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Student Perceptions of Accounting and Business Scandals on the Accounting Profession

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This work was carried out in collaboration between all authors. All authors read and approved the final manuscript.

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ABSTRACT

The purpose of this study was to determine the impact of accounting and business scandals on business student perceptions of the accounting profession and to determine if they are differentiated by maturity factors. Student maturity is distinguished by age in years, class standing, and number of accounting classes taken. The study results are based on a survey of business student perceptions regarding their understanding of accounting scandals, related to business student's knowledge of scandals, student perceptions about the accounting profession, and student perceptions about accounting/business ethics. The relationship between business student perceptions of the accounting profession, ethics and accounting education, and student knowledge of accounting and business scandals and maturity factors is examined. It is interesting to note that the more mature a student is, as measured by numeric age, the more they perceive that the accounting profession has implemented adequate measures to avoid future accounting scandals. Students disagree with the statement that accounting scandals have made the accounting profession more attractive, as separated by the maturity factor of age. Students agree that accounting scandals have stressed the importance of good ethical conduct in the accounting profession. The study also revealed students are becoming more informed about business scandals by regularly reading business publications. The findings of this study have important implications for students and professors alike by enabling efforts to dialog with students about perceptions of the accounting profession.

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1. INTRODUCTION

The reputation of the accounting profession has suffered dramatically since the Enron scandal and failure of Arthur Anderson (Theuri and Weickgenannt [1]). However, corporate accounting scandals, accounting irregularities, and income restatements continue to rise, heralding a call for more effective accounting ethics coverage in the accounting education (Mastracchio [2]). Educators shape the values of individuals and society, while accounting educators also play key roles in shaping professionals values (Burton and Sack [3]). These scandals have resulted in changes to the regulatory environment for financial accounting reporting. The perceptions of business and accounting students as a result of these scandals must be considered to keep the profession viable.

The passage of the Sarbanes-Oxley Act of 2002 (SOX), is a direct result of these accounting scandals, and has dramatically changed the accounting and auditing professions. This has also brought into question the coverage of ethics in the accounting education for students and accounting professionals (Blanthoren, Kovar, and Fisher [4]). The Public Company Accounting Oversight Board (PCAOB) was a direct result of SOX, whose purpose is to oversee and inspect the audits and auditors of public companies. Management's responsibility for financial reporting is increased by SOX and requires the CEO and the CFO of public companies to certify the quarterly and annual statements submitted to the SEC. Anyone knowingly falsely certifying the financial statements is subject to criminal prosecution. In addition, another major change is SOX's requirement that all public companies issue a report on internal control. Companies must acknowledge management's responsibility for maintaining controls and assess the effectiveness of their internal control structure and procedures (Nichols [5]).

Even with these regulations and closer scrutiny on business accounting, the perception of the accounting profession is doubtful and accounting/business ethics education coverage in the curriculum is in need of change. According to Liu, Yao, and Hu [6], accounting/business ethics education in accounting shows

deficiencies in terms of code-bound content, less formal training, hands-on training, and less partnering, as compared to medicine and law. The National Association of State Boards of Accountancy (NASBA) has been considering what is necessary in regards to curriculum for accounting education or whether to rely on educational institutions or accrediting bodies to decide what is adequate. Some believe that additional changes to the Certified Public Accounting Examination on content specification areas regarding accounting/business ethics would lead academia to change the subject matter in business and accounting courses (Mastracchio [2]).

Blanthorne, Kovar, and Fisher [4] presented the results of a comprehensive survey of accounting faculties' opinions and practices regarding accounting/business ethics education. They found that accounting educators recognize the importance of accounting/business ethics education to satisfy the profession's needs. Accounting educators indicate that they are the most appropriate source of business ethics education and prefer practical application over theoretical course content. In the study, they found only 18% of accounting instructors reporting that they do not teach accounting/business ethics in their courses and 75% stating that they should teach more accounting/ business ethics. These instructors also reported that the integration of accounting/business ethics was supported by 98% of respondents, with only 27% thinking that a philosophy class teaching normative ethical theory was necessary. Bloch, Brewer, and Stout [7] posit that accounting students must be trained as potential leaders who can shape the future of business.

According to Buchan [8], research in accounting/business ethics is a fairly recent phenomenon. Recent scandals have dominated the news and the role of the accounting profession has been questioned by students, the accounting profession, the public, legislators, and regulators. The current perceptions of the accounting profession by students studying business and accounting is important in determining the implications for academicians in teaching professional accounting/business ethics and conduct.

The study examines business student perceptions regarding their understanding of accounting scandals, related to business student's knowledge of scandals, student perceptions about the accounting profession, and student perceptions about accounting/business ethics. These perceptions are considered in relationship to factors of student demographics based on the following factors: age, major, grade point average (GPA), class standing (freshman, sophomore, etc.), the number of accounting courses taken, and sex.

Prior studies have focused on the overall value judgment of ethical issues and even measuring students' perceptions with maturity as the differentiating value. The findings of this study should contribute to the accounting/business ethics literature by evaluating various students' perceptions as differentiating variables. The results of this study should also be of value in the development of business courses that aide in student understanding of ethics and the regulatory process. It is critical for those seeking to enter the accounting profession to participate in setting accounting/business ethical standards to ensure the continued health of the profession.

1.1 Research Questions

The following research questions are addressed in this study.

