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Does Congruence between Audit Structure and Auditors' Locus of Control Affect Job Performance?

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ABSTRACT: This study examines how auditors' job performance is affected by the interaction between individual auditors' locus of control and the extent to which the employing audit firm uses a structured audit technology. We distributed an instrument that measures locus of control ("internal" vs. "external") and other key constructs to staff- and senior-level auditors from the two most structured and the two least structured (then) Big 6 accounting firms. Results indicate that supervisor-assessed job performance is positively associated with the "fit" between individual auditors' locus of control and the employing firm's audit structure. Specifically, auditors who have an internal locus of control perform at a higher level at unstructured than at structured firms, on average, while auditors who have an external locus of control perform better at structured than at unstructured firms. These findings are relevant to audit firms and individual auditors seeking a match between personal and firm characteristics, and to firms seeking to determine the potential impact of audit reengineering that may alter the level of structure in their audit approaches.

Keywords: *audit structure; locus of control; job performance; employee/work environment congruence.*

Data Availability: *Contact the authors.*

I. INTRODUCTION

Large audit firms are reengineering their audit approaches (Lemon et al. 2000). These reengineering efforts may affect important features of the work environment by changing the level of structure in the firms' audit processes (Bamber et al. 1989).

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Research in psychology and organizational behavior indicates that characteristics of the work environment may, in turn, interact with employees' personal characteristics, and thereby affect individual job performance. This suggests that as firms reengineer their audit approaches, they should consider how audit structure affects auditors' job performance by interacting with their personal characteristics. Systematic differences in the levels of structure across large audit firms documented by prior accounting research (Cushing and Loebbecke 1986; Prawitt 1995) provide an opportunity to examine these issues. Accordingly, this study examines how auditors' job performance is affected by the congruence between firms' audit structure (an exogenous work-environment measure) and individual auditors' locus of control (an individual personality measure).

Individuals who have an internal locus of control (hereafter "internals") tend to believe that their actions directly influence outcomes. Accordingly, prior research suggests that internals tend to perform more effectively in environments that allow them more control over their actions. Individuals who have an external locus of control (hereafter "externals") tend to believe that outcomes are more attributable to outside forces than to their own actions. Thus, prior research suggests that externals generally perform better when more control is imposed on them (Spector 1982; Rotter 1990).

This study's results are consistent with our expectation that auditors perform better when there is an appropriate fit between firms' audit structure and individual auditors' locus of control. According to both supervisor- and self-assessed performance measures, internals at unstructured firms perform at higher levels than internals at structured firms. Conversely, externals at structured firms perform at higher levels than externals at unstructured firms. Further analysis indicates that these results are not attributable to any single firm in either structure category.

By documenting an interaction between firms' audit structure and individual auditors' locus of control, this study contributes to our understanding of how audit structure affects the human resources employed in audit firms. These results extend previous research that examines the main effects of audit structure on employees' behavior and performance. These findings are relevant to audit firms seeking to reengineer their audit approaches because these initiatives may affect their levels of audit structure and, thus, the way their audit approaches interact with their employees' personal characteristics. The results of this study are also relevant to both audit firms and individual auditors seeking to make hiring and employment decisions that maximize the likelihood of good performance.[1]

The next section of the paper develops our hypothesis concerning the interaction between audit structure and locus of control, and how this interaction affects job performance. Section III describes the development and distribution of the instrument, and provides descriptive statistics on the participating auditors. Section IV presents both the results of the hypothesis tests and supplementary results. Section V summarizes and suggests directions for future research.

II. HYPOTHESIS DEVELOPMENT

We expect the congruence between individual auditors' locus of control and their employing firms' audit structure to affect job performance. This section defines audit structure and locus of control, and develops the study's hypothesis.

[1] A 1998 American Management Association survey found that about 50 percent of firms surveyed conduct some form of pre-employment psychological testing (up from 38 percent in the prior year) and that 25 percent administer personality tests to help assess the fit between the firm and potential hires (*USA Today* 1998). At least one of the Big 5 firms uses an online tool to screen prospective employees according to their personal characteristics.

