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An Investigation of Ethical Environments of CPAs: Public Accounting versus Industry

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ABSTRACT: The purpose of this paper is to investigate certified public accountants' (CPAs) perceptions of their ethical environments. More specifically, we compare the perceptions of CPAs in (1) public accounting firms to those in industry, and (2) perceptions of CPAs at Big 4 public accounting firms to those at non-Big 4 firms. The ethical environment is one component of overall organizational culture and is important for encouraging ethical decision making. Based on responses from 904 CPAs, we find CPAs working at public accounting firms perceive their ethical environments as significantly stronger than CPAs in industry (and other nonpublic accounting work settings). Additionally, within public accounting, CPAs at Big 4 firms perceive their ethical environments as significantly stronger than those working at non-Big 4 accounting firms. Implications for research and practice are discussed.

Keywords: ethical environment; public accounting; Big 4 firms.

Data Availability: Please contact the authors.

INTRODUCTION

At the turn of the 21st century, a number of accounting scandals occurred at a wide range of businesses such as AOL, Conseco, HealthSouth, Qwest, Sunbeam, WorldCom and, perhaps most notably, Enron. These ethical lapses led to the conviction of over 1,000 executives, litigation awards against auditors, regulators, banking institutions, and corporate organizations, the demise of Arthur Andersen, and the passage of the Sarbanes-Oxley Act of 2002 (SOX) (Ball 2009). Many argue that a pervasive decline in ethical values and ethical environments across the accounting profession was largely responsible for these scandals (e.g., Zeff 2003; Wyatt 2004; Suddaby, Gendron, and Lam 2009). In this study, we explore the ethical environments of CPAs across the public accounting profession. We are particularly interested in the ethical environment because a sharpened focus on the ethical (as opposed to economic) implications of decisions should help deter the lapses in judgment that have led to so many scandals.

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The *ethical environment* is the pervasive ethical climate or culture regarding what constitutes ethical behavior in an organization (Victor and Cullen 1988). In this study, we compare the ethical environment perceptions of CPAs working in public accounting and in industry to provide insight about potential differences between public accounting firms and the clients they serve (i.e., those in industry). Gaining a better understanding of ethical environment perceptions in the accounting profession is important for several reasons. First, ethical environment perceptions have been shown to influence ethical behavior (Bobek and Radtke 2007; Sweeney, Arnold, and Pierce 2010; Mayer, Kuenzi, and Greenbaum 2010; Lu and Lin 2014). Second, ethical environment perceptions can influence individuals' perceptions of reality (regardless of their accuracy), thereby influencing critical work attitudes and job outcomes such as organizational citizenship behaviors, organizational commitment, and turnover intentions (e.g., Dalton, Cohen, Harp, and McMillan 2014; Ozgur and Akdogan 2015). Third, identifying the relative strengths and weaknesses of ethical environments is important because these environments have the potential to be improved (Shafer 2015).

To guide our predictions regarding differences in ethical environments, we draw on theory about the institutional logics of professionalism and commercialism. Professionalism places a high priority on technical competence and protecting the public interest, while a commercial logic focuses instead on the importance of revenue generation and profitability for organizations (e.g., Hanlon 1994, 1996; Suddaby et al. 2009). Some have argued the underlying cause of accounting scandals is related to a shift in the prevailing institutional logics from the ideals of professionalism to an intense focus on commercialism within certain areas of the accounting profession (e.g., Zeff 2003; Wyatt 2004; Gendron and Spira 2009; Suddaby et al. 2009). Furthermore, corporate organizations generally adhere to a more commercial institutional logic than do public accounting firms (e.g., Suddaby et al. 2009), suggesting that insiders' perceptions of the ethical environment will be stronger in public accounting relative to insiders' perceptions in industry (Elias 2004). The public interest orientation of public accountants also suggests there should be more emphasis on a strong ethical environment at public accounting firms. Therefore, we predict CPAs working in public accounting will perceive stronger ethical environments than CPAs in industry.

Consistent with our hypothesis (i.e., stronger perceived ethical environments in public accounting than industry), our results show CPAs working in Big 4 and non-Big 4 firms perceive significantly stronger ethical environments than CPAs working in industry. Furthermore, our results indicate CPAs at Big 4 public accounting firms perceive significantly stronger ethical environments than CPAs at other international/national, regional, and local public accounting firms.

Our results are important for several reasons. First, we add important information to the literature on ethical environments by showing how perceptions vary based on organizational context. That is, our results provide a useful benchmark regarding the relative strength of ethical environments at large accounting firms, small accounting firms, and organizations outside of public accounting (that employ CPAs). Second, given that CPAs in industry (and other nonpublic accounting work settings) perceive significantly weaker ethical environments than CPAs in public accounting firms, our results suggest these organizations may need to place more emphasis on developing and strengthening their ethical environments (Shafer 2015). Third, our results suggest audit and tax professionals should be cognizant of the fact that the ethical environments their clients work in are perceived as significantly weaker than what is experienced within public accounting. This has important implications for public accounting CPAs when assessing the relative risk of an engagement. In summary, understanding how ethical environments vary based on work setting offers important insights to accounting leaders in both public accounting and industry that can be used to improve the ethical environments across different work contexts within the accounting profession.

The remainder of this paper is organized as follows. In the following section, we discuss prior research on ethical environments and develop our hypothesis. Next, we discuss the research methodology and present the results. The final section concludes with a discussion of implications and recommendations for future research.

