The impact of authentic leadership and ethical firm culture on auditor behavior

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ABSTRACT

Unprofessional behavior has resulted in several high-profile financial scandals and business failures. Many blamed external auditors for failing to detect and/or report errors and fraud in financial reports. Leaders within major audit firms are urged to foster more ethical firm environments as a means of inhibiting dysfunctional auditor behaviors (DAB) s. This advice is based on two assumptions: (1) auditor behavior is one element of audit quality and (2) the behavior of employees is influenced by the ethical culture created by leaders.

Little empirical evidence exists, however, about audit firm cultures, and there is even less research on how leadership and firm culture impacts audit quality. This study was designed to examine subordinates' perceptions of leaders within the audit profession and the leaders' likely impact on firm culture and auditor behavior. Analysis of surveys from 120 in-charge auditors suggest that most firm leaders exhibit high levels of the constructs (transparency, ethical perspective, self-awareness, balanced processing) comprising authentic leadership. Further, firm cultures were perceived to be highly ethical. These measures of authentic leadership and ethical organizational culture were found to be negatively correlated, at a statistically significant level, with in-charge auditors' perceptions of the frequency of DAB.

This study is important because it helps to explain factors impacting variance in dysfunctional auditor behavior. The findings from this research suggest that when subordinates perceive their leadership as authentic and view themselves as part of an ethical firm culture, a decline in the frequency of dysfunctional auditor behavior follows.

Keywords: Organizational culture, Auditing behavior, Authentic leadership, Dysfunctional Auditor Behavior, Ethical culture

INTRODUCTION

Note: Much of the contemporary leadership literature emphasizes the notion that leadership is not a synonym for positional authority. In the auditing profession, and also in the literature on authentic leadership, however, leadership and positional authority are closely aligned. Consequently, in this paper, the terms leader and leadership are associated with those who have been formally designated as the leadership in auditing firms (i.e., managers and partners).

Leadership within auditing firms (i.e., certified public accounting firms that conduct external audits) has been questioned over the past decade due to the number of business scandals and failures. The financial statement auditing profession, long considered the guardians for investors, creditors and other stakeholders in the financial reporting arena has, as in the past, been perceived to have failed in its guardian tasks (Dang, Brown and McCullough, 2011; Rabinowitz,1996; Knutson, 1994). Rockness and Rockness (2005) noted that many, including all of the world's largest, auditing firms have issued unqualified—or clean—opinions on a number of grossly inaccurate, if not fraudulent, financial statements. This study attempts to reveal the effect the authenticity of audit firm leadership may impact the culture of the firms and auditor behaviors which might lead to these types of audit failures.

Speaking of the financial scandals that plagued the early years of this century, Securities and Exchange Commission (SEC) chairman, William Donaldson, suggested that while most of corporate America was run by honest and dedicated people, events led standards to erode among "the very best …even… the gatekeepers [i.e., the auditors] charged with ensuring legal and accounting integrity" (Donaldson, 2003). Donaldson implied that certain individuals in both corporations and in public accounting were swayed by their professional environments to act unethically and their actions negatively impacted both their organizations and society.

Donaldson's (2003) comments have been echoed by others. Sama and Shoaf (2008) noted when Arthur Andersen LLP was indicted for its role in the Enron case, that even though many within the firm had never heard of Enron, the entire firm's culture was under indictment. Wyatt (2004) suggested that the cultures of the firms—such as Andersen—had changed from one of professionalism to one of greed and urged a move back, a change toward a professional culture.

Confirming Wyatt's (2004) comments, a significant body of literature on organizational change, suggests that leadership is key to organizational culture development and change (Kilmann, 1985; Kotter and Heskett, 1992; Schein, 1994; Scott and Bruce, 1994; Bass, 1998). These researchers and theorists uniformly suggest that leaders impact culture and that the organization's survival depends upon their effectiveness.

In the auditing profession, the call for change specifically related to the need for improved quality of the auditor's deliverable, the audit opinion, and the need for improving public confidence in that opinion. As such, most of the research in audit firm leadership has focused on audit quality, however the majority this literature (e.g., Kelley and Margheim, 1990; Sweeney and Pierce, 2006) has used junior-level supervisors (e.g., audit seniors) rather than those "at the top" when examining the effect leader actions have on subordinates. In this study, these audit seniors help inform our understanding of the upper-level managers and partners who are in positions of authority within the audit firm and are generally accepted as those who do establish the firms' cultures.

According to Jenkins, Deis, Bedard, and Curtis (2008), the public accounting profession has struggled to define it roles and responsibilities to the public and that these roles and responsibilities form the basis of the firms' cultural identities. They suggest, however, that little empirical evidence exists about firm cultures due primarily to the "proprietary nature of the construct" (p. 49) but that there is a linkage between culture and audit quality which is important to both the public accounting industry regulators and the public. In addition to examining their perceptions of the authenticity of their leaders, one of the purposes of this study was to determine the audit seniors' perceptions of firm culture.

Finally, given the volume of literature suggesting a link between leadership, culture, and behavior (e.g., Wyatt, 2004; Margheim and Pany, 1986), and the expressed need for improved audit quality, this study also sought to examine the relationship between one measure of audit quality, dysfunctional auditor behavior, and audit seniors' perceptions of their firms' ethical culture and authentic leadership. Dysfunctional auditor behavior has been used in prior studies (e.g., Kelley and Margheim, 1990; Otley and Pierce, 1996) to partially measure audit quality. Specifically, the behaviors under review in this study are behaviors referred to as audit quality reduction acts or behaviors. According to Herrbach (2001), auditor actions that inappropriately reduce evidence-gathering effectiveness threaten audit quality or damage the profession's reputation.

LITERATURE AND HYPOTHESES

Authentic Leadership Theory

The ethical nature of leader behavior in auditing is an important area of research, given the profession's two-master structure: auditing firms are hired by clients and paid by clients, but the firms are responsible to perform their duties in the interest of the decision-making public, not in the interests of their clients. As such, audit firm leaders are faced with looking out for the best interests of the audit firm while balancing the interests of both their clients (who pay for and retain their services) and the public they are engaged to protect. Thus, this study examined the audit seniors' perceptions of their leaders through an ethics-based framework: that of the authentic leader.

Gardner, Avolio, Luthans, May, and Walumbwa (2005) indicate that the recent ethical problems in business are indicative of the willingness of people to misplace their trust in untrustworthy leaders. They also theorized and empirically researched the idea, though, that there are also "lower profile but genuine leaders who lead by example in fostering healthy ethical climates characterized by transparency, trust, integrity, and high moral standards" (p. 344) and that these authentic leaders are both true to themselves and lead others to also achieve authenticity. Gardner, et al. hypothesize that through the development of such authentic leaders and authentic followers, positive ethical climates can be created.

Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008) provide a definition of authentic leadership which more fully reflects the underlying dimensions of the construct:

> Specifically, we define authentic leadership as a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development. (p. 94)

These four constructs (self-awareness; internalized moral perspective; balanced processing of information; and relational transparency) provide the framework for Authentic Leadership Theory (ALT). The constructs were based in Kernis' (2003) model of authenticity. Kernis defines authenticity as "unobstructed operation of one's true, or core, self in one's daily enterprise" (p. 13).

