
ACCOUNTING STUDENTS' KNOWLEDGE AND PERCEPTIONS OF THE SARBANES-OXLEY ACT OF 2002

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ABSTRACT

The Sarbanes-Oxley Act of 2002 (SOX) affects many accounting and other business professionals. As future accounting and business professionals, accounting and other business majors must be knowledgeable about the provisions of this important new act. The purpose of this study was to investigate accounting students' knowledge about key provisions of the SOX, and their perceptions regarding such knowledge.

The study found that the majority of the students knew about the financial statement certifications required by the CEO and CFO. However, the majority of the students did not know which Non-audit services auditors are prohibited from performing for audit clients. In addition, only a small percentage of the students knew what the purpose of the Securities and Exchange Commission and the Public Company Accounting Oversight Board is, and did not show a good understanding of the purpose of the SOX. Students generally perceived the need to know about SOX as high, but did not feel that they possessed such knowledge.

The results of the study suggest that additional discussions about the provisions of the SOX are necessary to prepare students for their future careers.

INTRODUCTION

The Sarbanes-Oxley Act of 2002 (SOX) was signed into law on July 30, 2002. The Act has many provisions that affect accounting as well as non-accounting business professions. As future business professionals, all business majors must be knowledgeable about the main provisions of the SOX. The purpose of this study is to investigate how knowledgeable accounting and non-accounting students are about some of the key provisions of the SOX which affect both accounting and non-accounting business professionals.

The study found that the majority of the study participants knew about the financial statement certification required by the CEO and CFO. However, the majority of the students did not know which NAS auditors are prohibited from performing for their audit clients. In addition, only a small percentage of the students knew what the purpose of the Securities and Exchange Commission (SEC) and the Public Company Accounting Oversight Board (PCAOB) is and very few study participants knew the name of the current chair of the PCAOB. The majority of the students

did not show a good understanding of the scope and purpose of the SOX. Students generally perceived the need to know about SOX as high, but did not feel that they possessed such knowledge.

As expected, accounting majors and particularly students who had completed a larger number of accounting classes were more likely to correctly answer some of the questions than were non-accounting majors and those who had completed only a few accounting classes. The overall low rate of correct responses to the questions suggest that additional coverage of the SOX in accounting as well as other business classes would be beneficial to the future business and accounting professionals.

BACKGROUND LITERATURE

The Sarbanes-Oxley Act of 2002 (SOX) was signed into law by President Bush on July 30, 2002. The Act was lawmakers response to highly publicize financial reporting scandals such as those involving ENRON and WorldCom that have impaired investors' confidence in financial reporting and auditing. The intended purpose of the Act is "To protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws, and for other purposes." (U.S. Congress, H.R. 3763, 2002).

The provisions of the SOX directly or indirectly affect many business professionals, including accountants, managers and executives, financial statement analysts and even attorneys. The provisions of the SOX are detailed in eleven titles, each with a number of subsections. The SOX also provides for strict penalties for SOX violations, which constitute violations of the SEC Act of 1934 (U.S. Congress, H.R. 3763, 2002). The key provision of the SOX subject to this study are discussed in the following paragraphs.

Provisions of the SOX

Title I of the SOX details the establishment of the PCAOB. It also sets forth the composition, scope and duties of the PCAOB. Consistent with Title I, the PCAOB has five member, of which three must be non-CPAs, and only two can be CPAs (H.R. 3763, 2002, Section 101). The PCAOB's mission is "...to oversee the audits of public companies in order to protect the interests of investors and further the public interest in the preparation of informative, fair, and independent audit reports." (PCAOB, 2003). The former president of the Federal Reserve Bank of New York, Mr. William J. McDonough, serves as the PCAOB's current chair. As part of its scope and authority, the PCAOB requires that all audit accounting firms that audit U.S. SEC registrants register with the board and pay the required registration fee. This includes both U.S. and non-U.S. audit firms if they audit U.S. SEC registrants. The PCAOB also reviews these audit firms each year or every three years, depending on the number of audits conducted by the firm. (U.S. Congress, HR

3763, 2002). The Board has recently released its first report regarding its review of the Big 4 audit firms (Gullapalli, 2004).

The SOX also grants the PCAOB the authority to promulgate auditing standards and regulations and has already issued several of them. Prior to the creation of the PCAOB, the American Institute of Certified Public Accountants' Auditing Standards Board promulgated auditing standards and rules.

