An Examination of the Influence of Audit Firm Size and Industry Specialization on Juror Evaluation of Liability

Blaise M. Sonnier
Sharon S. Lassar
Walfried M. Lassar*

ABSTRACT

Using an experiment, this study examines the impact of industry specialization and firm size on juror evaluations of blame, findings of negligence, and damage awards in auditor malpractice cases. The results indicate that jurors attribute less blame to industry specialist auditors and are less likely to find them negligent than non-industry specialists auditors. The study establishes that industry specialization increases the perceived competence of the auditor reducing the likelihood that jurors will hold it liable for an audit failure. While firm size was not found to effect evaluations of blame or negligence verdicts, it did have a significant impact on damage awards. Significantly greater damages were awarded against larger firms than against small firms in the experiment. Based on the results of the study, firms can reduce their litigation exposure by becoming industry specialist auditors. Additionally, small firms can benefit from the propensity of jurors to award less in damages.

Keywords: Industry specialist, audit firm size, auditor litigation, accounting jury research.

* Blaise M. Sonnier is Assistant Professor at the Florida International University. Sharon S. Lassar is Director at the School of Accountancy at the University of Denver. Walfried M. Lassar is Ryder Professor, Professor of Marketing, Chair, Marketing Department and Director, Ryder Center for Supply Chain Management at the Florida International University.

I. INTRODUCTION

Litigation against CPA firms continues to be a matter of great concern for the accounting profession. Multimillion dollar settlements of suits against CPA firms in recent years provide evidence that the threat of large damage awards by juries remain despite the elimination of joint and several liability for accountants in many jurisdictions (de la Merced, 2008; Reilly and Levitz, 2007). The Committee on Capital Markets Regulation, a nonprofit research organization, asserts that the threat of large damage awards results in "defensive auditing" leading to higher auditing costs for businesses (Reilly, 2006).

In a case tried before a jury, the role of jurors is to evaluate the evidence and determine whether to hold the defendant liable for damages allegedly sustained by the plaintiff. To prevail in an accounting malpractice suit, the plaintiff must prove that (i) the audit firm breached its professional duty of care in performing the audit, (ii) the plaintiff suffered damages, and (iii) there was a causal connection between the defendant's breach and the plaintiff's damages. (Restatement Second Torts, 1977, §552). During the course of litigation, decisions by the parties are influenced by how jurors are expected to react at trial (Hans and Vidmar, 1986; MacCoun, 1993; Palmrose, 1991). For example, the selection of expert witnesses, the manner of presenting evidence, and arguments made in support of a party's position are all influenced by the anticipated reaction of jurors. Another decision influenced by anticipated jury reaction is whether to settle a case or go to trial. Predicting how jurors will be affected by factors specific to the accounting profession is difficult given the limited research in this field (Bonner, 1999; Brandon and Mueller, 2008). The practical implications of jury research is evident given the considerable resources expended by lawyers,

litigants and trial consultants trying to identify potential jurors that will be sympathetic to their cause (Vinson *et al.*, 2008).

Research establishes that the potential of being sued for malpractice and held liable for damages influences how a firm approaches an audit engagement. During the planning stages of an audit, audit firms consider litigation risk in determining the appropriate audit procedures (Brumfield *et al.,* 1983). In addition, audit firms increase audit fees as litigation risk and exposure increase (Pratt and Stice, 1994; Seetharaman *et al*., 2002; Willenborg, 1999). Additionally, financial reporting quality (as measured by abnormal accruals) increases when there is an increased risk of litigation (Venkataraman *et al.*, 2008).

Understanding factors that influence juror decision making is essential to audit firms so they can make informed risk management decisions. To date, studies have evaluated the impact of audit tenure (Brandon and Mueller, 2008), client importance (Brandon and Mueller, 2006), source of professional guidance (Buckless and Peace, 1993), reliance on decision aids (Lowe *et al.*, 2002), and severity of the outcome of an audit failure (Kadous, 2000, 2001) on juror decision making.

The impact of industry specialization of an auditor on juror decision making has not been explored in any published study. Lowe *et al.* (2002) and Brandon and Mueller (2006) studied the impact of firm size on jury decision making with mixed results. While Lowe *et al.* (2002) found no relationship between firm size and the juror's decision regarding responsibility for an audit failure, a positive relationship was found in that study between firm size and the propensity of a juror to assess damages against the firm. Brandon and Mueller (2006) found no significant relationship between firm size and the finding of negligence or damages awarded.

In their studies, Lowe *et al*. (2002) and Brandon and Mueller (2006) defined a "large firm" as an international accounting firm with offices in more than 60 cities with 20,000 professionals and a "small firm" as an accounting firm with offices in four cities with 230 professionals. Neither study evaluated the impact on juror decision making when the defendant was a one office, truly small accounting firm. In 2002 there were 99,974 CPA firms in the U.S., 97 percent of which were small, one-office establishments with an average of 6.61 employees (U.S. Census Bureau, 2005). Single office CPA firms employ 49 percent of all those employed by CPA firms in the U.S (U.S. Census Bureau, 2005). Despite the predominance of small, one-office CPA firms in the U.S., no research exists regarding factors that impact jury decision making in suits against these firms. This paper fills that gap in the literature.

Participants in the study were asked to assume the role of a juror in an audit malpractice case. Participants provided negligence and damage award judgments after reading a case where an audit firm was sued for issuing an unqualified audit opinion a few months prior to the company's bankruptcy. The company that was audited by the firm was a closely-held company and the plaintiff in the suit was a bank that extended a loan to the company in reliance on the unqualified audit opinion. In the case materials, participants learned the audit firm was either a small firm (one office with ten professionals), a midsize firm (offices in four cities with 230 professionals), or a large firm (offices in more than 60 cities with 20,000 professionals). In addition, the audit firm either had (i) one other client in the same industry as the audit client and was not an expert about the industry, or (2) a large number of clients in the same industry as the audit client and was considered an expert about the industry.

Participants in our study were significantly less likely to find an industry-specialist auditor negligent than a non-specialist. This was driven by the industry specialist being perceived as more competent than a non-specialist. In addition, the impact of being an industry specialist on the negligence verdict was especially beneficial for small firms as compared to midsize and large firms. The practical implication is that small firms can employ industry specialization as a risk management tool.

The size of the audit firm did not significantly impact the participants' findings of negligence. However, there was a significant positive relationship between firm size and the amount of damages awarded when a negligence verdict was rendered. This effect was especially pronounced when comparing awards against the small firm to awards against the midsize and large firms. Our analysis of the data revealed that the difference in award was attributed to the deep pocket phenomenon. Industry specialization had no impact on the amount of damages awarded.

The remainder of this paper is organized as follows. Section II reviews previous literature related to jury research in the accounting area and develops the hypotheses tested in this study. Section III describes the methodology used in this study. The results of the study are presented in Section IV and the implications and limitations of the study are discussed in Section V.