Avolio, Gardner, Walumbwa, Luthans, and May (2004) assert that authentic leaders know who they are, know what they believe and value, and act upon this knowledge while maintaining a transparency with others. Yukl (2002) notes that leadership is a process of social interaction—the interaction between leader and follower—and this study is based upon the followers' (in this case, the audit seniors') perceptions of their leaders. The extent to which these leaders are transparent and the followers believe that they can see the real leader will, according to ALT, impact the relationship between the two.

Considering the relational aspects of ALT, Chan, Hannah and Gardner (2005) assert that it is not possible to be authentically immoral. Cooper, Scandura, and Schriesheim (2005) note that the developers of ALT appear to have a normative goal in mind; they want to "train and develop leaders who will proactively foster positive environments and conduct business in an ethical, socially responsible manner" (p. 477). If this construct of the theory is accurate, it is precisely the model against which we should be measuring auditing firm leadership. Years before ALT had a name, researchers were supporting the idea behind it: Otley and Pierce (1996) concluded that audit firms can influence the behavior of its staff through hiring, training and retaining managers and partners who exhibit considerate and supporting leader behavior. As such, the following hypothesis (with sub-hypotheses) were developed regarding authentic leadership and auditor behaviors:

H1: Perceptions of authentic leadership are negatively related to the frequency of dysfunctional audit behaviors.

H1a: Transparency component of authentic leadership is negatively related to the frequency of dysfunctional audit behaviors.

H1b: Moral/ethical component of authentic leadership is negatively related to the frequency of dysfunctional audit behaviors.

H1c: Balanced processing component of authentic leadership is negatively related to the frequency of dysfunctional audit behaviors.

H1d: Self-Awareness component of authentic leadership is negatively related to the frequency of dysfunctional audit behaviors.

Ethical firm culture

Hood and Koberg (1991) state that culture establishes recognized and accepted bases for decision making. Noted business consultant Mark Clemente (2003) said, "Corporate culture is one of those amorphous business concepts that leaders too often neglect because of its sheer intangibility. Yet culture—effective culture—is arguably the most valuable intangible asset a company can own" (para.1). This research looked at the impact that audit seniors' perceptions of their firm's culture, specifically the ethical elements within the culture, has on the behavior of auditors.

Schein (1992, 1996, 2004), a prominent researcher and theorist in organizational culture, provides a formal definition of culture:

> A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way you perceive, think, and feel in relation to those problems. (2004, p. 17)

Schein suggests that issues that challenge culture formation and survival include both adaptation to changing external environments and "integration of its internal processes to ensure the capacity to continue to survive and adapt" (p. 87).

Schein (2004) further asserts that the leader is responsible for external boundary management which is essential to survival. To implement this management, the organization must have a mission, a strategy and a means of implementing the goals derived from that strategy. The leader, according to Schein, must have some measurement standard to use to assess how well the organization achieves its goals, and finally, must have some way of correcting or repairing strategies if goals are not being met. Given the need for auditors to act in a moral and ethical manner as they engage in the audit process, the firms' leaders should be exemplifying the moral and ethical standards that would promote a goal of quality audits—and makes this the basis for the firm's organizational culture.

Considering the effect the perceptions of the moral and ethical component of a leader's authenticity have on perceptions of ethical firm culture and how these perceptions of ethical firm culture may influence the behaviors of auditors is the focus of the study's following three hypotheses, as illustrated in Figure 1:

H2: Perceptions of authentic leadership are positively related to perceptions of firm cultures as ethical.

H3: Perceptions of firm ethical culture are negatively related to the frequency of dysfunctional audit behaviors.

H4: The relationship between perceptions of the moral/ethical component of authentic leadership and the frequency of dysfunctional audit behaviors is mediated by perceptions of firm ethical culture.

Individual auditor ethical positions and other personal characteristics

While the audit seniors' perceptions of their firm leaders and firm culture is hypothesized to impact auditor behavior, prior research (e.g., Barnett and Karson, 1989) has shown personal characteristics to have an impact on individual behaviors. Gibson and Frakes (1997) noted that the accounting profession began to pay attention to personal ethics because of the investigation and criticism of the profession by Congress and other professional organizations. Researchers in accounting ethics (e.g., Douglas, Davidson, and Schwartz, 2001; Shaub, Finn, and Munter, 1993) have used Forsyth's (1980, 1992) Ethical Position Questionnaire (EPQ) to examine the effects of personal ethics on decisions applicable to the profession, finding that there was a difference in behaviors based on ethical positioning.

In addition to ethical positioning, Ponemon (1992) hypothesized that selected personal characteristics would result in different behaviors of auditors. Using a triangulated research design of cross-sectional, longitudinal and experimental methods, Ponemon found that leaders of accounting firms set the tone of their organizations by, as earlier research (e.g., Ponemon, 1988) had shown, promoting those whose personal attributes more closely reflected the leaders' perceptions and moral reasoning development. Ponemon's findings propose that there is a

correlation between the organizational culture created by the leaders of the accounting firms and the subordinates' personal characteristics and decision-making styles.

The auditor's ethical positions, measured using the EPQ, and selected personal characteristics and demographics are added to the previously hypothesized effect between authentic leadership style and a firm's ethical culture. The moderating effects the audit senior's ethical reasoning position and other personal characteristics have on the relationship between ethical culture and DAB frequency is also illustrated in Figure 1. Two further hypotheses are supported by this model:

H6: The variance in the frequency of dysfunctional audit behavior related to firms' ethical cultures will be moderated by ethical reasoning positions of the audit seniors.

H7: The variance in the frequency of dysfunctional audit behavior related to firms' ethical cultures will be moderated by selected audit senior characteristics (e.g., sex, age, ethical training experiences).

METHOD AND PRELIMINARY ANALYSIS

Data Collection

Measures for the constructs of authentic leadership, ethical firm culture, and frequency of DAB were gathered from 120 practicing senior auditors representing the Big Four firms, other international firms, large regional firms, and local firms. Audit seniors were chosen as the subjects for this study because they would likely have been with their firm two to five years, long enough to have gained an individual perception of the firm's leadership and firm culture, and yet—while responsible for supervising staff auditors—are not generally viewed as part of the firm's leadership.

An email was sent to 436 audit seniors with guidelines for the study and a link to an encrypted online survey at SurveyMonkey.com. Responses were gathered over a three-month period with 156 surveys returned (113 were submitted after the first email and the remaining 43 submitted after a second reminder email was sent six weeks later). After excluding those with missing data or completed by those holding positions other than audit senior, 120 useable surveys were analyzed. While emails were sent to 436 individuals, several of these individuals indicated that they forwarded the email on to colleagues. As such, an exact response rate is non-determinable.

The questionnaire requested that participants not identify themselves or their firms by name. They were, however, asked to identify their firm size by category (Big Four; other international/national; regional; local) to facilitate the analysis process. This procedure simultaneously provided anonymity for participants and helped minimize the likelihood of a social desirability response bias, the tendency for participants to answer questions in a manner that presents themselves in the "best possible light" (Fisher, 1993). Having the instrument completed and returned anonymously and providing assurance that no single response or firm-specific responses would, or even could, be shared with any member of a firm's leadership reduced the potential for this type of measurement error.

