tend to leave the firm for this reason are the brighter staff members who seek more challenging work, while those who tend to stay are less highly qualified, then the firm may suffer adverse consequences in the long run. (Cushing and Loebbecke, page 43)

A current study of audit structure is important since there are continuing updates of structured methodology (Lemon et al. 2000) and conflicting views on the merits of structured methodology. A further understanding of the relation between audit structure and human resources will provide further insight of audit efficiency.

1.1.3 The Impact of Audit Structure and Locus of Control on Human Resources

Locus of control refers to the degree to which a person believes that a reward is contingent upon his behavior. According to Rotter (1966),

when reinforcement is perceived by [an individual] as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in external control. If the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in internal control (page 1).

This psychological variable can possibly provide insight into understanding the nature of accountants in the work environment. "Internals" believe that their actions

directly influence outcomes, while “externals” believe that their own actions have little influence on outcomes. Hyatt and Prawitt (2001) examine the relation of audit structure and locus of control on performance, but only at the staff and senior levels. Further, no research has been performed to examine the influence of audit firm structure and locus of control on other human research variables such as personnel acquisition, compensation, and retention.

1.2 Contribution

This study contributes to the current body of auditing research by providing insight into how audit structure affects the human resources employed in audit firms. The results extend previous research by examining the effects of the interaction of audit structure and locus of control on performance at staff through manager levels. Job performance is measured by examining personnel files in addition to self-reporting by the subjects. The results also extend the research by examining the effects of the interaction on employee acquisition (hiring), retention, and employee salaries. Thus, the results are relevant to accounting firms wishing to improve their hiring practices, retain quality individuals, and provide an equitable salary structure.

Chapter 2 develops the hypotheses concerning audit structure and locus of control. In addition, the environmental and individual factors that are likely to contribute to audit efficiency and effectiveness in terms of human resources are identified. Chapter 3 describes the research methodology, the variables utilized, the survey instruments, and the participants. Chapter 4 includes the statistical analyses, hypotheses testing, and sensitivity analysis. Chapter 5 includes a discussion of the findings, limitations of the research, suggestions for future research, and a conclusion.

Chapter 2

Hypotheses Development

This chapter develops specific hypotheses of factors affecting auditor hiring, performance, retention, and compensation. The relationship between audit structure and locus of control is presented. Literature on audit structure and locus of control in auditing is reviewed to examine previous findings and relationships identified and to establish a framework for testing.

2.1 Audit Structure Research

Cushing and Loebbecke (1986) classify the twelve largest CPA firms along a structured/unstructured continuum. The classifications are based on examination of audit manuals of the firms. The major elements used in the measurement of audit structure included overall audit process, initial audit planning, audit program design, control review and evaluation, use of audit tools, and documentation and review.

Kinney (1986) assesses the audit structure rankings of the then Big 8 firms by asking four members of the AICPA's statistical sampling subcommittee to classify the firms on their structured guidance approaches. Results are consistent with Cushing and Loebbecke.

Bamber and Snowball (1988) verify differences in audit structure by perceptions of participating auditors, as distinct from Cushing and Loebbecke's institutional measures.

Due to the fact that the audit structure of the firms can change over time, Prawitt (1995) measures the amount of structure at the task level for four firms previously classified as high-structure or low-structure firms by Cushing and Loebbecke (1986). The measures are obtained by reviewing audit guidance materials of the firms, cataloguing the materials into nineteen (19) audit judgment task areas, and rating the materials according to amount of guidance given. For sixteen (16) of the nineteen (19) task areas, the high-structure and

low-structure classifications agreed with the Cushing and Loebbecke classifications.

Audit firms continue to update their audit approaches (Lemon et al. 2000). These transformations have greatly increased the amount of audit structure within Big 5 firms. To the extent that these transformations have also affected the level of audit structure within smaller firms, it is necessary to assess the amount of structure of non-Big 5 firms.

2.1.1 Audit Efficiency

Structured audit methodologies claim to improve audit efficiency. Researchers examining audit structure and audit efficiency have found that there is a positive relationship between the two. McDaniel (1990) employs staff auditors in an experiment to test the effects of time pressure and audit program structure on audit performance. The task was testing details of an inventory account. Audit performance efficiency is measured as the amount of time it took the auditor to achieve the stated objective in the hypothetical audit program. The audit program was manipulated between subjects (structured and unstructured). Findings suggest that at low time pressure, structured audit programs lead to higher audit effectiveness, efficiency, and consistency.

William and Dirsmith (1998) examine audit efficiency by focusing on the timeliness of client earnings announcements. They find that structured firms release surprising earnings information, whether good or bad, earlier than unstructured firms. Newton and Ashton (1989) measure efficiency by audit lag (the time required to complete an audit, from fiscal year end to audit report date). Their results, based on examining 300 Canadian firms, demonstrate a positive relationship between audit structure and audit delay. Bamber, Bamber, and Schrodenbek (1993) perform an empirical study to analyze audit structure and other determinants of audit lag. They find

that structured firms have larger audit lags but smaller abnormal audit report lags for their clients. They conclude that the structure imposes many procedures that lengthen audit time, but structure assists with audit surprises more efficiently.

Gist (1994) examines the effect of audit structure¹ on audit pricing. He utilizes a questionnaire to obtain information on audit fees, and ANCOVA models to analyze the findings. He argues that the more structured the audit, the more efficient the auditors will be, thus allowing for lower audit prices. Results support the hypothesis that audit pricing by structured firms is lower, on average, than pricing by intermediate or unstructured firms.

2.1.2 Human Resources

Another area of interest in the audit structure research is human resources. Kinney (1986) finds an association between audit structure and staffing ratio; structured firms have less staff per partner than unstructured firms.

Bamber, Snowball, and Tubbs (1989) focus on audit structure and its relation to role conflict and role ambiguity. Based on role theory and a sample of audit seniors from both structured and unstructured firms, the researchers find that perceptions of role ambiguity and role stress differ between structured and unstructured firms. Structured firm seniors perceive tasks as more analyzable, find a greater degree of formalization of standard practices within their firms, and perceive less stress than unstructured firm seniors.

Prawitt (1995) examines the effects of structured audit technology and environment on staffing assignments for judgment oriented tasks. Audit managers from high and low-structure firms indicated the minimum experience levels required for

performance and supervision for a list of audit tasks for a hypothetical firm. Findings indicate that structured firms assign less experienced auditors to perform and supervise audit tasks. Structured firm managers increase reliance on specialists for more complex problems, whereas unstructured firm managers rely on more experienced auditors.

Prawitt, Felix, and Spiker (2000) utilize an experimental setting to study the effects of audit firm structure and environment on human resource allocation (time budgeting) in auditing. They ask management from structured and unstructured firms to determine time budgets for a hypothetical client. Results indicate that structure reduces the supervision and review of audit procedures in terms of number of hours budgeted, but there is no reduction in the budgeted hours for the performance of the audit tasks. Also, management from structured firms utilize lower level auditors to perform the audit tasks as compared to management from unstructured firms.

2.1.3 Audit Effectiveness

Although not the main focus of this paper, it should be noted that a major category of audit structure research is audit effectiveness. Morris and Nichols (1988) compile publicly available data on companies' initial application of SFAS 34, "Capitalization of Interest Cost," to determine materiality judgments of the companies' auditors. The researchers find a positive association between the materiality judgment consensus and audit firm structure.

Bamber and Snowball (1988) utilize an experimental setting and auditors from structured and unstructured firms to study the effects of audit structure on audit judgments. The auditors from structured firms did not demonstrate greater consensus but did increase the use of control and coordination mechanisms as uncertainty increased.

¹ based on Kinney's (1986) classification scheme

Icerman and Hillison (1991) indicate that structured audit firms book (as opposed to waive) a greater percentage of individual errors as compared to unstructured or intermediate-structured firms.

2.2 Locus of Control Research

Locus of control research in accounting has focused primarily on managerial accounting. Since prior research has conflicting results on the relationship between budgetary participation and managerial performance, Brownell (1981) examines the relationship with the locus of control variable as a moderator. Using an experimental setting and students and managers as subjects, Brownell (1981) finds that subjects in similar personality/situation conditions perform better than those in dissimilar conditions. In other words, people who believe they control their destinies, internals, perform better when they participate in budgeting than when they do not participate in budgeting. Similarly, people who believe that their destinies are controlled by luck or chance, externals, perform better when they do not participate in budgeting.

Brownell (1982) validates the results of the 1981 study with a survey instrument analysis. Using the same management subjects as the experimental study, he examines job performance and job satisfaction. Results marginally indicate that the interaction between budgetary participation and locus of control is significant, supporting the notion that participation is most effective for internal individuals. The interaction between the two is shown to strongly affect job satisfaction.

Frucot and Shearon (1991) extend the work of Brownell by examining the locus of control / budgetary participation relationship with a cultural aspect; they examine job performance and satisfaction of Mexican managers. Results support previous study

findings on job performance but find the effect of locus of control has more of an effect on high-level managers than low-level managers. Findings also demonstrate that locus of control did not significantly affect job satisfaction, inconsistent with prior results, suggesting cultural differences among the subjects of the different studies.

Donnelly et al. (2001) took a different approach to examining the variable locus of control. Instead of examining the variable in a managerial setting, the focus is on external auditing. Utilizing a survey sent to auditors in a wide variety of firm sizes (ranging from Big 5 firms to statewide firms), they find that individuals with internal locus of control perform better and have lower turnover intentions than individuals with external locus of control.

2.3 Audit Structure and Locus of Control Research

Hyatt and Prawitt (2001) examine the effects of both audit structure and employees' locus of control on job performance. They find a positive association between performance and the "fit" between locus of control and the firm's audit structure. Thus, congruence between an individual's personality and the work environment of the accounting firm has a positive effect on performance. This is tested using ANOVA with supervisor-assessed job performance as the dependent variable and audit structure and locus of control as dichotomous independent variables. The researchers find that auditors who have an internal locus of control perform better at unstructured firms than at structured firms, and auditors who have an external locus of control perform better at structured firms than unstructured firms. They also find that within unstructured firms, internals perform at a higher level than externals, although at structured firms, the performance difference between internals and externals is not

significant. The researchers gather the data from a survey instrument. Supervisor-assessed job performance is self-reported based on the two most recent supervisor evaluations. To increase reliability, they also use a secondary performance measure based on a fourteen item self-assessed performance measure.

2.4 Model Development

The results of prior research indicate that audit structure, auditor locus of control, and the interaction between the two are likely to contribute to job performance. However, many questions remain unanswered in this area.

The current study examines whether the fit between audit firm structure and auditors' locus of control affects job performance at levels higher than senior accountants. There has been a finding that supervisor-assessed job performance is positively associated with the match between an individual auditor's locus of control and the employing firm's audit structure (Hyatt and Prawitt 2001), such that internals perform at higher levels at unstructured firms than at structured firms, because in that environment they can have more control over their actions; and externals perform at higher levels at structured firms than at unstructured firms. However, the association has not been tested at levels higher than senior accountants. The first hypothesis stated in the alternative is:

H1: Audit structure interacts with auditor locus of control such that internals perform at higher levels in unstructured environments and externals perform at higher levels in structured environments.

It is believed that internals at unstructured firms perform better than internals at structured firms, and externals at structured firms perform better than externals at

unstructured firms. Within structured firms, externals perform at a higher level than internals. Within unstructured firms, internals perform at a higher level than externals.

However, structured audit approaches are primarily aimed at lower level accountants, given their duties. Staff accountants perform more routine tasks and are heavily supervised, which leads them to rely on structured audit approach tools such as checklists and documented steps. Seniors are usually in charge of field work and perform more complex, non routine tasks than staff. Managers, as compared to staff and seniors, rely the least on audit structure supporting materials, which results in less reliance on a prescribed sequence of procedures, decisions, and steps. Thus, it is possible that at higher levels (where tasks are less routine), the fit between audit structure and locus of control is less important, especially at structured firms. The relationship between job performance and the “fit” between audit structure and an auditor’s locus of control will be separately examined at the staff through manager levels.

Although the interaction between audit structure and locus of control has been found to be positively associated with job performance, the link has not been connected to employee salaries. It is expected that higher levels of performance lead to higher salaries. The second hypothesis is stated as follows:

H2: Audit structure interacts with auditor locus of control such that internals have higher salaries in unstructured environments and externals have higher salaries in structured environments.

It is expected that individuals with external locus of control working at structured firms have higher salaries than individuals with external locus of control working at unstructured firms, other factors held constant. Similarly, it is expected that individuals

with internal locus of control working at unstructured firms have higher salaries than individuals with internal locus of control working at structured firms, other factors held constant. Within structured firms, externals have higher salaries than internals. Within unstructured firms, internals have higher salaries than externals.

Although employers reward good job performance with higher salaries, beginning salaries of auditors may not reflect the association between audit structure and locus of control. In addition, since the association between job performance and the fit of audit structure and locus of control has not been determined at levels higher than senior, salaries of more experienced auditors may not be positively associated with the structure/locus of control fit.

The current study also explores whether the fit between audit firm structure and auditors' locus of control affects job turnover intentions. It is expected that if there is congruence between audit firm structure and auditors' locus of control, auditors will be more satisfied with their jobs, and thus less likely to seek other employment opportunities. The fourth hypothesis stated in the alternative is:

H3: Audit structure interacts with auditor locus of control such that internals have lower turnover intentions in unstructured environments and externals have lower turnover intentions in structured environments.

It is believed that internals at unstructured firms have lower turnover intentions than internals at structured firms, and externals at structured firms have lower turnover intentions than externals at unstructured firms. Within structured firms, externals have lower turnover intentions than internals. Within unstructured firms, internals have lower turnover intentions than externals.

The current study also examines whether the fit between structure and auditors' locus of control is considered during the hiring process. Audit firms spend a considerable amount of time and money recruiting and training qualified individuals. It is hypothesized that the recruit's personality is taken into consideration when recruiting even if specific locus of control measures are not utilized. This leads to the following hypothesis about effects of audit structure and locus of control on recruiting:

H4: There is a significant relationship between a firm's audit structure and the locus of control of graduates offered employment with the firms.

It is expected that firms recruit individuals who are likely to perform well in their organizations. Thus, unstructured firms will recruit mainly individuals with internal locus of control, while structured firms will recruit mainly individuals with external locus of control.

Chapter 3

Research Methodology

The first section discusses the rationale for selecting participating firms and field auditors as participants in the study. The first section also addresses the data collection procedures. The second section describes the measurement of audit structure, locus of control, and job performance, job satisfaction, and turnover intentions. The third section discusses the choice of regression analysis and the anticipated findings.

3.1 Participants

Consistent with Bamber and Snowball (1988), differences in audit structure are evaluated by the perceptions of participating auditors. Specifically, auditors at the staff through manager levels evaluate the structure of their firms. Perceptions of audit structure by all field auditors are necessary due to the varying degrees of task complexity and routineness at different employee levels.²

To examine auditor compensation, performance, and retention, auditors at the staff through manager levels are participants in the study due to the need to examine how audit structure affects auditors' work environments at different levels of responsibility (Hyatt and Prawitt 2001). The auditors are employed at local, regional, and international firms.³

Master of accountancy students and undergraduate accounting major seniors are participants in the study to assess the hiring process of the firms. The participants selected are enrolled in universities where all Big 5 and some non-Big 5 firms heavily recruit, and all are currently involved in the interview process.

² Structured audit approaches are primarily aimed at lower level accountants, given their routine tasks. Routine tasks require considerably less judgment than complex tasks.

The instrument is mailed to the human resource manager at the participating firms, who will distribute the instruments to the audit participants. The participants are also given a return envelope, requesting that the instrument be mailed directly to the researcher. The instrument is distributed to student participants during a required course for their masters program or undergraduate program. Students are asked to return the completed instrument the next class period. All participants are guaranteed confidentiality, as responses are not associated with name and are reported in aggregate. Participants are informed that the instrument should not take longer than thirty minutes to complete.

3.2 Operational Measurement of Variables

3.2.1 Audit Structure

Audit structure is measured using Bamber and Snowball's (1988) audit structure analysis format, which is based on organizational behavior literature.⁴ The instrument contains scales that measure formalization and technology of the accounting firms. Measurements are based on the perceptions of the participating auditors, as opposed to the researcher reviewing firm audit manuals and related documents to assess the degree of audit structure.

Formalization is defined as "the degree to which standard practices, policies, and position responsibilities are formalized explicitly" and is derived from the Organization Description Questionnaire, an instrument that measures various internal organizational and managerial practices (House and Rizzo, 1972). More formalization translates to

³ Due to the increasing structure of Big 5 firms over time and little differentiation in structure among the Big 5 (Lemon, 2000), only two Big 5 firms are selected as participants for the study.

⁴ Bamber and Snowball's (1988) conclusions on audit structure are consistent with previous findings [Cushing and Loebbecke (1986) and Kinney (1986)].

more audit firm structure. House and Rizzo (1972) found the scale to meet validity and reliability requirements, as did Bamber and Snowball (1988) (Cronbach's $\alpha=.72$).

Technology is defined as "task variety (the frequency of unexpected or novel events) and task analyzability (how individuals respond to problems that arise)" and is derived from a questionnaire by Daft and Macintosh (1981). Less task variety and more analyzability translate to more audit structure. Bamber and Snowball (1988) found the task analyzability to be acceptable for measuring differences (Cronbach's $\alpha=.71$), but task variability has considerable error variance (Cronbach's $\alpha=.40$).

3.2.2 Locus of Control

Spector's (1988) work locus of control scale is used to measure the auditor's locus of control. Spector (1988) finds the work locus of control scale to correlate significantly to job satisfaction, turnover intentions, perceived influence at work, and job stress. The measure has proven to be more suitable for work-related studies (Blau, 1993) and is utilized recently in the accounting literature (Donnelly, 2001). The work locus of control scale asks respondents to answer sixteen (16) questions on relationships between rewards/outcomes and causes on a likert scale. Low scores represent internality while high scores represent externality.

