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INVESTIGATING AVIATION PERSONNEL PERCEPTIONS OF AIRLINE FATIGUE: EXAMINING PEARSON CORRELATION COEFFICIENT OUTCOMES

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ABSTRACT

This research investigates whether crew members perceived fatigue countermeasures suggested by a global airline as being meaningful elements of fatigue reduction. Three areas of fatigue countermeasures suggested by the host airline's crew resource management philosophy were examined: home status, flight duty, and travel duty. These queries investigated perceptions of whether the suggested countermeasures significantly contributed to commencing flight duty without manifesting symptoms of a sleep deficit. Comparisons were made within the collected data, and each of the comparisons assumed that sleep was a priority among the crew members. The Pearson calculations were used to investigate whether a perceived relationship existed between the suggested corporate countermeasures and making sleep a priority before commencing duty flights.

INTRODUCTION

Regardless of the individual, all humans require a period of natural, regular rest for the proper functioning and performance of mental and physical faculties. Flight crew personnel, who work unusual hours in a job where human error can carry a tremendous cost, have to be particularly sensitive to their bodies demand for sleep. The potential for mental and physical fatigue is great, and it can have dire consequences.

Rajaratnam and Arendt (2001) indicate that approximately 20 percent of the domestic population does not work traditional hours (8:00 a.m. to 5:00 p.m.), and that accidents resulting from sleepiness cost approximately $16 billion (U.S. dollars annually). According to Printup (2005), over 70 percent of aviation accidents occur because of pilot error that may be associated with fatigue. Birdsong (2004) indicates that fatigue contributes to poor and diminished decision-making abilities among flight crew personnel and increases the risk of human errors occurring. Various studies investigate the effects and symptoms of fatigue in numerous settings. Caldwell, Caldwell, Brown and Smith (2004) also emphasize the dangers posed by fatigue among flight crew personnel. Various levels of fatigue are correlated with sleep and flight histories by Goode (2003).

LITERATURE REVIEW

Murray (1997) indicates that aviation is a safe method of transportation regardless of accidents, and that mistakes are a normal attribute of human behavior. Nevertheless, numerous aviation and aerospace disasters and accidents have provided examples from which flight crew members may learn lessons and modify their behaviors to produce a safer work environment.

Humans are imperfect beings who are capable of making errors which may have disastrous consequences. Within the aviation domain, Soeters and Boer (2000) indicate that between 75 percent and 80 percent of the accidents involving civil aircraft are attributed to human factors. Rajaratnam and Arendt (2001) indicate that night workers experience diminished levels of alertness and performance at night and manifest a greater amount of accidents in comparison with their daylight counterparts. Oser, Salas, Merket, Walwanis and Bergondy (2000) indicate that human error is responsible for 60 percent to 80 percent of all naval aviation accidents.

HOST FIRM

The host environment for this research is a global airline. Federal Aviation Administration (FAA) regulations concerning training require the host firm to instruct its crew members of the warning signs that are symptomatic of fatigue and the countermeasures that may be beneficial to counter such symptoms. Ensuring that cargo is successfully delivered within a specific period of time necessitates the implementation of night, day, and weekend work schedules. Therefore, the potential for accidents related to fatigue occurring is a concern among the members of the local community, crew members, corporate leadership, management personnel, the pilot union, and government authorities.

This study examines the perceptions of suggested corporate fatigue countermeasures to investigate whether crew members find the activities to be helpful in commencing duty flights without a sleep deficit when at home, when performing flight duty, and when traveling for business purposes. Airline operations during the morning and overnight hours disturb the sleep cycles of flight crew personnel. The assigning of differing flight schedules introduces the potential for fatigue to occur among the flight crews. All flight crew personnel receive crew resource management training with respect to fatigue countermeasures.

The aircraft cockpit work environment continuously exists (24 hours a day, 7 days a week) with rotating personnel assignments. The corporate flight schedules are determined through a bidding process based on the seniority of personnel. Both historical data and engineering data are components of the calculations regarding flight schedules and duration. Primarily, corporate flights occur between the night hours of 2:00 a.m. and 5:00 a.m. Federal Aviation Regulations 121.503 through 121.525 regulate the hours of flight duty time crew members may experience (Federal Aviation, 1996). The host firm has a fatigue policy that accommodates work absences when personnel feel unable to safely perform their work tasks and adequately satisfy their duty requirements.