Title II of the SOX addresses auditor independence. Specifically, consistent with Section 201 of the SOX, public accounting firms may not provide the following NAS to audit clients:

- "(1) bookkeeping or other services related to the accounting records or financial statements of the audit clients;
- (2) financial information systems design and implementations;
- (3) appraisal or valuation services, fairness opinions, or contribution-in-kind reports;
- (4) actuarial services;
- (5) internal audit outsourcing services;
- (6) management functions or human resources;
- (7) broker or dealer, investment advisor, or investment banking services;
- (8) legal services and expert services unrelated to the audit; and
- (9) any other service that the Board determines, by regulation, is impermissible."

(U.S. Congress, H.R.3763, 2002, 201).

Initially, even tax services were considered for inclusion in the prohibited NAS. ~~However~~, currently public accounting firms may still provide tax compliance and planning services for their audit clients if they are pre-approved by the companies' audit committees. In addition, all other NAS not specifically prohibited, must be approved by the audit committee prior to performance (U.S. Congress, H.R. 3763, 2002, 202).

Effect of the SOX

A recent article in Business Week was titled, "Death, Taxes, and Sarbanes - Oxley?" (Henry et al., 2005). The article addressed the difficulties, costs, and the likely benefits of the SOX. It stated that on average big companies spend \$35 million to comply with audit-disclosure regulations, which have been expanded greatly by the SOX (Henry et al., 2005).

Many individuals are affected by the SOX. These include not only financial managers, controllers, and treasurers, but anyone within an organization who contributes to the organization's financial reporting to the SEC (Levinsohn, 2003). In fact, one survey by the Association for Financial Professionals found that consistent with SOX section 302, 37% of the executives working for public companies and 20% of the executives working for private companies were requested to certify the accuracy of their financial information. (Levinsohn, 2003).

For accounting majors, knowledge and understanding of the provisions of SOX is critical, as many provisions directly affect accountants (e.g., their ability to provide services to clients and

the PCAOB registrations) and their clients (e.g., the financial statement certification). In fact, the demand for accounting majors has increased significantly and some of this increasing demand has been spurred by the SOX (Hagenbaugh, 2005). While during the past year, the number of students graduating with an accounting degree has increased by 11%, more graduates are needed to fill the available positions (Hagenbaugh, 2005).

Intentional and unintentional consequences of the SOX may arise. For example, the stringent limitation of NAS is expected to decrease audit committee's willingness to accept proposals for any NAS. (Gifford & Howe, 2004). Furthermore, the recent decrease in the amount of capital raised by foreign firms in U.S. markets may be attributable to uncertainties about the jurisdiction of the SOX regarding these capital ventures (Karmin, 2003).

SOX applies specifically to public SEC reporting entities. However, a 2003 survey by Robert Half Management found that 58% of the CFOs in surveyed private companies reported that their organization had improved or planned to improve the control of their accounting practices. Furthermore, 36% reported that they have established a new or expanded an existing internal audit function within their organization, and 44% reported that they have reviewed or adapted their current accounting practices (Murray, 2003).

Another potential positive consequence of the SOX is that the percentage of S&P 500 companies that fail to meet their earnings expectations by at least 10% - reporting income either above or below expectations - has decreased significantly in 2004 (SmartPros Editorial Staff, 2005).

Accounting Educators' Role

Because the SOX is likely to affect the careers of many accounting and other business professionals, accounting and business majors must become familiar with the provisions of the SOX. Accounting and business educators play a key role in helping students learn about the provisions of the SOX to understand the requirements, and to know how to comply with them. A recent survey of accounting faculty (James, 2004) found that by Summer 2003, 67% of the faculty already had implemented discussions of the SOX in their classes. The study also suggested that the majority of the faculty supported the provisions of the SOX (James, 2004). While a high percentage of accounting educators already appear to have implemented discussions of SOX into their curriculum, the degree and extend of coverage is likely to vary, and so is the degree of students' knowledge.

Research Question and Objective of the Study

The degree of future instruction and discussion needed in accounting and other business-related classes depends on students' current knowledge of key provisions of the SOX. Thus, more must be known about students knowledge of the SOX. In addition, students' perceptions regarding

their knowledge of SOX and the importance of such knowledge are significant, as they affect their interest in acquiring such knowledge.