II. BACKGROUND AND HYPOTHESES

Industry Specialization of Auditors

The environment for audit firms over the past several years has been one of increased competition, lower audit fees, and increased client demands for a dynamic mix of services. To remain competitive in this environment, firms are required to continually improve the efficiency and effectiveness of the audit process (Lowe *et al.*, 2002). One way that audit firms may seek to achieve this is through industry specialization. Industry specialists are auditors who have extensive training and experience in a particular industry (Solomon *et al*., 1999).

Much research has been conducted regarding the impact of industry specialization on the audit process, the audit client, and the audit firm. Industry specialization enhances the error detection ability of the auditor (Maletta and Wright, 1996; Owhoso *et al.*, 2002) and better enables the auditor to detect misstatements (Hammersley, 2006). The quality of financial reporting by companies audited by industry specialists is improved as evidenced by decreased earnings management (Balsam *et al*., 2003; Krishnan, 2003a), lower absolute discretionary accruals (Krishnan, 2003b), and larger earnings response coefficients at earnings announcement dates (Balsam *et al*., 2003). Clients of industry specialist auditors are less likely to be involved in SEC enforcement actions (Carcello and Nagy, 2004) and to restate financial statements (Romanus *et al.,* 2008). Finally, companies audited by industry specialists are less likely to have restatements that affect core operating accounts (Romanus *et al.,* 2008).

Research has established that investors and other stakeholders have greater confidence in financial statements audited by industry specialists. Companies that use an industry specialist as its outside auditor have lower costs of capital, better debt ratings, and a lower

bid-ask spread than companies audited by non-industry specialists (Almutairi *et al.*, 2009). Earnings of companies audited by industry specialists are more reliable in predicting future cash flows (Grambling *et al.*, 2000) and analysts have a higher perception of the disclosure quality of companies with industry specialist auditors (Dunn and Mayhew, 2004).

Given the high quality of auditing by industry specialists and the benefits obtained by the clients of industry specialist auditors, extant research establishes that clients are willing to pay a premium for the services of specialized audit firms (Carson, 2009; Craswell *et al.*, 1995; DeFond *et al.*, 2000; Ferguson *et al.*, 2003; Ferguson and Stokes, 2002; Francis *et al.*, 2005; Palmrose, 1986). In addition to enhancing the competency of the audit firm, industry specialization may also increase the reputational capital of the audit firm making the audit firm less likely to compromise its independence and more likely to report violations of generally accepted accounting standards, financial statement misstatements, and other improprieties (Almutairi *et al.*, 2009).

Despite the extensive research regarding industry specialization of auditors, no study has examined the impact of industry specialization on the perception of audit quality by jurors in an audit malpractice suit. DeAngelo (1981) describes audit quality as a function of two factors: (i) the likelihood that an auditor will detect a misstatement (competence) and (ii) the likelihood that an auditor will report the misstatement (independence). Based on the foregoing, jurors in auditing malpractice suits should perceive auditors that are industry specialists to be more competent and independent than non-specialists. Accordingly, jurors should be less likely to rule against industry specialist auditors in auditing malpractice cases. Our prediction is supported by the attribution and source credibility theories.

Attribution of Blame and Source Credibility

In fulfilling their obligation at trial, jurors decide whether an audit firm is to blame for the injured party's losses. Attribution theory provides an explanation for the decision making process of jurors (Alicke, 2000; Alicke *et al.*, 1990; Brandon and Mueller, 2006, 2008; Schlenker *et al.*, 1994; Shaver, 1985). Attribution theory posits that jurors utilize extra-evidential or extralegal information about parties in a suit (e.g., social attractiveness) in assigning blame (Alicke, *et al.*, 2008; Alicke and Zell, 2009). Jury research in the criminal law area has demonstrated that blame and responsibility attributions are affected by legally extraneous factors such as the perpetrator's physical attractiveness, race, and state of sobriety (Alicke *et al.*, 2008; Alicke and Zell, 2009).

In an audit malpractice case, a defendant that is an industry specialist auditor may be viewed by jurors as "socially attractive." Accordingly, it is predicted that jurors would attribute less blame to an industry specialist auditor, as compared to the non-specialist, in the event of an audit failure.

Another premise of attribution theory is that one's behavior is interpreted by others based on the perceived motives or causes of that behavior (Brandon and Mueller, 2008; Kelley and Michela, 1980; Shaver, 1985). In evaluating evidence, a juror will attempt to understand the behavior of a party based on its possible motives. If an auditor is perceived as acting in its self-interest by accepting an audit of a client in an industry in which the auditor is not a specialist, a juror may attribute blame for an audit failure to the auditor. If the auditor is an industry specialist, it can cite its industry experience, knowledge and expertise in support of its audit decisions in the event of an audit failure. A juror is more likely to accept the justifications and explanations of a specialist than a non-specialist and attribute no blame (or

less blame) to the industry specialist auditor for the audit failure (Cornell *et al.*, 2004; Rosenthal and Schlesinger, 2002; Shaver, 1985). As discussed above, an industry specialist auditor may also be perceived as being more independent of its client and more motivated to protect its reputational capital than a non-specialist (Brandon and Mueller, 2008, 2006). These perceived motivations may result in jurors attributing less blame to the industry expert for an audit failure.

Jurors in an audit malpractice suit will most likely be less knowledgeable about financial reporting and auditing than a typical financial statement user (i.e. loan officers, financial analysts, rating agencies, or investors). In evaluating whether an auditor has been negligent and determining the appropriate damage award if auditor negligence has occurred, jurors are required to process complex and conflicting evidence. In addition, jurors must decide whether an auditor has committed negligence based on vague and ill-defined decision criteria regarding the minimum audit quality level required to avoid legal liability for an audit failure (Kadous, 2000, 2001). When faced with complex evidence and vague decision criteria, jurors will resort to shortcuts, or heuristic decision rules, in reaching a verdict (Brandon and Mueller, 2008; Cooper *et al.*, 1996; Vinson *et al.*, 2008). One such heuristic decision rule is that "experts can be trusted" (Chaiken and Maheswaran, 1994).

The source credibility theory posits that when faced with a decision that requires the evaluation of complex facts or evidence, the credibility of the information source will be an important consideration in the decision making process (Birnbaum and Stegner, 1979; Chaiken and Maheswaran, 1994; DeZoort *et al.*, 2003; Eagly and Chaiken, 1993; McGinnies and Ward, 1980; Walster *et al.*, 1966). A source should be perceived as more credible when it possesses greater expertise or is less prone to bias (DeZoort *et al.*, 2003). Research establishes

that jurors are influenced in their decision making by expert witnesses with prestigious credentials because they are perceived as more competent (Cooper *et al.*, 1996).

We hypothesize that an industry specialist auditor will be perceived by jurors as more competent and therefore more credible than a non-specialist. An industry specialist should also be viewed as more independent and therefore more credible to jurors than a non-specialist (Brandon and Mueller, 2008; Eagly and Chaiken, 1993). We expect jurors will be less likely to find industry specialists auditors negligent than non-specialists and will award less damages against them.