1. What are the impacts of accounting and business scandals on business student perceptions of the accounting profession differentiated by maturity factors distinguished by age, class standing, and number of accounting classes taken?
2. What are the impacts of accounting and business scandals on business student perceptions of accounting/business ethics and accounting education differentiated by maturity factors distinguished by age, class standing, and number of accounting classes taken?
3. What are student perceptions of effects of scandals and their knowledge about scandals differentiated by maturity factors distinguished by age, class standing, and number of accounting classes taken?
4. What is the relationship between business student perceptions of the accounting profession, accounting/business ethics and accounting education, and student knowledge of accounting and business scandals and maturity factors?

2. LITERATURE REVIEW

Many business leaders and scholars have argued that ethics and morality are vague concepts that are difficult to define and translate into practical application in the workplace. However, ethics and morality are practical issues in business because society expects its organizations and leaders to fit within a framework that also sets human behavior with meaning, prescribed standards of behavior, and defines how we are expected to treat one another (Paine [9]). Santava, Caldwell & Richards [10] recommend that business executives, financial leaders and auditors, conform to an ethical system that facilitates trust among its adherents and creates the necessary foundation for a cooperative endeavor. They also suggest that society has imposed on corporate leaders a set of moral obligations that includes responsibilities, aims, values and commitments.

For the purpose of this study, accounting and business ethics are considered one in the same and referred to as accounting/business ethics. Accounting/business ethics should permeate the entire firm, so they are considered one topic. We define accounting/business ethics as the principles and standards that determine acceptable conduct in accounting practice in business organizations. Acceptable behavior in business is determined by customers, competitors, government regulators, interest groups, and the public, along with an individual's personal moral principles and values (Applied corporate governance [11]).

The accounting and business irregularities at Arthur Anderson, Citigroup, Health South Corporation, Countrywide, Lehman Brothers, Merrill Lynch, Thornburg Mortgage, and Qwest Communications have created a renewed need to examine the impacts of accounting and business scandals on business student's perceptions of the accounting profession. The insider trading at ImClone Systems, scandals at Tyco, Adelphia, and Madoff are additional reasons for organizations to make a renewed effort to establish standards for conducting business that will also help improve their reputations to attract accounting and business student talent and operate in an ethical and legal manner.

The importance of accounting/business ethics in accountancy can be viewed from the demise of Arthur Anderson and other auditing firms who

were publicly dishonored for disregarding or compromising high ethical integrity in accounting that, among other things, led to the corporate accounting scandals of the late 1990s and the early 2000s. Cantoria [12] found that accountants helped mislead the public by certifying fraudulent financial reports of companies as being true and correct. Incidences of unethical accounting conduct precipitated the passage of the Sarbanes-Oxley Act of July 2002.

2.1 Scandals

To buttress the importance of accounting/business ethics in the accounting profession, the following is a chronology of recent high profile accounting fraud cases that sent shocking waves across the nation.

2.1.1 Waste management scandal (1998)

Waste Management, based in Houston Texas, is a publicly traded waste management company. A new CEO and management team while going through the books found reported fake income of \$1.7 billion created by lengthening depreciation time on its tangible assets thus understating depreciation expense. Waste Management settled shareholders' class-action suit for \$457 million. Arthur Andersen audited its books and was fined \$7 million by the Security and Exchange Commission. Arthur Anderson firm eventually went out of business (accounting-degree.org. [13]; Cantoria [12]; Deal Book [14]).

2.1.2 Enron scandal (2001)

Enron Corporation was based in Houston Texas and was a commodities, energy and service company. It kept huge debts off its balance sheets. Enron created bogus companies through which it routed huge bank borrowings. Internal whistleblower, Sherron Watkins, as well as Enron's suspicious high stock prices exposed the scandal. Benston [15] stated that Enron's stock price was suspiciously high and had increased from a \$7 low in the 1990s to a high of \$90 per share in mid-2000 and eventually hit bottom less than \$1 by the end of 2001, leading them to file for bankruptcy protection. Shareholders lost \$74 billion and more than 20,000 people lost their jobs and retirement accounts. Arthur Andersen, one of the Big 5 global accounting firms, was found guilty of fudging Enron's accounts and this led its dissolution (accounting-degree.org. [13]; Cantoria [12]; Deal Book [14]). In 2006, chief executives of Enron, Kenneth L. Lay and Jeffrey

K. Skilling, were found guilty of convicted of fraud and conspiracy. Kenneth Lay died before being sentenced and Mr. Skilling was subsequently sentenced to 24 years in prison (DealBook [14]).

2.1.3 World com scandal (2002)

WorldCom, the nation's largest long-distance telecommunications company, inflated assets by as much as \$11 billion and underreported line costs by capitalizing, rather than expensing. It overstated revenues with fake accounting entries to avoid showing heavy losses in the company's financial statements (DealBook [14]). The internal auditing department at WorldCom uncovered \$3.8 billion worth of fraud and exposed the company leading to a loss of 30,000 jobs. The CFO was fired, the controller resigned, and the company filed for bankruptcy. Bernard John "Bernie" Ebbers, the CEO, was sentenced to 25 years for fraud, conspiracy and filing false documents with regulators (accounting-degree.org [13]; Cantoria [12]; Deal Book [14]). WorldCom was then acquired by Verizon Communications in 2005 and is now known as MCI Inc.