RESEARCH METHODOLOGY

A questionnaire was developed and administered at the beginning of each quarter in four sections of Managerial Accounting in Spring and Fall 2004, one section of Case Studies in Accounting in Fall 2004, and one section of Advanced Accounting in Winter 2005. All business majors are required to complete Managerial Accounting, which is an upper division accounting class at this Western region university. The prerequisites for Managerial Accounting are the successful completion of Principles of Accounting I and II. Case Studies in Accounting is the last required accounting class completed by accounting majors. Advanced Accounting is an elective course and typically one of the last classes completed by accounting majors prior to graduation. The prerequisite for Advanced Accounting is Intermediate Accounting II. Prior to administering the questionnaire, one faculty member and two students reviewed the questions for validity.

Two-hundred-six students completed the questionnaire, which consisted of twelve questions, some with multiple parts. One question addressed the purpose of the SOX. Several choices were provided. Two questions asked students to indicate agreement or disagreement with the statements that SOX only applies to U.S. corporation and to U.S. accounting and audit firms. A multi-part question addressed NAS and asked students whether auditors currently were permitted to perform these services for their audit clients. All the services that are prohibited by the SOX were included as well as two services that are still permitted (i.e., tax compliance and planning services). Possible responses to these questions were “yes” and “no.”

Two questions addressed the CFO and CEO financial statement certification requirements. Possible responses are “yes” or “no.” In addition, three open-ended questions asked students to state the purpose of the PCAOB and the SEC and to name the chair of the PCAOB. Three questions addressed students perceptions regarding their knowledge of SOX and the importance of such knowledge. Finally, some of the questions were demographics-type questions. The data was evaluated utilizing two-sample t-tests, ANOVA, and Pearson Correlations.

HYPOTHESES

While the SOX affects many business professionals, many of its provisions directly affect accountants and their clients. For example, accountants in public practice are now prohibited from performing most NAS for their audit clients. In addition, public accounting firms who audit U.S. companies that file financial reports with the SEC must now register with the PCAOB, pay registration fees, and comply with the board’s regulations and rules. Thus, accounting majors may

be more likely than non-accounting majors to have learned about some of the main provisions of the SOX. Thus H1 states:

H1: Accounting majors are more likely to be knowledgeable about key provisions of the SOX than non-accounting majors.

The students enrolled in Advanced Accounting and Case Studies in Accounting (400-level) classes already had completed a significantly higher number of accounting classes than those students enrolled in Managerial Accounting (300-level) and thus should have had additional opportunities to learn about the SOX in class. Thus, accounting students who have completed a larger part of their accounting curriculum are more likely to be knowledgeable about the provisions of the SOX, than those who have completed only a few accounting classes. Thus H2 states:

H2: Accounting students who are enrolled in 400-level classes are more likely to be knowledgeable about the provisions of the SOX than those you are enrolled in 300-level classes.

RESULTS

Demographics

The students were asked to indicate their major, age, academic standing, gender, ethnicity, working status, any non-English languages they spoke, and whether they had lived or traveled abroad. Of the 206 study participants, 42% were accounting majors, and 58% were non-accounting business majors. Forty percent indicated that they were sophomores, 27% that they were juniors, 28% that they were seniors and 5% that they were graduate students.

Ten percent of the students were less than 21 years old, 45% were between 21 and 25 years old, 20% were between 26 and 30 years old, 10 percent were between 31 and 35 years old, 11% were between 36 and 40 years old, and 4% were more than 40 years old. Four percent of the students indicated that they were African-American, 65% that they were Asian, 9% that they were Caucasian, 16% that they were Hispanic, and 6% that they were of another ethnic group. Fifty-seven percent were female and 43 percent male. Sixty percent of the students indicated that they currently worked. Fifty-three percent indicated that they had lived in a non-U.S. country and 75% indicated that they had traveled abroad. Eighty-nine percent indicated that they spoke a language other than English. The most common non-English language was a Chinese language.

Study Results

Table 1 shows the correct responses to the questions, and the percentages of all the students who correctly answered each question.

