Linking Undergraduate Business Degree Specialization To Ethical Behavior: An Empirical Investigation

Shane R. Premeaux

Sonya A. Premeaux

Jeanne Daboval

A.K.M. Matiur Rahman
McNeese State University
Lake Charles, Louisiana

According to Widener University's School of Management professors Reilly Bernard and Myroslaw Kyj any behaviors that lessen, deter or stand in the way of the goal (of maximizing shareholder equity) are considered "inefficiencies" to be eliminated by responsible corporate managers ([4], p. 23). In an effort to assure maximization of shareholder equity managers sometimes behave unethically [9]. Unethical incidents and moral impunity are often daily occurrences. Examples of these questionable business practices include: Rockwell International defrauding the Air Force, Hertz overcharging customers and Ocean Spray's indictment for pollution ([5], p. 56).

Such unethical actions usually result in extreme criticism of those in business and often results in public outcries for managers to behave more ethically. Education may be one method of improving the ethical foundation of business students, which may in turn lead to more ethical behavior. The current ethical impact of a business education on those in various degree specializations may provide the baseline on which to judge if any one degree specialization is doing a better job of providing a solid ethical foundation. Undergraduate business degree specializations were investigated to determine if such a baseline exists, and to assess the ethical outlook of those educated in the various business specializations.

The question addressed here is, "Does an individual's undergraduate business degree specialization have any effect on the ethical behavior of that person?" Specifically, does the ethical behavior of managers educated in the areas of finance, economics, marketing, management, and accounting differ significantly? No study to date has directly addressed the link between ethical behavior and business degree specialization. Such a linkage could possibly be useful in understanding the formation of ethical behavior patterns of managers with different educational backgrounds. If in fact students majoring in certain business disciplines are more ethical in their responses to ethical vignettes it is possible that the ethical foundation provided in certain business disciplines better prepares students to act in a responsible, ethical manner.

Research Design

For the results to be useful in linking business degree specialization with ethical behavior by managers, the data collected must represent a wide variety of business scenarios. A series of vignettes were used to gather data related to ethical linkages. These vignettes are firmly grounded in ethical theory and the ethical response options provided with each vignette were utilized by Fritzsche and Becker in their 1984 study of ethical linkages. Each vignette describes a business decision containing a potential ethical dilemma [7]. Respondents to the mail survey were asked to assume the role of decision maker and indicate how they would resolve each situation. Vignettes allow the injection of a greater amount of background information and detail into ethically questionable issues. These types of research vignettes are thought to elicit higher quality data than is possible from simple questions [1]. Four categories of ethical problems which represent a wide variety of ethical issues were included in this study [1]. The four categories investigated are coercion and control, conflict of interest, physical environment, and personal integrity. A coercion and control issue exists when some external force attempts to compel a manager to make a specific decision by using threats, extortion, or other sources of power. A conflict of interest situation arises when a manager has more than one interest that, if mutually pursued, may result in injury to individuals or to the firm [3]. The physical environment vignette is a special case of conflict of interest in which the environment is affected. Finally, personal integrity problems occur when decisions raise issues of conscience [1].

The original vignettes were developed by Fritzsche and Becker, and were once again pretested on a group of individuals working in the field of ethics. The ethics group consist of philosophers, business practitioners, and business professors in each of the business disciplines involved. The vignettes were revised in line with the pretest results and the comments received from the ethics group. The revised vignettes were placed in the questionnaire in random order. Respondents were asked to indicate the likelihood of behaving in accordance with a requested behavior of questionable morality. A 0- to 10-point Likert scale anchored with "definitely would not" (0) and "definitely would" (10) phrases was used. After making a decision, the respondent was asked why the particular decision was made.

Five copies of the questionnaire were mailed to a systematic random sample of 200 practicing human resource managers. One hundred and sixteen human resource managers assisted in this investigation. The sample was drawn from slightly over 1300 human resource managers who are affiliated with the Personnel Accreditation Institute. It was believed that a reasonably accurate representation of the actual population was secured. However, smaller firms were slightly under-represented among those who participated in this study. Non-response bias should not be a problem because the survey procedure continued until each segment of the population was well represented, with the exception of economics majors. Supplementary analysis indicated that the non-respondents did not differ materially from the respondents. The pretest results were also quite similar to those of the sample population.