PRIOR RESEARCH AND HYPOTHESIS DEVELOPMENT

Prior Accounting Research on Ethical Environments

An organization's ethical environment is an important component of a firm's organizational culture (Victor and Cullen 1988). Previous accounting studies have investigated ethical environments and offer guidance on factors associated with strong ethical environments. Booth and Schulz (2004) identify three features of a strong organizational ethical environment: social norms, social practices, and outcomes. Social norms address the underlying culture or values of the firm and contain three sub-elements: (1) mission and values, (2) leadership and management influence, and (3) peer group influence. Organizations that embrace well-specified missions and values that emphasize ethical behavior facilitate the ethical decision-making processes of their employees (e.g., Ford and Richardson 1994). Additionally, management influence such as "tone at the top," as well as peer group influence, also impact the ethical behavior of others within an organization (e.g., Hegarty and Sims 1979; Nichols and Day 1982).

Social practices assess the formal policies and procedures at a firm (as opposed to the informal culture) and contain two sub-elements: (1) procedures, rules, and codes of ethics, and (2) ethics training. Organizational codes of ethics and formal ethics training affect ethical decisions and behaviors (e.g., Ford and Richardson 1994; Martinov-Bennie and Pflugrath 2009). Finally, outcomes are recognized as rewards and sanctions, and pertain to the explicit consequences of ethical (or unethical) behavior within organizations. For example, in order to promote the ethical decision-making processes within an organization, firms can implement performance evaluation systems that reward ethical behaviors and punish unethical behaviors (Stuebs and Wilkinson 2010; Weber and Wasieleski 2013). In summary, a strong ethical environment exists when a firm relies upon social norms, social practices, and outcomes that emphasize and facilitate ethical decision making.

A wide range of prior studies indicates that ethical environment *perceptions* are positively associated with ethical judgments and decisions. For example, Lu and Lin (2014) find ethical environment perceptions are positively associated with employees' ethical behaviors (e.g., using company services for personal use, accepting gifts/favors in exchange for preferential treatment). Similarly, Mayer et al. (2010) find ethical environment perceptions are negatively associated with employee misconduct such as deliberately bending/breaking the rules and damaging company property.

Within the accounting context, prior research also finds a consistent, positive relationship between ethical environment perceptions and ethical judgments and behaviors.[1] For example, Sweeney et al. (2010) find that ethical environment perceptions are negatively associated with auditors' intentions to engage in dysfunctional audit behaviors, such as underreporting of time and audit quality-threatening behaviors. Shafer (2015) studies professional accountants working in private industry in Hong Kong and finds that perceptions of the ethical culture of their organizations are related to their ethical judgments regarding earnings management. Further, Elias (2004) finds a similar relationship between CPAs' beliefs about corporate ethical values and their beliefs about the acceptability of earnings management.

Of particular relevance to this study, Bobek and Radtke (2007) developed an ethical environment scale to elicit practicing tax professionals' perceptions of their ethical environments. Based on the work of Booth and Schulz (2004), Bobek and Radtke's (2007) ethical environment scale measures (1) social norms (mission and values, leadership and management influence, and peer group influence); (2) social practices (procedures, rules, codes of ethics, and ethics training); and (3) outcomes (rewards and sanctions). The ethical environment scale includes items that measure each of these factors and its sub-elements. It is important to note the Bobek and Radtke (2007) ethical environment scale is the first scale developed specifically to measure public accountants' perceptions of the strength of their ethical environments. As a profession, accountants face unique institutional and regulatory pressures that may shape the ethical environments in which they operate.[2]

Bobek and Radtke (2007) find that tax professionals who identified ethical dilemmas at their firms rated the strength of their ethical environments significantly weaker than tax professionals who did not identify ethical dilemmas. Dalton, Cohen, Harp, and McMillan (2014) use the Bobek and Radtke (2007) ethical environment scale to investigate the impact of ethical environments on female auditors' perceptions of gender discrimination. Dalton et al. (2014) find that ethical environment perceptions are associated with lower levels of perceived gender discrimination, suggesting a strong ethical environment is also associated with perceptions of organizational fairness and gender equality. Dalton et al. (2014) find stronger ethical environment perceptions are also positively associated with organizational citizenship behaviors (i.e., pro-social organizational behaviors) and negatively associated with turnover intentions. In summary, prior research finds ethical environment perceptions are positively associated with ethical judgments, ethical decisions, and positive job outcomes (e.g., lower turnover).[3]

[1] In addition, several experimental-based papers manipulate ethical environments (rather than examining ethical environment perceptions). Consistent with survey-based research on ethical environment perceptions, experimental research on ethical environments finds these environments have a positive impact on ethical judgments and decisions. For example, Booth and Schulz (2004) find that a strong ethical environment can encourage agents to act in the interest of the organization and mitigate agents' tendency to maximize self-interest at the firm's expense. Booth and Schulz (2004, 485) conclude "the most important implication of these findings is that the creation of a strong ethical environment represents a viable control design alternative for an organization attempting to provide a general decision environment that aligns managers' interests with those of the organization." Dalton and Radtke (2013) find that a strong ethical environment (relative to a weak ethical environment) is associated with higher levels of whistleblowing intentions in a case involving an ethically questionable situation.

[2] Other previously developed scales, such as those developed by Hunt, Wood, and Chonko (1989), Cullen, Victor, and Bronson (1993), and Treviño, Butterfield, and McCabe (1998), are more generic in nature and have been used for various participant groups across a range of business disciplines.

[3] A number of additional studies in accounting have investigated other issues pertaining to organizations' ethical culture/ethical environment. For example, Sweeney et al. (2010) examine how perceptions of ethical culture affect auditors' judgments in the U.S. and Ireland, while Svanberg and Öhman (2013) investigate how ethical culture affects audit quality under time budget pressure conditions among financial auditors in Sweden. Martinov-Bennie and Pflugrath (2009) conduct an experiment to examine the influence of the strength of the ethical environment (the presence and reinforcement of a code of conduct, or merely the presence of such a code) on auditors' ethical judgments. Finally, Jenkins, Deis, Bedard, and Curtis (2008) review the accounting literature on the relationship between public accounting firm culture and governance structures.