For the student participant analysis, Rotter's (1966) locus of control instrument is used for this variable. This instrument has consistently been used throughout the literature (Brownell, 1981; Reed et al., 1994; Bernardi, 1997; Hyatt and Prawitt, 2001). The instrument contains 29 forced-choice questions, six of which are distracters. Scoring is calculated by adding the number of external choices made (excluding the distracter

questions). A higher score indicates an external locus of control; a lower score indicates an internal locus of control.

3.2.3 Job Performance

Job performance is measured in three different ways. First, it is measured by the subjects' reporting the two most recent supervisor-assessed performance evaluations on a seven (7) point likert scale. The scores on the two evaluations are averaged for a single score for each participant. Secondly, a self evaluation of job performance is obtained. These measurements are consistent with Hyatt and Prawitt (1995). Due to the potential limitation of these self-reported measures, a third measurement of performance is collected. The scores on the two most recent supervisor-assessed performance evaluations are reported directly to the researcher by the firms' human resource manager, who obtained the information from the employee files.⁵ The scores on the two engagements are averaged for a single score for each participant and standardized to be comparable to participants from other firms.

3.2.4 Turnover Intentions

A four-choice question is utilized to encapsulate the turnover intentions of the participating auditors. The choices include two immediate turnover responses (quit as soon as possible, remain for at least two more years), a middle-term turnover response (remain for at least five more years), and a long-term turnover response (remain until

⁵ To meet the requirements of the "personnel management" quality control element established by the Quality Control Standards Committee (established in 1978) of the AICPA, audit firms evaluate personnel on each engagement using its individual engagement report (Arens and Loebbecke, 2000).

retirement). This question is based on the Donnelly et al. (2001) instrument⁶, which met reliability requirements (Cronbach's $\alpha=.91$).

3.3 Statistical Methodology

3.3.1 Audit Structure

Reliability for the formalization, task variety, and task analyzability scales is examined by means of Cronbach's (1951) coefficient α . To analyze firm structure, firm means for the formalization and technology scales are calculated. Measures are based on auditor responses to various statements. Higher scores translate into more structure (more formalization, less variety, and more analyzability).

3.3.2 Auditor Acquisition, Compensation, Performance, and Retention

Hypothesis 1 predicts that internals (externals) at unstructured (structured) firms will perform better than internals (externals) at structured (unstructured) firms. It also predicts that within structured (unstructured) firms, externals (internals) perform at a higher level than internals (externals). To test these predictions, regression analysis is utilized. Job performance is the dependent variable, and the interaction between audit structure and locus of control is the independent variable of interest. The model is run three times with different measures of job performance (self-reported supervisor-assessed job performance, self-assessed job performance, and personnel file information job performance)⁷. The model is expressed as follows:

$$\text{PERFORM} = \text{LOC} + \text{STR} + \text{LOC} * \text{STR} + \text{LEVEL} + \text{EXP} + \text{CPA} + \text{SALARY} + e$$

Where:

⁶ The Donnelly turnover intention scale had only one immediate turnover choice (remain for at least two more years). The items are written in a seven-point Likert scale format (strongly disagree to strongly agree).

⁷ It is expected that all performance measures will be highly correlated.

PERFORM = job performance measurement (all measures will be examined)

LOC = Locus of control (higher score indicates a greater degree of external personality)

STR = Audit structure of firm (unstructured, semi-structured, structured)

LEVEL=Level within the firm (staff, senior, manager)

EXP = Number of years experience in public accounting

CPA = Holds CPA certificate (yes, no)

SALARY = Current salary as reported by firm

The means and medians of the performance measures of internals and externals within structure categories are also evaluated.

Hypothesis 2 predicts that internals (externals) at unstructured (structured) firms have higher salaries than internals (externals) at structured (unstructured) firms, other factors held constant. It also predicts that within structured (unstructured) firms, externals (internals) have higher salaries than internals (externals), other factors held constant. To test these predictions, regression analysis is utilized. Employee salary is the dependent variable, and the interaction between audit structure and locus of control is the independent variable of interest. Since CPA firms are labor intensive, salaries are a significant cost for these firms. Salaries, therefore, is used as a proxy for the cost of human resources. The model is expressed as follows:

$$\text{SALARY} = \text{LOC} + \text{STR} + \text{LOC} * \text{STR} + \text{PER} + \text{LEVEL} + \text{EXP} + \text{CPA} + e$$

Where:

SALARY = employee salary (proxy for cost of human resources)

LOC = Locus of control (higher score indicates a greater degree of external personality)

STR = Audit structure of firm (unstructured, semi-structured, structured)

PER = Job performance measurement as reported by firm

LEVEL=Level within the firm (staff, senior, manager)

EXP = Number of years experience in public accounting

CPA = Holds CPA certificate (yes, no)

The salary means and medians of internals and externals within structure categories are also evaluated.

Hypothesis 3 predicts that internals (externals) at unstructured (structured) firms have lower turnover intentions than internals (externals) at structured (unstructured) firms, other factors held constant. It also predicts that within structured (unstructured) firms, externals (internals) have lower turnover intentions than internals (externals), other factors held constant. To test these predictions, a logistic regression model is utilized. Turnover intention is measured as a dichotomous dependent variable, and the interaction between audit structure and locus of control is the independent variable of interest. The model is expressed as follows:

$$\text{TURNOVER} = \text{LOC} + \text{STR} + \text{LOC} * \text{STR} + \text{PER} + \text{LEVEL} + \text{EXP} + \text{CPA} + \text{SALARY} + e$$

Where:

TURNOVER = turnover intention (plan to remain with the firm for 5 or more years, plan to leave the firm within 5 years)

LOC = Locus of control (higher score indicates a greater degree of external personality)

STR = Audit structure of firm (unstructured, semi-structured, structured)

PER = Job performance measurement as reported by firm

LEVEL=Level within the firm (staff, senior, manager)

EXP = Number of years experience in public accounting

CPA = Holds CPA certificate (yes, no)

SALARY = Current salary as reported by firm

Hypothesis 4 predicts that unstructured (structured) firms likely offer more employment opportunities to graduates with internal (external) locus of control. To test this prediction, a 2x2 contingency table is utilized. A Chi-square statistic indicates whether there is a significant relationship between the personalities of graduates and the audit structure of the firms offering them employment.

3.3.3 Sample Size Considerations

Thirty observations of each personality measure for each class of auditor is planned due to normal distribution considerations. According to Berenson et al. (1983), even if the population is far from a normal distribution, the sampling distribution will be approximately normal in most instances if the sample size is at least thirty. If smaller sample sizes are obtained, results will be calculated and presented using both parametric and nonparametric methods.

Chapter 4

Results of Analysis

This chapter discusses the results of analyses proposed in Chapter 3. Section 1 describes the data collection process and reports descriptive statistics of the participants. Section 2 contains the results of correlation analysis. Section 3 discusses the results of the hypotheses testing. A summary of the results is presented in Section 4.

4.1 Description of Participants

4.1.1 Auditor Participants

The survey instrument was pilot tested by two managers from different public accounting firms prior to administration of the study. No problems or concerns were noted by the managers; thus, no major changes were made to the instrument.

Eleven public accounting firms were initially contacted by letter requesting participation in the auditing study (see appendix). Contact by phone was made one week following the letter request. Eight firms agreed to participate in the study.

Prior to instrument distribution, a contact person was established at each firm. The contact person was in charge of indicating the number of surveys to send to the firm⁸, receiving the instruments from the researcher, assigning a survey instrument number to each participating auditor, and distributing the instruments. Second requests were also mailed within two weeks to the contact person for distribution to the auditors. In addition, the contact person was in charge of collecting personnel file information on each participant. Information included the scores on the two most recent performance evaluations and the current salary of each participant. The information received by the

researcher was coded by survey instrument number only, not name, so that confidentiality is maintained.

Usable responses were received from eighty-seven (87) auditors, for a response rate of 74%. A summary of responses is provided in Table 1. Five (5) participants completed the survey using the second requests and are classified as late responders. Due to the high response rate (74%) and the low percentage of late responders (6% of usable responses), non-response bias is not considered an issue.

Descriptive statistics of the participant and experimental variables are shown in Table 2. Fifty percent (50%) of the participants are male. Sixty-four (64) participants are staff or senior accountants, which accounts for seventy-four percent (74%) of the respondents, while twenty-two (22) participants are managers. A majority of the participants, fifty-four percent (54%), indicated that they have their CPA license. The participants average 4.3 years of public accounting experience with an average current salary of \$49, 511. The average pay raise for participants receiving an increase in salary in the current year was 7.8%.

Descriptive statistics by firm and firm size are shown in Tables 3 and 4, respectively. Thirty-two percent (32%) of the participants are from Big 5 firms, while twenty-one percent (21%) are from a regional firm and forty-six percent (46%) are from local firms.

⁸Participation was requested from all field auditors within the firm. If a firm was unable to provide participation from all employees, the contact person randomly solicited volunteers from qualified personnel.

Table 1
Summary of Data Collection by Firm

<u>Firm</u>	<u>Total Surveys Distributed</u>	<u>Usable Surveys Returned</u>	<u>Percent of Total</u>
1	19	15	17%
2	30	19	22%
3	15	14	16%
4	9	9	10%
5	6	4	5%
6	16	13	15%
7	18	8	9%
8	<u>5</u>	<u>5</u>	6%
Total	118	87	100%
Percent	100%	74%	

Table 2
Descriptive Statistics for 87 Participants

Panel A: Frequencies

Sex

Male	43	50%
Female	44	50%

Current Position

Staff	40	46%
Senior	24	28%
Manager	14	16%
Senior Manager	8	9%
Not reported	1	1%

CPA license

CPA	47	54%
Non-CPA	39	45%
Not reported	1	1%

Table 2 (continued)
Descriptive Statistics for 87 Participants

Panel B: Continuous Measures

<u>Variable</u>	<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>	<u>Observed Range</u>
Experience	86	4.3	2.8	4.9	0.3-30
Salary	87	49,511	44,400	14,316	28,200-110,000
Pay Raise	66	7.8	7.0	2.8	2-15
Performance 1	84	5.4	5.5	.9	3-7
Performance 2	85	4.9	4.8	0.7	4-7
Performance 3	71	0.0	0.37	1.0	-2.3 – 2.0
Locus of Control	87	39.59	39.0	8.2	17-64
Formalization	86	3.6	3.8	.8	1.4-5.0
Task analyzability	86	3.4	3.5	.5	2.2 – 4.7
Task variability	86	3.0	3.0	.4	1.6 – 4
Survey time	87	15.7	15.0	5.6	5-30

N - In total, 87 auditors participated. Each “n” reflects the number of subjects who responded to the survey measure.

Experience - Number of years employed in public accounting

Salary - Current salary as reported by the firm

Pay Raise - Most recent pay raise, if applicable

Performance 1 - Average performance rating on the two most recent evaluations, self reported. Possible range of answers is 1= very poor to 7 = excellent

Performance 2 - Overall performance rating based on self evaluation. Possible range is 1=much less successful than others to 7=much more successful than others

Performance 3 - The supervisor-assessed performance measures differs across firms. The numbers shown in the table represent the average of the subjects’ supervisor-assessed performance evaluations on their two most recent evaluations, as reported by the firm. Some firms performance scores had to be inverted so that higher scores indicate better performance. In addition, the performance measures were normalized within firms.

Formalization - Average amount of formalization in job activities, as reported on 8 questions. Possible range of answers is 1=little formalization to 5 = high formalization. Higher score indicates more audit structure.

Task analyzability - Average amount of direction given to perform tasks, as reported on 6 questions. Possible range of answers is 1 = little direction to 5 = much direction. Higher score indicates more audit structure.

Task variability - Average amount of variety in job activities, as reported on 5 questions. Possible range of answers is 1 = high variety to 5 = low variety. Higher score indicates more audit structure.

Locus - Total score on the work locus of control scale, where a higher score indicates a more external locus of control. Possible range is 16-96.

Survey time - Minutes to complete survey

Table 3
Descriptive Statistics by Firm

Panel A: Frequencies

	<u>Firm 1</u>	<u>Firm2</u>	<u>Firm 3</u>	<u>Firm 4</u>	<u>Firm 5</u>	<u>Firm 6</u>	<u>Firm 7</u>	<u>Firm 8</u>	<u>Total</u>
<u>Sex</u>									
Male	7	10	3	6	2	9	5	1	43
Female	8	9	11	3	2	4	3	4	44
<u>Current Position</u>									
Staff	8	7	7	3	2	6	4	3	40
Senior	5	7	4	2	1	3	2	0	24
Manager	2	2	3	2	1	1	2	1	14
Senior Mgr.	0	3	0	1	0	3	0	1	8
Not reported	0	0	0	1	0	0	0	0	1
<u>CPA License</u>									
CPA	8	13	8	4	1	7	3	3	47
Non-CPA	7	6	6	4	3	6	5	2	39
Not reported	0	0	0	1	0	0	0	0	1

Table 3 (continued)
Descriptive Statistics by Firm

Panel B: Means (medians)

	<u>Firm 1</u> n=15	<u>Firm 2</u> n=19	<u>Firm 3</u> n=14	<u>Firm 4</u> n=9
Experience	2.5 (2.0)	3.7 (3.5)	4.9 (3.8)	9.1 (5.0)
Salary	49,527 (44,800)	51,111 (46,000)	44,644 (41,612)	51,214 (48,925)
Pay Raise	8.2 (9.0)	8.1 (7.5)	8.0 (8.0)	6.6 (5.0)
Performance 1	5.3 (5.0)	5.4 (5.3)	5.2 (5.5)	5.4 (5.5)
Performance 2	5.0 (5.0)	4.9 (4.9)	4.9 (4.9)	4.8 (4.7)
Performance 3	0.0 (-0.7)	0.0 (0.0)	0.0 (-0.3)	0.0 (0.4)
Formalization	3.5 (3.6)	4.0 (4.1)	4.4 (4.5)	3.2 (3.3)
Task				
analyzability	3.3 (3.2)	3.6 (3.7)	3.7 (3.7)	3.5 (3.5)
Task variability	3.0 (3.0)	3.0 (3.0)	2.9 (3.0)	3.0 (3.0)
Locus	41.4 (38.0)	37.8 (39.0)	39.1 (39.5)	41.7 (40.0)
Survey time	15.1 (15)	14.9 (15.0)	15.9 (15.0)	17.6 (18.0)
	<u>Firm 5</u> n=4	<u>Firm 6</u> n=13	<u>Firm 7</u> n=8	<u>Firm 8</u> n=5
Experience	4.375 (2.8)	4.4 (3.3)	2.8 (2.5)	3.9 (3.0)
Salary	48,625 (41,250)	56,385 (51,000)	48,025 (42,600)	39,160 (35,000)
Pay Raise	6.8 (6.0)	8.3 (7.0)	8.0 (7.0)	4.0 (4.0)
Performance 1	6.0 (5.5)	5.7 (5.8)	5.1 (5.0)	5.8 (6.0)
Performance 2	4.6 (4.7)	5.1 (4.8)	4.8 (4.8)	4.9 (5.1)
Performance 3	0.0 (-0.4)	0.0 (-0.7)	0.0 (0.6)	0.0 (0.0)
Formalization	2.7 (2.9)	3.4 (3.5)	3.3 (3.4)	3.0 (3.0)
Task				
analyzability	3.6 (3.8)	3.1 (3.2)	3.3 (3.3)	3.3 (3.2)
Task variability	3.5 (3.6)	2.9 (3.0)	2.8 (2.7)	2.9 (2.8)
Locus	38.3 (38.0)	38.9 (38.0)	37.6 (37.5)	45.0 (45.0)
Survey time	19.3 (18.5)	15.2 (15.0)	13.4 (10.0)	18.0 (20.0)

Table 3 (continued)
Descriptive Statistics by Firm

Experience	-	Number of years employed in public accounting
Salary	-	Current salary as reported by the firm
Pay Raise	-	Most recent pay raise, if applicable
Performance 1	-	Average performance rating on the two most recent evaluations, self reported. Possible range of answers is 1= very poor to 7 = excellent
Performance 2	-	Overall performance rating based on self evaluation. Possible range is 1=much less successful than others to 7=much more successful than others
Performance 3	-	The supervisor-assessed performance measures differs across firms. The numbers shown in the table represent the average of the subjects' supervisor-assessed performance evaluations on their two most recent evaluations, as reported by the firm. Some firms performance scores had to be inverted so that higher scores indicate better performance. In addition, the performance measures were normalized within firms.
Formalization	-	Average amount of formalization in job activities, as reported on 8 questions. Possible range of answers is 1=little formalization to 5 = high formalization. Higher score indicates more audit structure.
Task analyzability	-	Average amount of direction given to perform tasks, as reported on 6 questions. Possible range of answers is 1 = little direction to 5 = much direction. Higher score indicates more audit structure.
Task variability	-	Average amount of variety in job activities, as reported on 5 questions. Possible range of answers is 1 = high variety to 5 = low variety. Higher score indicates more audit structure.
Locus	-	Total score on the work locus of control scale, where a higher score indicates a more external locus of control. Possible range is 16-96.
Survey time	-	Minutes to complete survey

Table 4
Descriptive Statistics by Firm Size

Panel A: Frequencies

	<u>Big 5</u>	<u>Regional</u>	<u>Local</u>	<u>Total</u>
<u>Sex</u>				
Male	16	10	17	43
Female	12	9	23	44
<u>Current Position</u>				
Staff	14	7	19	40
Senior	8	7	9	24
Manager	3	2	9	14
Senior Mgr.	3	3	2	8
Not reported	0	0	1	1
<u>CPA License</u>				
CPA	15	13	19	47
Non-CPA	13	6	20	39
Not reported	0	0	1	1

Table 4 (continued)
Descriptive Statistics by Firm Size

Panel B: Means (medians)