The human resource managers were asked to give a copy of the questionnaire to five employees, one with an undergraduate business degree in accounting, economics, finance, management, and marketing. Only managers who had been with the company for five years or more were surveyed. Three hundred and sixty-one usable questionnaires were received, which yielded a response rate of 36.1 percent. Not all managers responded to each question, thus the category frequencies related to each question are somewhat less than 361. Mean scores were computed for every rationale selected in each vignette on a 10-point scale. Analysis of variance (ANOVA) was used to determine whether significant differences existed between the rationales espoused by respondents with different degree specializations. Differences across responses were analyzed using the Scheffé a posteriori test with a significance level of $p<.10$.

The demographic data obtained from the respondents indicate that a wide spectrum of managers in each of the degree specializations, with the exception of economics, participated in the survey. Because of the limited responses from those with an economics specialization, the finance and economics categories were collapsed. Twenty-nine percent of the respondents had undergraduate degrees in accounting, 2 percent had degrees in economics, 22 percent had finance undergraduate degrees, 30 percent had management degrees, and 17 percent had marketing degrees. Sixty-one percent of the respondents were from the ranks of middle management. An additional 27 percent occupied top management positions. Ninety-four percent of the respondents had college business degrees and 67 percent had masters degrees. Ninety-eight percent of the accountants were CPAs. The respondents' age distribution was relatively uniform across categories from 30 to 49, with a minor drop-off in the 50 to 59 age group.

Findings

Open-ended questions were designed to determine the rationale for each ethical decision made by the respondents. The responses to these open-ended questions were aggregated into common response categories. Individual responses tended to be well thought out and somewhat complex, but there was no evidence of a patterned response. Few multicategorical responses were received, but when a complete response contained elements from several response categories, it was classified according to the first response category discussed. The findings are discussed by the type of ethical dilemma faced. Initially, the vignette eliciting the response is presented, followed by the question posed to the respondent, then a table containing the rationales for each response by those in each separate degree specialization is presented. Brackets enclose responses that did not differ significantly from each other per the Scheffé test.

Coercion and Control

Collusive efforts of local manufacturers have barred the Rollfast Bicycle Company from entering a large Asian market. Rollfast management expects to net 5 million dollars annually from bicycle sales if it could penetrate the market. Last week a businessman from the country contacted Rollfast management and assured them that he could smooth the way for the company to sell in his country for a "grease" fee of $500,000.

If you were responsible, would you pay the bribe or so-called "grease" fee?

Basically, the higher the mean scores the greater the acceptability of bribes, regardless of the rationale selected. Overall, only 114 of the respondents definitely ruled out paying a bribe. The majority of those surveyed exhibited a slight tendency toward paying the bribe or the so-called "grease fee." The six response categories relating to the reason for the action taken in the coercion and control vignette are shown in Exhibit 1. The response categories were classified according to the respondent's undergraduate business specialization. The fifty respondents selecting the "against company policy" rationale would not pay the bribe, as is obvious from the mean ratings of between .47 and .51. The sixty-four respondents selecting the "illegal under the Corrupt Business Practices Act" rationale would also not pay the bribe. The ninety-four respondents selecting the "unethical bribe" rationale are more likely to pay the bribe than those who preferred the first two rationales, but are still unlikely to pay the bribe. The accounting group selecting this rationale were even less likely to pay the bribe than the other three groups. The thirty-five respondents selecting the "no one is hurt" rationale are much more likely to pay the bribe than those subscribing to the other three rationales, with accountants being the group who were least likely to pay the bribe, even if no one is hurt. The sixty-five respondents selecting the "is an acceptable practice in other countries" rationale were, as a group, likely to pay the bribe, with the accounting and marketing groups somewhat less likely to pay. Finally, the thirty-six respondents selecting the rationale that it "is not unethical, but just the price paid to do business" were most likely to pay the bribe, with the accounting group less likely than the other three groups.