2.1.4 Tyco scandal (2002)

Tyco, a Swiss company with U.S. operational headquarters in Princeton, New Jersey, is a company with diversified product lines. Tyco's New Jersey CEO and CFO stole \$150 million and overstated company income by \$500 million. They siphoned money through unapproved loan disbursements, as well as, through fraudulent stock sales (accounting-degree.org, [13]). Money disguised as executive bonuses or benefits was smuggled out of the company. The CEO, Dennis Kozlowski, and the Chief Financial Officer Mark Schwartz were accused of civil fraud and theft and sentenced to 8-25 years in prison (accounting-degree.org [13]).

2.1.5 Qwest communications international, Inc. (2002)

Qwest Communications International, Inc., a large United States telecommunications company, headquartered in Denver, Colorado, provided services to 14 states in the US. It inflated revenue using network capacity "swaps" and "improper accounting for long-term deals". Qwest admitted that an internal review found that it inflated its sales revenues by \$1.16 billion. Qwest was fined \$250 million to settle the

Securities and Exchange Commission (accounting-degree.org [13]).

2.1.6 Health South scandal (2003)

HealthSouth was based in Alabama as the largest publicly traded health care provider company in the United States. It allegedly overstated its earnings by \$1.4 billion to meet stockholder expectations (accounting-degree.org [13]). CEO Richard Scrushy, sold \$75 million in stock, a day before the company reported a huge loss, prompting SEC suspicions. Scrushy was acquitted of all 36 counts of accounting fraud, but convicted of bribing the governor of Alabama, leading to a 7-year prison sentence (accounting-degree.org [13]; Cantoria, [12]; DealBook [14]).

2.1.7 American International Group (AIG) 2005

AIG is a multinational insurance corporation. It was involved in a huge accounting fraud with a value of about \$3.9 billion, as well as, in manipulation of stock price and bid-rigging. It showed loans as revenue and directed clients to insurers that the company had payoff agreements with, and encouraged traders to inflate AIG stock price. In 2008, it recorded the largest quarterly corporate loss in history at that time of \$61.7 billion, and was bailed out by the federal government. A possible tip off by a whistle blower got the SEC investigation started at AIG. It suffered the penalties from the SEC for \$10 million in 2003 and \$1.64 billion in 2006, and paid a Louisiana pension fund \$115 million, and three Ohio pension funds a total of \$725 million (accounting-degree.org. [13]). The executives at AIG compensated themselves to the tune of over \$165 million in bonuses (accounting-degree.org [13]; DealBook [14]).

2.1.8 Bernie Madoff scandal (2008)

Bernard L. Madoff Investment Securities, LLC, was a Wall Street investment firm founded by Madoff. Bernard Madoff was the former NASDAQ chairman. When Madoff let his sons know about his scheme, they immediately alerted the SEC. Madoff pleaded guilty to 11 federal crimes and admitted that his business was an elaborate Ponzi scheme. It swindled investors \$64.8 billion. Returns to investors were not paid from profits but out of their own money or that of other investors. Madoff was eventually sentenced to 150 years in prison and ordered to pay restitution of \$170 billion (accounting-degree.org [13]).

2.1.9 Scandal summary

Cantoria [12] stated that the Sarbanes Oxley (SOX) Act was a result of the careful study of all the malfeasance and manipulations committed that led to the accounting scandals in the early part of the 21st century. The laws implemented by the SOX Act brought about changes that deal heavy penalties to its offenders and do not excuse anyone from ignorance of the GAAP accounting rules and policies. It is important for accounting/business students to understand these mistakes in order to avoid repeating them.

2.1.9.1 Accounting/business ethics in the classroom

Can the causes of current accounting scandals be attributed to the failure to teach accounting/business ethics at the undergraduate level? The undergraduate student has limited exposure to a traditional course teaching ethical behavior. When and where will the accounting/business student be introduced to ethical behavior? Research has determined that the primary source of accounting/business ethics education in accounting students was not found in intermediate or advanced financial accounting courses, but was found in auditing textbooks (Gordon [16]). There is a brief exposure to ethics in auditing courses presented through the "Code of Professional Conduct".

The concept of a standalone accounting/business ethics course being taught to undergraduate accounting and business students is not a new concept. Professor Stephen E. Lobe addressed the concept of accounting/business ethics training for public accounting students and business students in general in his research (Lobe [17]; Lobe [18]). Furthermore, a finding of the National Commission on Fraudulent Financial Reporting recommends that the need for additional coverage of ethics in accounting and business education is real (Treadway Commission [19]). However, many accounting faculty do not feel comfortable and some think that they are not qualified to teach ethics (Everett [20]).

The American Accounting Association (AAA) [21] suggested that a code of ethics for accounting academics is a viable option. The AAA was charged with the task of determining if there was a need to develop a code of ethics and rules of professional conduct for accounting academics. The conclusion of the committee was that there

was not enough support for a code of ethics for accounting academics (American Accounting Association [21]). Many feel that it is time to revisit the need for a code of conduct, a code of ethics, and an ethics committee in business education and organizations (Loeb [22]; Lukerath-Rovers, and De Bos [23]).

According to Loeb [22], the establishment of an ethics committee at the corporate level, would better provide employees with an escape valve from the pressures that are natural to the profession of accounting. The perspective of the senior executives regarding ethical practices is important to help develop corporate culture. Ethical business practices should be modeled by senior executives, if management regards truth and leadership as important attributes to the organization.