The preceding discussion leads to the following hypotheses:

H1: *Juror findings of auditor negligence will be negatively related to industry specialization of the audit firm.*

H2: *The size of juror damage awards against an audit firm found negligent will be negatively related to industry specialization of the audit firm.*

Firm Size

A widespread perception exists that the tort system in the United States is biased against "deep pocket defendants" (MacCoun, 1996). Under the deep pocket theory, injured parties are more likely to blame and sue those they perceive to have extensive financial resources, lawyers are more likely to accept cases against deep pocket defendants, jurors are more likely to find deep pocket defendants liable in a civil action, and jurors will award more money to plaintiffs against deep pocket defendants (MacCoun, 1996). In a 1993 *National Law Journal* – Lexis poll, 35 percent of those who served on a civil jury thought that other members of the jury considered the defendant's ability to pay in making their decision

(National Law Journal, 1993). Prior research indicates that the filing of lawsuits against independent auditors is often influenced by the perceived "deep pockets" of audit firms (Carcello and Palmrose, 1994; Lennox, 1999). However, research on the relationship between audit-firm size and the incidence of litigation of audit firms is inconclusive (Fuerman, 2000, 2009; Bonner *et al.*, 1998; Palmrose, 1988; Stice, 1991). Lowe *et al.* (2002) argues that the perception of large audit firms providing high quality audits, and the greater incentive of larger firms to avoid litigation due to reputational concerns, should mitigate the deep pocket effect on the incidence of litigation against large firms.

Jury verdicts generally have two components. The jury must first decide whether the audit firm was negligent in the performance of the audit causing damage to the plaintiff. If the jury finds that the audit firm was negligent, it must then determine damages to be awarded to the plaintiff. A jury should award damages to the plaintiff to return the injured party to the same position it would have been in had the act of negligence not occurred (Anderson and MacCoun, 1999). The deep pocket effect may impact both the propensity to make a finding of negligence and the size of the award.

Two studies have examined the impact of audit-firm size on juror decision making with inconsistent results (Brandon and Mueller, 2006; Lowe *et al.*, 2002). Both compared mock juror decisions against a large, international accounting firm versus a midsized firm with four offices in an experimental setting. Lowe *et al.* (2002) found that firm size did not impact juror assessment of auditor responsibility for the audit failure; however, jurors were more likely to assess damages against a large audit firm than a small firm. Lowe *et al.* (2002) used factor analysis to combine three questions to measure "juror attribution of responsibility" and three questions to measure "assessment of damages." Attribution of responsibility

questions were whether the auditor made the right decision, whether the auditor was competent, and whether the plaintiff was required to assume normal investment risks and therefore was responsible for its own loss. The assessment of damages dependent variable asked mock jurors whether the CPA firm should reimburse the plaintiff, the likelihood the participant would support an award of some amount of damages against the auditor, and the likelihood of supporting an award for the total amount of damages against the auditor. Participants responded to these questions on a ten-point Likert scale. The dependant variables employed in Lowe *et al.* (2002) were indirect measures of the tendency or propensity of a jury to make a finding of negligence and to award damages against the audit firm. Lowe *et al.* (2002) did not ask participants whether they would actually render a verdict against the audit firm or to determine the amount of damages awarded if the auditor was negligent.

Brandon and Mueller (2006) found that firm size had no impact on the verdict or damage award made by jurors. The dependant variables in that study were based on the two central questions included on an actual jury verdict interrogatory form: (1) do you find the audit firm negligent, and (2) if you find that the audit firm was negligent, what amount of compensatory damages should be awarded?

While Lowe *et al.* (2002) and Brandon and Mueller (2006) reached inconsistent results, neither included small, one office firms in their study. We expect jurors will be more likely to find large firms negligent than small firms and make larger damage awards against large firms. This study fills a gap in the literature on an issue of substantial importance to a large segment of the accounting profession.

Based on the foregoing, we posit the following hypotheses:

H3: *Juror findings of auditor negligence will be positively related to the size of the audit firm.*

H4: *Juror damage awards against an audit firm found negligent will be positively related to the size of the audit firm.*

III. METHODOLOGY

Design

We used a 3 x 2 design with the following between-subject variables: audit-firm size (three levels) and audit industry specialist (two levels). The audit-firm size conditions were the following: (i) a large auditing firm with offices in more than 60 cities that employs nearly 20,000 professionals; (ii) a midsize auditing firm with offices in four cities that employs about 230 professionals; and (iii) a small auditing firm with one office that employs ten professionals. The description of the large auditing firm and midsize auditing firm was the same used in Lowe *et al.* (2002) and Brandon and Mueller (2006). In our study we add the small auditing firm with one office and ten professionals to enhance the external validity of our study given that small accounting firms comprise 97% of all CPA firms in the U.S.

In the industry specialization condition, the auditor is described as (i) auditing a large number of other companies in the same industry as the audit client, (ii) having a substantial amount of knowledge about the client's industry, and (iii) being an expert about the client's industry. In the non-industry specialization condition, the auditor is described as (i) auditing only one other company in the same industry as the audit client, (ii) having a limited amount of knowledge about the industry, and (ii) not being an expert about the industry.

Participants

Undergraduate and graduate students located at a university located in the southeastern part of the U.S. were recruited from business law courses to participate in the study. College

students are appropriate subjects given prior research that found no consistent differences in mock jury decisions from samples drawn from the general population as compared to university students (Bornstein and Rajki, 1994; Zickafoose and Bornstein, 1999). In an accounting study, Kadous (2001) reported no differences in her results between college student subjects and subjects from the general population acting as mock jurors.

A total of 250 surveys were collected, of which 185 usable responses were retained. Participants had to identify the specific size of the audit firm to remain in our analysis set. Sixty-five surveys were removed because of incomplete information provided by respondents or participants failing to correctly respond to a recall question regarding a primary audit firm size facet of the case. Table 1 sets forth the demographic data of the participants in our study.

Materials and Procedure

Participants were provided with an audit litigation case along with jury instructions for assessing negligence and compensatory damages. The litigation scenario for this study is a modified version of the case used in Lowe and Reckers (1994), Clarkson *et al.* (2002), and Brandon and Mueller (2006, 2008).[1] In the case, mock jurors were asked to evaluate whether an audit firm was negligent in issuing an unqualified audit opinion for the financial statements of a company that went bankrupt shortly after the opinion was issued.

The company in the case was a toy manufacturer that was a closely-held, non-public, company. During the course of the audit, the auditor's standard audit procedures revealed certain negative business conditions being faced by the company that could impair its ability to continue in business. The audit firm was also made aware that its audit report would be relied upon by a bank in deciding whether to extend a loan to the company. After evaluating

[1] Permission was obtained from Craig Emby and Duane Brandon to use the litigation case.

information regarding the negative business conditions and the company's plans to overcome negative conditions, the audit firm concluded that it did not have substantial doubt about the company's ability to continue to exist for at least another year. Accordingly, an unqualified opinion was issued by the audit firm. Shortly thereafter, the bank extended a substantial loan to the company. Several months later the company filed for bankruptcy.

In the case, the bank sued the audit firm for negligence. The bank argued that the audit firm should have issued a going concern opinion and that it would not have extended the loan to the company had a going concern opinion been issued. The audit firm argued that it followed appropriate professional standards and judgment in auditing the financial statements of the company.