The views of both accountants and marketers were significantly different from the views of others in the group in relation to bribes being an acceptable practice in other countries. However, overall accountants were less tolerant of bribes, even when bribes were an acceptable practice in other countries. None of the four "Other" responses appear to have anything to do with ethical considerations.

Conflict of Interest

Bill Smith has recently accepted a job with an aggressive microcomputer manufacturer. Microcomputer manufacturers are engaged in intense competition to become the first to develop a software package which utilizes the English language, and thus is easily used by the average customer. Smith's former employer is rumored to be the leader in this software development. When Smith was hired he was led to believe his selection was based on his management potential. However, the morning beginning the third week of his new job, Smith received the following memo from the company president:

"Please meet with me tomorrow morning at 8:15 for the purpose of discussing the progress your former employer has made in the development of language driven software."

If you were Smith, would you provide your new employer with the software information?

Exhibit 1: Rationale for Coercion and Control Responses

Response	ACCT Mean[a]	ACCT Freq	FIN/ECON Mean[a]	FIN/ECON Freq	MGMT Mean[a]	MGMT Freq	MKTG Mean[a]	MKTG Freq	Totals
Against company policy	{.47	22	.51	13	.49	10	.47	5}	50
Illegal under Corrupt Business Practices Act	{.48	23	.49	14	.48	18	.45	9}	64
Bribe, unethical	1.72	31	{2.54	20	2.51	29	2.43	14}	94
No one is hurt	3.61	14	{5.43	12	5.78	6	5.96	3}	35
Is an acceptable practice in other countries	5.66[b]	11	{6.74	10	6.77	29}	5.68[b]	15	65
Is not unethical, just the price paid to do business	6.04	5	{7.83	7	7.81	18	7.54	6}	36
Totals		106		76		110		52	344 **TOTAL**

Total specific responses	344
Other responses	4
Overall Total	348

A High average indicates that the respondents would pay the bribe, which would probably be interpreted as unethical.

[a]The braces enclose responses that did not differ significantly from each other per the Scheffé test.
A 0- to 10-point Likert scale anchored with "definitely would not" (0) and "definitely would" (10) was used.
[b]There are no significant differences between the Accounting and Marketing groups.

In interpreting Exhibit 2 it is important to remember that the higher the mean scores the more likely that individuals would provide the software information. Overall, the majority of those surveyed exhibited a slight tendency toward providing the software information. Six response categories for the conflict of interest vignette are presented in Exhibit 2. For the first and fourth rationales, the responses of accountants did not differ significantly from those with other business specializations. There was basic agreement that the information would not be provided if the rationale were that it was unethical for Smith to provide information and unethical for the employer to ask, and a near neutral response was received for providing some but not all of the information. Accountants who believed that it was unethical for the employer to mislead Smith when he was hired, and that protecting Smith's reputation was important, were more adamant that the information should not be provided than those in the other groups. While those in the non-accounting group were nearly neutral in their decision regarding providing the information based on whether a security agreement was in force, accountants leaned more toward it being less acceptable as a rationale. Respondents in the group who would probably provide the information rationalized that doing so would show loyalty to the new employer, and thereby help assure continued employment. However, accountants who chose this rationale were not so willing to accept it as an appropriate course of action, as were members of the other groups.

Forty-two of the respondents chose the "Other" response option and listed rationales different from those provided. Seven of these respondents stated that they did not believe that the scenario was reasonable, thirteen of the respondents believed that there was no conflict of interest, and the remaining respondents gave rationales which appear to have nothing to do with ethical considerations.

Physical Environment

Master Millers has developed a special milling process which yields a wheat flour which when used for bread provides a lighter more uniform texture than conventionally milled wheat flour. Unfortunately, the process gives off more dust than the emission control equipment presently installed can handle and still maintain emissions within legal limits. Due to lack of availability, the company is unable to install new emissions control equipment for at least two years; however, if it waited that long to introduce the new process, competitors would very likely beat it to the market. The general manager wants to use the new process during the third shift which runs from 10 p.m. to 6 a.m. By using the process at that time, the new flour could be introduced and the excess pollution would not be detected due to its release in the dark. By the time demand becomes great enough to utilize a second shift, new emission control equipment should be available.