Audit Structure

A structured audit approach relies on relatively comprehensive and integrated policies, procedures, and decision tools to transform judgments and evidence into an audit opinion. Audit structure is designed to help direct and control fieldwork and lower-level audit judgments (see Cushing and Loebbecke 1986; Bamber and Snowball 1988; Prawitt 1995).

The audit structure literature suggests that structure affects auditors' judgments and perceptions and, thus, plays an important role in human-resource issues (Bowrin 1998). Structure affects judgments and perceptions in that unstructured firms offer relatively little structured guidance or other mechanisms to encourage control and uniformity, whereas structured firms impose more specific guidance and control mechanisms to enhance consistency and uniformity (Cushing and Loebbecke 1986; Prawitt 1995). Prior research has found that auditors at structured firms perceive a higher level of formalization of rules and procedures, relatively less personal control and discretion over the specific procedures used, more similarity between one audit and the next, and more responsibility to use firm-provided materials and tools, than do auditors at unstructured firms (Bamber et al. 1989; Prawitt 1995). Prior studies have also examined the effects of audit structure on various human-resource issues, including auditor performance (e.g., Bamber and Snowball 1988; Morris and Nichols 1988; Williams and Dirsmith 1988; McDaniel 1990; Icerman and Hillison 1991; Bamber et al. 1993; Prawitt 1995; Prawitt et al. 2000). However, prior research has not investigated whether audit structure and individual auditor characteristics interact to affect auditor performance.

Locus of Control

Locus of control plays an important role in human performance in such accounting settings as participative budgeting (Brownell 1981, 1982; Frucot and Shearon 1991) and dealing with audit conflict (Tsui and Gul 1996). Locus of control also influences dysfunctional audit behavior, job satisfaction, organizational commitment, and turnover intentions (e.g., Reed et al. 1994; Donnelly et al. 2000).

One of the most frequently investigated personality constructs in the psychological and social sciences (e.g., see Rotter 1990; Strickland 1989), locus-of-control theory classifies individuals as either "internals" or "externals." Rotter (1990, 489) provides the following definition of locus of control:

> Internal versus external control refers to the degree to which persons expect that a reinforcement or an outcome of their behavior is contingent on their own behavior or personal characteristics versus the degree to which persons expect that the reinforcement or outcome is a function of chance, luck, or fate, is under the control of powerful others, or is simply unpredictable.

Prior research suggests that because internals tend to believe that their actions influence outcomes, they adapt better and perform more effectively in environments that allow them a greater degree of control over their own actions. Conversely, because externals tend to believe that outcomes are more a function of outside forces than of their own actions, they adapt better and perform more effectively when a greater degree of control is imposed on them (e.g., see Brownell 1981, 1982; Sandler et al. 1983; Hurrell and Murphy 1991; Dunk and Nouri 1998). However, it is important to note that in previous locus-of-control research in employment settings, the same subjects whose locus of control was being measured also assessed the work environment, leaving open the possibility that subjects' locus-of-control characteristics influenced their work-environment assessments.

The Effects of Audit Structure and Locus of Control on Job Performance

The current study examines whether audit structure affects the nature of the audit work environment such that the fit between structure and auditors' locus of control affects job performance. The rationale for our prediction is summarized as follows. Individuals classified as externals generally do not perceive a strong link between personal efforts and outcomes. They tend to believe that outcomes are determined by outside forces, such as luck, fate, or powerful others. Such individuals exhibit relatively ineffective task-oriented coping behaviors in ambiguous task settings (Anderson 1977). Thus, they may perform better when control is imposed on them and when they can simply carry out tasks or procedures decided upon by others (e.g., see Brownell 1981, 1982). Because structured firms prescribe more rules and step-by-step guidance, impose a relatively high degree of control, and allow less discretion over specific audit procedures, we expect structured firms' work environments to be more congruent with the characteristics of individuals with an external locus of control. Thus, we expect externals to perform at a higher level in structured than in unstructured firms.