	<u>Big 5</u>	<u>Regional</u>	<u>Local</u>	<u>Total</u>
Experience	3.4 (2.5)	3.7 (3.5)	5.3 (3.0)	4.3 (2.5)
Salary	52,711 (46,100)	51,111 (46,000)	46,511 (41,629)	49,409 (44,200)
Pay Raise	8.3 (7.0)	8.1 (7.5)	7.4 (6.5)	7.8 (7.0)
Performance 1	5.5 (5.5)	5.4 (5.3)	5.4 (5.5)	5.4 (5.5)
Performance 2	5.0 (4.9)	4.9 (4.9)	4.8 (4.8)	4.9 (4.8)
Performance 3	0.0 (-0.7)	0.0 (0.0)	0.0 (0.0)	0.0 (0.4)
Formalization	3.5 (3.6)	4.0 (4.1)	3.6 (3.9)	3.6 (3.8)
Task				
analyzability	3.2 (3.2)	3.6 (3.7)	3.5 (3.7)	3.4 (3.5)
Task variability	3.0 (3.0)	3.0 (3.0)	3.0 (3.0)	3.0 (3.0)
Locus	40.2 (38.0)	37.8 (39.0)	40.0 (40.0)	39.6 (39.0)
Survey time	15.2 (15.0)	14.9 (15.0)	16.4 (15.0)	15.7 (15.0)

- Experience** - Number of years employed in public accounting
- Salary** - Current salary as reported by the firm
- Pay Raise** - Most recent pay raise, if applicable
- Performance 1** - Average performance rating on the two most recent evaluations, self reported. Possible range of answers is 1= very poor to 7 = excellent
- Performance 2** - Overall performance rating based on self evaluation. Possible range is 1=much less successful than others to 7=much more successful than others
- Performance 3** - The supervisor-assessed performance measures differs across firms. The numbers shown in the table represent the average of the subjects' supervisor-assessed performance evaluations on their two most recent evaluations, as reported by the firm. Some firms performance scores had to be inverted so that higher scores indicate better performance. In addition, the performance measures were normalized within firms.
- Formalization** - Average amount of formalization in job activities, as reported on 8 questions. Possible range of answers is 1=little formalization to 5 = high formalization
- Task analyzability** - Average amount of direction given to perform tasks, as reported on 6 questions. Possible range of answers is 1 = little direction to 5 = much direction
- Task variability** - Average amount of variety in job activities, as reported on 5 questions. Possible range of answers is 1 = high variety to 5 = low variety
- Locus** - Total score on the work locus of control scale, where a higher score indicates a more external locus of control. Possible range is 16-96.
- Survey time** - Minutes to complete survey

4.1.2 Student Participants

For student participants, descriptive statistics and a correlation matrix of experimental variables are shown in Table 5. Twenty-two (22) students from two major universities in the southwest who are currently interviewing with public accounting firms completed usable responses. Fourteen (14) students are from one university, while eight (8) are from the other university. Eight (8) of the student participants are male. Six (6) are completing their undergraduate degree and sixteen (16) are completing their graduate degree.⁹ Of the respondents, the average undergraduate grade point average is 3.61 and the average graduate grade point average is 3.66. The undergraduate and graduate grade point average have a significant positive correlation (p-value = .002). The undergraduate grade point average is negatively correlated with locus of control (p-value = .054), indicating internals have higher undergraduate grade point averages than externals.¹⁰

⁹ The undergraduates reside in a state where the 150 hour rule is not currently in effect. Two of the undergraduates are interviewing for internships, while the others are interviewing for full-time positions.

¹⁰ The Pearson Correlation Coefficients and related p-values are reported in Table 5. Significant correlations using Spearman correlation coefficients are reported if not previously identified as significant using Pearson correlation coefficients.

Table 5
Descriptive Statistics for Student Participants

Panel C: Correlation Matrix
Pearson Correlation Coefficients (p-value, correlation equal to 0) ^a

<u>Variable</u>	<u>University</u>	<u>Sex</u>	<u>Locus</u>	<u>Undergraduate GPA</u>	<u>Graduate GPA</u>
University					
Sex	-.214 (.338)				
Locus	.225 (.314)	-.287 (.195)			
Undergraduate GPA	-.143 (.524)	-.107 (.636)	-.416 (.054)		
Graduate GPA	-.360 (.188)	-.157 (.576)	-.201 (.473)	.732 ** (.002)	
Survey Time	-.020 (.930)	.129 (.568)	-.004 (.986)	.060 (.792)	.127 (.653)

** Significant at $\alpha = .01$ level.

^a The correlations are rerun utilizing the Spearman correlation coefficient. The only significant correlation that is not highlighted in the table is the correlation between undergraduate GPA and locus of control, which is significant at the $\alpha = .05$ level.

4.2 Correlation Analysis

4.2.1 Auditor Participants

Correlations between experimental and descriptive variables are examined to identify significant relationships. The Pearson Correlation Coefficients and related p-values are reported in Table 6 for all 87 usable responses.¹¹ The primary variables of interest are the performance measures, salary, and job status (turnover intention).

4.2.1 Correlations with Performance Measures

The subjects' report of the supervisor-assessed performance evaluations (Performance 1) is significantly correlated to the self evaluation of job performance (Performance 2) and the firm-reported job performance (Performance 3). The self evaluation of job performance (Performance 2) and the firm-reported job performance (Performance 3) are also significantly correlated. These correlations, although significant, are lower than expected. All three will be utilized alternatively in the hypothesis testing; however, Performance 3 has higher reliability since it is a firm-reported measure (the human resource manager from the firms provided the information), as opposed to being self-reported by the participants, and is the actual performance evaluation given by a supervisor. Performance 2 and Performance 3 are significantly correlated with the auditors' current position and whether the auditor has a CPA license. Only Performance 3 has significant positive correlations with current salary (p-value = .001) and most recent pay raise (p-value = .001), which leads to further confirmation of its reliability over the other performance measures. No other significant correlations with the performance measures are found.

4.2.1.2 Correlations with Auditor Salary

As expected, auditor salary (as reported by the firm) is positively correlated with current position in the firm (p-value = .000), if the auditor has a CPA license (p-value = .000), number of years in public accounting (p-value = .000), and performance (Performance 3, p-value = .001). Another significant correlation is the positive relationship with turnover intention (p-value = .018), implying that the higher one's current salary, the longer he intends to stay with the firm. Locus of control is negatively correlated with auditor salary (p-value = .041), indicating externals have lower salaries.

4.2.1.3 Correlations with Turnover Intentions

Turnover intention seems to be positively affected by the current position held within the firm (p-value = .000), a CPA certificate (p-value = .001), and experience (p-value = .000). Thus, as an individual gets promoted to higher levels, the more likely he will stay with his current job. This seems reasonable when considering the high turnover rate of staff accountants at public accounting firms. As previously noted, turnover intention is significantly correlated with salary (p-value = .018).

Turnover intention is significantly correlated with the audit structure variables. A positive correlation is noted for structure when measured by formalization (p-value = .000) and task analyzability (p-value = .025), but a negative correlation is noted for structure when measured by task variability (p-value = .036). Locus of control is negatively correlated with turnover intention (p-value = .033), indicating that internals plan on staying with their current employee longer than externals. A significant finding in the correlation analysis is that turnover intention is negatively correlated to firm size

¹¹ Significant correlations using Spearman correlation coefficients are reported if not previously identified as significant using Pearson correlation coefficients.

(p-value = .048). This implies that auditors at smaller firms plan to remain at their current organization longer than auditors at larger firms.

Table 6
Correlation Matrix
Pearson Correlation Coefficients (p-value, correlation equal to 0) ^a

<u>Variable</u>	<u>Firm Size</u>	<u>Sex</u>	<u>Current Position</u>	<u>CPA</u>		
Firm size						
Sex	-.130 (.231)					
Current position	-.004 (.973)	-.068 (.537)				
CPA	.054 (.623)	-.096 (.381)	.693 (.000)	**		
Experience	-.174 (.110)	-.089 (.413)	.713 (.000)	**	.555 (.000)	**
Salary	.194 (.072)	-.088 (.419)	.835 (.000)	**	.571 (.000)	**
Pay raise	.142 (.256)	.255 * (.039)	-.108 (.394)		.064 (.611)	
Performance 1	.056 (.611)	-.046 (.681)	.025 (.826)		.166 (.133)	
Performance 2	.170 (.120)	-.108 (.325)	.242 (.026)	*	.290 (.007)	**
Performance 3	.001 (.993)	.029 (.812)	.385 (.001)	**	.451 (.000)	**
Turnover Intent	-.212 * (.049)	-.007 (.948)	.375 (.000)	**	.339 (.001)	**
Formalization	-.034 (.753)	.031 (.775)	-.051 (.640)		-.036 (.747)	
Task analyzability	-.222 * (.040)	.030 (.787)	-.086 (.436)		-.131 (.231)	
Task Variability	-.026 (.813)	.000 (1.00)	-.157 (.152)		-.005 (.965)	
Locus	.000 (.999)	-.088 (.420)	-.142 (.191)		-.083 (.448)	
Survey time	-.096 (.376)	-.134 (.216)	-.088 (.422)		-.029 (.787)	

* Significant at $\alpha = .05$ level.

** Significant at $\alpha = .01$ level.

^a The correlations are rerun utilizing the Spearman correlation coefficient. The only significant correlations that are not highlighted in the table are the correlation between salary and firm size (significant at $\alpha = .05$ level) and between Performance 2 and experience (significant at $\alpha = .05$ level).

Table 6 (continued)
Correlation Matrix
Pearson Correlation Coefficients (p-value, correlation equal to 0) ^a

<u>Variable</u>	<u>Experience</u>	<u>Salary</u>	<u>Pay Raise</u>	<u>Performance 1</u>		
Firm size						
Sex						
Current position						
CPA						
Experience						
Salary	.572 ** (.000)					
Pay raise	-.341 ** (.005)	-.123 (.327)				
Performance 1	.101 (.363)	.062 (.573)	.183 (.150)			
Performance 2	.175 (.111)	.210 (.053)	.201 (.111)	.390 ** (.000)		
Performance 3	.287 * (.016)	.404 ** (.000)	.320 * (.013)	.477 ** (.000)		
Turnover Intent	.392 ** (.000)	.254 * (.018)	.011 (.930)	.093 (.402)		
Formalization	-.139 (.205)	-.085 (.439)	.068 (.593)	.015 (.890)		
Task analyzability	-.040 (.716)	-.097 (.372)	-.159 (.206)	-.107 (.337)		
Task Variability	-.139 (.203)	-.152 (.161)	.189 (.131)	-.031 (.783)		
Locus	-.097 (.374)	-.220 * (.041)	-.189 (.128)	-.004 (.971)		
Survey time	-.032 (.773)	-.105 (.332)	.067 (.592)	.037 (.741)		

* Significant at $\alpha = .05$ level.

** Significant at $\alpha = .01$ level.

^a The correlations are rerun utilizing the Spearman correlation coefficient. The only significant correlations that are not highlighted in the table are the correlation between salary and firm size (significant at $\alpha = .05$ level) and between Performance 2 and experience (significant at $\alpha = .05$ level).

Table 6 (continued)
Correlation Matrix
Pearson Correlation Coefficients (p-value, correlation equal to 0) ^a

<u>Variable</u>	<u>Performance2</u>	<u>Performance3</u>	<u>Turn-over</u>	<u>Formalization</u>
Firm size				
Sex				
Current position				
CPA				
Experience				
Salary				
Pay raise				
Performance 1				
Performance 2				
Performance 3	.364 ** (.002)			
Turnover Intent	.160 (.143)	.197 (.099)		
Formalization	.005 (.963)	.028 (.820)	.404 ** (.000)	
Task analyzability	.043 (.697)	-.244 * (.042)	.241 * (.025)	.472 ** (.000)
Task Variability	-.163 (.139)	.034 (.783)	-.226 * (.036)	-.167 (.125)
Locus	-.085 (.442)	-.148 (.218)	-.229 * (.033)	-.229 * (.034)
Survey time	-.007 (.947)	.069 (.569)	.063 (.563)	-.065 (.550)

* Significant at $\alpha = .05$ level.

** Significant at $\alpha = .01$ level.

^a The correlations are rerun utilizing the Spearman correlation coefficient. The only significant correlations that are not highlighted in the table are the correlation between salary and firm size (significant at $\alpha = .05$ level) and between Performance 2 and experience (significant at $\alpha = .05$ level).

Table 6 (continued)
Correlation Matrix
Pearson Correlation Coefficients (p-value, correlation equal to 0)^a

<u>Variable</u>	<u>Task Analyzability</u>	<u>Task Variability</u>	<u>Locus</u>
Firm size			
Sex			
Current position			
CPA			
Experience			
Salary			
Pay raise			
Performance 1			
Performance 2			
Performance 3			
Turnover Intent			
Formalization			
Task analyzability			
Task Variability	-.305 ** (.004)		
Locus	-.176 (.104)	.136 (.211)	
Survey time	-.027 (.808)	.300 ** (.005)	.130 (.230)

* Significant at $\alpha = .05$ level.

** Significant at $\alpha = .01$ level.

^a The correlations are rerun utilizing the Spearman correlation coefficient. The only significant correlations that are not highlighted in the table are the correlation between salary and firm size (significant at $\alpha = .05$ level) and between Performance 2 and experience (significant at $\alpha = .05$ level).

4.3 Hypothesis Testing

4.3.1 Audit Structure

Reliability for the formalization, task analyzability, and task variability scales is examined by means of Cronbach's (1951) coefficient α . The resulting coefficients for formalization ($\alpha = .90$) and task analyzability ($\alpha = .72$) are similar to the previous accounting study (Bamber and Snowball, 1988) that used the measures to test differences between the firms, indicating appropriateness of inclusion in this study. Also consistent with Bamber and Snowball (1988), the coefficient for task variability ($\alpha = .30$) is low, which suggests that the scale contains considerable error variance and is unreliable for determining differences among firms even if differences do exist.

To remove effects of types of clients and situations auditors might encounter on the measures of audit structure, the Big 5 firms are initially classified as more structured than the other firms. This is based on the movement of the Big 5 audit methodologies to a business risk analysis (Lemon 2000) and the fact that the Big 5 have more resources available to work on the technical development of methodology than the other firms.

To analyze firm structure for the remaining six firms, firm means for the formalization, task variability, and task analyzability scales are calculated as well as univariate analysis of variance.¹² Measures are based on auditor responses to various statements. Higher scores translate into more structure (more formalization, less variety, and more analyzability). Formalization is the only variable that is significantly different across firms. See Table 7 for the univariate results and reported means of formalization, task analyzability, and task variability by firm. Four firms are classified as unstructured

¹² A general linear model was utilized due to the unequal cell sizes.

(firm codes 4, 5, 7, and 8) and two are classified as semi-structured (firm codes 2 and 3) based on the formalization scale.¹³ Although firms means for task analyzability are not significantly different, the ranking of scores demonstrates the same pattern as formalization with firm codes 2 and 3 having higher scores (more structure).

¹³ The analysis is performed using all participants (staffs, seniors, managers, and senior managers). Additional analysis of variance reveals no significant difference in scores for formalization, task analyzability, and task variability across auditor position levels.

Table 7
Audit Structure Analysis

Panel A: Univariate results of audit structure by firm ^{a, b}

	<i>Sum of Squares</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Formalization					
Between Groups	19.262	5	3.852	8.092	.000
Within Groups	25.232	53	.476		
Total	44.494	58			
Task Analyzability					
Between Groups	1.600	5	.320	1.679	.156
Within Groups	10.100	53	.191		
Total	11.700	58			
Task Variability					
Between Groups	1.370	5	.274	1.650	.163
Within Groups	8.802	53	.166		
Total	10.172	58			

^a Excludes Big 5 firms

^b Includes all auditor position level respondents.

Panel B: Estimated marginal means for audit structure

<i>Firm Code</i>	<i>N</i>	<i>Formalization</i> ^a	<i>Task Analyzability</i> ^b	<i>Task Variability</i> ^b
2	20	4.069	3.633	2.950
3	13	4.423	3.718	2.908
4	9	3.236	3.463	3.000
5	4	2.719	3.583	3.500
7	8	3.313	3.271	2.825
8	5	2.950	3.267	2.920

^a In pairwise comparisons, firm codes 2 and 3 were significantly different from the remaining firms but not from each other.

^b No significant differences noted across firms.

4.3.2 Locus of Control

Reliability for the locus of control scales is examined by means of Cronbach's coefficient α . The resulting coefficients for the work locus of control scale ($\alpha = .82$) and the students' general locus of control scale ($\alpha = .82$) are similar to previous studies (Spector, 1988; Donnelly et al., 2001) that used the measures to test differences between the firms, indicating appropriateness of inclusion in this study.

The work locus of control scale is placed in the regression analyses as a continuous measure. Higher scores indicate a greater degree of external personality. For further analysis performed to determine if the data reveals the pattern predicted by the hypotheses, the participants are classified as "internal" (people who believe they control their destinies) or "external" (people who believe that their destinies are controlled by luck or chance) by their locus of control score. Participants are classified as "internal" if their locus of control score is below the median score, and as "external" if the score is above the median score. The observed work locus of control measure ranges from seventeen (17) to sixty-four (64), with a mean of 39.59.¹⁴ The mean locus of control score for auditors classified as internals is 33.19. The mean score for auditors classified as externals is 45.57.

Consistent with prior research (Hyatt and Prawitt, 2001), the general locus of control responses (student participants) are divided at the median to obtain a dichotomous variable. Larger scores on the scale are considered externals and smaller scores are internals. The observed general locus of control measure ranges from three (3) to twenty

¹⁴ Donnelly et al. (2001) work locus of control measure for auditors ranges from 20-68, with a mean of 42.88.

(20), with a mean of 10.23.¹⁵ The mean locus of control score for students classified as internals is 6.45. The mean score for students classified as externals is 14.0.

4.3.3 Hypotheses Tests

Tests of the main hypotheses reveal the following results.

H1: Audit structure interacts with auditor locus of control such that internals perform at higher levels in unstructured environments and externals perform at higher levels in structured environments.