If you were responsible, would you approve the general manager's request?

Once again, the higher the mean scores the more likely that the general manager's request to use the special milling process would be approved. Overall, the majority of those surveyed exhibited a slight tendency toward approving the request to use the special milling process over the short term. Exhibit 3 contains the six response categories for the environment vignette. The responses of accountants did not differ significantly from other respondents for the fifth rationale. Those who rationalized that the pollution would not really hurt the environment were likely to grant permission to use the new process. However, the majority of those surveyed would not approve the new process. Like several other instances accountants were more adamant about not compromising. Committing an illegal act, threatening the environment, and possibly getting caught were viewed as less viable options by accountants. While those in the

Exhibit 2: Rationale for Conflict of Interest Responses

Response	ACCT Mean[a]	ACCT Freq	FIN/ECON Mean[a]	FIN/ECON Freq	MGMT Mean[a]	MGMT Freq	MKTG Mean[a]	MKTG Freq	Totals
Unethical for Smith to provide and unethical for employer to ask	{.81	32	.89	18	.84	15	.82	6}	71
Unethical for employer to mislead Smith when he was hired	1.62	28	{2.14	17	2.17	22	2.04	7}	74
Protect Smith's reputation	1.39	12	{1.67	7	1.71	8	1.68	3}	30
Provide some but not all information	{5.48	13	5.59	11	5.54	14	5.49	5}	43
Decision based on whether security agreement in force	3.90	8	{4.77	5	4.74	16	4.69	7}	36
To keep job, loyalty to new employer	6.18	4	{7.23	14	7.18	28	7.20	12}	58
Totals		97		72		103		40	312 TOTAL

Total specific responses	312
Other responses	42
Overall Total	354

A High average indicates that the respondents would provide the software information, which would probably be interpreted as unethical.

[a]The braces enclose responses that did not differ significantly from each other per the Scheffé test.
A 0- to 10-point Likert scale anchored with "definitely would not" (0) and "definitely would" (10) was used.

non-accounting group were nearly neutral in their decision to use the process, since it was impossible to install the equipment, accountants viewed using the process as somewhat less acceptable. Finally, the views of accountants, and those in the finance group, were significantly different from the views of others in relation to going ahead with the process if there is a large potential for gain with little risk. Basically, more of those in the accounting and finance groups had greater reservations than those in the other groups regarding this option.

Twenty-six of the respondents chose the "Other" option and listed rationales different from those provided. Nine of these respondents stated that harm to the environment is never acceptable under any circumstances, seven of the respondents believed that technology is such that a relatively quick solution could have been found, and the remaining respondents gave rationales which appear to have nothing to do with ethical considerations.

Personal Integrity

Jack Ward is working in product development for an auto parts contractor. Ward's firm received a large contract last summer to manufacture transaxles to be used in a new line of front wheel drive cars which a major auto manufacturer plans to introduce in the near future. The contract is very important to Ward's firm, which has recently fallen on hard times. Just prior to obtaining the contract, half of the firm's employees, including Ward, had been scheduled for an indefinite layoff. Final testing of the assemblies ended last Friday and the first shipments are scheduled for three weeks from today. As Ward began examining the test reports, he discovered that the transaxle tended to fail when loaded at more than 20% over rated capacity and subjected to strong torsion forces. Such a condition could occur with a heavily loaded car braking hard for a curve down a mountain road. The results would be disastrous. The manufacturer's specifications call for the transaxle to carry 130% of its rated capacity without failing. Ward showed the results to his supervisor and the company president who indicated that they were both aware of the report. Given the low likelihood of occurrence and the fact that there was no time to redesign the assembly, they decided to ignore the report. If they did not deliver the assemblies on time, they would lose the contract. Ward must now decide whether to show the test results to the auto manufacturer.

If you were Ward, would you notify the automobile manufacturer?