The case was administered using an online survey instrument accessed by the participants through a hyperlink provided in an electronic mail communication. The electronic mail message was sent by the instructor of the business law course in which participants were enrolled. The email invited students in the course to take part in the survey on a voluntary basis. Students that participated were given nominal extra credit in the course. If the students elected to participate, the link brought them to a landing page introducing the study. A random generator ensured that our six conditions were randomly assigned.

Participants in the study were first provided the audit litigation scenario to read at their own pace. After the participants completed reading the factual pattern, they were provided jury instructions and asked to decide whether the audit firm was negligent in the performance of the audit. Participants were also asked how confident they were in their decision regarding their negligence verdict using a seven-point Likert scale. Participants that found the audit firm negligent were then asked to indicate the amount that they would award to the bank as

compensatory damages. After participants completed the verdict portion of the survey instrument, they were asked to respond to additional questions that included demographic information, manipulation checks, and other variables of interest. After a participant completed reading the case or providing responses to a section of the survey instrument, the participant was not permitted to return to the case, a previously completed section of the survey, or to change prior responses.

Competence, Independence, Attribution of Blame and Verdict Measures

DeAngelo (1981) described audit quality as a function of auditor competence and auditor independence. The source credibility theory identifies source expertise (perceived competence) and source bias (perceived independence) as basic elements that affect the credibility of an information source (DeZoort *et al.*, 2003). In our study, the juror's perceived independence of the audit firm was measured by asking the extent to which the participant believed the audit firm was independent of the client on a scale of 1 (not at all independent) to 7 (completely independent). Perceived competence was measured by asking the participant how competent it perceived the audit firm to be in performing its duties in the audit of its client on a scale of 1 (not at all competent) to 7 (extremely competent).

The dependent variables in this study are the participants' evaluations of the auditor's blameworthiness (Blameworthiness), the negligence verdict rendered by the participant (Verdict), and compensatory damages awarded against the audit firm by the participant if it found the audit firm negligent (Compensatory Damages). The first two dependent variables, Blameworthiness and Verdict, are intended to measure the propensity of a juror to find that the auditor was negligent in the conduct of the audit.

Similar to the approach taken in Lowe *et al.* (2002, 193), we asked participants the following three questions to measure their belief regarding the blameworthiness of the auditor:

- To what degree do you blame the audit firm for the bank's loss?
- How responsible is the auditor for the bank's loss?
- To what extent do you believe that the audit firm caused the bank's loss?

Participants responded to these questions on a seven-point Likert scale. Factor analysis showed that the three measures loaded on one dimension allowing us to create an overall measure of juror attribution of blame. Cronbach's alpha for the three-item construct was 0.935, far exceeding the threshold of 0.70 required to accept construct reliability (Churchill, 1991). The resulting factor scores serve as the dependent measure for juror's assessments of auditor blameworthiness for the losses suffered by the bank (Blameworthiness). We checked that our measures of perceived independence, competence, and attribution of blame showed discriminant validity with factor analysis. The resulting three factor solution showed no cross-loadings.

The second dependent variable measured the likelihood that a juror would render a verdict against the audit firm by finding it negligent in the conduct of the audit (Verdict). Participants were first asked to render a dichotomous negligence verdict (guilty or not guilty of negligence) and then asked about the level of confidence in their verdict using a seven-point Likert scale with end points of "not at all confident" and "completely confident." The two questions were combined to create a 14-point liability scale where 1 represents complete confidence in a "not guilty" verdict and 14 represents complete confidence in a "guilty" verdict (Brandon and Mueller, 2006, 2008; MacCoun, 1996). Prior research has shown this

measure more predictive of juror voting during deliberation than the simple dichotomous measure (Stasser and Davis, 1981).

As mentioned above, participants who render a verdict finding the audit firm negligent are asked to state the amount that they would award in compensatory damages to the injured party (Compensatory Damages). Compensatory Damages is the third dependent variable in our study.

IV. RESULTS

Successful manipulation of our experimental factors, auditor size and industry specialization, was checked with participants' responses to questions regarding the number of offices that the audit firm had and the level of knowledge the audit firm had about the toy industry. For the industry specialization manipulation check, participants responded on a seven-point Likert-type scale with endpoints labeled "No knowledge" and "Expert knowledge." The mean knowledge rating of 2.67 for the auditor with only one toy industry client is significantly lower than the mean rating of 6.15 for the auditor with several toy industry clients ($t = 19.6$, $p < 0.001$). The auditor size manipulation check was used to remove respondents that did not seem to have grasped the conditions.

General descriptive statistics indicate that, of the 185 responses obtained, 139 (75.1 percent) participants found the audit firm guilty of negligence and compensatory damages were awarded in 98.6 percent (137) of the cases where participants found for the plaintiff.

Source Credibility

Before testing our hypotheses, we examined the effects of the auditor size and industry specialization manipulation on participants' perceptions of the auditor's competence and

independence by analyzing responses to questions included in the post-experimental questionnaire. Participants responded to each question on a seven-point Likert-type scale.

Responses to the competence question reveal that participants perceived industry specialist auditors to be more competent than non-specialists (3.98 v 3.25). This auditor specialization effect is significant (F=8.135, p=.005, Table 2). The result for the size manipulation shows mean levels for perceived competence to be lowest for small firms (3.50), highest for midsize firms (3.71), and in between for large firms (3.63). However, the differences are not significant (F=0.258, p=.773, Table 2). The interaction effect between auditor size and industry specialization on perceived competence is also not significant (F=0.928, p=.397, Table 2).

The results for independence are markedly different. Participants perceive no significant difference in independence of auditors who are not specialists versus those who are industry specialists (4.06 v 4.28, F=0.654, p=.420), whereas results for auditor size are significant (small=3.77 v midsize=4.01 v large=4.73, F=4.368, p=.014). In addition, we observe an interaction effect between size and specialization (F=2.895, p=.058). While the overall level of independence for industry specialists is higher than for non-specialists, large firms' size dominates the specialization effect and companies that have no industry specialization but are large are perceived as significantly more independent than all others. This effect may be the reason that industry specialization is not significant for perceived independence. See Table 2 for results discussed in this paragraph.

These preliminary results show that auditor size significantly affects participants' perceptions of auditor independence and that industry specialization significantly affects perceptions of auditor competence. Based on DeAngelo (1981)'s audit model, competence

and independence are directly related to audit quality. Jurors that perceive an audit firm to be more competent and independent should find them more credible and less blameworthy. The result should be reduced findings of negligence and lower compensatory awards against firms that are perceived as more competent or independent.

Tests of Jurors' Finding of Negligence: Attribution of Blame

Using analysis of variance, we assessed whether participants attribute blame to the auditor for its issuance of an unqualified audit report using the Blameworthiness variable described earlier. Auditors are found more blameworthy when they are not industry specialists (4.96 v 4.50) and less blameworthy when they are small as compared to midsize and large firms (4.47 v 4.86 v 4.85). While the industry specialization effect is significant ($F=5.648$, $p=.019$), the auditor size effect is not ($F=.613$, $p=.543$). The interaction effect between auditor size and industry specialization is also not significant ($F=0.196$, $p=.822$). Nevertheless, Blameworthiness of small firms was reduced at a marginally significant level when the firm was an industry specialist versus when it was not (4.13 v. 4.82, $p=.061$). See Table 3.1 for results discussed in this paragraph.