On the other hand, individuals classified as internals generally perceive a relatively strong link between personal efforts and outcomes—they believe that their actions make a difference. Such individuals are more effective at manipulating ambiguous work environments to find the information they need to perform their jobs (Abdel-Halim 1980; Spector 1982), and may perform better in situations that allow them to exercise control and to take the actions they believe are appropriate under the circumstances (e.g., see Brownell 1981, 1982). Because auditors at unstructured firms experience a relatively high degree of control and can exercise more discretion over their choices of audit procedures, we expect unstructured firms' work environments to be more congruent with the characteristics of individuals with an internal locus of control. Consequently, we expect internals to perform at higher levels in unstructured than in structured firms.

The following hypothesis summarizes the prediction that job performance depends on the congruence between audit structure and individual auditors' locus of control.

H1: Audit structure interacts with auditors' locus of control such that internals perform at higher levels at unstructured firms than at structured firms, and externals perform at higher levels at structured firms than at unstructured firms.

III. METHOD

Subjects and Instrument Development and Distribution

An instrument was distributed to staff- and senior-level auditors at four of the (then) Big 6 accounting firms to obtain data on locus of control and job performance. Table 1 presents descriptive statistics on participating auditors by structure category. Subject characteristics, including months of audit experience (30.8), number of audits worked (20.7), and minutes spent completing the questionnaire (28.3), do not differ significantly between structure categories. The data were collected approximately three years before the Big 6 merged into the Big 5, so the data were not affected by recent proposed or actual mergers, or by firms' recent audit reengineering.

Audit partners from several offices of each of the four firms served as our coordinators. Each package sent to a coordinator contained an instruction sheet and the agreed-upon number of instruments to be distributed. Each package included equal numbers of two differently ordered versions of the instrument (item ordering did not significantly affect auditors' responses). The coordinators distributed the instruments to staff and senior auditors in their offices. To preserve anonymity, participants returned the instruments directly to the researchers in the reply envelopes provided. We received instruments from 375 auditors in

TABLE 1
Descriptive Statistics for Subjects by Audit Structure Category

	Unstructured Audit Firms			*Structured Audit Firms*			*Overall*		
Subject Attribute	*n*[a]	*Mean*	*Std. Dev.*	*n*[a]	*Mean*	*Std. Dev.*	*n*[a]	*Mean*	*Std. Dev.*
Audit experience (months)	184	31.2	17.8	190	30.5	15.3	374	30.8	16.5
Audit experience (number of audits)	173	20.6	16.1	183	20.7	12.2	356	20.7	14.2
Time to complete instrument (minutes)	182	27.7	8.5	189	28.9	9.3	371	28.3	8.9

[a] One hundred eighty-four auditors at unstructured firms and 191 auditors at structured firms responded; however, some respondents did not answer all of the questions. Each "n" reflects the number of auditors who answered each of the questions.

29 offices, for an overall response rate of 43 percent. Response rates from unstructured and structured firms were nearly identical (43 percent and 44 percent, respectively). There is no evidence of response bias based on a comparison of the means of key variables between early and late responders (Oppenheim 1966).

Dependent Variable

Job Performance

The dependent variable is based on subjects' actual supervisor-assessed performance evaluations on their two most recently completed audit engagements, as reported by the subjects. For the firms involved in this study, supervisors typically evaluate their subordinates' performance at the end of each engagement on which they work 40 hours or more. We averaged the performance evaluation scores from the two engagements to obtain a single score for each subject. For ease of interpretation, we inverted the measure so that higher numbers indicate better performance.