2.2 Student Perceptions of Ethical Scandals

Determining the role of gender, academic status, and ethical education is important to academicians. Luthar, DiBattista, and Gautschi [24] determined from their study of 691 undergraduate seniors and freshman in a college of business, that gender was strongly correlated to perceptions of what an ethical climate should be. Furthermore, females showed a more favorable attitude regarding ethical behaviors than did their male counterparts. Underclassmen indicated at a higher rate than upperclassmen that they believe that accounting/business ethics are related to business outcomes. They also found that an accounting/ethical education was significantly correlated to an ethical current climate and what an ethical climate should be. More importantly students, who had been exposed to an ethical education in a course, were likely to believe that ethical behavior should be related to successful business outcomes (Blo Bloch, Brewer, and Stout [7])

According to Guffey & McCartney [25], the role of a college education is to produce ethical graduates and that ethical graduates are more likely to perform as professionals in an ethical manner. Their study of 397 students in upper-level accounting courses in seven large public universities in the US examined the construct of the perceived importance of an ethical issue (PIE), as a determinant of ethical decision making for accounting students. It was determined that PIE was related to ethical judgment and behavioral intention in an

academic setting. Ethical judgment was found to be associated with behavioral intent and that the greater the perceived importance of an ethical issue, the greater becomes the motivation to act ethically. Research tends to also support the belief that employees will conform to the ethical values of their leaders what they support and reinforce (Treviño and Brown [26]). A code of ethics for students is a way to communicate the importance of ethical behavior and that environmental contexts influence behavior, too. This research reinforces the findings of (McCabe & Treviño [27]; Clikeman & Henning [28]), that a socialization process and strong culture regarding ethical behavior in a business or school that a person belongs to, is of great influence to shape the importance of ethical issues, such as reduced cheating.

Theuri & Weickgennant [1] examined the effects of maturity on students' perceptions of how accounting scandals impact the accounting profession. They examined a population of 117 college business majors on three factors determining student maturity: age, class standing (sophomore, junior, etc.), and the number of courses in accounting that the student had taken. The results of this study indicate that student maturity is a significant determinant of student perceptions and differentiation in their understanding of accounting scandals, legislative response to scandal, response adequacy, and the viability of the accounting profession. They conclude that the effects of ethical scandals on business students' perception differentiated by maturity is important to academicians and this may increase their sensitivity to their students' needs during times of scandals, especially considering the influence of teachers in shaping their ethical perceptions.

Coleman, Kreuze, & Langsam [29] surveyed 338 business students regarding their perceptions of the accounting profession and business scandals in terms of their class rank, major, gender, and frequency of reading business publications. Their study indicated that overall, those respondents were aware of the corporate income restatements and accounting irregularities. They found that 91% of respondents agreed that many companies have been involved in income restatements and accounting irregularities during the last year. They also learned that student perceptions indicated that they believed that the investing public is not easy to forgive and forget these scandals. Most students were in favor of stiff penalties from the SEC against firms against

companies and individuals not providing fair and full accounting information disclosure. The student respondents of this research did not indicate that they were intending to change their major as a result of the accounting and business scandals. Respondents indicate that the profession remains honorable and that the scandals have reduced the attractiveness of the profession. They recommended that a tarnished image requires accounting programs in higher education to address this concern.

3. METHODOLOGY

A survey questionnaire entitled, "Perceptions of Accounting Scandals Survey (PASS version 1)" was developed by the authors to determine student perceptions about the accounting profession, accounting/business ethics education, and student knowledge about scandals. This study was conducted during a period post Enron and WorldCom, but at a time when recent and significant accounting scandals have occurred at Olympus Corporation and Autonomy Corporation.

The survey was conducted in a small private university that offers both undergraduate and graduate MBA program. The survey was a questionnaire in a Likert survey format given to students in a number of business courses at the freshman, sophomore, junior, and senior undergraduate level and at the MBA level. Students had an option as to whether to voluntarily participate and also complete the adult consent to participate form by their instructors. Students completed the survey in class in a pencil and paper format. On average students completed the 28 survey questions and 6 demographic questions in less than 15 minutes and submitted their surveys to the course instructor who then provided them to the researchers. No vignettes or definitions were provided to the students in the survey as it was also a measure of business knowledge of scandals.

The total population surveyed for this research was 320 as measured by enrollment in each of the courses surveyed. There were a total of 185 responses who complete the surveys that were deemed usable in the data analysis yielding a 58% response rate. Table 1 presents a summary profile of the student respondents. Approximately 49.7% of the respondents were female and 50.3% male. The majority of respondents were under 24 years-of-age or under at 75.1% with the

remaining 24.9% over 24 years-of-age. A total of 80.5% of respondents were non-accounting business majors, while 19.5% were accounting majors. Approximately 82.1% of respondents were undergraduate business students and 17.9% were MBA students. The majority of students had a 3.00 GPA or greater and had taken four or less accounting classes.