Following DeAngelo's logic we also analyzed attribution of blame with the source credibility constructs of competence and independence included as covariates. As Table 3.2 shows, source credibility effects dominate and both experimental conditions become insignificant.

Tests of Jurors' Finding of Negligence: Verdict

Analysis of variance is used to test whether auditor size and industry specialization affects jurors' liability verdicts. The verdict variable described above was used in this analysis. Hypothesis Three predicts a positive relationship between auditor size and a finding of negligence by jurors based on the deep pocket theory. While the mean levels for negligence rise with auditor size (10.4 v 10.5 v 10.6) the effect is not significant (F=0.041, p=0.96, Table 4.1). Therefore, the data does not support Hypothesis Three.

Hypothesis One predicts a negative relationship between auditor industry specialization and a finding of negligence based on the source credibility and the attribution theories. Consistent with Hypothesis One, we observe such a relationship with mean levels of negligence for industry specialist significantly lower than for non-specialists (9.62 v 11.3, F=7.376, p=0.007). Interestingly, we also observe a marginal interaction effect between size and specialization. The interaction effect is mainly driven by a very significant difference between small expert and small non-expert firms (t=2.612; p=.076). For small non-specialist firms there is a liability mean of 12.24 while for small specialists the mean liability finding is 8.56. For midsize and large audit firms, the difference in the jurors' liability verdict between industry specialist and non-specialist auditors is not significant.

As with attribution of blame, we also analyzed the negligence verdict effect with the source credibility constructs of competence and independence included as covariates. In the case of verdict, both source credibility constructs are significant (independence: F=6.628, p=.011; competence: F=19.08, p=.001) (Table 4.2) while firm size (F=.659, p=.518, Table 4.2) is again not significant. Industry specialization remains significant (F=3.853, p=.051,

Table 4.2) and the interaction effect between specialization and firm size remain marginally significant (F=2.463, p=.088, Table 4.2).

Table 4.1, Table 4.2 and Figure 1 provide complete results regarding auditor size and industry specialization impact on the Verdict variable. In summary, when using the verdict variable, the results support Hypothesis One for small firms only. The results do not support Hypothesis Three.

As an additional test of Hypotheses One and Three, we performed an ANOVA for participants' dichotomous negligence verdicts, without considering their confidence in their verdicts. Approximately 68 percent of participants found the auditor guilty when an industry specialist versus 85 percent when the auditor was not. The difference in verdict between the industry specialist and non-specialist group is significant (F=6.760, p=.01). About 75 percent found the auditor guilty when the auditor was small, compared to 76 percent when medium-sized and 78 percent when large; these differences are not significant (F=.053, p=.949). Together, the results provide support for Hypothesis One while Hypothesis Three is not supported as results point in the right direction but are not significant.

Tests of Compensatory Damage Awards

We performed analysis of variance to investigate the effects of auditor size and industry specialization on compensatory damage awards. Consistent with Hypothesis Four that predicts a positive relationship between firm size and damage award, the compensatory damage award is lower for small firms ($3.03M) and higher for midsize and large firms ($3.76M and $3.60M), respectively. The size effect is significant (F=5.581, p=0.005, Table 5.1). Further analysis of the data reveals that the size effect is driven by the difference between compensatory damage awards against small firms as compared to midsize and large

firms as defined in the study. There was no significant difference in the compensatory award measure between midsize and large firms. However, when the mean compensatory damages against small firms ($3.03M) is compared to the mean compensatory damages against midsize and large firms combined ($3.68M), the difference is significant ($F=11.324$, $p<.001$). Based on the foregoing, the data supports Hypothesis Four as it relates to small firms as compared to midsize and large firms.

Hypothesis Two predicts a negative relationship between industry specialization and damage awards. While we find slightly lower damage awards for industry specialists versus non-specialists (3.4M v $3.5M,), the effect is not significant ($F=0.094$, $p<0.76$, Table 5.1). In addition we do not detect a significant interaction effect between size and specialization on damage awards ($F=0.026$, $p<0.974$, Table 5.1).

Again, we analyzed the damage award effect with the source credibility constructs of competence and independence included as covariates. In the case of damage awards, only one of the two source credibility constructs, competence, is significant and firm size remains significant. The other source credibility construct, independence, is not significant. Industry specialization and the interaction effect between specialization and firm size remain non-significant. See Table 5.2 for these results.

Results regarding the impact of auditor size and industry specialization are set forth in Table 5.1, Table 5.2 and Figure 2. In summary, the results support Hypothesis Four for small firms as compared to midsize and large firms. The results do not support Hypothesis Two.

Mediation Effects of Source Credibility on Negligence Findings and Damage Awards

As discussed above, academic research supports that industry specialist auditors deliver higher quality audits than non-specialists and that companies audited by industry specialists have more reliable financial statements. This suggests that specialization may indirectly influence jury verdicts. Jurors may perceive higher competence by industry specialists and react by decreasing their findings of negligence. Pursuant to the source credibility theory, an industry specialist auditor is a more credible source of information, thereby reducing the likelihood of an adverse finding against it (Birnbaum and Stegner, 1979; Chaiken and Maheswaran, 1994; Eagly and Chaiken, 1993; McGinnies and Ward, 1980; Walster *et al*., 1966). Likewise, to the extent that the auditor is perceived as being more competent a juror may attribute less blame to decisions it makes during the audit process (Alicke, 2000; Darley and Huff, 1990; Hogue and Peebles, 1997; Kleinke *et al.*, 1992; Malle and Knobe, 1997).

Similarly, large audit firms may be perceived as being more independent than smaller audit firms. The greater the independence of the auditor the more it will be perceived as a credible source of information by jurors. Based on the foregoing, we performed a mediation analysis to determine

> (a) whether jurors' perceptions of the auditor's competence mediate the relationship between auditor industry specialization and attribution of blame;
>
> (b) whether jurors' perceptions of the auditor's competence mediate the relationship between auditor industry specialization and liability evaluations; and
>
> (c) whether jurors' perceptions of the auditor's independence mediate the relationship between auditor size and damage awards.

To test for the mediating effects, we first used the widely accepted "causal steps" simple mediation procedure proposed by Baron and Kenny (1986) by including each mediator

variable separately in a hierarchical regression model for each dependent variable. We need to show that: (1) industry specialization is a significant predictor of competence, independence, attribution of blame, and negligence verdict; (2) when evaluated separately, competence and independence are significant predictors of attribution of blame and negligence verdict; and (3) the relationship between industry specialization and attribution of blame and negligence verdict, respectively, should become non-significant or weaker when competence and independence are included as predictors in the model. We repeat the same procedure for firm size instead of industry specialization and damage award instead of findings of negligence. Table 6 shows the results for the direct relationships. Except for industry specialization on independence and firm size on competence, all direct effects are significant. Therefore, we eliminate the two non-significant mediation paths from further analysis. The remaining direct effects satisfy condition 1.