The participating firms use different scales to rate performance. Two of the firms (one structured and one unstructured) use four-point scales, where a score of "2" indicates "acceptable" performance. The other two firms (one structured and one unstructured) use five-point scales, where a score of "3" indicates "acceptable" performance. To control for differences in rating scales, we normalized the performance measure within firms ($X_n = \lfloor X_i - \bar{X} \rfloor / \sigma$). Normalizing within firms converts the measure to a common scale across firms and controls for differences in average rating levels. Normalizing also yields intuitively appealing results in that we can readily interpret performance scores for internals vs. externals as being above or below the mean.

Independent Variables

Locus of Control

Participants' locus of control is measured using Rotter's (1966) scale, which the majority of studies cited previously used. This scale includes 29 statement pairs, six of which

are distracter items, presented in a forced-choice format. The measure is obtained by summing the number of external statements chosen from the 23 relevant internal/external statement pairs. Higher scores indicate stronger external tendencies (externals), and lower scores indicate stronger internal tendencies (internals). We split the locus-of-control measure at the median into two groups of approximately equal size.[2]

Audit Structure

Auditors from the two most structured and the two least structured of the former Big 6 firms participated in this study. This structure dichotomy is based on Cushing and Loebbecke's (1986) structure ratings, as confirmed by Prawitt (1995) for the same four firms participating in this study.

IV. RESULTS

Descriptive Statistics

Table 2 provides a summary of the research model and descriptive statistics for the independent variables and the (untransformed) dependent variable. For firms using a four-point scale, the observed range of the job performance measure is from 2.0 to 4.0. The mean performance measure for these two firms is 3.1, which is approximately one rating point better than "acceptable." For firms using a five-point scale, the observed range of the job performance measure is from 2.5 to 5.0. The mean performance measure for these two firms is 4.0, also one rating point better than "acceptable."

The observed locus-of-control measure ranges from 1 to 22, with a mean of 9.4. Because the locus-of-control scale has a possible range of 0 to 23, with a midpoint of 11.5, the observed mean indicates that subjects, on average, tend toward an internal locus of control. The mean locus-of-control score for subjects classified as internals is 6.6, and the mean score for externals is 12.8. Cronbach's alpha for locus of control in the current study is 0.74, which is consistent with prior studies (e.g., Arney [1988] and Donnelly et al. [2000]—0.76 and 0.83, respectively).

The Effects of Audit Structure and Locus of Control on Job Performance

Hypothesis 1 predicts that internals at unstructured firms will perform better than internals at structured firms, and that externals at structured firms will perform better than externals at unstructured firms. We test this prediction using an ANOVA with supervisor-assessed job performance as the dependent variable, and audit structure and locus of control as dichotomous independent variables.[3] As shown in Table 3, the locus-of-control/structure interaction term is significant ($p < 0.01$). When we analyze simple main effects we find that, consistent with H1, internals receive higher supervisor-assessed performance evaluations at unstructured firms than do internals at structured firms (0.23 vs. −0.08, $p = 0.02$, one-tailed). Conversely, and also consistent with H1, externals at structured firms receive higher performance evaluations than do externals at unstructured firms (0.10 vs. −0.23, $p = 0.02$, one-tailed). Results are qualitatively unchanged when we: (1) use a secondary performance measure based on subjects' responses to a 14-item, self-assessed performance

[2] Thirty-seven participants have locus-of-control scores at the median. We classified these 37 participants as internals because this classification results in the most equal split possible and because the median score is below the mean score. Results are qualitatively identical when we exclude these 37 auditors from the analysis.

[3] When we repeat this and subsequent analyses using a regression model with locus of control as a continuous measure and structure as a 0,1 dummy variable, we obtain qualitatively identical results.