Table 1: Question/Statement

(n = 206)	Correct Answer	% Answering correctly	Standard Deviation
1. SOX applies only to U.S. businesses.	No	39	48
2. SOX applies only to accounting and audit firms	No	46	30
3. Purpose of the SOX	restore investors' confidence	23	3
4. Type of services financial statement auditors prohibited from performing for their <u>audit</u> clients.			
__ bookkeeping services	Yes	38	47
__ actuarial services	Yes	23	39
__ management functions or human resources	Yes	46	48
__ tax compliance services	No	65 ^a	51
__ broker or dealer, investment advisement and banking services	Yes	50	45
__ financial info. systems design and implement.	Yes	40	47
__ appraisal or valuation services	Yes	31	43
__ internal audit outsourcing	Yes	34	44
__ tax planning services	No	63 ^b	47
__ legal and expert services	Yes	33	46
5. CEOs of public companies must certify their financial statements	Yes	75	42
6. CFOs of public companies must certify their financial statements	Yes	85	34
7. The purpose of the SEC	regulate securities markets; protect investors	39	42
8. The purpose of the PCAOB	to oversee audits of public companies	16	25
9. Who is the Chair of the PCAOB	William McDonough	2	5
a 36 percent thought that it was prohibited b 33 percent thought that it was prohibited.			

Table 2: Comparison of Accounting and Non-Accounting Majors

Tests of Hypothesis H2			
Question/Statement	Percentage Correct 300-level classes (n = 144)	Percentage Correct 400-level classes (n = 62)	p-value
1. SOX applies only to U.S. businesses ^a	32	58	0.00
2. SOX applies only to accounting and audit firms ^a	45	50	0.35
3. Purpose of the SOX	15	46	0.00
4. Type of services financial statement auditors prohibited from performing for their <u>audit</u> clients.			
__ bookkeeping services	35	48	0.39
__ actuarial services	19	38	0.12
__ management functions or human resources	43	54	0.46
__ tax compliance services ^b	36	33	0.35
__ broker or dealer, investment advisement and banking services	44	69	0.13
__ financial info. systems design and implement.	40	54	0.23
__ appraisal or valuation services	30	37	0.65
__ internal audit outsourcing	28	54	0.01*
__ tax planning services ^b	33	45	0.46
__ legal and expert services	32	38	0.88
5. CEOs of public companies must certify their financial statements	78	67	0.15
6. CFOs of public companies must certify their financial statements	87	81	0.40
7. The purpose of the SEC	33	58	0.00**
8. The purpose of the PCAOB	8	39	0.00**
9. Who is the Chair of the PCAOB	1	8	0.00**
^a This statement was incorrect. ^b These tax services are permitted consistent with SOX. * significant at $p < 0.05$. ** significant at $p < 0.01$.			

Students' knowledge regarding key provisions of the SOX varied considerably. The highest percentage was associated with the CFO and CEO certification requirement. Eighty-five percent of the students knew that the CFO and 75% knew that the CEO of SEC registered firms must certify their company's financial statements. For the NAS services, overall the correct responses varied from 31 to 66 percent. The majority of the students did not know the purpose of the SOX, the SEC, and PCAOB.

The percentages of correct responses varied considerably between the 300 and the 400-level classes on some of the questions. Thus, the following discussion presents separate results for the 300-level and 400-level classes.

The participants were asked whether the SOX applies only to U.S. companies and 68 percent of the 300-level (Managerial Accounting) students and only 42 percent of the 400-level (Advanced and Case Studies) students answered "yes." Since SOX applies to both U.S. and non-U.S. SEC registrants, only 32% of the 300-level and 58% of the 400-level students answered this question correctly. The participants were also asked whether the SOX applies only to U.S. audit and accounting firms and 55 percent of the 300-level and 50 percent of the 400-level students answered "yes." Since all U.S. and non-U.S. audit firms that audit SEC registered firms must comply with the provisions of the SOX, approximately half of the student answered this question incorrectly.

When asked to identify an objective or purpose of the SOX, only 15% of the 300-level students and 46% of the 400-level students were able to identify "restore investors' confidence in financial reporting." The most common incorrect answers were "to guarantee that financial statements are accurate" and "to protect accountants." Thus, the misconception that financial reporting regulation can guarantee accuracy of the information appears to be prevalent.

Students were asked whether auditors are permitted to perform certain NAS for audit clients. All the services currently prohibited were included, as well as the two services that are currently permitted (tax planning and compliance). Only between 19 and 44 percent of the 300-level students could correctly identify the services currently prohibited by the SOX. The lowest percentage was associated with actuarial services and the highest with brokerage services.