According to the results presented in Table 7, competence is a significant predictor of attribution of blame (b = -0.309, p<0.001) and findings of negligence (b = -0.912, p<0.001). Table 7 also shows that independence is not a significant predictor of damage awards (b = 63,538.30, p<0.247). Thus, condition 2 is satisfied for competence but not for independence. Finally, Table 7 also shows that, after competence is added to the models, the relationship of industry specialization to attribution of blame (b = -0.257, p<0.151) becomes non-significant suggesting complete meditation. Thus, we conclude that the effect of industry specialization on attribution of blame is due to the effect of industry specialization on jurors' perceptions of competence. Repeated for findings of negligence, the industry specialization effect (b = -1.191, p<0.048) becomes weaker. The result suggests partial mediation, and we conclude that

the effect of industry specialization on liability judgments is partially due to the effect of industry specialization on jurors' competence perceptions while a partial direct effect remains.

When independence is included in the model for damage awards, the relationship of firm size to damage awards (b = 342,026.56, $p<0.005$) becomes stronger while independence was insignificant. Thus we conclude that the effect of firm size on damage awards is not mediated through independence and that firm size directly effects damage awards.

Next, following the procedure outlined by Preacher and Hayes (2004), we use bootstrapping methodology based on 5000 bootstrap resamples to further test for the hypothesized mediating effects. This procedure is believed to be a more statistically rigorous method than Baron and Kenny's (1986) "causal steps" procedure and the Sobel's (1982, 1986) test (MacKinnon *et al.*, 2004; Preacher and Hayes, 2004), in part, because it does not impose the assumption of normality of the sampling distribution (Preacher and Hayes, 2004, 2008). To test for the significance of the indirect (i.e., mediating) effects, we evaluate the "bias corrected and accelerated confidence intervals." If zero is contained within the 95% CIs, there is a lack of significance for the indirect effects. The results of the bootstrapping simple mediation analyses show that zero is not contained within any of the calculated 95% CIs for competence (Competence-Attribution of Blame: CI_{Lower} =-.4003 and CI_{Upper} =-.0590; Competence-Findings of Negligence: CI_{Lower} =--1.2481 and CI_{Upper} =-.0.1955). This further confirms that competence is a mediator for the relationships between industry specialization and attribution of blame as well as findings of negligence[2].

[2] Previous analysis showed firm size not significant, therefore, we do not model a moderated mediation model. However, when we control our mediated model for firm size to clearly define industry specialization effects the results remain the same.

V. DISCUSSION

Factors that impact jury decision making in auditing malpractice actions remain largely unexplored (Bonner, 1999; Brandon and Mueller, 2006). In most jurisdictions, any party may request a trial by jury at the commencement of the case if the amount of damages being sought exceeds a threshold amount. In making an informed decision on whether to have a case tried before a jury, parties must understand how various factors impact jury decision making. During settlement negotiations between the parties, those same factors will influence the decision on whether to proceed to trial or reach an amicable resolution of the controversy.

This is the first study to investigate the impact of industry specialization on juror decision making. In addition, it is the first study to evaluate the impact of firm size on juror decision making by utilizing small, midsize, and large firms in the experimental setup. We expand on prior research by separately analyzing the impact of firm size on juror decision making with respect to findings of negligence and award of damages.

Our study establishes that being an industry specialist reduces the likelihood that a juror will make a finding of negligence against the audit firm in a malpractice action. It also establishes that small firms derive the greatest benefit from being perceived by jurors as an industry specialist. Jurors perceive an industry specialist audit firm as being more competent than a non-industry specialist. Mediation analysis established that the decreased likelihood of a finding of negligence against an industry specialist is attributable to an increased perception of the competence of the auditor.

If a jury determines that an auditor has been negligent in the performance of an audit and the plaintiff has been injured as a result, the jury must determine the amount of damages to award the plaintiff. We establish that being an industry specialist has no impact on the

amount of damages awarded by jurors. However, the size of the audit firm does have an impact on the award of damages regardless of whether the firm is an industry specialist or not. Participants in our study awarded significantly greater damages against the midsize and large firm in our experiment than against the small, one office firm with ten professionals. While jurors perceived larger firms to be more independent than smaller firms, mediation analysis established that independence did not significantly affect the amount of compensatory damages awarded. Accordingly, the increased damage award against larger firms can be explained by the deep pocket theory.

Another interesting finding of our study relates to the impact of firm size on the propensity of a juror to make a finding of negligence in an audit malpractice action. In our study, the size of the audit firm had no impact on the finding of negligence by jurors. Size became a factor only when a juror was called upon to determine the amount of damages to award after making a finding of negligence. Accordingly, the deep pocket effect was isolated to the decision by the juror in the amount of damages to be awarded.

Our study demonstrates that small auditing firms in particular can significantly reduce their liability exposure by becoming industry specialist auditors. Industry specialization reduces the propensity of jurors to make a finding of negligence against an audit firm. When a small audit firm is found negligent, the damages awarded against it will be less than that awarded against a large audit firm due to the deep pocket effect. These factors may combine to provide a "boutique firm" strategy for small audit firms.

From a litigation strategy perspective, our study demonstrates that attorneys representing firms in auditing malpractice actions should emphasize the audit firm's expertise regarding the client's industry. When representing a small client, the attorney should find a

way to inform the jury about the size of the audit firm and its lack of deep pockets. Our study establishes that this combined strategy should reduce the exposure of small audit firms in audit malpractice actions.

Our study has several limitations. First, the amount of information provided to participants in the study was much less than would be received by a juror in an actual jury trial. The materials evaluated by the participants were also substantially less complicated than the evidence a juror in an actual auditing malpractice case would encounter. Second, in an actual case members of a jury reach a decision as a group after discussing the case in the confidential setting of the jury deliberation room. While research establishes that first ballot votes can predict jury verdicts to a high degree (Kalven and Zeisel, 1966; MacCoun, 1993; Sandys and Dillehay, 1995), the fact that jury decision making is a group deliberative process raises the question of whether the results of our study generalize to actual jury trials (Kaplan and Miller, 1978). Third, the study addresses the impact of industry specialization only in the setting of failure to issue a going concern opinion. Fourth, the survey instrument was administered online making it possible for participants to be influenced by others in completing the survey instrument.

Jury research studies often rely on the source credibility and attribution of blame theories to explain juror decision making. Our results demonstrate that source credibility and attribution of blame may in fact interact in producing a juror's decision. While industry specialization significantly impacted the attribution of blame of participant's in our study, the source credibility components of independence and competence drove this relationship. Industry specialization was also significantly related to the verdict rendered by participants in our study. When independence and competence were added as covariates to our analysis,

industry specialization remained significant. While competence and independence explained the effect of industry specialization on attribution of blame, these source credibility components did not completely explain industry specialization's impact on verdict. This suggests that industry specialization may have separate influences on attribution of blame and source credibility. For example, because of the superior knowledge, education and experience of industry specialist auditors, jurors in an accounting malpractice suit may deem them more credible while at the same time reasoning that they should have foreseen the audit failure. Under the attribution theory, jurors attribute more blame to those with foresight of the consequences of their action (Alicke, 2000). Additional research is warranted to investigate these relationships.