Ethical Perceptions of CPAs in Public Accounting and Industry

Elias (2004) is the only prior study we are aware of that has compared ethical perceptions of CPAs in public accounting to those in industry. Elias (2004) measured ethical values with the Hunt et al. (1989) five-item scale, which measures perceptions of whether managers act ethically, are concerned about ethics, and the extent to which ethical (unethical) behavior is rewarded (punished). He finds that CPAs in public accounting are significantly more likely to perceive high ethical values at their firms compared to CPAs in industry; further, those at smaller firms are more likely to perceive high ethical values than those at larger firms.

Our study is different from Elias (2004) in several important ways. First, the Elias (2004) study was conducted pre-SOX. Specifically, Elias (2004, 96) writes, "These results may not hold true after the bankruptcies [Enron and WorldCom], since many companies have intensified their efforts to sensitize their employees toward ethical behavior." There have been many changes both in the public accounting profession and in industry as a result of SOX that could affect perceptions of ethical environments. Second, the scale used by Elias (2004) is a five-item measure of corporate ethical values that does not include measures of social practices and is more limited in the scope of social norms that are measured. Finally, Elias (2004) did not report any details about the scale or differences across the various facets of the ethical environment; thus, our study has the opportunity to provide additional insight about specific aspects of the ethical environment.

Institutional Logics—Professionalism versus Commercialism

This section discusses the theoretical background for our investigation into differences in ethical environment perceptions between public accounting and industry. We approach our analysis from an institutional logics perspective (e.g., Suddaby et al. 2009) because institutional logics provide a framework for predicting differences in ethical environments across the accounting profession. Institutional logics consist of "the socially constructed, historical pattern of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality" (Thornton 2004, 69). Logics have important implications for organizations and individuals since different logics suggest different ways of making decisions (Gendron 2002), encourage conflicting strategies and practices (Lander, Koene, and Linssen 2013), and imply varying degrees of employee supervision and control (Hanlon 1994). The institutional logics of professionalism and commercialism (Gendron 2002) are particularly influential within the accounting profession (Lounsbury 2008).

Early conceptualizations (e.g., Wilensky 1964; Scott 1965; Hall 1968) and more recent work (e.g., Gendron 2002; Suddaby et al. 2009) describe several attributes that characterize the institutional logic of professionalism. Professionalism places a high priority on technical competence and protecting the public interest. Professionals view their work as a *calling* and operate with autonomy. The commercial logic, however, focuses primarily on the importance of revenue generation and profitability for organizations (Hanlon 1994, 1996). A firm's promotion criteria under the professional logic are likely to focus on technical abilities, whereas a firm's promotion criteria under the commercial logic are likely to be based on business development and profitability measures. While professionalism and commercialism may conflict (e.g., emphasis on technical ability and duty to the public versus revenue generation), prior research acknowledges the accounting profession needs both logics to be successful. Specifically, a minimum focus on profitability is needed to continue providing services (Gendron 2002), suggesting commercialism and professionalism often coexist in a state of institutional flux within the public accounting profession (Malsch and Gendron 2013). In summary, the professional logic emphasizes a long-term focus of competent service to society, whereas the commercial logic emphasizes more of a short-term focus on profit maximization.

Prior research documents a consistently negative relationship between aspects of commercialistic organizational cultures and ethical environments. For example, Ardichvili, Mitchell, and Jondle (2009) develop a scale called "long-term perspective," which measures the degree to which organizations exemplify a long-term focus on sustainability and social responsibility as opposed to a short-term focus on profit maximization. Using this scale, Jondle, Ardichvili, and Mitchell (2014) find companies with more of a short-term focus on profit maximizations are associated with less effective ethical leadership. Furthermore, they find companies with more of a short-term profit-maximization focus are less likely to internalize ethical values and are less likely to consistently treat various stakeholders (e.g., customers, suppliers, and employees) on an ethical and value-oriented basis. Taken together, these findings suggest more commercialistic organizations (i.e., organizations that embody more of a short-term profit-maximization culture) are associated with weaker ethical environments.

To explain the negative relationship between highly commercialistic organizations and ethical environments, prior research documents that highly commercialistic organizations focus primarily on bottom-line results (i.e., a results-orientation focus) and tend to espouse organizational cultures in which the "ends justify the means" (Campbell and Goritz 2014). In such environments, the heightened pressure to perform oftentimes leads to more corruption and ethical wrongdoing (e.g., Schweitzer, Ordonez, and Douma 2004; Pinto, Leana, and Pil 2008).

Perhaps no other company exemplified this short-term profit-maximization focus better than Enron (Sims and Brinkmann 2003). Enron promoted an environment in which everything boiled down to profits. Consistent with this culture, Enron's performance evaluation system rewarded employees who embraced a short-term focus on profits and routinely ostracized employees who did not (Sims and Brinkmann 2003). Additionally, senior executives reinforced this "win at all costs" culture. For example, CFO Jeffrey Skilling frequently stated that the only thing that matters is profits (e.g., Zellner 2002; Sims and Brinkmann 2003). Furthermore, senior executives would perpetuate this ethos by routinely hiring Ivy League graduates with similar desires for money (Sims and Brinkmann 2003). A number of studies indicate the root of Enron's corrupt behavior was, in fact, the "love of money" (e.g., Tang and Chiu 2003; Singhapakdi, Vitell, Lee, Nisius, and Yu 2013; Chen, T. Tang, and N. Tang 2014). Indeed, prior research finds an individual's "love of money" (as measured by the money ethic scale) is associated with unethical decision making, unethical behaviors, and organizational deviant behaviors (i.e., counterproductive work behaviors) (e.g., Tang and Chiu 2003; Singhapakdi et al. 2013; Chen et al. 2014).