Regression analysis tests this prediction with job performance (as reported by the firms)¹⁶ as the dependent variable and the interaction between audit structure and locus of control as the independent variable of interest. Other variables in the model include experience, position within the firm, and whether or not the participant is a CPA. As shown in Panel A of Table 8, the locus of control/structure interaction is not significant in explaining job performance. The adjusted R square for the model is .14 and is significant at the .05 level. CPA license and current salary are the significant variables in the model. Results are qualitatively unchanged using 1) the self reported supervisor-assessed job performance measure and the 2) self evaluation performance measure.

While the statistical analysis does not provide significant results for the interaction variable, further analysis is performed to determine if the data reveals the pattern predicated by the hypothesis. The median performance score of internals is compared across structure levels by the nonparameteric Kruskal-Wallis procedure of

¹⁵ Hyatt and Prawitt (2001) general locus of control measure for staff auditors ranges from 1-22, with a mean of 9.4.

¹⁶ Supervisor assessed job performance, as reported by the firms. The subject's firm reported the two most recently completed employee evaluations by a supervisor. The measure was standardized to control for scale differences. Scores represent the average number of standard deviations above or below the mean performance level. Higher scores translate into higher performance levels.

differences among k-independent samples. The same test is done for external participants. Similarly, internals and externals are compared to each other within structure categories utilizing the nonparametric Mann-Whitney Wilcoxon procedure of differences between two independent samples. These procedures are performed for all participants (Table 8, Panel C), as well as analyzing managers (Table 8, Panel D) separately from staff and seniors (Table 8, Panel E).

Although not significant, the following patterns in the data are noted. It appears that at all auditor positions, internals perform at a higher level in unstructured environments than structured environments, consistent with the hypothesis. Staff and seniors classified as externals perform at a higher level in structured environments than unstructured environments, but the same cannot be said for external managers. Patterns also indicate that at all auditor positions, externals perform better than internals in structured environments, and internals perform better than externals in unstructured environments. Results of further tests of hypothesis one are reported below under sensitivity analysis.

Table 8
The Effects of Audit Structure and Locus of Control
on Supervisor-Assessed Job Performance

Panel A: Regression Analysis

R Square = .267 Adjusted R Square = .143

<u>Source</u>	<u>Sum of Squares</u>	<u>Df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>
Regression	16.407	10	1.641	2.152	.034
Residual	44.973	59	.762		
Total	61.381	69			

<u>Model</u>	<u>Standardized Coefficient</u>	<u>t</u>	<u>p-value</u> (1-tailed)
Constant		.083	.47
Structured Firms	-.844	-.748	.23
Semi-structured Firms	-.512	-.445	.33
Locus of Control	-.283	-.646	.26
Structured Firm x Locus of Control	.761	.662	.26
Semi-structured Firms x Locus of Control	.401	.357	.36
Experience	-.170	-.937	.18
CPA	.325	1.710	.05
Staff	-.038	-.120	.45
Senior	.084	.381	.35
Salary	.317	1.409	.08

- Supervisor assessed job performance -** The subject's firm reported the two most recently completed employee evaluations by a supervisor. The measure was standardized to control for scale differences. Scores represent the average number of standard deviations above or below the mean performance level. Higher scores translate into higher performance levels. The test was repeated using 1) supervisor assesses job performance (self reported) and 2) self evaluation of performance. Results are similar to the results presented above.
- Audit Structure -** Three levels: (1) structured, for subjects working for Big 5 firms, (2) semi-structured, for subjects working for the most structured non-Big 5 firms, and (3) unstructured, for subjects working for the least structured non- Big 5 firms.
- Locus of Control -** Based on the work locus of control scale (Spector 1988). Higher scores on the work locus of control scale indicate a greater degree of external personality.
- Experience -** Number of years in public accounting.
- CPA -** Coded as 1 if participant is a CPA, coded as 0 otherwise.
- Staff -** Coded as 1 if participant is a staff, coded as 0 otherwise.
- Senior -** Coded as 1 if participant is a senior, coded as 0 otherwise.
- Salary -** Current salary as reported by firm.

Table 8
The Effects of Audit Structure and Locus of Control
on Supervisor-Assessed Job Performance

Panel B: Descriptive Analysis

	All Participants		Managers		Staff and Seniors	
	<i>Internal</i>	<i>External</i>	<i>Internal</i>	<i>External</i>	<i>Internal</i>	<i>External</i>
<i>Structured</i>						
Mean	-.19	.19	-.12	.67	-.22	.10
N	13	13	4	2	9	11
Std. deviation	.77	1.11	.70	1.94	.84	1.02
Median	-.40	.00	-.25	.67	-.52	-.24
<i>Semi-structured</i>						
Mean	.15	-.14	.83	.23	-.12	-.24
N	14	18	4	4	10	14
Std. deviation	1.21	.77	.66	.37	1.30	.83
Median	.45	.19	.60	.23	.19	.00
<i>Unstructured</i>						
Mean	.00	.00	1.00	.61	-.37	-.58
N	6	7	2	3	4	4
Std. deviation	.92	.88	.59	.21	.69	.85
Median	.19	.37	1.00	.71	-.36	-.71

Table 8 continued
The Effects of Audit Structure and Locus of Control
on Supervisor-Assessed Job Performance

Panel C: All Participant Nonparametric Comparison of Medians

	<u>Internal</u>	<u>External</u>	Sig. ^a
Structured	-.40	.00	.33
Semi-structured	.45	.19	.05
Unstructured	.19	.37	.50
Sig. ^b	.21	.40	

^a Significance of structure variable between internals and externals tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

^b Significance of locus of control variable among structure categories tested by the Kruskal-Wallis procedure (nonparametric test of differences among k-independent samples).

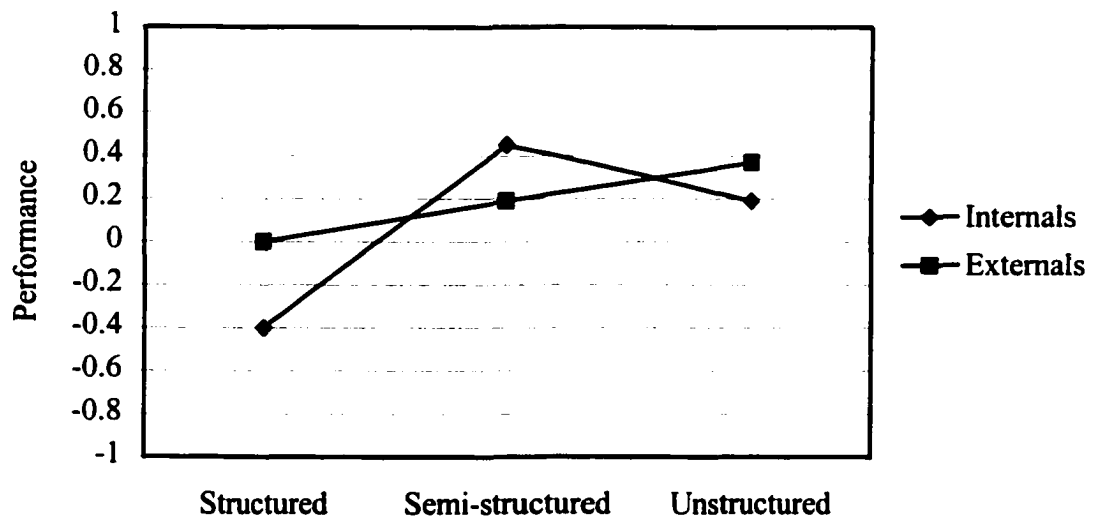


Table 8 continued
The Effects of Audit Structure and Locus of Control
on Supervisor-Assessed Job Performance

Panel D: Managers Nonparametric Comparison of Medians

	<u>Internal</u>	<u>External</u>	Sig. ^a
Structured	-.25	.67	.27
Semi-structured	.60	.23	.10
Unstructured	1.00	.71	.40
Sig. ^b	.11	.35	

^a Significance of structure variable between internals and externals tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

^b Significance of locus of control variable among structure categories tested by the Kruskal-Wallis procedure (nonparametric test of differences among k-independent samples).

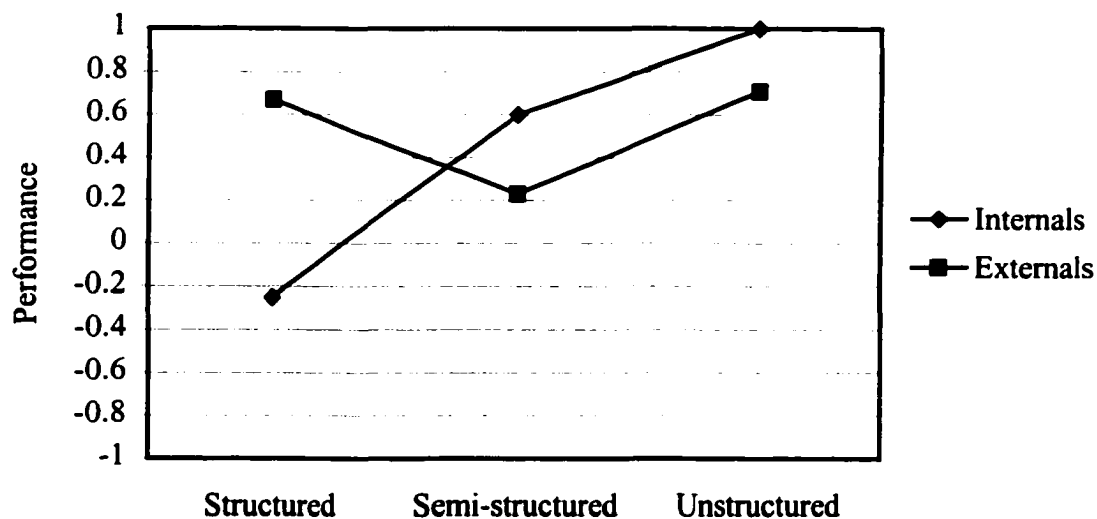


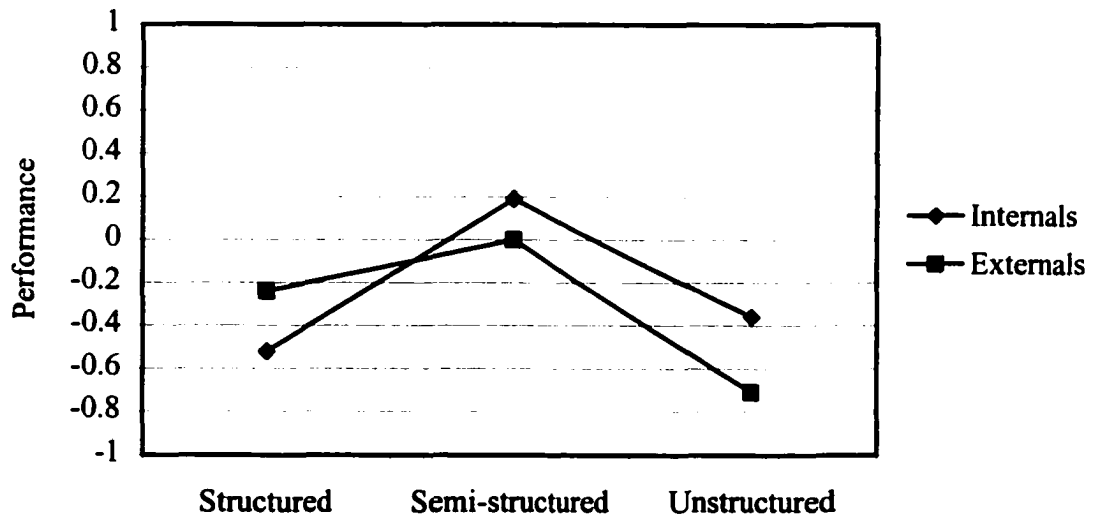
Table 8 continued
The Effects of Audit Structure and Locus of Control
on Supervisor-Assessed Job Performance

Panel E: Staff and Seniors Nonparametric Comparison of Medians

	<u>Internal</u>	<u>External</u>	Sig. ^a
Structured	-.52	-.24	.41
Semi-structured	.19	.00	.17
Unstructured	-.36	-.71	.44
Sig. ^b	.26	.27	

^a Significance of structure variable between internals and externals tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

^b Significance of locus of control variable among structure categories tested by the Kruskal-Wallis procedure (nonparametric test of differences among k-independent samples).



H2: Audit structure interacts with auditor locus of control such that internals have higher salaries in unstructured environments and externals have higher salaries in structured environments.

Regression analysis tests this prediction with the auditor's current salary¹⁷ as the dependent variable and the interaction between audit structure and locus of control as the independent variable of interest. Other variables in the model include experience, position within the firm, whether or not the participant is a CPA, and performance. As shown in Panel A of Table 9, the model has an adjusted R square of .72 and is significant at the .01 level. Significant variables in the model are in the expected direction. The higher the performance, the higher the salary. The higher the current position, the higher salary. Similarly, the more experience an auditor has, the higher the salary. Contrary to expectations, the locus of control/structure interaction is not significant.

While the statistical analysis does not provide significant results for the variable of interest, further analysis is performed to determine if the data reveals the pattern predicated by the hypothesis. The median salary of internals is compared across structure levels by the nonparametric Kruskal-Wallis procedure. The same test is done for external participants. Similarly, internals and externals are compared to each other within structure categories utilizing the nonparametric Mann-Whitney Wilcoxon procedure. These procedures are performed for all participants (Table 9, Panel C) as well as analyzing managers separately (Table 9, Panel D) from staff and seniors (Table 9, Panel E).

It appears that internal managers receive higher compensation at unstructured

¹⁷ Reported directly to the researcher by the firm's human resource manager. The auditors also reported their salary on the survey instrument. Self-reported salary and firm-reported salary has a .933 correlation.

firms than structured firms, and external managers receive higher compensation and structured firms than unstructured firms, consistent with the hypothesis. Within the unstructured environment, internal managers are compensated at a higher level than external managers. Although not significant, the data also shows that within structured firms, external managers are compensated at a higher level than internal managers.

The same patterns do not hold true for staff and seniors, as compensation is higher at structured firms regardless of an individual's locus of control, and compensation is higher for externals, regardless of structure. Results of further tests of hypothesis two are reported below under sensitivity analysis.

Table 9
The Effects of Audit Structure and Locus of Control on Auditor Salary

Panel A: Regression Analysis

R Square = .763 Adjusted R Square = .723

<u>Source</u>	<u>Sum of Squares</u>	<u>Df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>
Regression	1.06E+10	10	1058640987	19.018	.000
Residual	3.28E+.09	59	55666626		
Total	1.39E+10	69			

<u>Model</u>	<u>Standardized Coefficient</u>	<u>t</u>	<u>(1-tailed) p-value</u>
Constant		4.151	.000
Structured Firms	-.319	-.495	.311
Semi-structured Firms	-.450	-.689	.247
Locus of Control	-.260	-1.048	.150
Structured Firm x Locus of Control	.621	.950	.173
Semi-structured Firms x Locus of Control	.519	.816	.209
Experience	.178	1.757	.042
CPA License	.020	.183	.428
Staff	-.788	-5.369	.000
Senior	-.645	-6.880	.000
Performance	.103	1.409	.082

- Auditor Salary** - Reported directly to the researchers by the firm. The auditors also reported their salary in the survey instrument. The correlation between the two was .933.
- Audit Structure** - Three levels: (1) structured, for subjects working for Big 5 firms, (2) semi-structured, for subjects working for the most structured non-Big 5 firms, and (3) unstructured, for subjects working for the least structured non- Big 5 firms.
- Locus of Control** - Based on the work locus of control scale (Spector 1988). Higher scores on the work locus of control scale indicate a greater degree of external personality.
- Experience** - Number of years in public accounting.
- CPA** - Coded as 1 if participant is a CPA, coded as 0 otherwise.
- Staff** - Coded as 1 if participant is a staff, coded as 0 otherwise.
- Senior** - Coded as 1 if participant is a senior, coded as 0 otherwise.
- Performance** - The subject's firm reported the two most recently completed employee evaluations by a supervisor. The measure was standardized to control for scale differences. Scores represent the average number of standard deviations above or below the mean performance level. Higher scores translate into higher performance levels.

Table 9 continued
The Effects of Audit Structure and Locus of Control on Auditor Salary

Panel B: Descriptive Analysis

	All Participants		Managers		Staff and Seniors	
	<i>Internal</i>	<i>External</i>	<i>Internal</i>	<i>External</i>	<i>Internal</i>	<i>External</i>
<i>Structured</i>						
Mean	52,707	52,715	72,550	91,500	45,491	45,664
N	15	13	4	2	11	11
Std. deviation	13,374	19,264	6,812	26,163	4,660	4,618
Median	46,700	45,500	74,100	91,500	43,600	44,800
<i>Semi-structured</i>						
Mean	48,741	48,056	67,837	64,943	41,796	43,231
N	15	18	4	4	11	14
Std. deviation	13,485	11,917	10,460	12,520	4,781	6,060
Median	41,646	45,000	64,057	61,250	41,056	41,556
<i>Unstructured</i>						
Mean	50,392	45,052	80,300	52,300	40,423	40,038
N	12	14	3	5	9	8
Std. deviation	19,491	8,360	4,751	8,073	8,336	4,913
Median	40,200	45,200	80,400	51,600	38,500	38,750

Table 9 continued
The Effects of Audit Structure and Locus of Control on Auditor Salary

Panel C: All Participants Nonparametric Comparison of Medians

	<u>Internal</u>	<u>External</u>	Sig. ^a
Structured	46,700	45,500	.39
Semi-structured	41,646	45,000	.48
Unstructured	40,200	45,200	.43
Sig. ^b	.13	.27	

^a Significance of structure variable between internals and externals tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

^b Significance of locus of control variable among structure categories tested by the Kruskal-Wallis procedure (nonparametric test of differences among k-independent samples).