Even when answering anonymously, however, some of the questions included on the survey can influence the findings of most survey-based ethics studies because participants will often try to provide ethically desirable answers. Robertson and Anderson (1993) contend that, if an individual can project him or herself into a situation—and certainly, in this study, the auditors

could do so when answering questions relative to auditor behavior—he or she may provide socially desirable responses. Earlier work in this field (Arnold and Ponemon, 1991; Fisher, 1993) suggests that asking participants to answer questions from the perspective of another or third person can reduce socially desirability response bias and provide a reliable measure of the participant's beliefs. The questions and vignettes used to measure auditor behavior in the instrument were all posed in the third person.

Of the 120 participants in the study, the majority (58.3 percent) work for one of the Big Four firms, and the remainder work for other international/national firms and regional firms (19.2 percent and 22..5 percent respectively). See Table 1 for all demographic data. Most (63.3 percent) of the respondents were female and this percentage is representative of the current auditing profession population (Number of Female Accountants Increasing, 2006; American Institute of Certified Public Accountants (AICPA), 2008). Given that this study gathered data from audit seniors, the age and length of time in public accounting of the participants are consistent with those expected of audit seniors.

It should be noted that because none of the prior research reviewed for this study used audit seniors exclusively for their sample, comparison of this study's participant pool to prior studies was not possible. One study, however, conducted by Coram, Glavovi, Ng, and Woodliff (2008), asked partners at CPA firms to distribute their survey to professionals in their firms with five or less years of experience. Their respondents were 67 percent male (33 percent female), however, the authors do not discuss the impact that gender had on their findings or if their sample was representative of the auditing population. Further, their method of distribution—selection of participants by partners, who, according to the AICPA (2008) were 81 percent male in 2004—may have biased their sample. No other demographic information was provided for their participants.

Measures

The survey instrument used for the study was comprised of existing survey instruments designed to measure the variables in question and a set of original questions developed for the study (See Appendices A – D). Authentic leadership was measured using the recently developed and validated Authentic Leadership Questionnaire (ALQ) (Avolio, Gardner, & Walumbwa, 2007; Walumbwa et al., 2008). Organizational Ethical Culture was measured by using Hunt, Chonko and Wood's (1989) Corporate Ethical Values Scale (CEV). The Ethics Position Questionnaire (EPQ) developed by Forsyth (1980) was used to gather data regarding the personal ethical orientation of the surveyed auditors. Table 2 shows reliability coefficients ranging from .78 to .89 for each of the constructs measured by the ALQ, CEV, and EPQ. Generally, reliability coefficients of 0.70 or more are considered good (Nunnally, 1967), suggesting that the data used for this study are reliable. Frequency of DAB was measured by responses to questions and vignettes created for this study based on conversations with practicing auditors and prior research instruments used by Kelley and Margheim (1990).

ALQ

The ALQ is "a theory-driven leadership survey instrument designed to measure the components that have been conceptualized as comprising authentic leadership" (Avolio, et al.,

2007). Selected questions from the ALQ are presented in Appendix A. Avolio, et al. assert that the four scales comprising the ALQ address certain questions:

> 1) Self Awareness: To what degree is the leader aware of his or her strengths, limitations, how others see him or her and how the leader impacts others?
> 2) Transparency: To what degree does the leader reinforce a level of openness with others that provides them with an opportunity to be forthcoming with their ideas, challenges and opinions?
> 3) Ethical/Moral: To what degree does the leader set a high standard for moral and ethical conduct?
> 4) Balanced Processing: To what degree does the leader solicit sufficient opinions and viewpoints prior to making important decisions? (Overview)

Although Walumbwa, et al. (2008) cautions that while the ALQ has the same limitations as all leadership measures (see Avolio et al., 2007), it was found to be, statistically, both a valid and a reliable measure of authentic leadership.

CEV

The measure of corporate ethical values used for this study, the Corporate Ethical Values Scale (CEV), presented in Appendix B, was developed by Hunt, Chonko and Wood (1989) to determine perceptions about three broad-based variables:

> (1) the extent to which employees perceive that managers are acting ethically in their organization (see item 1 [of the CEV scale]), (2) the extent to which employees perceive that managers are concerned about the issues of ethics in their organization (see item 3), and (3) the extent to which employees perceive that ethical (unethical) behavior is rewarded (punished) in their organization (see items 2, 4, and 5). (p. 83 – 84).

Hunt, et al. note that the instrument measures the "composite of the individual ethical values of managers and both the formal and informal policies on ethics of the organization" (p. 79). Further research (e.g., Hunt and Vitell, 1986; 1993; Finn, Chonko and Hunt, 1988; Singhapakdi, Vitell, and Franke, 1999; Douglas, Davison, and Schwartz, 2001; Paolillo and Vitell, 2002; Valentine & Barnett, 2002) has shown that the scale can be used effectively to measure the ethical culture of a firm.

EPQ

The EPQ , presented in Appendix C, validated in a number of prior studies (Forsyth, 1980; Leary, Knight, and Barnes, 1986; Forsyth, 1992; Shaub, Finn & Munter, 1993; Lawrence & Shaub, 1997; Elias, 2002), provides a measure of the ethical orientation constructs idealism and relativism. Auditors were asked to indicate their level of agreement on a five-point Likert scale to the EPQ's 20 attitude statements, the first 10 measuring their level of idealism and the second 10 their level of relativism. The mean score of the auditors' responses to each of the idealism items and the mean score of their responses to the relativism statements were calculated.

Although Forsyth (1980) hypothesized that the relationship between ethical ideology and behavior was "tenuous" (p. 182), Barnett, et al. (1998), however, suggest that it is important to consider the influence of personal moral philosophy in empirical business ethics studies. As such, the EPQ was included in the survey to gather measures to test the possible relationships

between the audit seniors' ethical ideology and their beliefs regarding the frequency of dysfunctional auditor behaviors.

DAB

The next section of the study instrument asked the participants to indicate the frequency of selected dysfunctional behaviors among audit seniors at their firm. The questions created for this section of the survey were based, in large part, on a questionnaire used in previously published research (Kelley and Margheim, 1990) and are presented in Appendix D.

In addition to the questions related to the frequency of dysfunctional behavior among audit seniors, two vignettes with frequency-based response items were included. After comparing business ethics studies, Cavanaugh and Fritzsche (1985) determined that vignettes provide significant advantages over other instruments when investigating an individual's ethical principles and ethical behavior. The vignettes were crafted using a recognized technique for validity assessment: they were developed based upon information received from practicing auditors and from the literature, presented to a panel of practicing auditors for comments and review, and pretested on subjects similar to those that comprised the sample population (Cavanaugh and Fritzsche, 1985). Further, the vignettes' variables (under-reporting of time and premature sign-off) have been tested in other scholarly research (e.g., Kelley and Margheim, 1990, 2002; Otley and Pierce, 1996; Shapeerro, Koh and Killough, 2008). Table 3 provides a definition or explanation of each of the 11 dysfunctional auditor behaviors examined in this study.