Prior research also suggests the growth in commercialism is responsible for ethical lapses within the public accounting context (e.g., Zeff 2003; Wyatt 2004). Based on interviews of former members of Arthur Andersen, Gendron and Spira (2009, 2010) find commercial pressures played a significant role in the downfall of Andersen. For example, several interviewees indicated firm pressure to raise profit levels led audit partners to compromise their independence for the sake of higher profits (Gendron and Spira 2009). In addition, Wyatt (2004) argues greed within public accounting firms led to several lapses in ethical judgment among many accounting firms at the turn of the 21st century. Wyatt (2004) contends large public accounting firms' constant desire to find new ways of generating revenues, particularly through the use of nonaudit management consulting services, led to a culture of greed and commercialism within the accounting profession, which, in turn, led to a decline in ethical values. Furthermore, Wyatt (2004) acknowledges the underlying causes of the decline in professionalism are likely to remain in place for an extended period.

While understanding the perceptions of CPAs in public accounting is important, many CPAs are also employed in industry. Industry is still recognized as the "epicenter" of commercialization; thus, despite the increase in commercialism within public accounting (e.g., Suddaby et al. 2009), prior research indicates organizations in industry are more likely to adhere to the commercial institutional logic than public accounting firms (e.g., Suddaby et al. 2009). Historically, public accounting partnerships have represented the "traditional" work context (Suddaby et al. 2009) and have operated as "professional organizations" that espouse the values of professionalism (Wallace 1995). While commercialism has increased in focus within many public accounting firms, professionalism and its values of integrity, professional independence, technical competence, and service to society remain ingrained within public accounting firms (e.g., Gendron 2002; Malsch and Gendron 2013). Corporate organizations, however, have historically placed a much greater emphasis on the values of commercialism (e.g., Suddaby et al. 2009). We expect the higher levels of commercialism in industry and the corresponding greater emphasis on professionalism within public accounting firms are likely to engender weaker ethical environments in industry than public accounting.

In summary, prior research suggests higher levels of commercialism (and lower levels of professionalism) tend to create an environment more focused on profit maximization and less focused on ethical decision making and protecting the public interest. As such, given that prior research suggests organizations in industry are more likely to espouse the values of commercialism than public accounting firms (while public accounting firms are more likely to adhere to the norms and values of professionalism than industry organizations), we expect, on average, CPAs in public accounting will perceive stronger ethical environments than CPAs in industry. Formally, we predict the following:

Hypothesis: CPAs working in public accounting will perceive stronger ethical environments than CPAs working in industry positions.

METHODS

The data used in the present study are a combination of data published elsewhere (Bobek et al. 2012; Bobek, Hageman, and Radtke, 2015; n = 241) and new data collected in connection with three other studies (n = 663).[4] The data were gathered from four different states (264 participants from Florida, 21 participants from Kansas, 186 participants from Wisconsin, and 433 participants from South Carolina).[5] Data collected specifically for this study were gathered through the use of state CPA society lists; in all, 904 participants are included in our study, with 803 participants used in our primary analysis arising from

[4] All data were gathered as part of larger data-gathering efforts. The newly collected data are not included in any published or working papers based on these datasets. It is also important to note that none of the data included in this study have been previously analyzed on the bases included herein. Further, institutional review board approval was obtained for both newly collected data, as well as previously collected data.

[5] Ethical environment perceptions for CPAs in public accounting are not statistically different across the four states of participants.

TABLE 1

Demographics and Ethical Environment Scale Means

		Type of Organization				Type of Public Accounting Firm	
	Total (n = 904)	**Public (n = 676)**	**Industry (n = 127)**	**Government (n = 62)**	**Nonprofit (n = 39)**	**Big 4 (n = 143)**	**Non-Big 4 (n = 533)**
Age	41.4	39.6	46.9	47.9	46.3	32.3	41.5
Gender							
Female	41.9%	39.6%	42.5%	61.3%	48.7%	41.3%	39.2%
Male	58.1%	60.4%	57.5%	38.7%	51.3%	58.7%	60.8%
Current Employment							
Public Accounting	74.8%						
Other Accounting	25.2%						
Ethical Environment	71.46	73.32	67.00	63.81	65.92	76.11	72.57
	(9.62)	(8.22)	(11.03)	(11.88)	(10.60)	(6.97)	(8.37)
CPA Firm Size							
Big 4		21.1%					
International/National		9.5%					
Regional		29.3%					
Local		40.1%					

Ethical Environment is measured using 12 items, each with a seven-point scale (see Appendix A). Thus, the range for this variable is 12–84. Higher scores indicate a stronger perceived ethical environment.
Age is measured for one group of respondents using a scale with the following options: 25 years or under, 26–30 years, 31–35 years, 36–40 years, 41–45 years, 46–50 years, 51–55 years, 56–60 years, and over 60 years. Data from all other sources are converted to this scaled measure. Reported scale means are calculated by converting the scaled measures back to years.

public accounting versus industry (the remaining 101 participants work in government and nonprofit organizations).[6] Response rates were consistently near the 10 percent range.