In addition, future research could evaluate the impact of industry specialization of audit firms in contexts other than the failure to issue a going concern opinion. For example, the impact of industry specialization on juror decision making for failure to detect fraud or the misstatement of financial statements could be evaluated to provide further information in this area. The impact of industry specialization on other type of accounting malpractice actions, such as those arising from consulting engagements, could also be examined.

Table 1: Demographic Data for Participants

Panel A: Continuous Measures

Attribute	Scale	Mean	SD	Min	Max
Work Experience	Years	5.22	4.90	0	22
Accounting Courses	Courses	4.95	3.05	0	15
Business Courses	Courses	9.53	7.10	0	35
Law and Political Science Courses	Courses	2.00	1.62	0	10

Panel B: Dichotomous and Categorical Measures

Attribute	Count	Percent
Gender:*		
Male	62	33.9%
Female	121	66.1%
Age (years):		
20 to 24	66	35.7%
25 to 29	60	32.4%
30 to 34	32	17.3%
35 to 39	15	8.1%
40 to 59	12	6.5%
Marital Status:		
Married	62	33.5%
Single, Never Married	106	57.3%
Separated or Divorced	11	6.0%
Living with Partner	6	3.2%
Employment:		
Full-time (31 hours or more per week)	103	55.7%
Part-time (30 hours or less per week)	42	22.7%
Not employed	40	21.6%
Highest Level of Education:		
High School Graduate	12	6.5%
Associates Degree	60	32.4%
Bachelors Degree	81	43.8%
Post-college Graduate	32	17.3%
Household Income:**		
Less than $20,000	17	9.3%
$20,000 to $39,999	29	16.0%
$40,000 to $59,999	46	25.3%
$60,000 to $79,999	31	17.0%
$80,000 to $99,999	24	13.2%
$100,000 and greater	35	19.2%
Currently Own Stock:		
Yes	51	27.6%
No	134	72.4%
Currently Own Real Estate:		
Yes	67	36.2%
No	118	63.8%

*2 respondents did not provide information regarding gender.
**3 respondents did not provide information regarding income

Table 2: MANOVA for Competence and Independence

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	Competence	30.561[a]	5	6.112	2.098	.068
	Independence	45.573[b]	5	9.115	2.870	.016
Intercept	Competence	2291.803	1	2291.803	786.837	.000
	Independence	3051.746	1	3051.746	960.829	.000
Ind. Expertise	Competence	23.696	1	23.696	8.135	.005
	Independence	2.078	1	2.078	.654	.420
Firm Size	Competence	1.500	2	.750	.258	.773
	Independence	27.746	2	13.873	4.368	.014
Ind. Expertise * Firm	Competence	5.408	2	2.704	.928	.397
Size	Independence	18.387	2	9.194	2.895	.058
Error	Competence	512.632	176	2.913		
	Independence	559.004	176	3.176		
Total	Competence	2973.000	182			
	Independence	3687.000	182			
Corrected Total	Competence	543.192	181			
	Independence	604.577	181			

Table 3.1: ANOVA – Attribution of Blame

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	12.611	5	2.522	1.504	.191
Intercept	4665.872	1	4665.872	2781.432	.000
Ind. Expertise	9.475	1	9.475	5.648	.019
Firm Size	2.055	2	1.028	.613	.543
Ind. Expertise * Firm Size	.659	2	.330	.196	.822
Error	300.274	179	1.678		
Total	5107.750	185			
Corrected Total	312.885	184			

Table 3.2: ANCOVA – Attribution of Blame

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	71.509	7	10.216	7.422	.000
Intercept	870.084	1	870.084	632.133	.000
Competence	39.190	1	39.190	28.473	.000
Independence	4.653	1	4.653	3.381	.068
Ind. Expertise	2.971	1	2.971	2.158	.144
Firm Size	5.391	2	2.696	1.958	.144
Ind. Expertise * Firm Size	1.429	2	.714	.519	.596
Error	239.498	174	1.376		
Total	5039.389	182			
Corrected Total	311.007	181			

Table 4.1: ANOVA Negligence Verdict

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	249.158	5	49.832	2.817	.018
Intercept	19684.767	1	19684.767	1112.615	.000
Ind. Expertise	130.493	1	130.493	7.376	.007
Firm Size	1.457	2	.728	.041	.960
Ind. Expertise * Firm Size	92.423	2	46.211	2.612	.076
Error	3166.929	179	17.692		
Total	23697.000	185			
Corrected Total	3416.086	184			

Table 4.2: ANCOVA Negligence Verdict

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	788.415	7	112.631	7.634	.000
Intercept	4633.460	1	4633.460	314.062	.000
Competence	281.500	1	281.500	19.080	.000
Independence	97.778	1	97.778	6.628	.011
Ind. Expertise	56.839	1	56.839	3.853	.051
Firm Size	19.458	2	9.729	.659	.518
Ind. Expertise * Firm Size	72.661	2	36.331	2.463	.088
Error	2567.080	174	14.753		
Total	23400.000	182			
Corrected Total	3355.495	181			

Table 5.1: ANOVA – Damage Awards

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.429E13	5	2.858E12	2.338	.045
Intercept	1.566E15	1	1.566E15	1281.257	.000
Ind. Expertise	1.150E11	1	1.150E11	.094	.760
Firm Size	1.364E13	2	6.821E12	5.581	.005
Ind. Expertise * Firm Size	6.402E10	2	3.201E10	.026	.974
Error	1.601E14	131	1.222E12		
Total	1.791E15	137			
Corrected Total	1.744E14	136			

Table 5.2: ANCOVA – Damage Awards

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2.153E13	7	3.076E12	2.567	.017
Intercept	2.392E14	1	2.392E14	199.578	.000
Competence	5.292E12	1	5.292E12	4.416	.038
Independence	6.806E11	1	6.806E11	.568	.453
Ind. Expertise	9.353E9	1	9.353E9	.008	.930
Firm Size	1.656E13	2	8.279E12	6.907	.001
Ind. Expertise * Firm Size	8.767E10	2	4.383E10	.037	.964
Error	1.522E14	127	1.199E12		
Total	1.759E15	135			
Corrected Total	1.737E14	134			

Table 6: Unstandardized regression coefficients for the direct effects of industry specialization and firm size

Model Links	Coefficient	F	Adjusted R^2
Model A: Source Credibility			
Industry Specialization → Competence	0.683**	7.353	.039
Industry Specialization → Independence	0.400 .	2.169	.012
Industry Specialization → Attribution of Blame	-0.449 *	4.234	.017
Industry Specialization → Negligence Verdict	-1.824 *	8.411	.039
Model B: Deep Pockets Theory			
Firm Size → Competence	0.158 .	0.984	.005
Firm Size → Independence	0.432 *	6.786	.031
Firm Size → Damage Awards	296,377 *	6.505	.039