For the final vignette, the higher the mean scores the more ethical the decision, and the greater the likelihood that Ward would notify the automobile manufacturer. Overall, the majority of those surveyed exhibited a very strong tendency toward notifying the automobile manufacturer. As is evident from the information in Exhibit 4, this vignette yielded a high degree of personal integrity among the majority of the respondents regardless of their undergraduate degree specialization. There was general consensus in relation to the overall acceptability of three of the five rationales. The majority of those in all groups viewed that Ward has an additional responsibility to report the problem, and that loyalty is irrelevant. All groups also believed that the risk of injury or death is unacceptable, and because of the chances of injury or death Ward should not remain silent. Accountants would definitely not remain silent if doing so would be either dishonest or criminal. Respondents with different educational backgrounds would also go public, but not with the same degree of conviction that accountants exhibited. Both accountants and marketers would definitely not risk the firm's image, profitability, and long run potential by remaining silent. To a lesser degree those with undergraduate specializations in economics, finance, and management would also not risk similar repercussions.

Of the twenty-one "Other" responses, eight individuals believed that the risk of injury or death is always most important, five individuals felt that the case did not illustrate a personal integrity issue, and the remaining respondents gave rationales which appear to have nothing to do with ethical considerations.

Exhibit 3: Rationale for Physical Environment Responses

	ACCT		FIN/ECON		MGMT		MKTG		
Response	**Mean•**	**Freq**	**Mean•**	**Freq**	**Mean•**	**Freq**	**Mean•**	**Freq**	**Totals**
It would be illegal	.96	31	{1.36	30	1.41	28	1.35	13}	102
Concern for the environment-life	1.21	23	{1.53	18	1.51	18	1.49	6}	65
Risk of getting caught with resulting negative consequences too great	1.34	20	{1.74	14	1.69	17	1.61	5}	56
Not their fault, equipment would be installed if available	4.11	7	{5.57	3	5.49	12	5.31	7}	29
The pollution would not really hurt the environment	{7.01	5	7.06	5	7.06	27	7.01	16}	53
Large potential gain with low risk	{6.41	13	6.49	8}	{7.51	5	7.63	2}	28
Totals		99		78		107		49	333 **TOTAL**

Total specific responses	333
Other responses	26
Overall Total	359

A High average indicates that the respondents would allow the use of the new milling process, which would probably be interpreted as unethical.

•The braces enclose responses that did not differ significantly from each other per the Scheffé test.
A 0- to 10-point Likert scale anchored with "definitely would not" (0) and "definitely would" (10) was used.

Discussion

Fortunately, the majority of those responding had a preference toward the "ethical" end of the scale. However, it is also obvious from the unethical business practices which have come to light in recent years that more needs to be done to instill in all business majors a stronger ethical foundation. While it is true that ethical reasoning does not assure ethical behavior, it at the very least, may indicate a greater awareness of the importance of ethics in business. Since accountants exhibited a greater tendency toward more ethical reasoning than those with other business specializations, it may be possible to gain some insight into the contribution of their educational experiences to their ethical reasoning. Although other factors could influence ethical behavior such as working in different capacities within the company or an individual's level of experience, it is quite revealing that a linkage appears to exist between undergraduate business degree specialization and ethical behavior.

With all of the emphasis on ethical issues in the last decade it is somewhat surprising that managers with accounting backgrounds appear to be somewhat more ethical in their rationalizations than managers with educational backgrounds in finance, management, and marketing. Basically, accounting-trained managers were somewhat more likely to choose ethical positions than were managers trained in other business disciplines. The results of this study represent only one observation for each type of ethical dilemma examined, and only reveals what managers said they would do in various scenarios.

Possibly, managers with accounting undergraduate degrees are prone to behave more ethically because they are exposed to the "Code of Professional Conduct of the AICPA." No other business field has such a readily available, universally accepted code of conduct. The professional code of conduct for accountants encourages behavior in line with society's strict ethical requirements [6]. The Code outlines the responsibilities of those in the accounting profession, and encourages members to act in the public interest, with integrity, exercising objectivity and independence, and always observe the profession's technical and ethical standards [6].