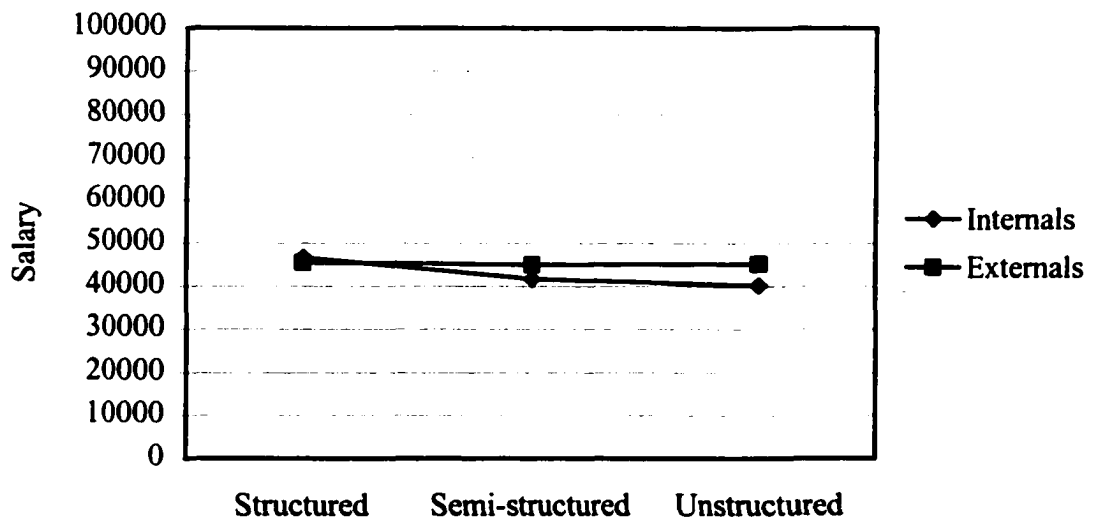


Table 9 continued
The Effects of Audit Structure and Locus of Control on Auditor Salary

Panel D: Managers Nonparametric Comparison of Medians

	<u>Internal</u>	<u>External</u>	Sig. ^a
Structured	74,100	91,500	.40
Semi-structured	64,057	61,250	.24
Unstructured	80,400	51,600	.02
Sig. ^b	.08	.05	

^a Significance of structure variable between internals and externals tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples.)

^b Significance of locus of control variable among structure categories tested by the Kruskal-Wallis procedure (nonparametric test of differences among k-independent samples).

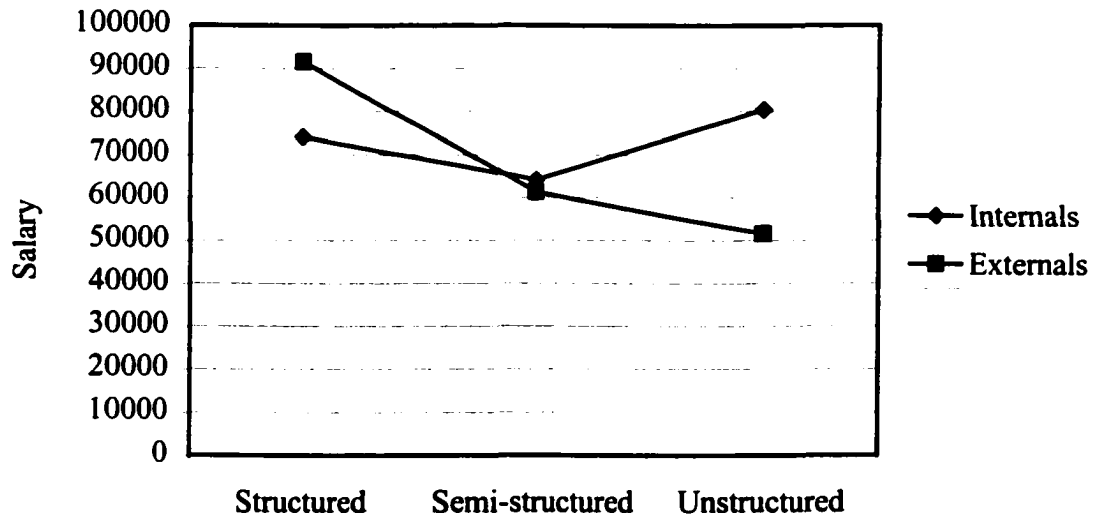


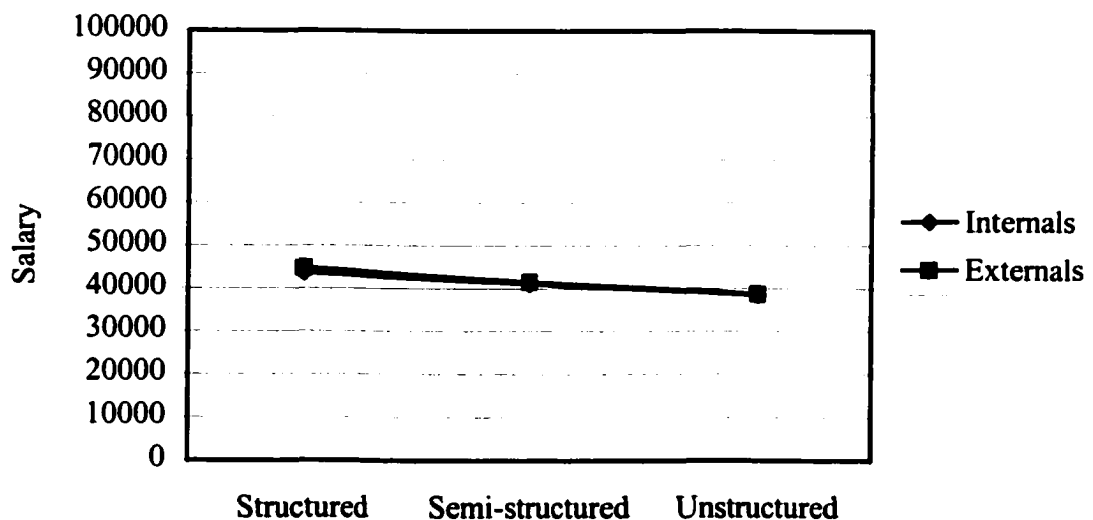
Table 9 continued
The Effects of Audit Structure and Locus of Control on Auditor Salary

Panel E: Staff and Seniors Nonparametric Comparison of Medians

	<u>Internal</u>	<u>External</u>	Sig. ^a
Structured	43,600	44,800	.40
Semi-structured	41,056	41,556	.36
Unstructured	38,500	38,750	.48
Sig. ^b	.01	.04	

^a Significance of structure variable between internals and externals tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

^b Significance of locus of control variable among structure categories tested by the Kruskal-Wallis procedure (nonparametric test of differences among k-independent samples).



H3: Audit structure interacts with auditor locus of control such that internals have lower turnover intentions in unstructured environments and externals have lower turnover intentions in structured environments.

Logistic regression analysis tests this prediction with the auditor's job turnover intentions as the dependent variable, and the interaction between audit structure and locus of control as the independent variable of interest. Other covariates include experience, position within the firm, whether or not the participant is a CPA, and salary. As shown in Table 10, the locus of control/structure interaction is significant and in the expected direction, indicating that externals have longer term turnover intentions at structured firms than internals. Likewise, externals have longer term turnover intentions at structured firms than at unstructured firms.

Other significant variables include current position, salary, structure of the firm, and locus of control. Staff and seniors have short-term turnover intentions compared to managers. This is consistent with high turnover rates at lower levels within the firms. Internals generally want to remain longer with their current employer, and auditors at unstructured firms generally want to remain longer with their current employer. Results of further tests of hypothesis three are reported below under sensitivity analysis.

Table 10
The Effects of Audit Structure and Locus of Control
on Auditor Turnover Intentions

Panel A: Logistic Regression Analysis

R square = .340 Sig. = .000

<u>Variables in the Equation</u>	<u>B</u>	<u>(1-tailed)</u> <u>p-value</u>
Constant	28.330	.00
Structured Firms	-13.77	.02
Semi-structured Firms	-16.35	.01
Locus of Control	-.484	.00
Structured Firm x Locus of Control	.387	.02
Semi-structured Firms x Locus of Control	.475	.00
Experience	.046	.35
CPA License	.746	.21
Staff	-6.225	.01
Senior	-4.958	.00
Salary	.000	.01

- Turnover Intention** - Two levels: (1) plan to remain with the firm for at least 5 more years, (0) plan to leave the firm in less than 5 years
- Audit Structure** - Three levels: (2) structured, for subjects working for Big 5 firms, (1) semi-structured, for subjects working for the most structured non-Big 5 firms, and (0) unstructured, for subjects working for the least structured non- Big 5 firms.
- Locus of Control** - Based on the work locus of control scale (Spector 1988). Higher scores on the work locus of control scale indicate a greater degree of external personality.
- Experience** - Number of years in public accounting.
- CPA** - Coded as 1 if participant is a CPA, coded as 0 otherwise.
- Staff** - Coded as 1 if participant is a staff, coded as 0 otherwise.
- Senior** - Coded as 1 if participant is a senior, coded as 0 otherwise.
- Salary** - Current salary as reported by the firm.

H4: There is a significant relationship between a firm's audit structure and the locus of control of graduates offered employment with the firms.

The results are shown in Table 11. No measures of association are examined for semi-structured firms since they did not offer employment to any of the thirteen (13) students interviewing (six students are internals and seven are externals). To compensate, analysis is based on structured firms, and semi-structured and unstructured firms combined.

Twenty-one (21) of the students interviewed with a structured firm. Seventeen (17) of the students interviewed with a semi-structured or unstructured firm. Examination of employment offers given to interviewing students reveals no significant emphasis given to an interviewee's locus of control during the hiring process. Offers were given almost equally to internals and externals interviewing with the participating firms. Results of further examination of hypothesis four are reported below under sensitivity analysis.

Table 11
Employment Offers to Interviewing Accountants

Panel A: 2x2 Contingency Table for Structured Firm Offers

Employment offer	Locus of Control		Total
	Internal	External	
No offer	6	4	10
Offer	<u>5</u>	<u>6</u>	<u>11</u>
Total	11	10	21

Panel B: 2x2 Contingency Table for Semi-structured and Unstructured Firm Offers

Employment offer	Locus of Control		Total
	Internal	External	
No offer	5	7	12
Offer	<u>3</u>	<u>2</u>	<u>5</u>
Total	8	9	17

4.4 Sensitivity Analysis

This section presents the results of sensitivity analysis performed on an alternative formulation of the research design. Instead of having three structure levels, the Big 5 firms and the regional firm are classified as “structured” and the remaining six (6) firms are classified as “unstructured.” This analysis redefines audit structure analysis by firm size. The regional firm is placed with the Big 5 firms since it is one of the top ten largest firms in the nation and was differentiated from other firms on the formalization measure. It is assumed to have more resources available to work on the technical development of methodology than the local firms, lending itself to a more structured environment. Tests of the first two hypotheses reveal the following results.

H1: Audit structure interacts with auditor locus of control such that internals perform at higher levels in unstructured environments and externals perform at higher levels in structured environments.

Regression analysis tests this prediction with job performance (as reported by the firms)¹⁸ as the dependent variable and the interaction between audit structure and locus of control as the independent variable of interest. Covariates include experience, position within the firm, whether or not the participant is a CPA, and salary. As shown in Panel A of Table 12, the model has an adjusted R square of .21 and is significant at the .01 level. Locus of control is a significant variable, as well as audit structure, the interaction between audit structure and locus of control, CPA license, and current salary.

Consistent with the hypothesis, the locus of control/structure interaction is in the

¹⁸ Supervisor assessed job performance, as reported by the firm human resource department. The subject's firm reported the two most recently completed employee evaluations by a supervisor. The measure was standardized to control for scale differences. Scores represent the average number of standard deviations

expected direction and significant at the $p = .10$ level. Performance is dependent on the fit between audit structure and auditor locus of control. To analyze the results, the median performance score of internals is compared across structure levels by the nonparametric Mann-Whitney-Wilcoxon procedure. The same test is done for external participants. Similarly, internals and externals are compared to each other within structure categories. These procedures are performed for all participants (Table 12, Panel C) as well as analyzing managers separately (Table 12, Panel D) from staff and seniors (Table 12, Panel E).

Managers with internal locus of control perform at higher levels at unstructured firms than structured firms, consistent with the hypothesis. However, managers with external locus of control do not perform at higher levels at structured firms than unstructured firms. Although not significant, patterns indicate that external (internal) managers perform at high levels than internal (external) managers in structured (unstructured) environments, consistent with the hypothesis.

Staff and seniors with external locus of control perform at higher levels at structured firms than they do at unstructured firms, consistent with the hypothesis. However, internals perform just as well at structured firms as unstructured firms. Although not significant, patterns indicate that externals (internals) perform at high levels than internals (externals) in structured (unstructured) environments.

above or below the mean performance level. Higher scores translate into higher performance levels. The self-reported supervisor assessed job performance and the self evaluation produced non-significant results.

Table 12
The Effects of Audit Structure and Locus of Control
on Supervisor-Assessed Job Performance
Big 5 and Regional vs. Local Firms

Panel A: Regression Analysis

R Square = .298 Adjusted R Square = .206

<i>Source</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Regression	18.319	8	2.290	3.244	.004
Residual	43.062	61	0.706		
Total	61.381	69			

<i>Model</i>	<i>Standardized Coefficient</i>	<i>T</i>	<i>(1-tailed) p-value</i>
Constant		.437	.33
Structured Firms	-1.175	-1.732	.04
Locus of control	-.437	-1.634	.05
Structured Firms x Locus of Control	1.093	1.528	.07
Experience	-.213	-1.156	.13
CPA License	.295	1.645	.05
Staff	-.030	-.105	.46
Senior	.117	.566	.29
Salary	.394	1.796	.04

Supervisor assessed job performance - The subject's firm reported the two most recently completed employee evaluations by a supervisor. The measure was standardized to control for scale differences. Scores represent the average number of standard deviations above or below the mean performance level. Higher scores translate into higher performance levels.

Audit Structure - Two levels: (1) structured, for Big 5 and regional firms, (2) unstructured, for local firms

Locus of Control - Based on the work locus of control scale (Spector 1988). Higher scores on the work locus of control scale indicate a greater degree of external personality.

Experience - Number of years in public accounting.

CPA - Coded as 1 if participant is a CPA, coded as 0 otherwise.

Staff - Coded as 1 if participant is a staff, coded as 0 otherwise.

Senior - Coded as 1 if participant is a senior, coded as 0 otherwise.

Salary - Current salary as reported by the firm.

Table 12 continued
The Effects of Audit Structure and Locus of Control
on Supervisor-Assessed Job Performance
Big 5 and Regional vs. Local Firms

Panel B: Descriptive Analysis

	All Participants		Managers		Staff and Seniors	
	<i>Internal</i>	<i>External</i>	<i>Internal</i>	<i>External</i>	<i>Internal</i>	<i>External</i>
<i>Structured</i>						
Mean	-.19	.17	0.00	.51	-.28	0.00
N	22	23	6	5	16	18
Std. deviation	.95	.99	.61	.98	1.05	1.00
Median	.20	.23	.28	.41	0.00	.13
<i>Unstructured</i>						
Mean	.40	-.29	1.12	.38	0.00	-.53
N	11	15	4	4	7	11
Std. deviation	1.00	.71	.58	.49	.97	.62
Median	.58	-.32	1.06	.54	0.00	-.67

Table 12 continued
The Effects of Audit Structure and Locus of Control
on Supervisor-Assessed Job Performance
Big 5 and Regional vs. Local Firms

Panel C: All Participants Nonparametric Comparison of Medians

	<u>Internal</u>	<u>External</u>	Sig. ^a
Structured	.20	.23	.12
Unstructured	.58	-.32	.04
Sig. ^b	.10	.06	

^a Significance of structure variable between internals and externals tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

^b Significance of locus of control variable among structure categories tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

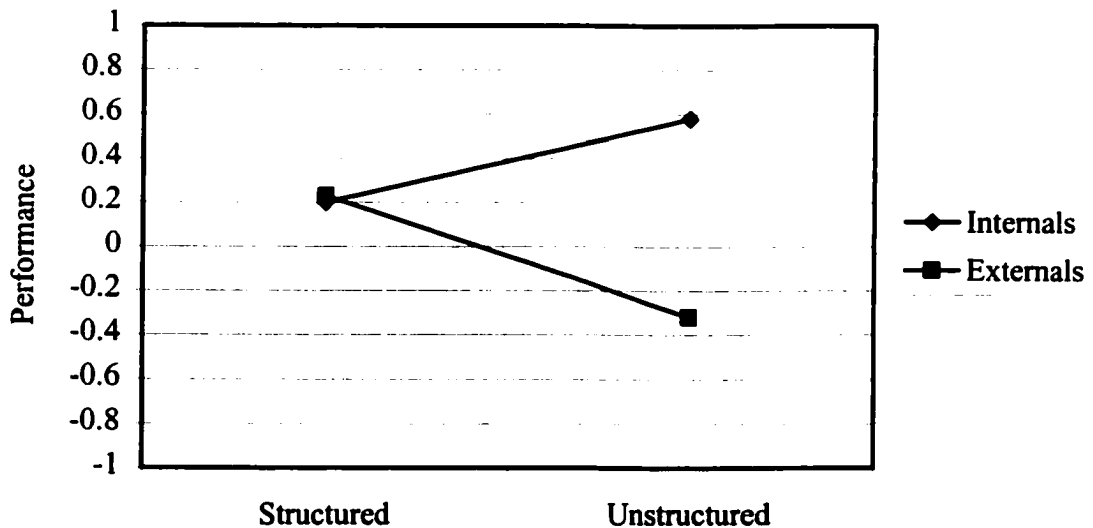


Table 12 continued
The Effects of Audit Structure and Locus of Control
on Supervisor-Assessed Job Performance
Big 5 and Regional vs. Local Firms