TABLE 2
Research Model and Descriptive Statistics for Operational Variables

Research Constructs	*Operational Measures*	*Possible (Observed) Range*	*Median (n[a])*	*Mean (Std. Dev.)*
Dependent Variable:				
Supervisor-Assessed Job Performance[b]	Average performance rating on two most recent audits			
	Firms with 4-point scales	1.0–4.0 (2.0–4.0)	3.0 (174)	3.1 (0.63)
	Firms with 5-point scales	1.0–5.0 (2.5–5.0)	4.0 (194)	4.0 (0.55)
Independent Variables:				
Locus of Control[c]	Number of external statements chosen from 23 internal/external statement pairs	0–23 (1–22)	9.0 (350)	9.4 (3.9)
Internal[c]	NA	0–9 (1–9)	7.0 (190)	6.6 (2.1)
External[c]	NA	10–23 (10–22)	12.0 (160)	12.8 (2.6)
Audit Structure	Subjects from two most and two least structured of the (former) Big 6 firms, based on Cushing and Loebbecke (1986), Prawitt (1995)	0/1 Variable	NA	NA

[a] In total, 375 participants responded. Each "n" reflects the number of subjects who responded to all of the items pertaining to each of the individual measures.

[b] The range for the supervisor-assessed performance measure differs across firms—two of the firms (one structured and one unstructured) use four-point scales; the other two firms use five-point scales. The ranges shown in the table represent the average of subjects' actual supervisor-assessed performance evaluations on their two most recently completed audit engagements, as reported by the subjects. We inverted the performance scores; thus, higher scores indicate better performance. For analysis reported in the text and in subsequent tables, we normalized the performance measure within firms. The normalized performance measure for all subjects has an observed range of −1.53 to 3.47.

[c] The locus-of-control entry provides descriptive statistics for the full range of the locus-of-control variable. Higher scores indicate a more external locus of control. "Internal" and "external" provide descriptive statistics for the two levels of the dichotomous locus-of-control variable employed in subsequent analyses. Thirty-seven participants with locus-of-control scores at the median are classified as internals because this classification results in the most equal split possible, and because the median score is below the mean score.

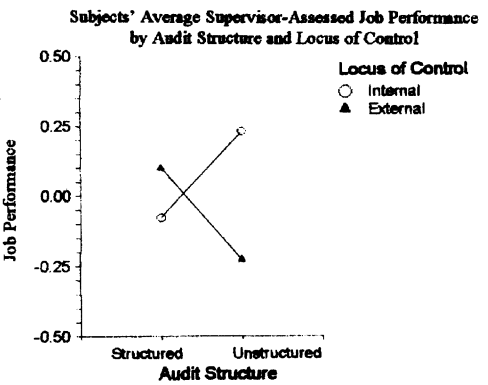
TABLE 3
The Effects of Audit Structure and Locus of Control on Supervisor-Assessed Job Performance

Panel A: Results of a 2 × 2 ANOVA of Audit Structure[a] and Locus of Control[b] on Supervisor-Assessed Job Performance[c]

Source of Variation	*df*	*SS*	*MS*	*F*	*p*
Audit structure	1	0.01	0.01	0.01	0.941
Locus of control	1	1.71	1.71	1.71	0.191
Locus of control × Audit structure	1	8.53	8.53	8.57	0.003
Error	340	338.83	1.00		
Total (adjusted)	344	349.10			

Panel B: Supervisor-Assessed Job Performance Mean Scores and Cell Sizes (Standard Errors)

Locus of Control	*Audit Structure*		
	Structured	*Unstructured*	*Totals*
Internal	−0.08	0.23	0.08
	92	94	186
	(0.10)	(0.10)	(0.07)
External	0.10	−0.23	−0.06
	80	78	158
	(0.11)	(0.11)	(0.08)
Totals	0.01	0.002	0.006
	172	172	344
	(0.08)	(0.08)	(NA)



[a] Audit structure has two levels: (1) structured, for the subjects working for the two most structured of the former Big 6 firms and (2) unstructured, for the subjects working for the two least structured of the former Big 6 firms, as identified by prior research (Cushing and Loebbecke 1986; Prawitt 1995).

[b] Locus of control has two levels: (1) internal, for subjects whose locus-of-control scores were less than or equal to the median score, and (2) external, for subjects whose locus-of-control scores were higher than the median score.