FINDINGS

The data collected for this study were examined through the use of descriptive statistics, correlation, reliability measures, and regression analysis. Table 3 contains the mean and standard deviation (SD) for the independent variables and the dependent variables of the study. All items in the table were measured on a 5-point Likert-type scale with the exception of ethical firm culture (CEV) which was measured on a 7-point Likert-type scale. Because the scales were bounded by different measures, for ease of comparison, the means have been converted to percentages in the final column of the table. The standard deviations (SD) were bounded between .66 and .95 for all items (both independent and dependent variables' response items) except PSO-Vignette (1.06), suggesting overall coherence in the responses.

Authentic leadership

Means for this study's participants' perceptions of the four constructs of authentic leadership are presented in Table 4 in order of descending strength of the mean measure. One of the chief emphases of this study was to determine the effect perceptions of leaders' authenticity—especially as it relates to their moral and ethical perspective—have on perceptions of the firm's ethical climate and on behavior of subordinates. As indicated in this table, the moral and ethical perspective of the CPA firm leadership is believed to be high (i.e., mean of 3.88 out of 5.00) and transparency even higher. The other two measures were well above the median measure of 3.0, indicating that the participants in this study, on average, perceived their firm's leaders to exhibit authentic leader qualities. Looking at the means in percentage form indicates that if the audit seniors were grading their firms' leaders on a 100 point scale, each of the

constructs would have received passing marks: transparency (83.6), moral/ethical (77.6), balanced processing (74), and self-awareness (70.8).

Corporate Ethical Value

With a mean score of 6.20 out of 7.00, the participants found, on average, their firms' cultures' to be highly ethical. Continuing with the grading analogy, these respondents would have given their firms' ethical cultures a grade of 88.57 on a 100 point scale.

Audit seniors' ethical positions

Two independent variables reflect the auditor's identified ethical position (orientation) using Forsyth's (1980) EPQ scale: idealism and relativism. The mean idealism score for the participants was 3.87, compared to the mean relativism score of 2.55, indicating that the participants were more idealistic than relativistic as it is defined for this study.

Dysfunctional auditor behaviors

Finally, Table 4 presents the means and standard deviations for the dysfunctional auditor behaviors. The dependent variables used in this study were divided into three types, those related to under-reporting of time worked on an audit engagement; those related to premature sign-off of audit procedures; and other dysfunctional behaviors. Each variable is discussed in this section, along with relevant frequencies and other statistics. Table 5 provides the actual and percentage response rates to the dependent DAB variables.

Under-reporting of time worked on an engagement. Under-reporting of time (URT) has been researched in depth (e.g., Margheim and Pany, 1986; Kelley and Margheim, 1990, 2002; Margheim, Kelley and Pattison, 2005; Coram, Glavovic, and Woodliff, 2008; Shapeerro, Koh, and Killough, 2008) and for this study, three URT response items were included in the survey (see Table 3). From this frequency distribution, we determine that 78.3 percent of the participants believed that typical audit seniors will under-report time at least sometimes, and 10 percent thought it was practiced nearly always. Frequencies shown for URT-Staff indicate that 56.7 percent of the participants believed audit seniors allow staff to under-report at a frequency of sometimes or more. These numbers confirm prior findings (e.g., Margheim and Pany, 1986; Shapeerro, Koh, and Killough, 2008) that URT has been and continues to be an issue for the audit profession.

In order to validate the responses to URT-InCharge, a vignette was created that contained one response item (URT-Vignette) asking about the frequency of an auditor under-reporting time. Response rates for the vignette approach to assessing the prevalence of under-reporting in a respondent's firm were similar to the responses to the direct questions associated with this DAB. In the scenario, 63.2 percent of the participants indicated that the audit senior would under-report time at least sometimes. This response rate is also consistent with prior studies (e.g., Lightner, et al., 1982; Margheim and Kelley, 1990; Margheim, Kelley, and Pattison, 2005) that have shown time-budget pressure to have a significant influence on under-reporting time.

Premature sign-off of audit procedures. Table 5 also provides the frequencies associated with the premature sign-off (PSO) dependent variables. These responses seem to imply that audit seniors believed that their peers engage in PSO much less frequently than they under-report time. For instance, only 20 percent of the participants indicated that a typical audit senior at their firm would prematurely sign-off on audit work, compared to 78.3 percent under-reporting time

worked on an audit. Further, where participants thought 56.7 percent of in-charge would allow staff to under-report at least sometimes, only 17.5 percent thought the same of allowing staff to prematurely sign-off.

Responses to PSO-Vignette were not consistent with the first two response items associated with premature sign-off. The indication of higher frequency of PSO-Vignette may be due to the auditors failing to perceive the vignette's situation as an example of PSO as the scenario had an audit manager specifying that the audit senior signoff on the unperformed work. Alternatively, it could be that the auditors thought that their peers would be more inclined to prematurely sign-off if they were following a superior's dictate.

Other dysfunctional behaviors. As noted in this Table 5, over 40 percent of the participants believed that their peers would, at least sometimes, superficially review documents (Poor Doc. Review), accept weak client explanations (Weak Explain), and fail to adequately research accounting principles when knowledge was limited (Fail to Research). The remaining two dysfunctional behaviors, the reduction of work below what would be considered reasonable (Reduce Work) and shifting time to a different charge code (Charge Other Code), show the lowest instances of occurrence according to the participants. Given the differing nature of these DABs, it is not unexpected there would be some variation in frequencies. As noted in prior research (e.g., Ponemon, 1990; Lightner, Adams, and Lightner, 1982), perceptions regarding the ethical component of each of these behaviors could have some influence over the responses.

ANALYSIS

Results from the bivariate tests of correlation for Hypothesis1 are presented in Table 6. This hypothesis proposed that there is a direct relationship between the measured components of authentic leadership and the frequency of DABs. As noted, there was a significant negative correlation between all measures of authentic leadership and DAB tested with few exceptions. For most that do not show significance at the .01 or .05 level, correlation is significant at the 90 percent confidence level. These correlation findings suggest that as the audit seniors' perceptions of their leaders' authenticity increased, they believed fewer instances of dysfunctional auditor behavior occurred.

As illustrated in Table 6, the moral/ethical component of authentic leadership was found to be significantly negatively correlated to the frequency of occurrence of all of the tested dysfunctional auditor behaviors. Both transparency and balanced processing were significantly negatively correlated with all but two DABs. Self-Awareness is the authentic leadership component that was least correlated with the DABs. It failed to be significantly correlated with five of the dependent variables.

The four components of authenticity were then included as independent variables in regression models using each of the DABs as dependent variables. As shown in Table 8 (Model 2) the regressions explained between 6 percent and 21 percent of the variance in the various DABs and the model was significant at the .05 level for six of the DABs, at the .01 level for three DABs, and not significant for the remaining two.

The lower R-square values were, to some extent, expected. Prior research (e.g., Kelley and Margheim, 1990) has shown that other factors, such as time budget pressure, explain most of the variation in dysfunctional auditor behaviors. This study was aimed at finding how, if at all, authentic leadership and ethical culture relate to auditor behavior. These findings suggest that perceptions of leadership also help explain variations in auditor's dysfunctional behavior.