INVESTIGATING CORRELATIONS AMONG THE DATA SETS

The collected data set was examined to investigate potential correlations among various notions associated with the considered corporate countermeasures. The Pearson Correlation Coefficient was the mathematical method used to perform the analytical data processing. Comparisons were made within the collected data, and each of the comparisons assumed that sleep was a priority among the respondents. The Pearson calculations were used to investigate whether a perceived relationship existed among the respondents' perceptions of the suggested corporate countermeasures and their perceptions associated with making sleep a priority during personal hours before commencing corporate duty flights.

The following table presents the outcomes of these Pearson investigations:

Table 1: Pearson Correlation Outcomes		
NOTION 1	NOTION 2	PEARSON VALUE
Making sleep a priority during personal hours-- a method of countering fatigue.	Home use of anchor sleep patterns increases energy.	0.21
Making sleep a priority during personal hours as a method of countering fatigue.	Utilizing the circadian rhythm improves the quality of sleep.	0.22
Making sleep a priority during personal hours as a method of countering fatigue.	Two or more sleep periods while on thequality of sleep. road allows crew members to accumulate an average of 7 to 8 hours of sleep.	0.23
Making sleep a priority during personal hours as a method of countering fatigue.	A 15-minute nap before traveling diminishes fatigue during a trip.	0.04
Making sleep a priority during personal hours as a method of countering fatigue.	A pre-sleep routine promotes faster sleeping during travel.	0.28
Making sleep a priority during personal hours as a method of countering fatigue.	Napping in the cockpit increases alertness during flight.	-0.16

CONCLUSIONS

The outcomes of these investigations show that no perceived relationship exists between the perceptions of personnel making sleep a priority during their personal hours and the use of anchor sleep patterns by flight crew members before duty periods. Little, if any, perceived relationship among the survey respondents was established between the personnel perceptions of whether sleep was a priority for crew members and the perceptions of whether anchor sleep increases energy. The investigations did not show a strong perceived relationship between the personnel perceptions of making sleep a priority during their personal hours and the perceptions regarding the observance of the circadian rhythm.

Little, if any, perceived relationship was manifested among the respondents between the perceptions associated with making sleep a priority during their personal hours and personnel perceptions of using multiple sleep periods during a travel period to accumulate seven or eight hours of sleep. Little, if any, perceived relationship was manifested among the respondents between the personnel perceptions concerning making sleep a priority during their personal hours and the personnel perceptions of taking a 15-minute nap before commencing duty. The Pearson outcomes indicated that little, if any, perceived relationship existed among the respondents between the notions of making sleep a priority during their personal hours and the personnel perceptions of pre-sleep routines used to induce slumber. Lastly, the outcomes indicated that little, if any, perceived relationship existed among the respondents between the personnel perceptions of making sleep a priority during their personal hours and the personnel perceptions of cockpit napping during duty time.

SIGNIFICANCE AND RECOMMENDATIONS

This pilot study investigated the various personnel perceptions among flight crews of suggested fatigue countermeasures with respect to the periods when personnel reside in their personal homes, when performing flight duties, and when traveling for business purposes. Therefore, given the outcomes of this research, it is recommended that this study be repeated using a larger set of respondents.

The anticipated outcomes of this study were expected to show that the notion of making sleep a priority during personal hours was a significant method of countering fatigue with respect to the advocated corporate fatigue countermeasures. However, in contrast, the outcomes of this research suggested that little, if any, perceived relationship exists among the tested countermeasure perceptions of the flight crew personnel. Each of the notions associated with sleep habits of personnel was considered with respect to whether crew personnel make sleep a priority during their personal hours. Little strength of perceived relationship, if any, was observed among personnel perceptions of the respondents concerning whether the corporate countermeasures suggested during personal time regarding priority sleep significantly contributed to performing corporate duty flights without a sleep deficit.

The findings of this study may be considered with respect to the adjustment of fatigue countermeasures training for both internal and external organizations and individuals. Within the host firm, the continuation of the prescribed fatigue countermeasures may provide advantages that could preserve life and avoid accidents despite the indications suggested by the outcomes of this study. It is recommended that the existing corporate procedures and any associated countermeasures training continue among flight crew personnel.

This study only investigates potential correlations among the collected data. This study does not examine the suggested corporate fatigue countermeasures from any other perspectives. Therefore, it is suggested that additional data processing occur using stratification and categorization of responses based on respondent age, personnel seniority, flight routes, marital status, rank or flight crew position, and aircraft type. The mathematical tools used for additional research may include ANOVA, analysis of ranked data, or additional bivariate testing methods.