[c] We calculated the supervisor-assessed job performance measure using the average of subjects' actual supervisor-assessed performance evaluations on their two most recently completed audit engagements, as reported by the subjects. We then standardized the measure using the standard-normal transformation within firms to control for scale differences and for differences in average performance levels across firms. Thus, the scores in the table represent the average number of standard deviations above or below the mean performance level. Higher scores correspond to higher performance levels, and vice versa.

measure adapted from Rebele and Michaels (1990), and (2) add respondent experience as a covariate.[4,5]

For descriptive purposes, we also analyzed simple main effects within structure categories. Results indicate that within unstructured firms, internals perform at a higher level than externals (0.23 vs. −0.23, $p < 0.01$, two-tailed). The performance difference between internals and externals within structured firms is not significant (−0.08 vs. 0.10, $p = 0.26$, two-tailed).[6] These results suggest that auditor locus of control plays a more significant role in unstructured firms than in structured firms—an issue that could be explored by future research.

To further investigate the locus-of-control/structure interaction effect on performance, we cross-tabulated the data to indicate the proportions of externals performing above and below the median within each firm type. We repeated the analysis for internals. As shown in Table 4, results indicate that performance is not independent of structure in either the external or the internal locus-of-control group (Fisher's exact $p = 0.06$ and 0.09, respectively). Panel A shows that of 69 externals with *above-median* performance assessments, 59 percent are in structured firms, and only 41 percent are in unstructured firms. By contrast, of 89 externals with *below-median* performance assessments, only 44 percent are in structured firms, but 56 percent are in unstructured firms. Panel B shows that of 87 internals with *above-median* performance assessments, 56 percent are in unstructured firms, but only 44 percent are in structured firms. By contrast, of 99 internals with *below-median* performance assessments, only 45 percent are in unstructured firms, but 55 percent are in structured firms.

Because the proportion of externals and internals in structured vs. unstructured firms is approximately 50/50, the data indicate that externals are approximately 46 percent more likely to be classified as above-median performers in structured firms than they are in unstructured firms ([41 − 28]/28), and internals are approximately 29 percent more likely to be classified as above-median performers in unstructured firms than they are in structured firms ([49 − 38]/38).

V. SUMMARY AND CONCLUSION

Prior accounting research has shown that audit structure affects the amount of formalization and control imposed on auditors. In turn, prior research in psychology and organizational behavior indicates that internals adapt more effectively than do externals to situations that allow the individual more control, and vice versa. Integrating these two streams of research, this study examines whether congruence between auditors' locus of control and the work environments they face affects auditors' job performance. We find that auditors'

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[4] We repeated the test for a structure by locus-of-control interaction four times, each time excluding one of the four participating firms from the analysis. In each of the four tests, the interaction was significant at $p < 0.05$ in the expected direction, indicating that the results are not driven by a single firm in either structure category.

[5] We regressed the continuous locus-of-control measure against respondent experience within each structure category. Within unstructured firms, respondents with more experience tend to be more internally oriented ($p < 0.09$). Within structured firms, the regression coefficient is not significant ($p = 0.35$). We repeated this regression using subjects found in the outer quartiles of the continuous locus-of-control measure. The results are similar to those using all subjects, except that the relationship in unstructured firms is stronger ($p < 0.04$). Future research could further examine how and why locus of control changes with experience in unstructured, but not in structured, firms.

[6] We also conducted a within-firm analysis, comparing supervisor-assessed performance between internals and externals within each of the four firms. The results support the primary analysis. Although we found no significant differences in performance across locus-of-control categories in one of the structured firms, in the other structured firm, externals had significantly higher average performance assessments than did internals. In each of the unstructured firms, internals had significantly higher performance assessments on average than did externals.