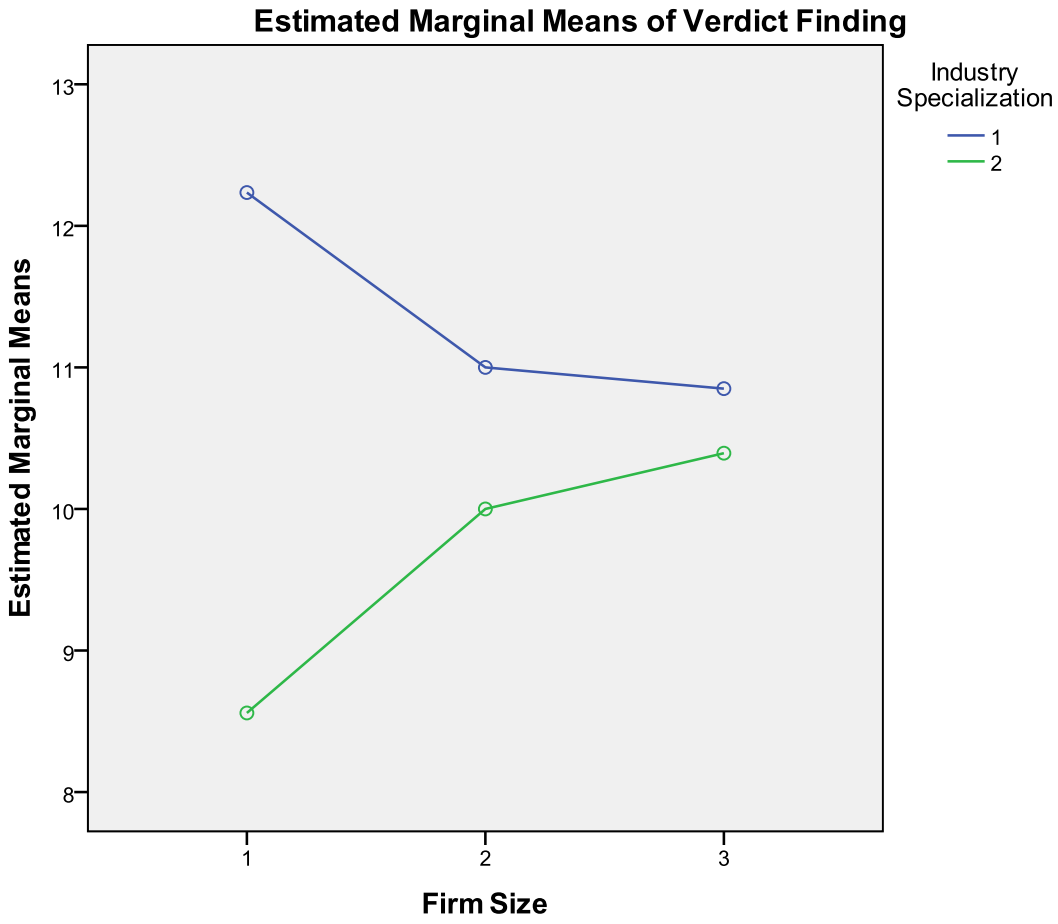
* $p < 0.05$; ** $p < 0.01$

Table 7: Unstandardized regression coefficients for the indirect effects of industry specialization or firm size (T statistics)

Independent Variables	Blame Attribution	Negligence Verdict	Damage Award
Industry Specialization	-.257 (1.442)	-1.191 (1.995)*	
Firm Size			342,026.56 (2.826)**
Competence	-.309 (6.015)**	-.912 (5.294)**	
Independence			-63,538.30 (1.163)
Adjusted R^2	.193	.172	.044
d.f.	(2, 181)	(2, 181)	(2, 133)
F	21.679**	18,813**	4.088*

* $p < 0.05$; ** $p < 0.01$

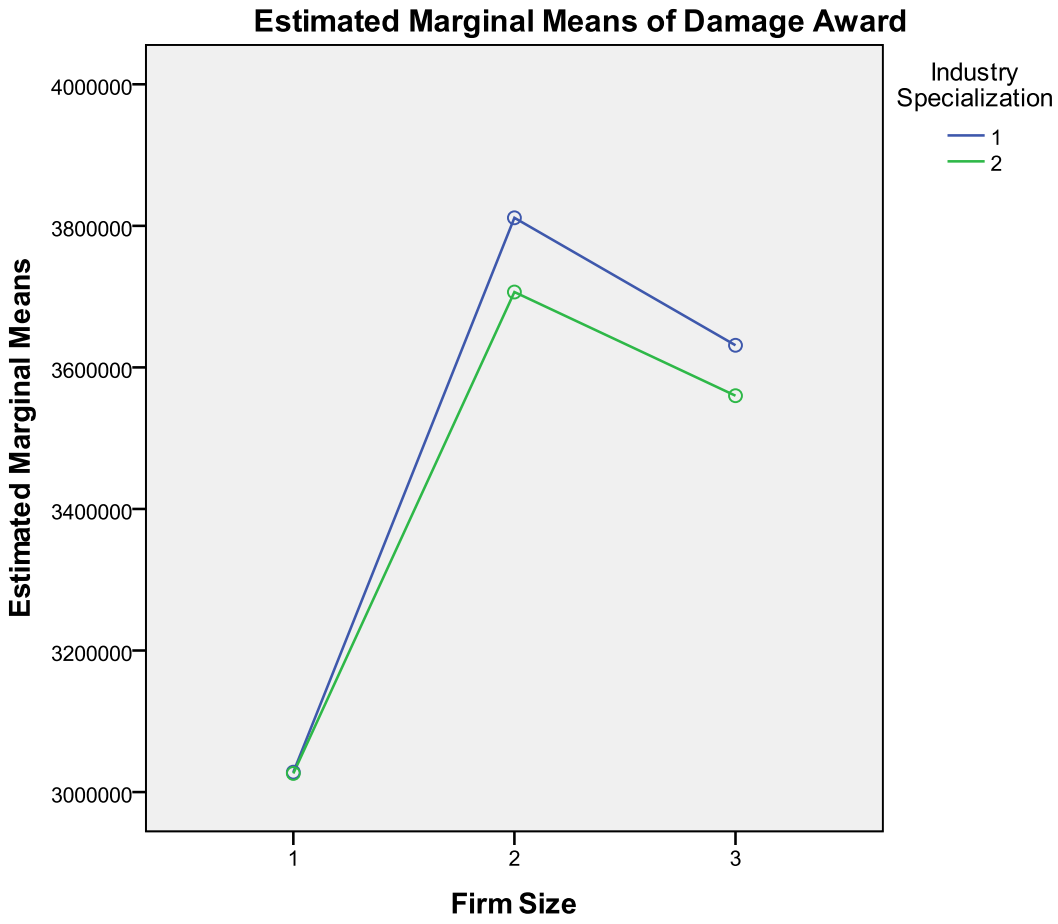
Figure 1: ANOVA for Finding of Negligence



Audit-Firm Size:
- Small = 1
- Midsize = 2
- Large = 3

Industry specialization:
- Non-specialist (top line) = 1
- Industry specialist (bottom line) = 2

Figure 2: ANOVA for Damage Awards



Audit-Firm Size:
- Small = 1
- Midsize = 2
- Large = 3

Industry specialization:
- Non-specialist (top line) = 1
- Industry specialist (bottom line) = 2

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