Between 37 and 69% of the students in 400-level classes correctly identified the NAS services that are prohibited. The highest percentage was associated with brokerage services and the lowest with appraisal services. Thirty-three percent of the 300-level students and 45% of the 400-level students erroneously believed that tax planning was prohibited, while 36 percent of the 300-level and 33% of the 400-level students believed that tax compliance services were prohibited.

Students were asked whether the CEOs and CFOs of public companies were required to certify their financial statements filed with the SEC. The majority of the 300-level and the 400-level students knew that the CEO and the CFO are required to certify their financial statements. The students also were asked to indicate or describe the purpose of the SEC. All answers that described at least some aspect of the SEC's purpose were accepted as correct. Only 33% of the 300-level students and were able to correctly describe the purpose of the SEC. Fifty-eight percent of the 400-

level students were able to correctly identify the SEC's purpose. Only 8% of the 300-level students and only 39% of the 400-level students were able to correctly identify the purpose of the PCAOB. Only 1% of the 300-level students and 8% of the 400-level students were able to name the chair of the PCAOB.

Test of Hypothesis

Hypothesis H1 tests whether accounting majors are more likely to be knowledgeable about key provisions of the SOX than non-accounting majors. Pearson correlation and two-way ANOVA suggest that accounting majors are more likely to know that SOX applies not only to U.S. but also to some non-U.S. firms and that auditors cannot perform actuarial and internal audit services for their audit clients ($p < 0.05$).

Hypothesis H2 tests whether students who had completed a larger number of accounting classes (400-level students) were more likely to be knowledgeable about the provisions of SOX than accounting students who have completed only a few accounting classes (300-level students). Statistical results also are shown in Table 2 above.

Two sample t-tests show that 400-level accounting students tended to be more knowledgeable than 300-level students with respect to several of the questions. Specifically, 400-level students were more likely to know that SOX applies to U.S. and non-U.S. SEC registered firms ($p < 0.01$). They also were more likely to correctly identify the intended purpose of SOX ($p < 0.01$). In addition, 400-level student were more likely to know that internal audit services could not be performed for audit clients ($p\text{-value} < 0.05$). Furthermore, a significantly higher percentage of 400-level students were able to state the purpose of the SEC ($p\text{-value} < 0.05$) and the PCAOB ($p\text{-value} < 0.01$), and name the chair of the PCAOB.

Student Perceptions

The students were asked to rate three statements on a five-point scale, where 5 was equal to strongly agree, and 1 was equal to strongly disagree.

Table 3: Students' Perceptions of SOX Knowledge and Importance of SOX Knowledge			
Statement	300-level (n = 144)	400-level (n = 62)	p-value
I need to know about SOX	4.3	4.8	0.00**
SOX is important only to accounting majors	2.8	2.2	0.00**
I am knowledgeable about the provisions of SOX	2.2.	2.4	0.28

When asked to rate the statement “I need to know about the Sarbanes-Oxley Act 2002, the 300-level students’ mean rating was 4.3, while the 400-level students’ rating was 4.8. When asked to rate the statement “The SOX is only important to accounting majors, the 300-level students’ rating was 2.8 and the 400-level students’ mean rating was 2.2. When asked to rate the statement “I am knowledgeable about the provisions of the Sarbanes-Oxley Act,” the 300-level students’ mean rating was 2.2 and the 400-level students’ mean rating was 2.4. Two sample t-tests suggest that 400-level students rated the need to know about SOX as higher than the 300-level students. In addition, 400-level students were less likely to perceive that the SOX is only important to accounting majors. Surprisingly, the 400-level students did not perceive themselves as more knowledgeable than the 300-level students.

CONCLUSIONS

The study found that students are knowledgeable about some of the provisions of the SOX (the CFO and CEO certification requirement) but not very knowledgeable about other aspects of the SOX (e.g., NAS, the scope of the SOX).

As expected, accounting majors and particularly students who had completed a larger number of accounting classes were more likely to correctly answer some of the questions than were non-accounting majors and those students who had completed only a few accounting classes. On average, students perceived the need to know about the SOX as very high. Surprisingly, students who had completed a larger number of accounting classes did not feel more knowledgeable than those who had not. The overall low rate of correct responses to many of the questions suggest that additional coverage of the SOX in accounting as well as other business classes would be beneficial to prepare accounting and other business majors for their future careers.

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