In addition to the demographics presented in Table 1 regarding the survey respondents this study aimed to address four main research questions regarding students' maturity and their perceptions of the impact accounting and business scandals had on the accounting profession as follows:

1. What are the impacts of accounting and business scandals on business student perceptions of the accounting profession differentiated by maturity factors distinguished by age, class standing, and number of accounting classes taken?
2. What are the impacts of accounting and business scandals on business student perceptions of accounting/business ethics and accounting education differentiated by maturity factors distinguished by age, class standing, and number of accounting classes taken?
3. What are student perceptions of effects of scandals and their knowledge about scandals differentiated by maturity factors distinguished by age, class standing, and number of accounting classes taken?
4. What is the relationship between business student perceptions of the accounting profession, accounting/ business ethics and accounting education, and student knowledge of accounting and business scandals and maturity factors.

The following section examines the results of the survey questions by research question, examines the relationship between

4. RESULTS

4.1 First Analysis

The first analysis was conducted to determine the mean, median, and standard deviation of the survey questions used to answer each of the three research questions. Table 2 presents the perceptions of effects of scandals on the accounting profession. The top two mean scores were found in question 3 and 4. Table 3 presents

the perceptions of effects of scandals on accounting/business ethics and business education. The top two mean scores were found in questions 5 and 2. Table 4 presents student perceptions of effects of scandals and their knowledge about scandals. Questions 2 and 5 represent the top two mean scores.

Table 1. Demographic profile of respondents

Percent		Frequency	Percent
Sex:	Female	92	49.7%
	Male	93	50.3%
Age:	24 and Under	139	75.1%
	Over 24	46	24.9%
Major:	Accounting	36	19.5%
	Others (Business)	149	80.5%
Class Standing:	Undergraduate	152	82.1%
	Graduate (MBAs)	33	17.9%
GPA:	Under 2.49	4	2.2%
	2.50-2.99	26	14.1%
	3.00-3.49	66	35.7%
	3.50-4.00	89	48.0%
Accounting Courses Taken:	Four or less	159	86.0%
	Over four courses	26	14.0%
		N= 185	

Table 2. Student perceptions of effects of scandals on the accounting profession

Your opinion of agreement with...	Mean	Median	SD
1. The accounting profession remains an attractive profession.	2.31	2	1.07
2. Corporate income restatements and accounting irregularities have caused me to rethink my career choice	3.64	4	1.05
3. I plan to change my college major from accounting/business to other fields, because of these accounting scandals involving restatements and accounting irregularities.	4.11	4	.98
4. The accounting scandals have made a career in accounting more attractive	3.75	4	.94
5. The accounting scandals have stressed the importance of good ethical conduct in the accounting profession	2.04	2	.77

Table 3. Student perceptions of effects of scandals on ethics and accounting education

Your opinion or level of agreement with...	Mean	Median	SD
1. A business ethics education in college is necessary for ethical business practices.	2.37	2	1.02
2. A business ethics education in college will reduce scandals.	2.67	3	.94
3. A business ethics education in college will result in business success.	2.55	3	.90
4. It is important for a good business education that an ethical code of conduct is in place at a school.	1.98	2	.76
5. A required ethics class for all business majors would decrease accounting scandals in business.	2.94	3	1.12

4.2 Correlation Analysis

A test for a linear relationship between each perception variable and the overall maturity of the subjects was initially performed prior to an investigation of how each of the three measures of maturity (age, class standing and number of accounting courses taken) impacts the various perception variables of interest. Since the maturity variables are based on categorical data, the Spearman *Rho* correlation coefficient is used to test for the relationship.

Table 5 presents student perceptions of the effects of scandals on the accounting profession and the correlation coefficient and corresponding significance. A strong positive linear correlation exists between respondents' class and two perception variables of interests. The age of the student also exhibits a strong positive linear correlation with one variable of interest. Accounting courses taken has a strong positive correlation with two variables of interest. It is important to note that only those variables

exhibiting a statistically significant linear relationship are reported.

Table 6 presents student perceptions of the effects of scandals on ethics and business education and the correlation coefficient and corresponding significance. A strong positive linear correlation exists between respondents' age and two perception variables of interest. The age of the student also exhibits a strong positive linear correlation with one variable of interest.

Table 7 presents student perceptions of the effects of scandals and their knowledge about scandals on the accounting profession and the correlation coefficient and corresponding significance. A strong positive linear correlation exists between respondents' class and three perception variables of interests. The age of the student also exhibits a strong positive linear correlation with two variables of interest. Accounting courses taken has a strong positive correlation with three variables of interest.

Table 4. Student perceptions of effects of scandals and their knowledge about scandals

<i>Your opinion or level of agreement with...</i>	Mean	Median	SD
1. During the last decade, many companies have been involved in corporate income restatements and accounting irregularities.	2.17	2	.67
2. I understand what was entailed in the accounting scandals.	2.88	3	.95
3. The Securities and Exchange Commission (SEC) failed to ensure corporate disclosures were full and fair and this resulted in behavior that caused these corporate Scandals.	2.68	3	.70
4. Managers are responsible for these accounting scandals?	2.23	3	1.07
5. The accounting profession has implemented adequate measures to avoid future scandals?	2.72	3	.85
6. I read business publications often?	2.06	2	1.05