Authentic leadership and ethical firm culture: Table 6 further shows that there was significant positive correlation between all measures of authentic leadership and CEV, supporting Hypothesis 2. This correlation is consistent with literature (e.g, Schein, 2004) suggesting that perceptions of leadership will be related to perceptions of corporate culture. ALT is a relatively new theory of leadership and the findings imply that leaders within the CPA firms were perceived to have traits of authenticity as defined by the theory, and that this perception may translate into perceptions of ethical firm cultures.

Ethical firm culture and DAB: Hypothesis 3 suggests a negative relationship between the audit seniors' perceptions of their firms as ethical and the instances of DAB. Table 5 shows that all11 DABs studied were statistically negatively correlated with the auditors' CEV scores, providing support for the hypothesis. Simple regression models were run using ethical firm culture (measured by CEV) as the independent variable and the 11 DABs tested by this study as dependent variables. As reported in Table 7, two of the models have an R-square above .20, indicating that the perception of an ethical firm culture may account for at least 20 percent of the variance in (reduction in) the auditors' willingness to accept weak client explanations and to reduce work below reasonable levels.

Mediation effect of ethical firm culture on authentic leadership's relationship with DAB. Because work conducted by Schein (2004) and others (e.g., Douglas, Davison, and Schwartz, 2001) suggests that an organization's leadership influences its culture which, in turn, influences the behavior of subordinates within the organization, Hypothesis 4 was developed and tested. This hypothesis suggests that DAB will be mediated by the change in perceptions of a firm's ethical culture that results from audit seniors' perceptions of the authenticity of their firm's leaders.

To test for this mediation, a series of regression models were run as suggested by Judd and Kenny (1981b) and discussed by Barron and Kenny (1986). First, according to Judd and Kenny's mediation tests, the components of authentic leadership must affect CEV. As shown in Table 6, the four components of authentic leadership and CEV are all significantly statistically related with correlation coefficients ranging from .38 to .63. Next, the components of authentic leadership must affect DAB. As shown in Table 6 and discussed previously, the majority of the DABs were impacted at a significant level by the four components of authentic leadership.

Finally, Barron and Kenny (1986) note that a model should be run regressing the dependent variable on both the independent variable and the mediator variable. Model 3 in Table 8 reports the results of this regression analysis. Barron and Kenny note that, if independent variable "causes" the mediator, these variables will be subject to multicollinearity. As such, the inclusion of the mediator in the model should reduce the power of the independent variable on the dependent variable in the regression analysis. As shown in Table 8, Model 3, there were only five of 44 possible correlations that did not result in reduced power of one of the components of authentic leadership when CEV is added to the model and only one where significance of the individual component increased. In the regression model for URT-Staff, the significance of the relationship with the transparency component increased, although the power of the coefficient decreased with the inclusion of CEV in the model. These findings support Hypothesis 4, which suggests that authentic leadership impacts ethical culture and the firm's ethical culture mediates the dysfunctional behavior of the audit seniors.

Auditor characteristics and DAB: Using bivariate test of correlation to determine the degree of correlation among the continuous variables of idealism and relativism and DAB, only

minimal support for Hypothesis 4 was found. None of the 11 DABs were significantly correlated with relativism. Idealism was significantly negatively correlated with only three DABs. These findings reveal only a minor correlation between the constructs of ethical position and dysfunctional audit behavior. Due to the limited correlations found in the data to exist between the participants' ethical positions and frequency of DAB, further analysis was not conducted on these relationships.

Further, there was limited support for Hypothesis 5. Correlation between each of the 11 dysfunctional behaviors under review and selected auditor characteristics (firm type, age, sex, state educated, licensed as a CPA, level of college business ethics coursework, and level of college non-business ethics coursework), was tested and only six significant correlations were found in a table of 88 possible correlations. It can be concluded, as none of the correlations are consistent across dysfunctional behavior or auditor characteristics, that the auditors' characteristics have minor influence on auditor behavior. Again, due to the limited correlations, these relationships were not subjected to further analysis.

When these auditor characteristics were employed as moderating variables on the effect ethical firm culture on DAB, the results were similar. Regressions were run with each of the 11 DABs selected as dependent variables, CEV selected as the independent variable, and idealism and relativism added as co-variants. With two minor exceptions, no significance differences were made to the models by adding these co-variants. While these two exceptions provide limited support for Hypothesis 5, due to the inconsistent modification across all DABs, no inference should be made from this support. These findings are consistent with earlier research (e.g., Forsyth, 1980; Douglas, et al., 2001) that shows limited relation between ethical reasoning position and behavior.

Hypothesis 6 was associated with the modification of the model that regresses the various DABS on CEV, however, in this model the co-variants were auditor characteristics. The co-variants tested in these models included the audit seniors': firm type; sex; years in auditing profession; age; state where received higher education; CPA license status; college business ethics course experience; and college non-business ethics course experience.

These characteristics were examined for correlation with each of the 11 DABs and limited correlations were found. Using regression, the impact that auditor characteristics had in modifying the relationship between perceptions of ethical firm culture (CEV) and frequency of dysfunctional behavior of auditors was tested. Although there were limited cases of improved significance of the relationship by modifying the model with the auditors' characteristics, there was no consistency in the results. For instance, while the auditors' sex and licensing as a CPA improved the model for the regression of CEV on URT-InCharge (p value changed from .01 to .00, and R-square moved from .05 to .20), sex had no effect on any other model and CPA only slightly modified one other model (when URT-Vignette was the dependent variable). Again, there is minimal support for Hypothesis 7; however, because of the inconsistency in the findings, no assumptions should be made regarding the impact of auditor characteristics on the relationship between ethical firm culture and auditor behavior.

SUMMARY, LIMITATION, AND SUGGESTIONS FOR FUTURE RESEARCH

The purpose of this study was to explore the relationships among authentic leadership, ethical firm culture, personal auditor characteristics—including ethical position—and dysfunctional auditor behavior. The findings support the mediation of perceptions of authenticity

in leaders on the auditors' perception of ethical firm culture and on the auditors' instances of dysfunctional behaviors. The result provide further support that the four constructs of authentic leadership, whether taken individually or in combination, have influence over the employee's perception of the ethical content of a firm's organizational culture.

Further, the findings related to ethical firm culture support work of researchers such as Schein (2004) who have suggested that the underlying values and beliefs of an organization's culture may influence the behavior of its individual members. However, the study offers only minimal support for the effect an auditor's ethical position might have on their audit behavior and even less support for selected demographic characteristic's impact on behavioral decisions. As such, the findings from this study underscore the importance of leadership and culture, and the relative unimportance of many individual characteristics, to DAB. This latter finding is in contrast to the findings of other researchers (e.g., Brief, Dukerich and Doran, 1991; Premeaux, 2004; Windsor and Ashkanasy, 1996;) who have studied the impact of individual attributes on behavior. Further research should be conducted to confirm this study's findings.

One of the study's primary limitations is that the observation and measurement of ethics—whether at the individual or organizational level—is difficult. The data were collected by self-report; however, questions were asked in third person (typical audit senior) rather than in first person to mitigate social-desirability bias. Additionally, cross-sectional analysis was used and this method does not support conclusions regarding causality, nor does it allow for generalizability outside of the subject group. To mitigate this latter limitation, the instrument was distributed to a wide sub-set of the CPA firm community—to audit seniors in Big Four, other international, regional, and large local firms—in order to generate a wide and diverse sample of the auditor population.