All CPAs responded to one of two versions of the ethical environment instrument developed by Bobek and Radtke (2007) (shown in Appendix A), either the original public accounting version (with wording specifying "my firm") or a nonpublic accounting version (with wording specifying "my organization"). Respondents assessed the ethical environment of their work setting by indicating their agreement with each statement on a seven-point Likert scale anchored by "strongly disagree" and "strongly agree." The possible range of scores is therefore 12 to 84, with higher scores representing a stronger perceived ethical environment.[7]

RESULTS

Descriptive Statistics

Demographic information in Table 1 shows the majority of respondents are male (58.1 percent) with an average age of 41.4 years. Over 74 percent work in public accounting, and 78.9 percent of those in public accounting are from non-Big 4 firms including international/national, regional, or local firms.[8] Table 1 also reports the average ethical environment rating, as well as ratings for those working in public accounting firms (676 responses), industry (127 responses), government (62 responses), and nonprofit entities (39 responses). The mean (standard deviation) rating for the sample is 71.46 (9.62), the mean (standard deviation) for those in public accounting is 73.32 (8.22), and the mean (standard deviation) for those in industry is 67.00 (11.03). Overall, Cronbach's alpha for the ethical environment scale is acceptably high (0.913).

[6] Since responses were collected via state CPA society lists, we did not know where all of the CPAs worked before soliciting responses. In total, we received responses from CPAs working in public accounting (n = 676), industry (n = 127), government (n = 62), and nonprofit entities (n = 39). Since analysis of responses from CPAs working in government and nonprofit entities may prove informative, we include these participants in our dataset and report their ethical environment perceptions in a footnote later in the paper. However, our hypothesis analysis only includes responses from those working in public accounting and industry.

[7] Some responded to the ethical environment items based on a nine-point Likert scale. These responses are converted to a seven-point scale for comparison purposes.

[8] Sole proprietors are excluded from the study, due to the difficulty of assessing ethical environments of sole proprietorships.

TABLE 2

Pearson/Spearman Correlation Coefficients
(n = 904)

	Ethical Environment	*Age*	*Gender*	*Public/Other*
Ethical Environment	1	−0.01765	**−0.06487**	**0.31374**
		0.5962	**0.0512**	**< 0.0001**
Age	−0.01784	1	**−0.18687**	**−0.26197**
	0.5921		**< 0.0001**	**< 0.0001**
Gender	**−0.10493**	**−0.18251**	1	**−0.07956**
	0.0016	**< 0.0001**		**0.0167**
Public/Other	**0.33319**	**−0.26939**	**−0.07956**	1
	< 0.0001	**< 0.0001**	**0.0167**	

The Pearson correlation coefficients are displayed below the diagonal and the Spearman correlation coefficients are displayed above the diagonal in the table, with the p-values displayed below the coefficients. Statistically significant correlations are bold.
Ethical Environment is measured using 12 items, each with a seven-point scale (see Appendix A). Thus, the range for this variable is 12–84. Higher scores indicate a stronger perceived ethical environment.
Age is measured for one group of respondents using a scale with the following options: 25 years or under, 26–30 years, 31–35 years, 36–40 years, 41–45 years, 46–50 years, 51–55 years, 56–60 years, and over 60 years. Data from all other sources are converted to this scaled measure.
Gender is measured as 1 = female, and 0 = male.
Public/Other = 1 for public accounting, and 0 otherwise (i.e., industry, government, or nonprofit).

Table 2 shows correlations among the study variables and indicates those working in public accounting perceive significantly stronger ethical environments than those working elsewhere (Pearson correlation coefficient (r) = 0.33319; $p < 0.0001$). Furthermore, gender is negatively correlated (r = −0.10493; p = 0.0016) with the ethical environment scale, indicating females perceive significantly weaker ethical environments than males.[9]

Hypothesis Testing

Table 3 presents ethical environment ratings for CPAs in public accounting and industry. Our hypothesis proposes CPAs in public accounting will perceive stronger ethical environments than CPAs working in industry positions. Consistent with our hypothesis, Table 3 indicates public accounting CPAs rate their ethical environments (mean = 73.32) as significantly stronger ($p < 0.0001$) than CPAs in industry (mean = 67.00). While both groups, on average, agree with most scale items, those in public accounting agree more strongly. Thus, while CPAs in general perceive they work in relatively strong (as opposed to weak) ethical environments, there appears to be more emphasis on ethical environments in public accounting firms compared to industry organizations. Further, in an untabulated analysis we find accounting professionals at both Big 4 and non-Big 4 public accounting firms perceive stronger ethical environments than those in industry ($p < 0.0001$).

To determine which aspects of the ethical environment contribute to the difference between ethical environment perceptions in public accounting and industry, Table 3 displays means for each of the three factors (and a total of six sub-elements) of the ethical environment scale. Each sub-element is measured with two items (possible range of 2–14). As shown in Table 3, respondents employed in public accounting firms rate every sub-element as stronger than do those in industry ($p < 0.01$).

As a more formal test of our hypothesis, we also perform regression analysis. Table 4 reports a regression analysis that controls for age and gender. As shown in Table 4, the *Public/Industry* dummy variable is positive and significant, indicating public accounting CPAs perceive stronger ethical environments than CPAs working in industry after controlling for the influence of age and gender.[10] In total, the results shown in Tables 3 and 4 provide consistent support for our hypothesis.

[9] We perform a supplemental analysis to determine whether the negative correlation between gender and ethical environment is constant across employer type. When analyzing public accounting, government, and nonprofit professionals as separate groups, there is no significant relationship between ethical environment ratings and gender within any of these three groups; instead, a small but marginally significant correlation (r = −0.16824; p = 0.0587) exists between gender and ethical environment for those participants who work in industry, with females' ethical environment perceptions slightly lower than males' perceptions. Thus, the finding that females perceive their ethical environment as weaker than males is only significant for those who work in industry.