TABLE 4
The Effects of Audit Structure and Locus of Control on Above- and Below-Median Supervisor-Assessed Job Performance[a] (Supplemental Analysis)

*Panel A: Cross-Tabulation for **Externals**[b]—Job Performance[c] × Audit Structure[d]*

Supervisor-Assessed Performance	*Audit Structure*		*Row Totals*
	Structured	*Unstructured*	
Below-median	39 (43.8%)	50 (56.2%)	89 (100%)
Above-median	41 (59.4%)	28 (40.6%)	69 (100%)
Column totals	80 (50.6%)	78 (49.4%)	158 (100%)

Fisher's Exact p = 0.06

*Panel B: Cross-Tabulation for **Internals**[b]—Job Performance[c] × Audit Structure[d]*

Supervisor-Assessed Performance	*Audit Structure*		*Row Totals*
	Structured	*Unstructured*	
Below-median	54 (54.5%)	45 (45.5%)	99 (100%)
Above-median	38 (43.7%)	49 (56.3%)	87 (100%)
Column totals	92 (49.5%)	94 (50.5%)	186 (100%)

Fisher's Exact p = 0.09

[a] We calculated the supervisor-assessed job performance measure using the average of subjects' actual supervisor-assessed performance evaluations on their two most recently completed audit engagements, as reported by the subjects. We then standardized the measure using the standard-normal transformation within firms to control for scale differences and for differences in average performance levels across firms. Higher scores correspond to higher performance levels, and vice versa.

[b] The terms "external" and "internal" refer to the subjects' locus of control. Locus of control has two levels: (1) internal, for subjects whose locus-of-control scores were less than or equal to the median score, and (2) external, for subjects whose locus-of-control scores were higher than the median score.

[c] One hundred fifty-six subjects providing responses to all relevant questions were classified above the performance median, and 188 were classified below the median. Because the performance measure is not continuous, a 50/50 split is not possible. However, the split does cleanly divide the subject group at the mean.

[d] Audit structure has two levels: (1) structured, for subjects working for the two most structured of the former Big 6 firms and (2) unstructured, for subjects working for the two least structured of the former Big 6 firms, as identified by prior research (Cushing and Loebbecke 1986; Prawitt 1995).

performance levels depend on the fit between audit structure and locus of control. Specifically, internals perform at higher levels at unstructured firms than at structured firms, and externals perform at higher levels at structured firms than at unstructured firms.[7]

Researchers investigating individual/environment congruence have long called for exogenous measures of the work environment to rule out the potential alternative explanation

[7] As indicated above, subjects reported their supervisor-assessed performance evaluations in response to the research instrument. Our inability to directly observe the evaluations represents a potential limitation in interpreting our findings. However, the interactive nature of our results reduces the plausibility of possible alternative explanations.

that subjects' assessments of the work environment are affected by, and are thus correlated with, their personal characteristics (e.g., Pervin 1968). This is the first study to demonstrate the moderating effects of locus of control using an exogenous, firm-level measure of the work environment, rather than an endogenous, subject-assessed measure.

This study's results are relevant to accounting firms seeking to improve their individual hiring decisions, and to individual auditors seeking an environment in which they can maximize the likelihood of good performance. These results may also help inform audit firms' reengineering efforts, because these initiatives may affect their levels of audit structure and thus the way their audit approaches interact with their employees' personal characteristics.

One might interpret this study as lending support to psychology-based screening in hiring decisions, but on the other hand, hiring auditors who do not fit the firm's work environment could add to the firm's dynamism by countering the potentially implosive force of insulated organizational culture (e.g., Mintzberg 1989). Given that human resources represent audit firms' most significant input, the ultimate effect of including or excluding workers who do not fit the particular firm's work environment is important for both practice and research.

Although the evidence is clear that auditors at structured and unstructured firms experience significantly different work environments, this study examines a limited number of work-environment characteristics. Future research could develop and test expectations regarding other differences in work environments related to firm structure (e.g., how structure affects auditors' work environments at different levels of responsibility). Another important question for future research is why the impact of an appropriate fit between structure and locus of control is more pronounced in unstructured than in structured firms.

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