Table 5. Student perceptions of effects of scandals on the accounting profession

<i>Your opinion or level of agreement with...</i>	Class r-coeff (sign)	Age r-coeff (sign)	Courses r-coeff (sign)
1. The accounting profession remains an attractive profession.	.030 (.683)	-.040** (.588)	-.302** (.000)
2. Corporate income restatements and accounting irregularities have caused me to rethink my career choice.	.129*(.080)	.018(.804)	-.138(.060)
3. I plan to change my college major from business to other fields, because of these accounting scandals involving restatements and accounting irregularities.	-.094(.205)	-.095(.199)	-.136(.065)
4. The accounting scandals have made a career in accounting more attractive.	.086(.242)	-.007(.927)	-.179(.293)
5. The accounting scandals have stressed the importance of good ethical conduct in the accounting profession.	-.215**(.003)	-.110(.135)	-.151*(.040)

Table 6. Student perceptions of effects of scandals on ethics and accounting education

<i>Your opinion or level of agreement with...</i>	Class	Age	Courses
1. A business ethics education in college is necessary for ethical business practices.	.090(.223)	-.165*(.025)	.040(.591)
2. A business ethics education in college will reduce scandals.	.101(.170)	.134(.069)	.048(.513)
3. A business ethics education in college will result in business success.	.180(.014)	.175*(.017)	.044(.549)
4. It is important for a good business education that an ethical code of conduct is in place in a school	-.181(.014)	.006(.934)	.012(.870)
5. A required ethics class for all business majors would decrease accounting scandals in business.	-.077(.298)	.125(.091)	.063(.392)

Table 7. Student perceptions of effects of scandals and their knowledge about scandals

<i>Your opinion or level of agreement with...</i>	Class	Age	Courses
1. During the last decade, many companies have been involved in corporate income restatements and accounting irregularities.	-.190**(.010)	-.198**(.007)	-.151*(.040)
2. I understand what was entailed in the Accounting scandals.	-.173*(.018)	-.202**(.006)	-.312**(.000)
3. The Securities and Exchange Commission (SEC) failed to ensure corporate disclosures were full and fair and this resulted in behavior that caused these corporate scandals.	-.119(.107)	-.131(.075)	.130(.078)
4. In your opinion, who is responsible for these accounting scandals?	.057(.444)	.093(.207)	-.078(.293)
5. The accounting profession has implemented adequate measures to avoid future scandals?	-.035(.638)	-.041(.582)	-.078(.293)
6. How often do you read business publications?	.198**(.007)	-.261**(.003)	.230**(.002)

4.3 Linear Regression Analysis

In order to determine the extent to which the maturity variables reported in Tables 5, 6, and 7 are a factor in influencing the responses to the perception effects, linear regression analysis (reduced and full models) were run on the significant relationships. Each of the maturity levels served as independent variables with the perception effects as the dependent variable. Tables 8, 9, and 10 present the summary results of the analysis.

In the model that investigates whether the accounting profession remains an attractive profession age is statistically related to students' perception ($p=.000$) after controlling for class standing and number of courses taken [see Table 8(q. 1)]. When age is removed from the model and class standing is introduced by itself, class standing is statistically significant ($p=.000$) in explaining student perceptions, accounting courses taken is also significant ($p=.000$). In a

full model that includes age, class standing, and number of accounting courses taken, none are significant.

In the model that investigates whether the accounting scandals have made a career in accounting more attractive age is statistically related to students' perception ($p=.005$) after controlling for class standing and number of courses taken [see Table 8(q. 5)]. When age is removed from the model and class standing is introduced by itself, class standing is statistically significant ($p=.021$) in explaining student perceptions, accounting courses taken is also significant ($p=.000$). In a full model that includes age, class standing, and number of accounting courses taken, courses taken presents the only significant finding.

In the model that investigates whether the accounting scandals have stressed the importance of good ethical conduct in the accounting profession age is statistically related to students' perception ($p=.001$) after controlling

for class standing and number of courses taken [see Table 8(q. 6)]. When age is removed from the model and class standing is introduced by itself, class standing is statistically significant ($p=.004$) in explaining student perceptions, accounting courses taken is also significant ($p=.007$). In a full model that includes age, class standing, and number of accounting courses taken none is significant.

In the model that investigates whether student's agree with whether a business education in college is necessary for ethical practices and age is statistically related to students' perception

($p=.013$) after controlling for class standing and number of courses taken [see Table 9(q. 1)]. In a full model that includes age, class standing, and number of accounting courses, age is significant ($p=.019$).

In the model that investigates whether a accounting ethics education in college will result in business success and age is statistically related to students' perception ($p=.019$) after controlling for class standing and number of courses taken [see Table 9(q. 3)]. In a full model that includes age, class standing, and number of accounting courses, none is significant.

Table 8. Full and reduced regression models of student perceptions of effects of scandals on the accounting profession