Panel D: Managers Nonparametric Comparison of Medians

	<u>Internal</u>	<u>External</u>	Sig. ^a
Structured	.28	.41	.21
Unstructured	1.06	.54	.17
Sig. ^b	.02	.50	

^a Significance of structure variable between internals and externals tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

^b Significance of locus of control variable among structure categories tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

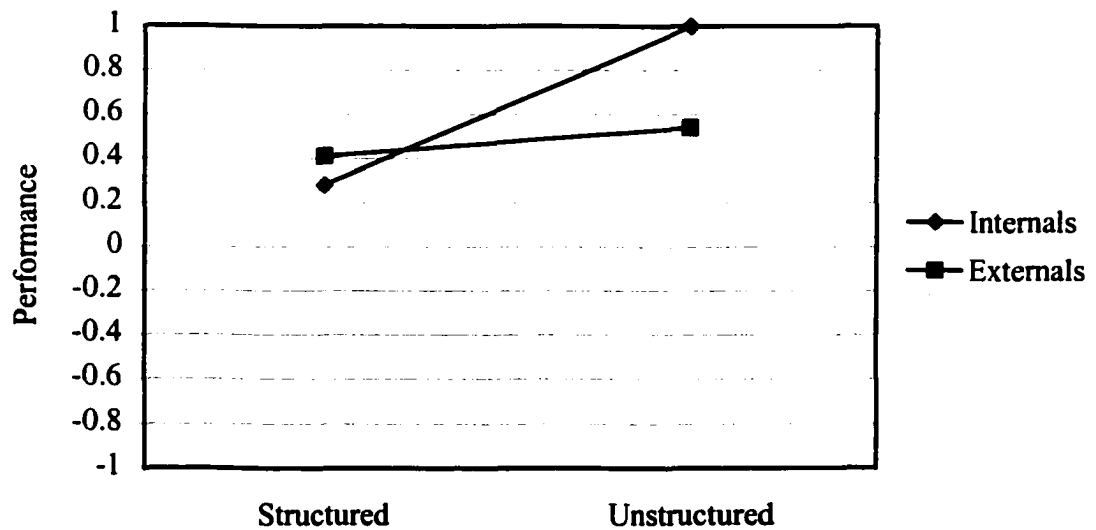


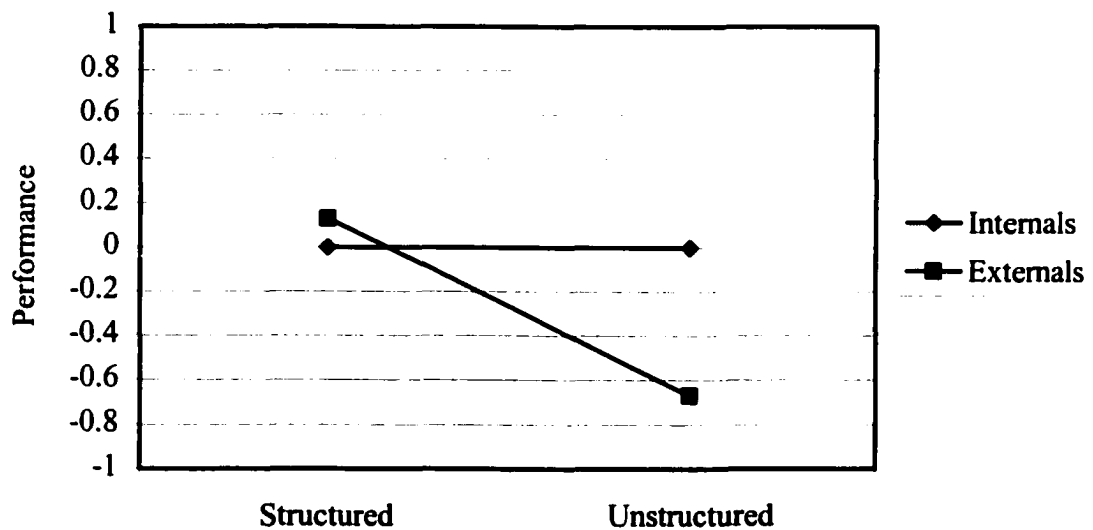
Table 12 continued
The Effects of Audit Structure and Locus of Control
on Supervisor-Assessed Job Performance
Big 5 and Regional vs. Local Firms

Panel E: Staff and Seniors Nonparametric Comparison of Medians

	<u>Internal</u>	<u>External</u>	<u>Sig. ^a</u>
Structured	0.00	.13	.19
Unstructured	0.00	-.67	.19
Sig. ^b	.49	.05	

^a Significance of structure variable between internals and externals tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

^b Significance of locus of control variable among structure categories tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).



H2: Audit structure interacts with auditor locus of control such that internals have higher salaries in unstructured environments and externals have higher salaries in structured environments.

Regression analysis tests this prediction with the auditor's current salary¹⁹ as the dependent variable, and the interaction between audit structure and locus of control, as the independent variable of interest. Covariates include experience, position within the firm, whether or not the participant is a CPA, and performance. As shown in Panel A of Table 13, the model has an adjusted R square of .74 and is significant at the .01 level. Significant variables in the model are in the expected direction. A higher performance is rewarded with a higher salary. The higher the current position, the higher salary. Similarly, the more experience an auditor has, the higher the salary. Contrary to expectations, the locus of control/structure interaction is not significant. It should be noted, however, that the interaction is significant in explaining performance, and performance is significant in explaining auditor salary.

While the regression analysis does not provide significant results with respect to the test variable, further analysis is performed to determine if the data reveals the pattern predicated by the hypothesis. The median salary of internals is compared across structure levels by the nonparametric Mann-Whitney-Wilcoxon procedure. The same test is done for external participants. Similarly, internals and externals are compared to each other within structure categories. These procedures are performed for all participants (Table 13, Panel C), as well as analyzing managers separately (Table 13, Panel D) from staff and seniors (Table 13, Panel E).

¹⁹ Reported directly to the researcher by the firm human resource manager. The auditors also reported their salary on the survey instrument. The self-reported salary and firm-reported salary has a .933 correlation.

External managers are paid more at structured firms than unstructured firms, consistent with the hypothesis. However, internal managers are being paid similar amounts at structured and unstructured firms. Within structure categories, internals are being compensated at a higher level than externals in unstructured environments, but managers are being paid similarly within structured environments, regardless of their locus of control.

It appears that at the staff and senior levels, firms pay employees similarly regardless of their locus of control. In addition, the structured firms (larger firms) are consistently paying a higher salary to staff and seniors than unstructured firms (local firms).

Table 13
The Effects of Audit Structure and Locus of Control on Auditor Salary
Big 5 and Regional vs. Local Firms

Panel A: Regression Analysis

R Square = .773 Adjusted R Square = .743

<u>Source</u>	<u>Sum of Squares</u>	<u>Df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>
Regression	1.07E+10	8	1340374155	25.975	.000
Residual	3.15E+9	61	51602419		
Total	1.39E+10	69			

<u>Model</u>	<u>Standardized Coefficient</u>	<u>T</u>	<u>(1-tailed) p-value</u>
Constant			
Structured Firms	.157	.397	.35
Locus of control	-.058	-.374	.36
Structured Firms x Locus of Control	.123	.298	.38
Experience	.272	2.712	.00
CPA License	-.035	-.339	.37
Staff	-.723	-5.298	.00
Senior	-.611	-6.903	.00
Performance	1.796	1.796	.04

- Auditor Salary** - Reported directly to the researchers by the firm. The auditors also reported their salary in the survey instrument. The correlation between the two was .933.
- Audit Structure** - Two levels: (1) structured, for Big 5 and regional firms, (2) unstructured, for local firms
- Locus of Control** - Based on the work locus of control scale (Spector 1988). Higher scores on the work locus of control scale indicate a greater degree of external personality.
- Experience** - Number of years in public accounting.
- CPA** - Coded as 1 if participant is a CPA, coded as 0 otherwise.
- Staff** - Coded as 1 if participant is a staff, coded as 0 otherwise.
- Senior** - Coded as 1 if participant is a senior, coded as 0 otherwise.
- Performance** - The subject's firm reported the two most recently completed employee evaluations by a supervisor. The measure was standardized to control for scale differences. Scores represent the average number of standard deviations above or below the mean performance level. Higher scores translate into higher performance levels.

Table 13 continued
The Effects of Audit Structure and Locus of Control on Auditor Salary
Big 5 and Regional vs. Local Firms

Panel B: Descriptive Analysis

	All Participants		Managers		Staff and Seniors	
	<i>Internal</i>	<i>External</i>	<i>Internal</i>	<i>External</i>	<i>Internal</i>	<i>External</i>
<i>Structured</i>						
Mean	51,842	52,296	73,283	77,700	44,694	45,239
N	24	23	6	5	18	18
Std. deviation	13,738	16,745	7,507	20,235	4,733	4,896
Median	45,350	46,000	74,100	73,000	43,000	44,533
<i>Unstructured</i>						
Mean	49,012	44,465	72,550	52,629	39,959	40,903
N	18	22	5	6	13	15
Std. deviation	17,021	7,925	11,142	7,266	7,029	5,637
Median	41,206	44,200	75,500	52,800	38,500	39,923

Table 13 continued
The Effects of Audit Structure and Locus of Control on Auditor Salary
Big 5 and Regional vs. Local Firms

Panel C: All Participants Nonparametric Comparison of Medians

	<u>Internal</u>	<u>External</u>	Sig. ^a
Structured	45,350	46,000	.45
Unstructured	41,206	44,200	.42
Sig. ^b	.10	.04	

^a Significance of structure variable between internals and externals tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

^b Significance of locus of control variable among structure categories tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

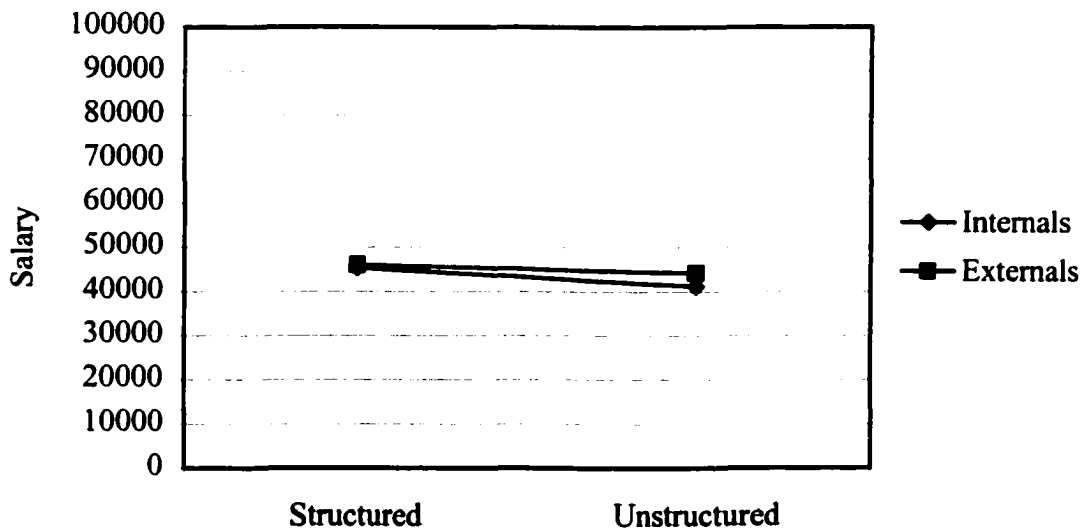


Table 13 continued
The Effects of Audit Structure and Locus of Control on Auditor Salary
Big 5 and Regional vs. Local Firms

Panel D: Managers Nonparametric Comparison of Medians

	<u>Internal</u>	<u>External</u>	Sig. ^a
Structured	74,100	73,000	.40
Unstructured	75,500	52,800	.01
Sig. ^b	.50	.01	

^a Significance of structure variable between internals and externals tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of difference between two independent samples).

^b Significance of locus of control variable among structure categories tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of difference between two independent samples).

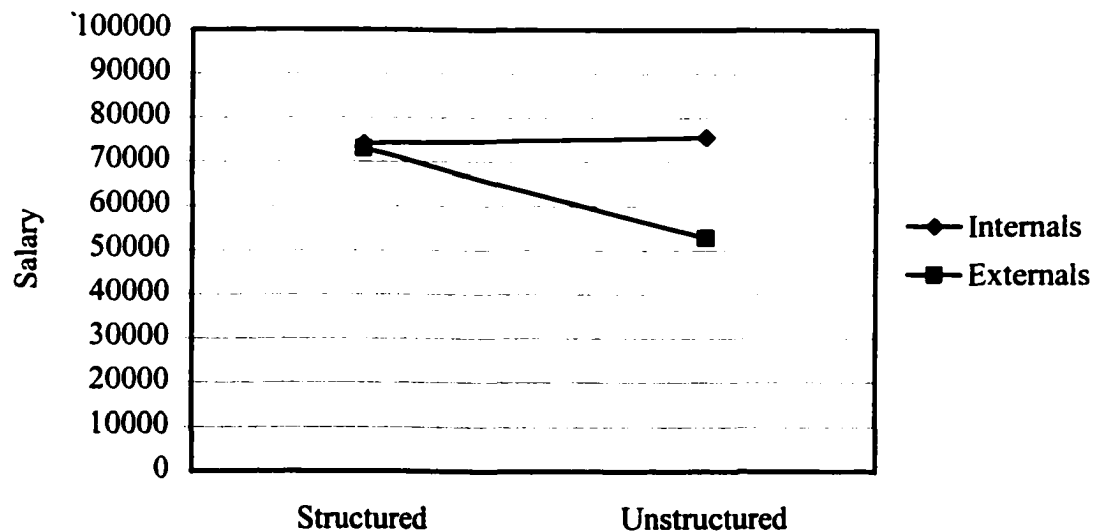


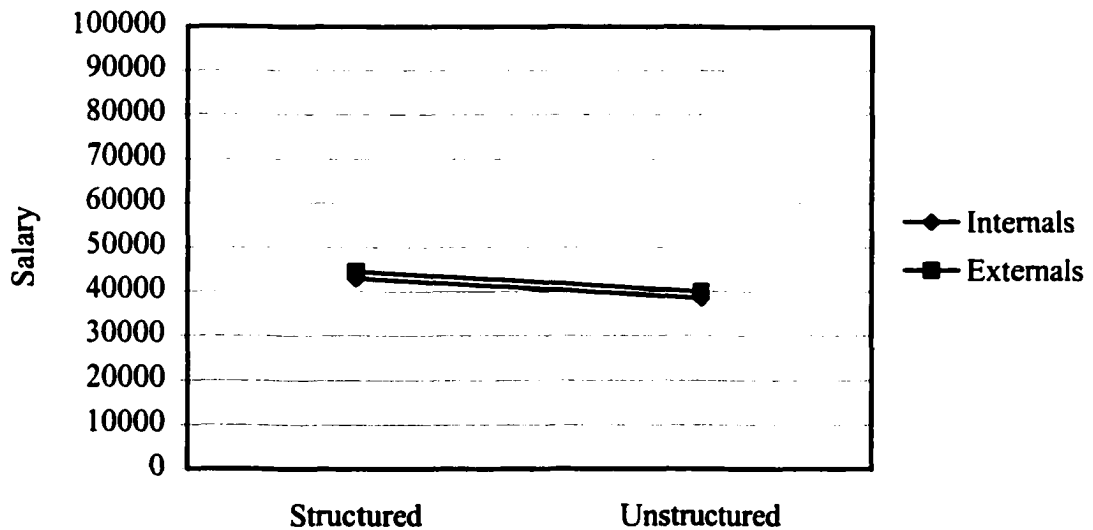
Table 13 continued
The Effects of Audit Structure and Locus of Control on Auditor Salary
Big 5 and Regional vs. Local Firms

Panel E: Staff and Seniors Nonparametric Comparison of Medians

	<u>Internal</u>	<u>External</u>	<u>Sig.^a</u>
Structured	43,000	44,533	.31
Unstructured	38,500	39,923	.34
Sig.^b	.00	.01	

^a Significance of structure variable between internals and externals tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).

^b Significance of locus of control variable among structure categories tested by the Mann-Whitney-Wilcoxon procedure (nonparametric test of differences between two independent samples).



H3: Audit structure interacts with auditor locus of control such that internals have lower turnover intentions in unstructured environments and externals have lower turnover intentions in structured environments.

Logistic regression analysis tests this prediction with the auditor's job turnover intentions as the dependent variable, and the interaction between audit structure and locus of control as the independent variable of interest. Covariates include experience, position within the firm, whether or not the participant is a CPA, and salary. As shown in Table 15, the locus of control/structure interaction is significant and in the expected direction, indicating that externals have longer term turnover intentions at structured firms than internals. Likewise, externals have longer term turnover intentions at structured firms than at unstructured firms.

Other significant variables include current position, salary, structure of the firm, and locus of control. Staff and seniors have short-term turnover intentions compared to managers. This is consistent with high turnover rates at lower levels within the firms. Internals generally want to remain longer with their current employer, and auditors at unstructured firms generally want to remain longer with their current employer.

Table 14
The Effects of Audit Structure and Locus of Control
on Auditor Turnover Intentions
Big 5 and Regional vs. Local Firms

Panel A: Logistic Regression Analysis

R square = .246 Sig. = .002

<u>Variables in the Equation</u>	<u>B</u>	<u>(1-tailed)</u> <u>p-value</u>
Constant	12.85	.01
Structured Firms	-7.48	.02
Locus of Control	-.23	.00
Structured Firm x Locus of Control	.19	.03
Experience	.06	.30
CPA License	1.05	.11
Staff	-2.65	.04
Senior	-2.15	.03
Salary	.00	.05

- Turnover Intention** - Two levels: (1) plan to remain with the firm for at least 5 more years, (0) plan to leave the firm in less than 5 years
- Audit Structure** - Two levels: (1) structured, for subjects working for Big 5 or regional firms, or (0) unstructured, for subjects working for local firms.
- Locus of Control** - Based on the work locus of control scale (Spector 1988). Higher scores on the work locus of control scale indicate a greater degree of external personality.
- Experience** - Number of years in public accounting.
- CPA** - Coded as 1 if participant is a CPA, coded as 0 otherwise.
- Staff** - Coded as 1 if participant is a staff, coded as 0 otherwise.
- Senior** - Coded as 1 if participant is a senior, coded as 0 otherwise.
- Salary** - Current salary as reported by the firm.