[10] We use age instead of years of experience because our samples are from varying data sources and we do not have consistent measures of years of experience for all participants. Additionally, age and years of experience are generally highly correlated.

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TABLE 3

Ethical Environment Scale Comparison
Public Accounting versus Industry
(n = 803)

Ethical Environment Factors[a]	Public Accounting[b] (n = 676)	Industry (n = 127)	Public Accounting	
			Big 4 (n = 143)	Non-Big 4 (n = 533)
Social Norms				
Mission and Values	12.78*	11.84	13.18***	12.67
	(1.55)	(2.16)	(1.28)	(1.60)
Leadership and Management Influence	12.79*	11.66	13.07***	12.72
	(1.48)	(1.95)	(1.31)	(1.51)
Peer Group Influence	12.47*	11.77	12.72**	12.41
	(1.45)	(1.74)	(1.44)	(1.44)
Social Practices				
Procedures, Rules, and Codes of Ethics	13.07*	11.98	13.34***	13.00
	(1.26)	(1.91)	(0.93)	(1.32)
Ethics Training	11.71*	9.86	12.86***	11.41
	(2.35)	(3.41)	(1.58)	(2.43)
Outcomes				
Rewards and Sanctions	10.49*	9.89	10.95***	10.37
	(2.09)	(2.02)	(2.08)	(2.08)
Overall Ethical Environment Scale	73.32*	67.00	76.11***	72.57
	(8.22)	(11.03)	(6.97)	(8.37)

* Indicates significantly higher than industry at $p < 0.01$.
, * Indicates significantly higher than non-Big 4 at $p < 0.05$ and $p < 0.01$, respectively.
[a] See Appendix A for the items that make up each factor. The "Public Accounting" column includes responses from those who work in public accounting. The "Industry" column includes responses from those who work in industry positions. All respondents are CPAs. Each item is measured on a seven-point scale, with the possible total ethical environment scale ranging from 12–84. Each component is therefore measured with a range of 2–14. Higher scores indicate a stronger perceived ethical environment.
[b] Mean (standard deviation) response for the sum of the two items that make up each factor.

Supplemental Analysis

As a supplemental analysis, we examine whether Big 4 CPAs report stronger (or weaker) ethical environments than non-Big 4 CPAs.[11] Table 1 shows sample demographics for Big 4 and non-Big 4 CPAs separately. Importantly, Big 4 CPAs report significantly stronger ethical environments (mean = 76.11, standard deviation = 6.97) than non-Big 4 CPAs (mean = 72.57, standard deviation = 8.37). Table 3 indicates this result holds true for all six sub-elements of the ethical environment scale ($p < 0.05$). As additional support for this finding, Table 5 reports a regression analysis controlling for age and gender. As shown in Table 5, the coefficient of the *Non-Big 4* variable is negative and significant at $p < 0.01$, indicating Big 4 CPAs perceive a stronger ethical environment, relative to non-Big 4 CPAs.[12] These results are in contrast to the pre-SOX results of Elias (2004), who finds that CPAs at smaller firms are more likely to perceive strong organizational ethical values. Our findings may reflect the increased emphasis, particularly by Big 4 firms, on ethics training and ethical behavior that has occurred since the scandals of the early 2000s, which resulted in the demise of Arthur Andersen. As shown in Table 5, *Age* is also significant, indicating

[11] In an untabulated supplemental analysis, we also investigate the perceptions of those working in government and nonprofit organizations. The average ethical environment rating of CPAs working in government is 63.81, while those working in nonprofit entities average 65.92. Additional analysis indicates accounting professionals working in public accounting firms perceive stronger ethical environments than those in both governmental organizations and nonprofit entities ($p = 0.0001$). Additionally, CPAs working in industry positions perceive stronger ethical environments than those working in governmental organizations ($p < 0.05$).
[12] In untabulated analyses, we find the differences between Big 4 and non-Big 4 firms exist for all sizes of non-Big 4 firms (i.e., other international/national, regional, and local). Furthermore, there are no statistically significant differences between participants from regional and local firms or between other international/national firms and regional or local firms.

TABLE 4

Hypothesis Testing
Regression Analysis of Ethical Environment Scale Differences between Public and Industry CPAs
(n = 803)

$$Ethical\ Environment = \beta_0 + \beta_1 Public/Industry + \beta_2 Age + \beta_3 Gender + \varepsilon$$

	Public and Industry	
	Coefficient Estimate	**t-value**
Intercept	66.38	55.47*
Public/Industry	6.56	7.59*
Age	0.18	1.39
Gender	−1.21	−1.89
R^2	0.0737	
F-value	21.18*	

* Indicates p-value < 0.0001.
Ethical Environment is measured using 12 items, each with a seven-point scale (see Appendix A). Thus, the range for this variable is 12–84. Higher scores indicate a stronger perceived ethical environment.
Age is measured for one group of respondents using a scale with the following options: 25 years or under, 26–30 years, 31–35 years, 36–40 years, 41–45 years, 46–50 years, 51–55 years, 56–60 years, and over 60 years. Data from all other sources are converted to this scaled measure.
Gender = 1 for females, and 0 for males.
Public/Industry = 1 for public accounting, and 0 for industry.

older CPAs perceive stronger ethical environments than younger CPAs. These results complement the findings of Bobek, Hageman, and Radtke (2010), who find partners perceive stronger ethical environments than non-partners.[13]

Prior research suggests commercialism's dominance within public accounting firms is greater for larger public accounting firms (i.e., Big 4 and international/national non-Big 4 firms) than for smaller accounting firms (i.e., regional and local firms) (e.g., Gendron 2002; Zeff 2003; Wyatt 2004; Cooper and Robson 2006; Gendron and Spira 2009, 2010; Kornberger, Justesen, and Mouritsen 2011; Sweeney and McGarry 2011). For example, Big 4 firms are now commonly assumed to have profit maximization as their primary motivation (e.g., Cooper and Robson 2006). Thus, given our earlier discussion regarding the association between commercialism and the decline in ethical values within the accounting profession, these results (i.e., a stronger ethical environment in Big 4 firms than non-Big 4 firms) may appear counter intuitive.