This study provided relevant, timely, and needed information for the audit profession. The findings also lend empirical support for the utility of a relatively new theoretical construct in the Leadership Studies field, the construct of authentic leadership. The implications for policy and practice—both in auditing and in the field of leadership studies—of the relationships exhibited among authentic leadership, ethical culture, and auditor behavior, as well as suggestions for future research, are far-reaching.

The study found that a significantly statistical negative relationship between firm culture and auditor behavior, however, the means for some of the dysfunctional behaviors were as high as 3.24 (out of 5.0). The question posed by the study for the auditing profession and firms to consider, then, is: Why were the frequencies of certain dysfunctional behaviors so high if the firm cultures are, for the most part, perceived as being highly ethical? These higher frequencies seem to indicate that—for certain types of behaviors—policy is not translating into practice and perhaps audit firm leaders should do more to affect appropriate values within their firms. Firms need to consider how to transform the audit seniors' perceptions of an ethical firm culture into efficient and effective behaviors that maintain or increase audit quality.

Firms may need to modify, for example, their hiring and retention practices; reward systems; training programs; and communication systems, in order to fully address the apparent continuance of dysfunctional behavior. As Dillard and Yuthas (2002) stated, "research … suggests that firms adopt processes that promote the firms' ethical goals" (p. 61) but that the firms do not consider the "process by which ethical structures evolve and change" (p. 61) or how they influence behavior. This needs to change. If the firms are truly committed to ethics in accounting and auditing, the findings suggest that they should attempt to capitalize upon the

audit seniors' perceptions of leaders and culture as ethical in order to generate policies and practices that discourage the types of DABs reviewed in this study.

This research study did not gather data from any auditor group other than the audit seniors. Follow-up studies could examine firm leaders' (as defined for this study, firm managers and partners) perceptions and compare those findings with this study's findings generated from surveying audit seniors. Alternately, specific questions raised by this study could be addressed. For instance, one study could examine under-reporting of time dysfunctional behavior and its very high association with the authentic leadership component of transparency. What is it about transparency of leaders that might lessen the possibility of under-reporting time?

Earlier research has looked at reasons for dysfunctional behavior and primarily determined that time pressure and employee incentives associated with appearing to work efficiently were two possible causes of dysfunctional behavior. This study examined the mitigating effect that authenticity of leaders and ethical firm cultures might have on the frequency of dysfunctional auditor behavior. Future studies should focus more specifically on the impact that leadership and firm cultures have on such variables as time pressure and incentives for appearing to be efficient. Such studies, for instance, could ask whether ethical leaders minimize time concerns or whether they are less likely to provide incentives that appear to lead to dysfunctional auditing behaviors. By examining all of these variables in a comprehensive study, a fuller understanding of these relationships might come to light.

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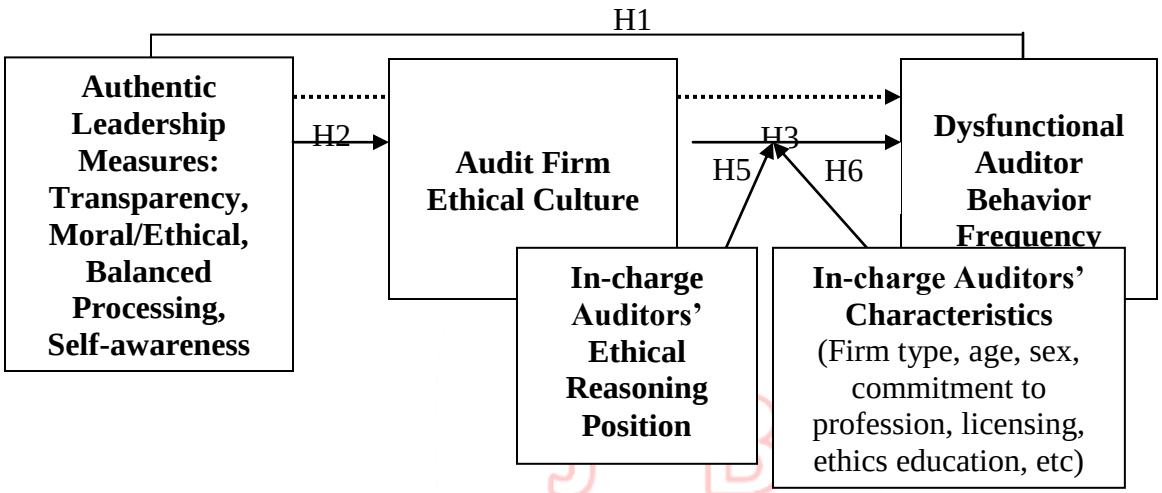
APPENDIX

Figure 1

Integrated model of authentic leadership, ethical culture, and frequency of dysfunctional auditor behavior as mediated by in-charge auditors' ethical reasoning position and demographic data.



Appendix A

Selected portions of the Authentic Leadership Questionnaire (ALQ) version 1
Rater Instrument

Instructions: The following survey items refer to your leader's style, as you perceive it. Judge how frequently each statement fits his or her leadership style using the following scale:

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

My leader:

1. says exactly what he or she means.
2. demonstrates beliefs that are consistent with actions.
3. makes decisions based on his or her core values.
4. asks you to take positions that support your core values.
5. makes difficult decisions based on high standards of ethical conduct.

Appendix B

Corporate Ethical Values Scale[a]

1. Managers in my company often engage in behaviors that I consider to be unethical. [b]
2. In order to succeed in my company, it is often necessary to compromise one's ethics. [b]
3. Top management in my company has let it be known in no uncertain terms that unethical behaviors will not be tolerated.
4. If a manager in my company is discovered to have engaged in unethical behavior that results primarily in *personal gain* (rather than corporate gain), he or she will be promptly reprimanded.
5. If a manager in my company is discovered to have engaged in unethical behavior that results primarily in *corporate gain* (rather than personal gain), he or she will be promptly reprimanded.

Notes: [a] Items are scored on the following scale: 1 = strongly disagree and 7 = strongly agree
[b] Reverse scored

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Appendix C

Forsyth's Ethics Position Questionnaire (1980)

This questionnaire was designed to measure your attitudes about a number of potentially related things. You will find a series of statements below. Each represents a commonly held opinion and there are no right or wrong answers. You will probably disagree with some items and agree with others. We are interested in the extent to which you agree or disagree with such matters of opinion. Please read each statement carefully and then indicate the extent of your disagreement/agreement with each item according to the following scale: 0 = strongly disagree; 1 = disagree; 2 = no opinion or neutral; 3 = agree; 4 = strongly agree

1. People should make certain that their actions never intentionally harm others even to a small degree.
2. Risks to another should never be tolerated, irrespective of how small the risks might be.
3. The existence of potential harm to others is always wrong, irrespective of the benefits to be gained.
4. One should never psychologically or physically harm another person.
5. One should not perform an action which might in any way threaten the dignity and welfare of another individual.
6. If an action could harm an innocent other, then it should not be done.
7. Deciding whether or not to perform an act by balancing the positive consequences of the act against the negative consequences of the act is immoral.
8. The dignity and welfare of people should be the most important concern in any society.
9. It is never necessary to sacrifice the welfare of others.
10. Moral actions are those which closely match ideals of the most "perfect" action.
11. There are no ethical principles that are so important that they should be part of any code of ethics.
12. What is ethical varies from one situation and society to another.
13. Moral standards should be seen as being individualistic; what one person considers to be moral may be judged to be immoral by another person.
14. Different types of moralities cannot be compared as to "rightness."
15. Questions of what is ethical for everyone can never be resolved since what is moral or immoral is up to the individual.
16. Moral standards are simply personal rules which indicate how a person should behave, and are not to be applied in making judgments of others.
17. Ethical considerations in interpersonal relations are so complex that individuals should be allowed to formulate their own individual codes.
18. Rigidly codifying an ethical position that prevents certain types of actions could stand in the way of better human relations and adjustment.
19. No rule concerning lying can be formulated; whether a lie is permissible or not totally depends on the situation.
20. Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.