	Model	Age	Class	Courses
	<i>F-value(sign)</i>	<i>t-value(sign)</i>	<i>t-value(sign)</i>	<i>t-value(sign)</i>
Your opinion or level of agreement with...				
1. The accounting profession remains an attractive profession.				
Model with Age only	6.010(.015)	-2.425(.000)	---	---
Model with Class only	5.806(.017)	---	17.368(.000)	---
Model with Courses only	4.509(.035)	---	---	25.302(.000)
Model with Age & Class	3.559(.030)	-1.141(.26)	-1.051(.294)	---
Model with Age & Courses	4.139(.017)	-1.924(.056)	-1.492(.137)	---
Model with Class & Courses	3.900(.034)	---	-1.7999(.074)	-1.400(.163)
Model with Age, Class, & Courses	2.947(.034)	-1.019	-.764(.446)	-1.302(.165)
5. The accounting scandals have made a career in accounting more attractive.				
Model with Age only	8.128(.005)	-2.851(.005)	---	---
Model with Class only	5.402(.021)	---	-2.324(.021)	---
Model with Courses only	16.431(.000)	---	---	-4.053(.000)
Model with Age & Class	4.232(.016)	-1.733(.085)	.604(.547)	---
Model with Age & Courses	9.997(.000)	-1.831(.069)	---	-3.377(.001)
Model with Age, Class, & Courses	6.630(.000)	-1.469(.144)	.073(.942)	-3.311(.001)
6. The accounting scandals have stressed the importance of good ethical conduct in the accounting profession.				
Model with Age only	10.676(.001)	3.267(.001)	---	---
Model with Class only	8.312(.004)	---	2.883(.004)	---
Model with Courses only	7.559(.007)	---	---	2.749(.007)
Model with Age & Class	5.821(.004)	1.797(.074)	---	---
Model with Age & Courses	7.269(.001)	2.596(.010)	---	1.924(.056)
Model with Class & Courses	6.028(.003)	---	2.088(.038)	---
Model with Age, Class, & Courses	4.950(.003)	1.639(.103)	.061(.544)	1.755(.081)

Table 9. Full and reduced regression models student perceptions of effects of scandals on ethics and accounting education

	Model	Age	Class	Courses
	<i>F-value(sign)</i>	<i>t-value(sign)</i>	<i>t-value(sign)</i>	<i>t-value(sign)</i>
Your opinion or level of agreement with...				
3. A business ethics education in college will result in business success.				
Model with Age only	5.610(.019)	2.368(.019)	---	---
Model with Age, Class, & Courses	2.476(.063)	1.136(.257)	1.217(.225)	-.824(.411)
5. A business ethics education in college is necessary for ethical business practices.				
Model with Age only	6.230(.013)	2.496(.013)	---	---
Model with Age, Class, & Courses	2.184(.092)	2.147(.033)	-2.700(.788)	-.485(.628)

In the model that investigates whether student's agree with whether during the last decade many companies have been involved in corporate income restatements and accounting irregularities, accounting courses taken is statistically related to students' perception ($p=.000$) after controlling for class standing and number of courses taken [see Table 10(q. 1)]. In a full model that includes age, class standing, and number of accounting courses taken, accounting courses taken is significant ($p=.000$).

In the model that investigates whether a student understands what was entailed in the accounting scandals, accounting course taken is significant ($p=.035$) after controlling for age and class standing [see Table 10(q. 2)]. In a full model that includes age, class standing, and number of accounting courses, courses taken is significant ($p=.000$).

In the model that investigates how often do you read business publications, class standing is significant ($p=.000$) after controlling for age and accounting courses taken [see Table 10(q. 6)]. When the model with courses only is examined it is significant (.000). In the model with class standing and course standing, class is significant (.038). In a full model that includes age, class standing, and number of accounting courses, none is significant.

5. DISCUSSION

5.1 Perceptions Differentiated by Age

Student respondents were divided into two groups based on age categories of 24 and under

($n=139$) and over 24 ($n=46$). When examining the mean scores of younger college students compared with their older counterparts, older college students perceived that they were more knowledgeable about business and scandals. In Table 11, statements 4 and 5, with p values of (.004) and (.009), respectively, indicate that these statements have different mean values. In Table 12 and 13, mean scores between age groups are similar; however, in question six in Table 13, there is a statistically significant difference observed at (.021) between age groups, indicating a difference between mean scores. The remaining statements present p values with significance levels greater than the α level (.05), indicating that the mean scores between age groups are similar. These results are consistent with Silver and Valentine (2000) and Theuri and Weickgenannt [1] who found that older students present more positive ethical attitudes than younger students.

5.2 Perceptions Differentiated by Class Standing

Students were divided into two groups based on their class standing, undergraduate ($n=152$) and MBA ($n=33$). MBA student results present higher mean scores, overall, than undergraduates. In Table 11, statement 5 has significant p value of (.046), indicating that this statement has different mean values between classes. In Table 12 and 13, mean scores between age groups are similar. These findings align with those of Theuri and Weickgenannt [1] who found differences in class standings and student perceptions of ethics.

Table 10. Full and reduced regression models student perceptions of effects of scandals and their knowledge about scandals

	Model	Age	Class	Courses
	F-value(sign)	t-value(sign)	t-value(sign)	t-value(sign)
Your opinion or level of agreement with...				
1. I read accounting publications often.				
Model with Class only	6.708(.010)	---	17.368(.000)	---
Model with Courses only	3.354(.035)	---	---	25.302(.000)
Model with Class & Courses	3.888(.022)	---	2.088	-1.032(.303)
Model with Age, Class, & Courses	2.584(.055)	1.33(.895)	1.206(.090)	1.037(.301)
2. During the last decade, many companies have been involved in corporate income restatements and accounting irregularities.				
Model with Course only	20.360(.006)	---	---	20.276(.000)
Model with Age, Class, & Courses	8.448(.000)	.711(.478)	1.14(.52)	-.501(.000)
6. I understand what was entailed in the accounting scandals.				
Model with Courses only	4.535(.035)	---	---	-2.130(.035)
Model with Age, Class, Class, & Courses	2.184(.092)	2.147(.033)	-2.7(.788)	-.485(.628)