H4: There is a significant relationship between a firm's audit structure and the locus of control of graduates offered employment with the firms.

The results are shown in Table 15. Twenty-one (21) of the students interviewed with a structured firm. Eight (8) of the students interviewed with a semi-structured or unstructured firm. Examination of employment offers given to interviewing students reveals no significant emphasis given to an interviewee's locus of control during the hiring process. Offers were given almost equally to internals and externals interviewing with the participating firms.

Table 15
Employment Offers to Interviewing Accountants
Big 5 and Regional vs. Local Firms

Panel A: 2x2 Contingency Table for Structured Firm Offers

Employment offer	Locus of Control		Total
	Internal	External	
No offer	6	4	10
Offer	<u>5</u>	<u>6</u>	<u>11</u>
Total	11	10	21

Panel B: 2x2 Contingency Table for Unstructured Firm Offers

Employment offer	Locus of Control		Total
	Internal	External	
No offer	0	3	3
Offer	<u>3</u>	<u>2</u>	<u>5</u>
Total	3	5	8

Chapter 5

Discussion, Limitations, and Conclusion

This chapter provides a summary of the study. This first section describes the findings of the study. The second session discusses the limitations. The third section contains the conclusion and suggestions for future research.

5.1 Discussion of Findings

5.1.1 Audit Structure

Reliability tests for formalization and task analyzability indicate appropriate use of the variables in the study. Due to the availability of resources and audit methodologies based on business risk analysis, the Big 5 firms are placed in the structure category while the remaining firms are placed in either the semi-structured or unstructured category based on the mean scores of formalization and task analyzability.

The above measurement of audit structure appears to contribute to the rejection of the hypotheses. Prior studies examined only the then Big 6 firms by reviewing firm audit manuals and materials (Hyatt and Prawitt 2001) or utilizing similar scales as in this study (Bamber et al. 1993) to determine audit structure. This study examines Big 5 firms as well as regional and local firms. Further analysis placed the large regional firm with the Big 5 firms in the structured category based on the large amount of resources available to work on the technical development of methodology. This structured / unstructured segregation is based on size only, not on the original measures of audit firm structure (formalization and task analyzability). However, based on the formalization measure, the regional firm was categorized as being in the structured category. Although this

segregation was not initially planned, based on the resources available across the firms included in this study, it appears to be a reasonable assessment of audit structure.

5.1.2 Locus of Control

Reliability tests for the general and work locus of control scales indicate proper inclusion in the study. Mean scores and ranges for both scales are similar to previous studies (Spector, 1988; Donnelly et al., 2001; Hyatt and Prawitt, 2001), further indicating that the variable was properly captured for analysis.

5.1.3 Job Performance

Hypothesis 1 states that audit structure interacts with auditor locus of control such that internals perform at higher levels in unstructured environments and externals perform at higher levels in structured environments. Consistent with prior research, the study finds a positive association between performance and the “fit” between audit firm structure and auditor locus of control. It appears that although externals at the staff and senior levels perform better at structured firms than at unstructured firms, internals at the staff and seniors levels perform similarly at unstructured and structured firms.

At the manager level, however, internals perform better at the unstructured firms than at the structured firms, but externals perform similarly in structured and unstructured environments. This pattern of findings suggests that externals thrive in a structured environment when the tasks are more routine and heavily supervised, while internals thrive in an unstructured environment when there is less reliance on prescribed sequences of procedures, decisions, and steps.

Although not significant, it is also found that externals (internals) at all auditor positions perform better than internals (externals) in structured (unstructured) environments. This is consistent with the hypothesis.

5.1.4 Auditor Compensation

Hypothesis 2 examines whether audit structure interacts with auditor locus of control such that internals have higher salaries in unstructured environments and externals have higher salaries in structured environments. Although the regression is highly significant and explanatory, contrary to expectations, the locus of control/structure interaction is not significant. However, it should be noted that performance is a significant explanatory variable in the model, and as hypothesis 1 predicts, the interaction is significant in explaining job performance.

Further analysis reveals that structured firms (larger firms) are consistently paying a higher salary to staff and seniors than unstructured firms (local firms) and both structures are compensating the internals and external staff and seniors equally. At the manager level, however, external managers are paid more at structured firms than unstructured firms, while internal managers are being paid almost equally across structure levels. Internal managers are being compensated at a higher level than external managers in unstructured environments, although at structured environments, internals and externals are paid approximately the same. Both of these patterns indicate the growing importance of an internal locus of control at higher positions, when there is less reliance on prescribed sequences of procedures, decisions, and steps.

5.1.5 Auditor Retention

Hypothesis 3 states that audit structure interacts with auditor locus of control such that internals have lower (long-term) turnover intentions in unstructured environments and externals have lower (long-term) turnover intentions in structured environments. Results demonstrate that there is a significant relation between turnover intentions and the “fit” between audit structure and auditor locus of control. Although individuals with internal locus of control generally have lower turnover intentions than individuals with external locus of control, audit structure interacts with auditor locus of control so that at structured firms, externals have lower turnover intentions than internals. Likewise, externals have lower turnover intentions at structured firms than at unstructured firms.

5.1.6 Auditor Acquisition

Hypothesis 4 claims that there is a significant relationship between a firm’s audit structure and the locus of control of graduates offered employment with the firms. Due to the small sample size, statistical conclusions cannot be made. However, examination of employment offers given to interviewing students reveals no significant emphasis given to an interviewee’s locus of control during the hiring process. Offers were given almost equally to internals and externals interviewing with the participating firms.

5.2 Limitations

This section discusses the limitations of the study. The first subsection discusses statistical power analysis utilized in the study. The second subsection addresses the participant pool. The third subsection discusses measurement issues.

5.2.1 Statistical Power

Statistical power is a weakness of this study. Thirty observations of each personality measure for each class of auditor was planned due to normal distribution

considerations. Although there was a high response rate of the auditor participants (74%), the offices of the firms that agreed to participate are not large. As a result, the sample size of eighty-seven (87) participants is not adequate to achieve the desired level of power. In addition, the number of managers that agreed to participate was less than desired. Twenty-two (22) of the eighty-seven (87) participants, or twenty-six percent (26%), are managers. More manager participants are desirable to perform separate parametric analyses on their responses.

The sample size of twenty-two (22) student participants is also not adequate to achieve statistical power. One of the participating universities is located in a state where the 150-hour CPA rule is currently being put into effect. Therefore, the number of students interviewing with public accounting firms is low, as many of the students are planning on attending graduate school.

5.2.2 Participant Pool

Participating firms and participating students were selected from the same region of the country. Different results may have been found if a larger or different geographic region was utilized.

5.2.3 Measurement Issues

As previously noted, the initial measurement of audit structure by formalization and task analyzability may contribute to the rejection of the hypotheses. It is possible that when respondents answered the audit structure questions, audit firm clientele complexity affected the answers. Thus, responses may not be comparable across different size firms. To minimize this effect, Big 5 firms are initially segregated into the structured category due to their available resources and their audit methodologies based

on business risk analysis. The second measurement of audit structure disregards the formalization and task analyzability scores and assumes the amount of structure depends on the available resources of the firms only. Further, based on the formalization measure, the regional firm was categorized as being in the structured category.

5.2 Concluding Remarks

This section presents some concluding remarks which highlight the most important findings of the study. In addition, suggestions for future research are presented.

5.3.1 General Conclusions

This study provides insight into the impact of the “fit” between audit structure and auditor locus of control on performance, compensation, retention, and acquisition. Although significant results are not pursued for employee acquisition (hiring) due to the small sample size, findings indicate a significant relationship between the congruence of audit structure and auditors’ locus of control and job performance and retention. It appears that externals perform well in a structured environment when the tasks are more routine and heavily supervised, while internals perform well in an unstructured environment when there is less reliance on prescribed sequences of procedures, decisions, and steps.

The interaction between firm structure and auditor locus of control was not significant in the salary regression model. However, data patterns indicate the growing importance of an internal locus of control at higher positions, when there is less reliance on prescribed sequences of procedures, decisions, and steps. It should be noted that the

interaction is significant in explaining performance, and performance is significant in explaining auditor salary.

In terms of employee retention, although internals generally want to remain longer with their current employer, the locus of control / structure interaction is significant, indicating that externals have lower turnover intentions at structured firms than internals. Likewise, externals have lower turnover intentions at structured firms than at unstructured firms.

5.3.2 Future Research

This study examined one auditor characteristic, locus of control. Due to the high costs of auditor recruiting, training, and turnover, future research should examine other auditor characteristics that may affect performance, salary, turnover, and hiring.

Obtaining a larger sample size can extend the current study. Specifically, more responses from students and managers can help extend the results and interpretation.

Examining audit manuals of smaller participating firms may help better define audit structure among these firms. This will facilitate further analysis of the effects of audit structure and locus of control across local firms.

Another avenue for audit structure and auditor locus of control research is an internal auditor study. This would be relevant to firms seeking to improve hiring decisions and to the auditors seeking employment.

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APPENDIX

This appendix includes the information sent to participants of the study. The first letter requests participation of the auditing firms (Panel A). The second letter is the correspondence between the researcher and the contact person at the participating firms (Panel B). The third letter and corresponding questions is the survey instrument sent to the auditors (Panel C). The third letter and corresponding questions is the survey instrument sent to the student participants (Panel D).

PANEL A: REQUEST FOR PARTICIPATION

November 27, 2001

Dear

Audit firms must be effective and efficient to survive in the competitive environment. Firms must meet and maintain professional standards and at the same time minimize their costs. Although social pressure from audit failures motivates firms to conduct effective audits, the competitive environment creates incentives for the firms to conduct audits more efficiently. The study of human resource acquisition, compensation, performance and retention is important since labor is the major cost of accounting firms.

In this regard, Connie McKnight has begun a study of the effects of audit structure and auditor characteristics on human resource issues. This study is interesting and should provide useful information to audit firms and the profession.

In connection with this study, your firm is in an excellent position to help Connie. She would like members of your auditing staff to take about 20-30 minutes to respond to a questionnaire which she has prepared. In addition, she would like additional information collected from personnel files by someone in your firm. All information received by Connie will be strictly confidential.

In a few days, Connie will contact you (or an individual you designate in your organization) to determine if your firm is willing to participate in the study. She would like to administer the questionnaires at your earliest convenience, preferably before busy season.

Through participation in this study, you will not only help Connie with her dissertation research, you will also be contributing to a greater understanding of the human resource issues facing the auditing profession. If you have any questions, please do not hesitate to call Connie at (501) 575-6157. Thank you for your attention to this matter. I greatly appreciate your support.

Sincerely,

**Doyle Z. Williams
Dean, Walton College of Business**

PANEL B: CORRESPONDENCE WITH FIRM CONTACT

December 14, 2001

firm
Attn: contact
street address
state zip

Dear Contact,

Thank you for participating in this research! Per our conversation, I've enclosed twenty-five surveys to be completed by staff, seniors, and managers. The surveys are coded on the back cover. The code range is:

01-01-001 to 01-01-025

Please match each code with an individual. I've enclosed a form for you to do this. (This form is for your convenience; please do not return it to me.) You will want to keep the coding information in your files in case I need to send second requests to the auditors in a few weeks.

I've also enclosed a form for you to collect information from the personnel files. Please send me the information requested in code only, not the individuals' names. Information needed includes the overall score on the two most recent performance evaluations and the current salary. Also, please indicate the range of possible scores on a performance evaluation. You can use the envelope provided to return the personnel file information.

Thank you so much for your help. I know that your time is valuable; your participation is greatly appreciated. When this research is completed, summary results of the findings will be made available to participating firms. Let me know if I can assist you in any way.

Sincerely,

Connie McKnight

Enclosures: Code/name identification form (for your files; do not return)
Personnel file information form
Return envelope
25 surveys and return envelopes

Personnel File Information Form

Auditor Code	Overall Score on Most Recent Performance Evaluation	Overall Score on the Second Most Recent Performance Evaluation	Current Salary	Paid Overtime? circle yes or no
01-01-001				Yes No
01-01-002				Yes No
01-01-003				Yes No
01-01-004				Yes No
01-01-005				Yes No
01-01-006				Yes No
01-01-007				Yes No
01-01-008				Yes No
01-01-009				Yes No
01-01-010				Yes No
01-01-011				Yes No
01-01-012				Yes No
01-01-013				Yes No
01-01-014				Yes No
01-01-015				Yes No
01-01-016				Yes No
01-01-017				Yes No
01-01-018				Yes No
01-01-019				Yes No
01-01-020				Yes No
01-01-021				Yes No
01-01-022				Yes No
01-01-023				Yes No
01-01-024				Yes No
01-01-025				Yes No

Please briefly describe how overall performance is evaluated. (For example, if performance is evaluated on a five point scale, note what each number indicates.)

Thank you for your participation and assistance! All information is completely confidential; access to the information is restricted to the researchers. Please return this form in the envelope provided.

**Code/Name Identification Form
(for your files; do not return)**

Auditor Code	Auditor Name
01-01-001	
01-01-002	
01-01-003	
01-01-004	
01-01-005	
01-01-006	
01-01-007	
01-01-008	
01-01-009	
01-01-010	
01-01-011	
01-01-012	
01-01-013	
01-01-014	
01-01-015	
01-01-016	
01-01-017	
01-01-018	
01-01-019	
01-01-020	
01-01-021	
01-01-022	
01-01-023	
01-01-024	
01-01-025	

PANEL C: AUDITOR SURVEY INSTRUMENT

Dear Auditor,

This questionnaire is intended to be completed by auditors at the staff, senior, and manager levels within the firm. The questionnaire asks questions concerning your personal beliefs about certain events in society and aspects of your job. In addition, there are questions concerning your audit firm and your job performance. When providing your answers, please respond based on your feelings in general, which may not correspond with how you feel today due to normal ups and downs. The last page asks a few biographical questions. **The questions do not have any "right" or "wrong" answers beyond what you personally believe.**

Please answer each question carefully, but do not spend too much time on any one item. Also, try to answer each question independently when making your responses; do not be influenced by your previous responses. Finally, please answer all of the questions asked, including the biographical questions, because each one is important to this study. There is no need to put your name on the questionnaire, because neither you nor your firm will be identified in the research results. Results will only be reported in the aggregate. Also, since you will be returning your completed questionnaire directly to me, **your responses will be strictly confidential.**

Please do not communicate with others who are also completing the questionnaire concerning any of its specifics until after you (and they) have responded and returned the questionnaire. **The validity of this project's results depends on each participant responding independently.**

Please try to respond within two weeks of receiving the questionnaire. When you have finished, enclose the entire questionnaire in the business reply envelope provided and return it to me. If you have any questions, feel free to contact me at the above address or phone number. When this research is completed, summary results of the findings will be made available to all participating firms.

Your participation in this study is voluntary. Return of the survey to the researcher in the enclosed envelope indicates consent to use your responses. The questionnaire should not take longer than thirty minutes to complete.

Thank you for your time and cooperation.

Sincerely,

Connie McKnight
Researcher

Part I

The following questions ask you to indicate how your overall performance has been rated at your firm. Please provide what your overall performance evaluation ratings were on your two most recent engagements by circling the appropriate number next to each statement according to the following scale.

- 1. very poor
- 2. poor
- 3. average
- 4. above average
- 5. good
- 6. very good
- 7. excellent

1. On my most recent engagement performance evaluation, my overall performance was rated as:

very poor 1-----2-----3-----4-----5-----6-----7 excellent

2. On my second most recent engagement performance evaluation, my overall performance was rated as:

very poor 1-----2-----3-----4-----5-----6-----7 excellent

Part II

The following question asks you to assess your job status. Remember, try to respond based on how you generally feel about your job, which may not correspond with how you feel today.

1. Please check ONE of the following statements that best describes how you feel about changing your job.

- I plan to quit this job at my current organization as soon as possible.
- I plan to remain with my current organization for at least two more years.
- I plan to remain with my current organization for at least five more years.
- I plan to remain with my current organization until I retire.

Part III

An auditor's performance is measured by many criteria--controlling costs, maintaining client relationships, communicating effectively, etc. Next to each performance criterion listed below, circle the number which indicates your level of success relative to other auditors at the same level at your firm.

1. Much less successful than others.
2. Moderately less successful than others.
3. Slightly less successful than others.
4. About the same as others.
5. Slightly more successful than others.
6. Moderately more successful than others.
7. Much more successful than others.

	<u>Response</u>
	1 2 3 4 5 6 7
1. Gaining the respect of associates.	1 2 3 4 5 6 7
2. Developing practical solutions to problems encountered on an engagement.	1 2 3 4 5 6 7
3. Developing an adequate understanding of relevant firm accounting releases, SEC regulations, federal and state income tax laws, etc.	1 2 3 4 5 6 7
4. Possessing technical ability in preparing financial statements and reports.	1 2 3 4 5 6 7
5. Ability to handle responsibility.	1 2 3 4 5 6 7
6. Effectiveness of oral expression.	1 2 3 4 5 6 7
7. Comprehension of and interest in my clients' businesses.	1 2 3 4 5 6 7
8. Exercising sound judgment on an engagement.	1 2 3 4 5 6 7
9. Projecting an image of self-confidence.	1 2 3 4 5 6 7
10. Operating within an engagement budget.	1 2 3 4 5 6 7
11. Listening attentively to identify and understand the real concerns of my clients.	1 2 3 4 5 6 7
12. Convincing clients that I understand their unique problems and concerns.	1 2 3 4 5 6 7
13. Effectiveness of written expression.	1 2 3 4 5 6 7
14. Maintaining a high percentage of billable hours for the firm.	1 2 3 4 5 6 7

Part IV

The following questions ask you about work in general. Indicate your extent of agreement with each of the statements by circling the appropriate number next to each statement according to the following scale. Try to respond based on how you generally feel, which may not correspond with how you feel today.