Fewer unethical occurrences are regularly noted in accounting than in other areas of business, but those in the accounting profession are not ethically blameless [8]. Some ethicists have suggested that managers need more than codes of ethics to behave ethically [9]. Kenneth R. Andrews concluded in his study of the GTE Corporation that, "education can highlight the importance of ethics and clarify ways in which rationale business decisions can include ethical considerations, but behavior change can only come about when the organization as a whole provides both the environment and the mechanisms for supporting ethical practices ([2], p. 47)." Possibly, CPAs are more ethically aware than other managers because in addition to their code of conduct, they are continually performing work that is subject to public scrutiny.

Are managers with accounting backgrounds really more ethical, or were the accountants surveyed just more ethical in their rationalizations? It would be quite useful to isolate the reason or reasons for the ethical gap between those with backgrounds in accounting and those in other business fields. Possibly, an effort should be made to encourage the development of a general code of business ethics, or a code of ethics specific to each business discipline. However, an effort should definitely be made to create more ethical managers regardless of their undergraduate business degree specializations.

Exhibit 4: Rationale for Personal Integrity Responses

	ACCT		FIN/ECON		MGMT		MKTG		
Response	**Mean[a]**	**Freq**	**Mean[a]**	**Freq**	**Mean[a]**	**Freq**	**Mean[a]**	**Freq**	**Totals**
Ward has no additional responsibility, loyalty will keep him quiet	{3.21	5	3.29	3	3.31	11	3.26	6 }	25
Risk of injury or death too low to halt sale	{3.83	6	3.84	2	3.81	5	3.79	3}	16
The company has a responsibility to the public–criminal and dishonest to remain silent	9.86	27	{8.16	18	8.19	12	8.03	7}	64
Risk to firm's image, profitability, and long-run potential too great to remain silent	9.91[b]	13	{8.64	11	8.53	25}	9.68[b]	13	62
Chances of causing injury or death too great to remain silent	{9.48	51	9.37	44	9.41	44	9.48	24}	163
Totals		102		78		97		53	330 **TOTAL**

Total specific responses	330
Other responses	21
Overall Total	351

A High average indicates that the respondents would notify the automobile manufacturer, which would probably be interpreted as unethical.

[a]The braces enclose responses that did not differ significantly from each other per the Scheffé test.
A 0- to 10-point Likert scale anchored with "definitely would not" (0) and "definitely would" (10) was used.

[b]There are no significant differences between the Accounting and Marketing groups.

References

1. Alexander, C.S., & Becker, H.J. "The Use Of Vignettes In Survey Research." Public Opinion Quarterly, Vol. 42 (1978), pp. 93-104.

2. Andrews, K.R. "Ethics In Policy and Practice at GTE Corporation." in James K., ed. Corporate Ethics: A Prime Business Asset–A Report on Policy and Practice in Company Conduct. New York: The Business Roundtable (1988), p. 47.

3. Beauchamp, T.L., & Bowie, N.E. Ethical Theory and Business. Englewood Cliffs, N.J., Prentice-Hall (1979).

4. Bernard R.J. & Kyj, M.J. "Ethical Business and the Ethical Person." Business Horizons, Vol. 33 (November-December 1990), p. 23.

5. Byrne, J.A. "Businesses Are Signing Up for Ethics 101." Business Week, (February 15, 1988), p. 56.

6. Code of Professional Conduct and Bylaws. "The Code of Professional Conduct of the AICPA." New York: American Institute of Certified Public Accountants (1988), pp. 1-55.

7. Fritzsche, D.J. & Becker, H. "Linking Management Behavior To Ethical Philosophy: An Empirical Investigation." Academy of Management Journal, Vol. 27 (March 1984), pp. 166-175.

8. Hammaker, Paul M., Horniman, A.B., & Rader, L.T. Standards of Conduct in Business. Charlottesville, VA: The Center for the Study of Applied Ethics (1977), pp. 11-19.

9. Hyman, M.R., Skipper, R., & Tansey, R. "Ethical Codes Are Not Enough." Business Horizons, Vol. 33 (March-April 1990), pp. 15-22.