There are several factors that provide an explanation for this finding. First, prior accounting research indicates Big 4 firms have invested more in reputational capital than non-Big 4 firms (e.g., Beatty 1989; Francis and Krishnan 1999). Given the Big 4's reputation of providing higher-quality audit services (e.g., Teoh and Wong 1993; Raman and Wilson 1994; Eshleman and Guo 2014), Big 4 firms have more to lose regarding reputational capital. Consequently, Big 4 firms may have more of an incentive to promote strong ethical environments than non-Big 4 firms. Second, Big 4 firms spend more on training programs than non-Big 4 firms; therefore, it is possible that Big 4 firms provide more ethics training than non-Big 4 firms. Third, given that Big 4 firms have "deeper pockets" than non-Big 4 firms, Big 4 firms face greater litigation risk than non-Big 4 firms (e.g., Palmrose 1988; Khurana and Raman 2004), and thus may have more of an incentive to promote the ethical environment of the firm. Finally, more frequent inspection of Big 4 firms' audit quality by the PCAOB (inspected annually) than most non-Big 4 firms (inspected triennially) may also result in more incentive to promote the ethical environments of Big 4 firms.[14]

[13] We also investigate whether ethical environment perceptions vary between auditors and tax accountants. The correlation between the ethical environment scale and public accountants working in audit versus tax is r = 0.09592, p = 0.0126, with auditors perceiving their ethical environments as stronger than tax accountants. In our sample, the 186 auditors come predominantly from larger firms. A 0/1 dummy variable representing Big 4/non-Big 4 is significantly correlated with public accountants working in audit versus tax at r = 0.14880, p = 0.0001. A regression (untabulated) with ethical environment as the dependent variable and the four independent variables of audit versus tax, *Big 4/Non-Big 4*, *Age*, and *Gender* shows only *Big 4/Non-Big 4* (negative coefficient, p < 0.01) and *Age* (positive coefficient, p < 0.01) as significant.

[14] We note a subsample of our respondents completed both the ethical environment scale and provided responses to scenarios that assess ethical judgments and decisions. Consistent with prior research, in untabulated results, we find that ethical environment perceptions are positively related to ethical judgments and decisions.

TABLE 5

Supplemental Analysis
Regression Analysis of Ethical Environment Scale Differences across Public Accounting Firms
(n = 676)

$$Ethical\ Environment = \beta_0 + \beta_1 Non\text{-}Big\ 4 + \beta_2 Age + \beta_3 Gender + \varepsilon$$

	Public Accounting	
	Coefficient Estimate	**t-value**
Intercept	73.81	90.94*
Non-Big 4	−3.90	−5.43*
Age	0.50	3.68*
Gender	−0.39	−0.60
R^2	0.0498	
F-value	11.73*	

* Indicates p-value < 0.01.
Ethical Environment is measured using 12 items, each with a seven-point scale (see Appendix A). Thus, the range for this variable is 12–84. Higher scores indicate a stronger perceived ethical environment.
Age is measured for one group of respondents using a scale with the following options: 25 years or under, 26–30 years, 31–35 years, 36–40 years, 41–45 years, 46–50 years, 51–55 years, 56–60 years, and over 60 years. Data from all other sources are converted to this scaled measure.
Gender = 1 for females, and 0 for males.
Non-Big 4 = 1 for other international/national, regional, and local firms, and 0 otherwise.

SUMMARY AND CONCLUSIONS

To shed light on the relative strength (or weakness) of ethical environments across the accounting profession, this study examines differences in CPAs' perceived ethical environments in the post-SOX era. Using a dataset of 904 CPAs, our results indicate the ethical environments experienced by CPAs working in Big 4, other international/national, regional, and local public accounting firms are perceived as significantly stronger than the ethical environments of CPAs working in industry (as well as other nonpublic accounting organizations). Furthermore, the ethical environments of CPAs at Big 4 public accounting firms are perceived as significantly stronger compared to those at other international/national, regional, and local public accounting firms.

The results of this study should be considered with its limitations in mind. First, we measured CPAs' *perceptions* of their ethical environments and do not have information regarding the "real" ethical environments in practice. However, Craft (2013) notes perceptions may be as important as reality in terms of affecting behavior. Furthermore, as discussed earlier, ethical environment perceptions are associated with ethical behaviors (e.g., Bobek and Radtke 2007; Sweeney et al. 2010; Mayer et al. 2010; Lu and Lin 2014), so understanding ethical environment *perceptions* remains important. Second, the CPAs in our study indicate their ethical environments are relatively strong, suggesting perhaps some level of socially desirable responses. We have no reason to believe one group would be more susceptible to the social desirability response bias than any other group; therefore, conclusions about the ethical environments of CPAs working in different work contexts should be reliable.