1. disagree very much
2. disagree moderately
3. disagree slightly
4. agree slightly
5. agree moderately
6. agree very much

1. A job is what you make of it. disagree very much 1---2---3---4---5---6 agree very much
2. On most jobs, people can pretty much accomplish whatever they set out to accomplish. disagree very much 1---2---3---4---5---6 agree very much
3. If you know what you want out of a job, you can find a job that gives it to you. disagree very much 1---2---3---4---5---6 agree very much
4. If employees are unhappy with a decision made by their boss, they should do something about it. disagree very much 1---2---3---4---5---6 agree very much
5. Getting the job you want is mostly a matter of luck. disagree very much 1---2---3---4---5---6 agree very much
6. Making money is primarily a matter of good fortune. disagree very much 1---2---3---4---5---6 agree very much
7. Most people are capable of doing their jobs well if they make an effort. disagree very much 1---2---3---4---5---6 agree very much
8. In order to get a really good job you need to have family members or friends in high places. disagree very much 1---2---3---4---5---6 agree very much
9. Promotions are usually a matter of good fortune. disagree very much 1---2---3---4---5---6 agree very much
10. When it comes to landing a really good job, who you know is more important than what you know. disagree very much 1---2---3---4---5---6 agree very much
11. Promotions are given to employees who perform well on the job. disagree very much 1---2---3---4---5---6 agree very much
12. To make a lot of money you have to know the right people. disagree very much 1---2---3---4---5---6 agree very much
13. It takes a lot of luck to be an outstanding employee on most jobs. disagree very much 1---2---3---4---5---6 agree very much
14. People who perform their jobs well generally get rewarded for it. disagree very much 1---2---3---4---5---6 agree very much
15. Most employees have more influence on their supervisors than they think they do. disagree very much 1---2---3---4---5---6 agree very much
16. The main difference between people who make a lot of money and people who make a little money is luck. disagree very much 1---2---3---4---5---6 agree very much

Part V

Your responses to the following questions will help us analyze and understand the audit work environment. The group of statements describe circumstances that could occur at work. Indicate your extent of agreement with each of the statements as they relate to your work environment by circling the appropriate number next to each statement according to the following scale. Remember, we are interested in the actual situation, not how you would like the situation would be.

- 1. strongly disagree
- 2. inclined to disagree
- 3. neither agree nor disagree
- 4. inclined to agree
- 5. strongly agree

- 1. My duties, authority, and accountability are documented in policies, procedures, or job descriptions. strongly disagree 1---2---3---4---5 strongly agree

- 2. The organization works to a written law. strongly disagree 1---2---3---4---5 strongly agree

- 3. Performance appraisals are based on written performance standards or criteria. strongly disagree 1---2---3---4---5 strongly agree

- 4. Firm rules or guidelines to direct efforts are very clear. strongly disagree 1---2---3---4---5 strongly agree

- 5. Standards of performance and control systems have been established in writing. strongly disagree 1---2---3---4---5 strongly agree

- 6. Written procedures and guides are readily available. strongly disagree 1---2---3---4---5 strongly agree

- 7. Schedules, programs, or engagement specifications are used to guide work. strongly disagree 1---2---3---4---5 strongly agree

- 8. Written documents (such as budgets, schedules, project specifications, program plans, job descriptions, etc.) are used as an integral part of the job. strongly disagree 1---2---3---4---5 strongly agree

Part VI

Please indicate the extent to which each statement below describes your work by circling the appropriate number next to each statement according to the following scale.

- 1. to a very little extent
- 2. to a little extent
- 3. to some extent
- 4. to a great extent
- 5. to a very great extent

- 1. My normal work activities are guided by standard procedures, rules, etc. very little extent 1---2---3---4---5 very great extent
- 2. To do my work well, knowing a lot of standard practices and procedures is needed. very little extent 1---2---3---4---5 very great extent
- 3. In carrying out my audit tasks, an understandable sequence of steps can be followed. very little extent 1---2---3---4---5 very great extent
- 4. The work is routine. very little extent 1---2---3---4---5 very great extent
- 5. When a problem arises, it takes a lot of experience and training to know what to do. very little extent 1---2---3---4---5 very great extent
- 6. I actually rely on established procedures and practices in doing my work. very little extent 1---2---3---4---5 very great extent
- 7. There is a variety in the events that cause my work. very little extent 1---2---3---4---5 very great extent
- 8. My tasks require extensive and demanding search for a solution. very little extent 1---2---3---4---5 very great extent
- 9. Audit decisions I make are dissimilar from one day to the next. very little extent 1---2---3---4---5 very great extent
- 10. Established materials (audit manuals, industry guides) cover my work. very little extent 1---2---3---4---5 very great extent

Biographical Data

REMINDER: In order to maintain confidentiality, please do not write your name anywhere on the questionnaire. Results will be kept **confidential** and will only be reported in the aggregate.

- 1. Sex (circle answer) male female
- 2. Type of firm (circle one) Big 5 international national regional local
- 3. Please indicate your date of hire with the firm. _____
- 4. Current position (circle answer)
 staff senior manager senior manager partner
- 5. Please indicate how many months you held (or have held) each of the following positions:

<u>Position</u>	<u>Time in position</u>
Staff	_____
Senior	_____
Manager	_____
Senior Manager	_____
Partner	_____
Other _____	_____

- 6. Please indicate your total number of years in public accounting. _____ in industry _____.
- 7. Do you have your CPA license? (circle answer) yes no
- 8. Current salary _____
- 9. Paid overtime? (circle answer) yes no
- 10. Please indicate your last pay raise. (circle answer) (If this is your first year with the firm, write "n/a".)

 1% 2% 3% 4% 5% 6% 7% 8% 9% 10%
other _____
- 11. Please indicate approximately how long it took you to complete the entire questionnaire.
 _____ minutes.

Thank you for taking the time to complete this survey!
Please return the survey to the researcher using the envelope provided.

PANEL C: STUDENT SURVEY INSTRUMENT

CONSENT TO PARTICIPATE IN AN EXPERIMENTAL STUDY

Investigator: Connie McKnight
Walton College of Business, Room 461
University of Arkansas
Fayetteville, AR 72701
(501) 575-6157

Description: This questionnaire is intended to be completed by students currently interviewing with auditing firms. The questionnaire asks questions concerning your personal beliefs about certain events in society and aspects of your career choice. In addition, there are questions concerning how satisfied you are with your major, the level of stress you feel in college, your college performance, and job interviews. The questionnaire should not take longer than thirty minutes to complete.

Instructions: When providing your answers, please respond based on your feelings in general, which may not correspond with how you feel today due to normal ups and downs. The last two pages ask a few biographical questions. **The questions do not have any "right" or "wrong" answers beyond what you personally believe.** Please answer each question carefully, but do not spend too much time on any one item. Also, try to answer each question independently when making your responses; do not be influenced by your previous responses. Finally, please answer all of the questions asked, including the biographical questions, because each one is important to this study. There is no need to put your name on the questionnaire, because neither you nor your college will be identified in the research results. Results will only be reported in the aggregate. Also, **your responses will be strictly confidential.** Please do not communicate with others who are also completing the questionnaire concerning any of its specifics until after you (and they) have responded and returned the questionnaire. **The validity of this project's results depends on each participant responding independently.** When you have finished, return the entire questionnaire to your instructor. If you would like a copy of the aggregated results or if you have any questions, feel free to contact me at the above address or phone number.

Risks and Benefits: The benefits of participation include the satisfaction of contributing to research conducted at the University of Arkansas. There are no anticipated risks to your participation.

Your participation in this study is voluntary. You must consent to the use of your responses.
Informed consent: I have read the description, including the nature and purposes of the study, the procedures to be used, the potential risks and side effects, as well as the right to refuse to participate. The investigator has explained the study and answered my questions. My signature below indicates that I freely agree to allow the use of my responses of this experimental study and that I have received a copy of this agreement from the investigator.

Signature

Student ID number

Date

Printed Name

Part I

An auditor's performance is measured by many criteria--controlling costs, maintaining client relationships, communicating effectively, etc. Next to each performance criterion listed below, circle the number which indicates your level of success relative to other students at the same level at your university.

- 1. Much less successful than others.
- 2. Moderately less successful than others.
- 3. Slightly less successful than others.
- 4. About the same as others.
- 5. Slightly more successful than others.
- 6. Moderately more successful than others.
- 7. Much more successful than others.

	<u>Response</u>
	1 2 3 4 5 6 7
1. Gaining the respect of other students.	1 2 3 4 5 6 7
2. Developing practical solutions to problems encountered on an assignment.	1 2 3 4 5 6 7
3. Developing an adequate understanding of accounting releases, SEC regulations, federal and state income tax laws, etc.	1 2 3 4 5 6 7
4. Possessing technical ability in preparing financial statements and reports.	1 2 3 4 5 6 7
5. Ability to handle responsibility.	1 2 3 4 5 6 7
6. Effectiveness of oral expression.	1 2 3 4 5 6 7
7. Comprehension of and interest in auditing .	1 2 3 4 5 6 7
8. Exercising sound judgment on an assignment.	1 2 3 4 5 6 7
9. Projecting an image of self-confidence.	1 2 3 4 5 6 7
10. Operating within a time budget.	1 2 3 4 5 6 7
11. Listening attentively to identify and understand the real concerns of others.	1 2 3 4 5 6 7
12. Convincing people that I understand their unique problems and concerns.	1 2 3 4 5 6 7
13. Effectiveness of written expression.	1 2 3 4 5 6 7
14. Maintaining a high percentage of non-wasted time when working on a project.	1 2 3 4 5 6 7

Part II

The following questions ask you to assess your career choice satisfaction. Try to respond based on how you generally feel about your future career, which may not correspond with how you feel today.

1. Please choose ONE of the following statements which best describes how well you like your college major choice. Place a check mark in front of that statement.
 - I hate it.
 - I dislike it.
 - I don't like it.
 - I am indifferent to it.
 - I like it.
 - I am enthusiastic about it.
 - I love it.

2. Please check ONE of the following statements to show how much of the time you feel satisfied with your college major choice.
 - All of the time.
 - Most of the time.
 - A good deal of the time.
 - About half of the time.
 - Occasionally.
 - Seldom.
 - Never.

3. Please check ONE of the following statements that best describes how you feel about changing your major.
 - I would quit this major at once if I hadn't invested so much time already.
 - I would take almost any other major in which I could earn as much as I can earn in accounting.
 - I am planning on obtaining a degree in another field after I finish this degree.
 - I cannot think of any major for which I would exchange my major.
 - I would not exchange my major for any other.

4. Please check ONE of the following statements to show how you think you compare with others.
 - No one likes their major better than I like mine.
 - I like my major much better than most people like theirs.
 - I like my major better than most people like theirs.
 - I like my major about as well as most people like theirs.
 - I dislike my major more than most people dislike theirs.
 - I dislike my major much more than most people dislike theirs.
 - No one dislikes their major more than I dislike mine.

5. Please check ONE of the following statements that best describes how you feel about your career in public accounting.
 - I plan to quit public accounting as soon as possible.
 - I plan to remain in public accounting for at least two years.
 - I plan to remain in public accounting for at least five years.
 - I plan to remain in public accounting until I retire.

Part III

The following 29 items consist of pairs of alternatives lettered "a." or "b." Please select, by circling the appropriate letter, the one statement from each pair (**and only one**) which you more strongly **believe** to be the case as far as you are concerned. Be sure to select the one that you believe to be more true rather than the one you think you should choose or the one you would like to be true. In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the **one** you more strongly believe to be the case as far as you are concerned.

1. a. Children get into trouble because their parents punish them too much.
 b. The trouble with most children today is that their parents are too easy with them.
2. a. Many of the unhappy things in people's lives are partly due to bad luck.
 b. People's misfortunes result from the mistakes they make.
3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
 b. There will always be wars, no matter how hard people try to prevent them.
4. a. In the long run people get the respect they deserve in this world.
 b. Unfortunately, people's worth often passes unrecognized no matter how hard they try.
5. a. The idea that teachers are unfair to students is nonsense.
 b. Most students don't realize the extent to which their grades are influenced by accidental happenings.
6. a. Without the right breaks one cannot be an effective leader.
 b. Capable people who fail to become leaders have not taken advantage of their opportunities.
7. a. No matter how hard you try some people just don't like you.
 b. People who can't get others to like them don't understand how to get along with others.
8. a. Heredity plays the major role in determining a person's personality.
 b. It is a person's experiences in life which determine what that person is like.
9. a. I have often found that what is going to happen will happen.
 b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
10. a. In the case of the well prepared student there is rarely, if ever, such a thing as an unfair test.
 b. Many times exam questions tend to be so unrelated to course work that studying is really useless.
11. a. Becoming a success is a matter of hard work; luck has little or nothing to do with it.
 b. Getting a good job depends mainly on being in the right place at the right time.
12. a. The average citizen can have an influence in government decisions.
 b. This world is run by the few in power, and an ordinary citizen cannot do much about it.

13.
 - a. When I make plans, I am almost certain that I can make them work.
 - b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
14.
 - a. There are certain people who are just no good.
 - b. There is some good in everybody.
15.
 - a. In my case getting what I want has little or nothing to do with luck.
 - b. Many times we might just as well decide what to do by flipping a coin.
16.
 - a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
 - b. Getting people to do the right thing depends upon ability; luck has little or nothing to do with it.
17.
 - a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control.
 - b. By taking an active part in political and social affairs, people can control world events.
18.
 - a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
 - b. There really is no such thing as "luck."
19.
 - a. One should always be willing to admit mistakes.
 - b. It is usually best to cover up one's mistakes.
20.
 - a. It is hard to know whether or not a person really likes you.
 - b. How many friends you have depends upon how nice a person you are.
21.
 - a. In the long run the bad things that happen to us are balanced by the good ones.
 - b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
22.
 - a. With enough effort we can wipe out political corruption.
 - b. It is difficult for people to have much control over the things politicians do in office.
23.
 - a. Sometimes I can't understand how teachers arrive at the grades they give.
 - b. There is a direct connection between how people study and the grades they get.
24.
 - a. A good leader expects people to decide for themselves what they should do.
 - b. A good leader makes it clear to everybody what their jobs are.
25.
 - a. Many times I feel that I have little influence over the things that happen to me.
 - b. It is impossible for me to believe that chance or luck plays an important role in my life.
26.
 - a. People are lonely because they don't try to be friendly.
 - b. There's not much use in trying too hard to please people; if they like you, they like you.

27. a. **There is too much emphasis on athletics in school.**
b. **Team sports are an excellent way to build character.**
28. a. **What happens to me is my own doing.**
b. **Sometimes I feel that I don't have enough control over the direction my life is taking.**
29. a. **Most of the time I can't understand why politicians behave the way they do.**
b. **In the long run the people are responsible for bad government on a national as well as on a local level.**

Biographical Data

The following question asks about your interviews and offers with public accounting firms.

1. Please indicate which firms you interviewed and if you received an offer for employment. Also indicate the position for which you were interviewing and if you accepted the offer. **If you interviewed with a firm and it is not listed, please add the firm to the list and complete the information.**

Firm	Location (Indicate city)	Campus Interview? (circle yes or no)	Office Interview? (circle yes or no)	Position (circle answer)	Offer Made? (circle answer)	Offer Accepted? (circle answer)
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No
		Yes No	Yes No	Audit Tax Other	Yes No	Yes No

The following questions ask you to indicate how your overall performance has been rated at your college.

2. My overall grade point average for my undergraduate degree is _____.
University attended: _____ Major _____
3. My grade point average for my undergraduate major is _____.

IF YOU ARE CURRENTLY WORKING ON YOUR UNDERGRADUATE DEGREE,
PLEASE IGNORE QUESTION #4.

4. My overall grade point average for my graduate degree is _____.
University attended: _____
Major _____
5. Please indicate approximately how long it took you to complete the entire questionnaire.
_____ minutes.

Thank you for taking the time to complete this survey!
Please return the survey to your instructor.

**THE EFFECTS OF AUDIT FIRM STRUCTURE AND
AUDITOR LOCUS OF CONTROL ON AUDITOR ACQUISITION,
COMPENSATION, PERFORMANCE, AND RETENTION**

**Abstract of dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy**

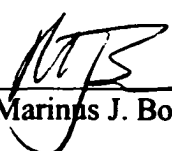
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ABSTRACT

The purpose of this dissertation is to examine the effect of audit structure and auditor locus of control on human resource acquisition, compensation, performance, and retention. The study of human resources is important since labor cost is the most significant cost of accounting firms. An understanding of the relation among factors influencing this cost is of primary importance in managing it.

The study examines the effects of the interaction of audit structure and locus of control on performance at staff through manager levels. The results extend current research by examining the effects of the interaction on employee acquisition (hiring), retention, and employee salaries.

Tests of job performance indicate that the interaction between audit structure and auditor locus of control is significant. People who believe they control their destinies (internals) perform at higher levels at unstructured firms than at structured firms. People who believe that their destinies are controlled by luck or chance (externals) perform at higher levels at structured firms than at unstructured firms. It is also found that internals perform at higher levels than externals in unstructured environments. Although not significantly, the data pattern also indicates externals perform at higher levels than internals in structured environments.

While tests of auditor compensation (salary) indicate some support for the hypothesis, the interaction between audit structure and auditor locus of control is not significant in the regression model. However, it does appear that internal managers at unstructured firms are compensated at a higher level than external managers.

Tests of auditor retention reveal that the interaction between audit structure and auditor locus of control is significant. Thus, employee intentions on remaining with the current employer is dependent on the match between audit structure and auditor locus of control.

Examination of employment offers given to interviewing students reveals no significant emphasis given to an interviewee's locus of control during the hiring process. Offers were given almost equally to internals and externals interviewing with the participating firms.