Note: Source Forsyth, D. R. (1980). A taxonomy of ethical ideologies. *Journal of Personality and Social Psychology, 39*, 175-184. Reprinted with permission of author.

Appendix D

Dysfunctional Auditor Behavior Questions and Vignettes

Variable	Response Item
URT-InCharge	On a typical financial statement audit, how often do you think typical audit seniors [in-charges] at your firm under-report chargeable time?
URT-Staff	On a typical financial statement audit, how often do you think typical audit seniors [in-charges] at your firm allow audit staff to under-report chargeable time?
URT-Vignette	Taylor is a typical audit senior with your firm. The firm has recently acquired a new client with a very low bid. The engagement partner suggests the audit hour budget for inventory-related items will be 100 hours. Taylor's experience with similar clients suggests that in order to have reasonable assurances of no material errors or irregularities, the audit will take a minimum of 150 hours. Performance evaluation is based in part on efficiency. Assume Taylor accepts the budget of 100 hours. Please indicate how likely it is that (1) Taylor will do all necessary work to provide reasonable assurance, and (2) Taylor will underreport hours worked on the inventory audit?
PSO-InCharge	On a typical financial statement audit, how often do you think typical audit seniors [in-charges] at your firm sign-off on audit procedures they have not completed?
PSO-Staff	On a typical financial statement audit, how often do you think typical audit seniors [in-charges] at your firm allow staff auditors to sign-off on audit procedures they have not completed?
PSO-Vignette	Pat is another senior with your firm who is assigned to an engagement in which s/he is required to complete work related to market valuation of a client's assets. Pat is not sure if the client is using the appropriate methodology for valuing the assets and feels the need to research the accounting treatment further. Upon discussing the issue with his/her manager, the manager suggests that Pat sign-off on the valuation step because s/he (the manager) is confident that the client has correctly valued the asset. How likely is it that Pat will sign-off on the audit step, even if s/he is not confident that the asset valuation is correct?
Poor Doc. Review	On a typical financial statement audit, how often do you think typical audit seniors [in-charges] at your firm make superficial reviews of documents?
Weak Explain	On a typical financial statement audit, how often do you think typical audit seniors [in-charges] at your firm accepted weak client explanations?
Reduce Work	On a typical financial statement audit, how often do you think typical audit seniors [in-charges] at your firm reduced work below what would be considered reasonable?
Fail to Research	On a typical financial statement audit, how often do you think typical audit seniors [in-charges] at your firm fail to research an accounting principle when knowledge is limited?
Charge Other Code	On a typical financial statement audit, how often do you think typical audit seniors [in-charges] at your firm shift time to a different charge code when time budget is unattainable?

TABLES

Table 1. Demographic Characteristics of Participants (N = 120)

Characteristic	n	Percent
CPA Firm Type		
Big Four	70	58.3
Other International / National	23	19.2
Regional	27	22.5
Sex		
Male	44	36.7
Female	76	63.3
Age		
20-25	38	31.7
26-30	62	51.7
31+	12	10.0
Years in Public Accounting		
1-2	20	16.6
3-4	83	69.2
5+	17	14.2

Table 2. Construct reliability index of ALQ, CEV, and EPQ multi-item variables

Instrument	Construct	Number of Items	Cronbach's alpha (Internal consistency)
ALQ	Transparency	5	.83
	Moral/Ethical	4	.88
	Balanced Processing	3	.78
	Self-awareness	4	.89
CEV	CEV	5	.79
EPQ	Idealism	10	.86
	Relativism	10	.87

Table 3. Definition of each dysfunctional auditor behavior (DAB) included in response items presented in Appendix D and associated variables

DAB	DAB Variables	Definition
Under-reporting of [chargeable] time	URT-InCharge URT-Staff URT-Vignette	When an auditor does not report all hours worked on a client engagement and therefore the auditor's firm does not bill the client. While it may not seem to be a DAB, it creates unrealistic expectations for the amount of time needed to effectively complete audit work. As future time budgets are set too low, audit quality can suffer as auditors try to meet or beat the time budget by engaging in other DAB. Once incentive for auditors to URT is that performance evaluations are often based on meeting time budgets.
Premature sign-off [of audit procedures]	PSO- InCharge PSO-Staff PSO-Vignette	An auditor signing off on audit procedures indicates that those procedures have been completed. Prematurely signing-off is when the auditor indicates that work has been completed when, in fact, it had not.
Superficial review of documents	Poor Doc. Review	When an auditor fails to closely examine client documents (e.g., invoices; inventory records; accounting journals and ledgers) in the performance of audit procedures.
Accept weak client explanations	Weak Client Explain	When an auditor accepts weak explanations when asking clients to provide more detail about a transaction, event, or other item of interest in the audit. For example, an auditor inquires about a transaction and the client answers, "we've always done it that way, so it must be right" or "my manager said to record it this way," and the auditor accepts these types of answers as sufficient evidence without doing additional corroborative work.
Fail to research accounting principles when knowledge is limited	Fail to Research	When the auditor does not perform adequate research of generally accepted accounting principles when needed—that is, when s/he is unsure of the correct accounting principle.

Table continued

DAB	DAB Variables	Definition
Reduce work below what would be considered reasonable	Reduce Work	When the auditor does not collect sufficient, appropriate audit evidence to support the audit opinion.
Shift time to a different charge code	Charge other code	When the auditor does not charge his/her time to the appropriate client and reports hours under administrative (e.g., training) or another client code.