As an additional limitation, we made predictions guided by prior research about professionalism and commercialism, but we did not measure these institutional logics directly; thus, to the extent our assumptions are incorrect, there may be other theoretical reasons for our findings. Thus, future research should examine the underlying reasons why CPAs in industry perceive weaker ethical environments. Perhaps public accounting firms have implemented more policies and practices designed to promote strong ethical environments. Conversely, perhaps more ethical accounting professionals (e.g., individuals with higher levels of moral reasoning) have self-selected into public accounting firms. In addition, public accounting firm socialization, wherein members are molded by the firm, is quite different from most industry settings. Public accounting firms use coercive (i.e., structural), mimetic (i.e., mentoring), and normative (i.e., professionalization) techniques to acculturate individuals into the profession (Fogarty 1992). These mechanisms of acculturation are less common in organizations outside of public accounting where there are many organization members who are not CPAs. Thus, perhaps acculturation practices enhance ethical environment perceptions within public accounting.

Our results provide a number of implications for the accounting profession. First, we find CPAs in industry (and other nonpublic accounting settings) perceive significantly weaker ethical environments than CPAs in public accounting. This result,

coupled with the findings of the Association of Certified Fraud Examiners (ACFE 2014) that accounting department employees commit the highest frequency of fraud, suggests organizations in industry may need to place more emphasis on developing and strengthening their ethical environments. For example, providing strong ethical leadership, offering ethics training, and adequately incentivizing ethical behavior are all keys to promoting strong ethical environments within organizations (e.g., Stuebs and Wilkinson 2010; Weber and Wasieleski 2013; Dalton and Radtke 2013; Dalton et al. 2014). Audit and tax professionals should remain mindful that their clients operate in a weaker ethical environment than do public accounting professionals when assessing the relative risk of an engagement. This also has implications for assessing potential management control weaknesses.

Second, CPAs in public accounting who are considering a transfer to industry (either in the near or distant future) should be aware of one difference between public accounting and industry previously unrecognized in the literature, that is, the ethical environments within industry are perceived as significantly weaker than those in public accounting. It is relatively common for CPAs to leave public accounting for industry due to work-life balance concerns (e.g., Buchheit, Dalton, Harp, and Hollingsworth 2016); however, these CPAs should also consider the possibility that a position in industry may be associated with a weaker ethical environment. Having a weaker ethical environment within industry may place more stress on accounting professionals because they may be the ones who face ethical dilemmas without the organizational support needed for effective resolution.

Finally, despite (or perhaps because of) being heavily scrutinized following the corporate scandals of the early part of this century (e.g., Zeff 2003; Wyatt 2004; Ball 2009; Suddaby et al. 2009), Big 4 firms are perceived to have the strongest ethical environments. This is in contrast to the findings in the pre-SOX era (Elias 2004). Therefore, our results suggest perhaps more attention should be shifted from Big 4 firms to non-Big 4 firms. For example, it appears Big 4 CPA firms are focusing resources on their ethical environments. Furthermore, given that Big 4 CPAs report the strongest ethical environments, Big 4 firms may want to publicize this relative advantage. For example, finding qualified staff remains a top issue facing public accounting firms (Bagley, Dalton, and Ortegren 2012). Therefore, anything firms can do to distinguish themselves from competing firms is likely beneficial. While Bagley et al. (2012) outline a number of advantages and disadvantages of careers in Big 4 versus non-Big 4 firms, they do not mention a firm's ethical environment as a distinguishing factor. Our results provide Big 4 firms with a positive distinguishing factor. Future research should investigate whether CPAs in industry respond differently than CPAs in public accounting to ethical dilemmas. This would be of interest to accounting firm leaders. In addition, future research should investigate whether the ethical environments at Big 4 firms actually support enhanced ethical decision making or if such environments are merely superficial. In summary, our study offers important insights regarding the ethical environments of CPAs across the accounting profession and provides several opportunities for future research.

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APPENDIX A

Ethical Environment Scales

Ethical Environment Factors	Public Accounting Scale	Industry Scale[a]
Social Norms		
Mission and Values	1. As a whole, my firm has strong ethical values that reinforce ethical decision making. 2. My firm is greatly concerned with ethical behavior.	1. As a whole, my organization has strong ethical values that reinforce ethical decision making. 2. My organization is greatly concerned with ethical behavior.
Leadership and Management Influence	1. Managers and partners within my firm act ethically. 2. Managers and partners within my firm clearly support all firm efforts to encourage ethical behavior.	1. Managers within my organization act ethically. 2. Managers within my organization clearly support all organizational efforts to encourage ethical behavior.
Peer Group Influence	1. Individuals within my firm strongly identify with the firm. 2. Colleagues within my firm act ethically.	1. Individuals within my organization strongly identify with the organization. 2. Colleagues within my organization act ethically.
Social Practices		
Procedures, Rules, and Codes of Ethics	1. My firm has a code of ethics that is consistent with the AICPA Code of Professional Conduct. 2. Other individuals within my firm adhere to both the firm's code of ethics and the AICPA Code of Professional Conduct.	1. My organization has a code of ethics that is consistent with the AICPA Code of Professional Conduct. 2. Other individuals within my organization adhere to both the organization's code of ethics and the AICPA Code of Professional Conduct.
Ethics Training	1. My firm has an effective ethics training program. 2. My firm's ethics training program focuses on practical issues and encourages ethical decision making.	1. My organization has effective ethics training programs. 2. My organization's ethics training programs focus on practical issues and encourage ethical decision making.
Outcomes		
Rewards and Sanctions	1. Unethical behavior is severely punished within my firm. 2. Special recognition is given to individuals who demonstrate ethical behavior within my firm.	1. Unethical behavior is severely punished within my organization. 2. Special recognition is given to individuals who demonstrate ethical behavior within my organization.

[a] Government and nonprofit CPAs responded to the same scale as the industry respondents.
Ethical Environment is measured using 12 items, each with a seven-point scale anchored with 1 = strongly disagree and 7 = strongly agree. Higher scores indicate a stronger ethical environment. Thus, the range for this scale is 12–84.

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