Table 11. Results of multiple comparison test of students' perception of scandals' effect

What are student perceptions of the accounting profession?	Age	Class	Courses
	F-value(Sign)	F-value(Sign)	F-value(Sign)
1. The accounting profession remains an attractive profession.	1.772(.153)	.780(.547)	.867(.434)
2. These corporate income restatements and accounting irregularities have caused me to rethink my career choice.	.511(.728)	1.477(.236)	.548(.702)
3. I plan to change my college major from business to other fields, because of these accounting scandals involving restatements and accounting irregularities.	1.415(.246)	.298(.744)	.229(.875)
4. The accounting scandals have made a career in accounting more attractive.	3.904(.009)	.645(.593)	.919(.472)
5. The accounting scandals have stressed the importance of good ethical conduct in the accounting profession.	6.285(.004)	1.229(.307)	.626(.606)

5.3 Perceptions Differentiated by Number of Accounting Courses Taken

Students were divided into two groups based on the number of accounting classes taken, four and under classes taken (n=152), and over four classes taken (n=33). Overall, students who had

taken four accounting classes or less perceived that they were more knowledgeable than those who had taken more than four classes about the accounting profession, ethics, and business education. Each of the individual statements present p values with significance levels greater than α level (.05), indicating that the mean scores between age groups are similar.

Table 12. Results of multiple comparison test of students' perception of scandals' effect

What are student perceptions about ethics and business education?	Age	Class	Courses
	F-value(Sign)	F-value(Sign)	F-value(Sign)
1. A required ethics class for all business majors would decrease accounting scandals in business.	.638(.638)	.495(.739)	1.505(.237)
2. A business ethics education in college is necessary for ethical business practices	.705(.593)	.916(.468)	.757(.530)
3. A business ethics education in college will reduce scandals.	.648(.632)	1.234(.319)	1.502(.388)
4. A business ethics education in college will result in business success	.432(.785)	.528(.716)	2.16(.122)
5. It is important for a good business education that an ethical code of conduct is in place at school.	1.215(.316)	.100(.982)	1.15(.351)

Table 13. Results of multiple comparison test of students' perception of scandals' effect

Do students feel they are knowledgeable about accounting and business scandals?	Age	Class	Courses
	F-value(Sign)	F-value(Sign)	F-value(Sign)
1. During the last decade, many companies have been involved in corporate income restatements and accounting irregularities.	1.960(.135)	.966(.422)	1.018(.415)
2. I understand what was entailed in the accounting scandals.	.978(.430)	1.058(.382)	2.492(.066)
3. The Securities and Exchange Commission (SEC) failed to ensure corporate disclosures were full and fair and this resulted in behavior that caused these corporate scandals.	1.528(.221)	.642(.612)	.534(.712)
4. Managers are responsible for these accounting scandals?	1.99(.896)	1.709(.187)	.854(.476)
5. I read business publications often.	1.219(.318)	.368(.829)	2.918(.046)
6. The accounting profession has implemented adequate measures to avoid future scandals?	3.234(.021)	2.136(.103)	1.463(.252)

5.4 Limitations

There are a number of limitations of this study that include the specialized nature of the student sample. The student sample was drawn exclusively from undergraduate and graduate accounting and business courses at only one private non-profit institution of higher learning. Second, the single institution at which students were surveyed was in the United States. These conditions limit the generalizability of the results to other types of institutions throughout the United States and global.

Nonetheless, interesting findings have resulted from the examination of student perceptions of accounting scandals and maturity factors. Results indicate that older students feel that the

accounting profession has implemented adequate measures to avoid future accounting scandals. As separated by age, students disagree with the statement that accounting scandals have made the accounting profession more attractive. Students agree that accounting scandals have stressed the importance of good ethical conduct in the accounting profession. Considering maturity as measured by course taken, students are reading business publications often.

The findings of this study contribute to the literature about accounting/business ethics by considering the effects of accounting and business scandals on student perceptions of the accounting profession when maturity factors are measured. Business instructors influence their students in shaping their opinions about

accounting/business ethics and ethical practices and the opportunity to dialogue about the topic. The results from this study indicate that student perceptions of accounting scandals, as distinguished by maturity, vary based on factors of age, class standing, and number of accounting classes taken.

7. CONCLUSION

Accounting educators and their institutions must ensure that the supply of qualified, intelligent, and ethical accountants meets the changing professional standards and future market demands. It is not enough to accept students who volunteer to enroll in colleges and universities as accounting majors. The responsibility is to recruit not only outstanding students, but those with high ethical values. Accounting/business ethics education in terms of ethical practices is needed in the business and accounting curriculums. This is required to improve the accounting profession and to gain the trust of the public. Students must be provided with the knowledge, skills, and ethical standards to help improve the reputation of the accounting profession.

Damage-control lessons learned from the surge of these corporate accounting scandals, if passed to new breed of accountants and business persons, should help prevent a future repeat of such history. The high cost in reputation and economic damage to companies must be communicated to student accountants, if they are to learn from history and avoid future damages that further diminish public confidence in the accounting profession. Accounting students should be made to understand the great importance of high integrity and public confidence in the accounting profession. By learning lessons from past scandals, future accountants may avoid the high cost of accounting fraud to the profession and the affected firms.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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