Table 4. Mean and standard deviation for the IV and DV (N=120)

	Mean	SD	Mean as a percentage
Transparency	4.18[a]	.70	83.60
Moral/Ethical	3.88[a]	.81	77.60
Balanced Processing	3.70[a]	.72	74.00
Self-Awareness	3.54[a]	.89	70.80
CEV	6.20[b]	.95	88.57
Idealism	3.87[c]	.66	77.40
Relativism	2.55[c]	.73	51.00
URT-InCharge	3.24[d]	.94	64.80
URT-Staff	2.74[d]	.93	54.80
URT-Vignette	2.91[d]	.95	58.20
PSO-InCharge	1.97[d]	.76	39.40
PSO-Staff	1.87[d]	.78	37.34
PSO-Vignette	2.87[d]	1.06	57.48
Poor Doc. Review	2.36 [d]	.88	47.20
Weak Explain	2.48 [d]	.79	49.60
Reduce Work	2.00 [d]	.66	40.00
Fail to Research	2.32 [d]	.80	46.40
Charge Other Code	2.06 [d]	.86	41.20

Notes: [a] Originally administered on a scale of 0-4 in to honor usage agreement with publisher (see Appendix A), but for consistency in presentation of data, responses were recoded on a 1-5 scale, with 1= Not at all and 5 = Frequently, if not always.
[b] Originally administered on a scale of 0-6 (see Appendix B), but for consistent presentation of data, responses were recorded on a 1-7 scale.
[c] 10 items originally administered on a scale of 0-4 in to honor usage agreement with publisher (see Appendix C), but for consistency in presentation of data, responses were recoded on a 1-5 scale, with 1= Completely disagree and 5 = Completely agree.
[d] Originally administered on a 0-4 scale (see Appendix D), but for consistency in presentation of data, recoded on a 1-5 scale, with 1= Never and 5 = Nearly always.

Table 5. Frequencies of DAB (N = 120)

		1= Never	2= Rarely	3= Sometimes	4= Often	5= Nearly always
URT-InCharge	n	2	24	49	33	12
	Percent	1.7	20.0	40.8	27.5	10.0
URT-Staff	n	7	45	45	18	5
	Percent	5.8	37.5	37.5	15.0	4.2
URT-Vignette	n	6	38	41	31	4
	Percent	5.0	31.7	34.1	25.8	3.3
PSO-InCharge	n	32	64	20	4	0
	Percent	26.7	53.3	16.7	3.3	0
PSO-Staff	n	41	58	17	4	0
	Percent	34.2	48.3	14.2	3.3	0
PSO-Vignette	n	13	29	45	26	7
	Percent	10.8	24.2	37.5	21.7	5.8
Poor Doc. Review	n	19	52	36	13	0
	Percent	15.8	43.3	30	10.8	0
Weak Explain	n	11	50	50	8	1
	Percent	9.2	41.7	41.7	6.7	0.8
Reduce Work	n	25	71	23	1	0
	Percent	20.8	59.2	19.2	0.8	0
Fail to Research	n	25	71	23	1	0
	Percent	20.8	59.2	19.2	0.8	0
Charge Other Code	n	25	71	23	1	0
	Percent	20.8	59.2	19.2	0.8	0

Table 6. ALQ measures, CEV, and DAB bivariate correlation coefficients and (*p* values)

	Correlation Coefficients (*p* values)				
	Transparency	Moral/ Ethical	Balanced Processing	Self-Awareness	CEV
URT-InCharge	-.30**	-.28**	-.28**	-.29**	-.23*
	(.00)	(.00)	(.00)	(.00)	(.01)
URT-Staff	-.30**	-.22*	-.19*	-.15	-.24**
	(.00)	(.01)	(.04)	(.10)	(.01)
URT-Vignette	-.23*	-.27**	-.28**	-.23*	-.19*
	(.01)	(.00)	(.00)	(.01)	(.03)
PSO-InCharge	-.23*	-.28**	-.18*	-.16	-.34**
	(.01)	(.00)	(.05)	(.09)	(.00)
PSO-Staff	-.18	-.23*	-.14	-.11	-.31**
	(.05)	(.01)	(.13)	(.24)	(.00)
PSO-Vignette	-.08	-.18*	-.16	-.17	-.22*
	(.41)	(.05)	(.08)	(.07)	(.02)
Poor Doc. Review	-.26**	-.28**	-.21*	-.25**	-.26**
	(.01)	(.00)	(.02)	(.01)	(.01)
Weak Explain	-.32**	-.44**	-.28**	-.27**	-.51**
	(.00)	(.00)	(.00)	(.00)	(.00)
Reduce Work	-.39**	-.42**	-.26**	-.24**	-.50**
	(.00)	(.00)	(.00)	(.01)	(.00)
Fail to Research	-.29**	-.38**	-.28**	-.32**	-.46**
	(.00)	(.00)	(.00)	(.00)	(.00)
Charge Other Code	-.25**	-.25**	-.20*	-.13	-.25**
	(.01)	(.01)	(.03)	(.17)	(.01)
CEV	.49*	.63**	.44*	.38*	1
	(.01)	(.00)	(.01)	(.01)	

Notes: ** Correlation is significant at the .01 level (2-tailed).
* Correlation is significant at the .05 level (2-tailed).

Table 7. Regression Models with Ethical Firm Culture (CEV) as Independent Variable

DAB	R-square	*p-value*
Weak Client Explain	.26	.00
Reduce Work	.25	.00
Fail to Research	.21	.00
PSO-InCharge	.12	.00
PSO-Staff	.09	.00
Poor Doc. Review	.07	.01
URT-Staff	.06	.01
Charge Other Code	.06	.01
URT-InCharge	.05	.01
PSO-Vignette	.05	.02
URT-Vignette	.04	.03

Table 8. Regression Analysis and Mediation Testing: Authentic Leadership Mediation of Ethical Firm Culture (CEV) on DAB

	Model 2[a]					
	Model		Beta coefficients			
	R-square	Sig.	Trans	M/E	BP	SA
URT-InCharge	.109	.010	-.121	-.089	-.068	-.10
URT-Staff	.101	.015	-.367	-.051	-.026	-.168
URT-Vignette	.094	.022	.025	-.162	-.214	-.018
PSO-InCharge	.082	.041	-.121	-.233	-.028	.099
PSO-Staff	.057	.149	-.087	-.216	-.032	.113
PSO-Vignette	.057	.144	.237	-.204	-.094	-.141
Poor Doc.Review	.090	.027	-.063	-.183	.048	-.132
Weak Explain	.196	.000	-.030	-.428**	-.004	.014
Reduce Work	.206	.000	-.300	-.317**	.037	.142
Fail to Research	.159	.000	.053	-.326**	.009	-.162
Charge Other Code	.091	.026	-.218	-.153	-.132	.231

	Model 3[b]						
	Model		Beta coefficients				
	R-square	Sig.	Trans	M/E	BP	SA	CEV
URT-InCharge	.113	.017	-.111	-.041	-.058	-.109	-.086
URT-Staff	.110	.019	-.353*	.020	-.011	.149	-.126
URT-Vignette	.094	.043	.029	-.145	-.210	-.013	-.031
PSO-InCharge	.126	.008	-.090	-.081	.004	.059	-.271
PSO-Staff	.097	.037	-.056	-.068	-.001	.074	-.262*
PSO-Vignette	.079	.089	.260	-.095	-.071	-.170	-.193
Poor Doc.Review	.101	.030	-.047	-.106	.064	-.152	-.136
eak Explain	.288	.000	.016	-.207	.042	-.044	-.393
Reduce Work	.291	.000	-.256	-.104	.081	.086	-.377
Fail to Research	.241	.000	.096	-.117	.053	-.217	-.373**
Charge Other Code	.101	.031	-.203	-.080	-.117	.211	-.130

Notes:
a Model 2 regressed DAB on the four authentic leadership components
b Model 3 regressed DAB on the four authentic leadership components and CEV
** Correlation Significant at the .01 level (2-tailed)
* Correlation Significant at the .05 level (2-tailed