Further, this study was conducted within the work setting of a significant commercial cargo airline with respect to its overnight operations. Therefore, these research outcomes may not be applicable to military environments, passenger airlines, chartered services, or other airline services. Also, because only night operations of the host firm were considered, these outcomes may not be applicable to daytime operations. Given this consideration, it is recommended that research initiatives be undertaken within each of these settings and conditions with respect to the investigated statements. Such research may involve ANOVA analysis, analysis based on the ranking of data, or some type of additional bivariate analysis.

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PERCEPTIONS RELATED TO CARGO FLIGHT CREW FATIGUE COUNTERMEASURES: A Z-TEST INVESTIGATION

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ABSTRACT

This research investigates whether crew members perceived fatigue countermeasures suggested by a significant cargo airline as being helpful elements of fatigue reduction. Three key areas of fatigue countermeasures suggested by the host airline's crew resource management department were examined: 1) home status, 2) flight duty, and 3) travel duty. The purpose of this study was to examine personnel perceptions of fatigue and the countermeasures suggested by the host airline. The perceptions of the activities were considered via a Z-test analysis of the responses. The stratification of data involved classifying responses based on the categories of captain versus first officer. The outcomes of this study may be used to adjust corporate training and educational activities associated with fatigue countermeasures.

INTRODUCTION AND LITERATURE

Soeters and Boer (2000) indicate that 75 to 80 percent of accidents involving civil aircraft are attributed to human factors. Oser, Salas, Merket, Walwanis and Bergondy (2000) state that between 60 and 80 percent of all naval aviation accidents are the result of human error. Weigmann and Shappell (1997) find that the same percentage of accidents applies to both military and civilian incidents. Examples of aviation accidents include the 1998 Swissair Flight 111 in which 229 people perished (Cocklin, 2004). Additional examples from the 1990s include the crash of ValuJet Flight 592, the Pittsburgh USAir Flight 427 accident, the Indiana American Eagle Flight 4184 accident, and the North Carolina American Eagle Flight 3379 accident (Fishman, 1999; Grose, 1995). Lubner, Markowitz and Isherwood (1991) indicate that such accidents are preventable. Weigmann and Shappell (1997) indicate that any expectation of humans performing tasks without errors is unreasonable. Mistakes are a component of human behavior, and crew members are susceptible to the fallibility of human nature (Murray, 1997).

Fatigue may result from laborious activity, stress, or various forms of exertion, and it is a dangerous condition that may adversely affect the members of a flight crew. Birdsong (2005) indicates that fatigue contributes to poor decision making among flight crews. Caldwell, Caldwell, Brown and Smith (2004) reiterate the dangers of fatigue. Neri, Shappell and DeJohn (1992) investigate the potential of fatigue occurring when aviation operations are sustained through time. Wright and McGown (2001) investigate the effects of sleepiness and sleep with respect to long-haul flights. Chidester (1990) conversely examines the sleep characteristics of flight crew personnel on short-haul flights.

Wright and McGown (2001) investigate the effects of drowsiness, sleepiness, and sleep of flight crew personnel with respect to long-haul flights. Chidester (1990) examines the mood and sleep patterns of flight crew personnel. This study investigates airline personnel to identify individual mood differences and sleep differences during short-haul flights. Rosekind et. al (1997) investigate methods of countering and managing the symptoms of fatigue. Caldwell and Roberts

(2000) investigate the effects of stimulants on personnel performance using simulators versus actual aircraft.

AIRLINE SETTING

The host firm is headquartered in the United States, and it processes an average daily parcel throughput of several million packages. This firm has a cumulative total of approximately 138,000 employees worldwide and serves over 350 airports. The airline fleet of the host firm includes the Boeing 727, the DC-10, the MD-10, and the MD-11. This firm also hosts continuous supply chains that are critical to the business operations of its clients. Airline operations during the morning and overnight hours disturb the sleep cycles of flight crew personnel. The assigning of differing flight schedules introduces the potential for fatigue to occur among the flight crews. All flight crew personnel receive crew resource management training with respect to fatigue countermeasures. The aircraft cockpit work environment continuously exists (24 hours a day, 7 days a week) with rotating personnel assignments. The corporate flight schedules are determined through a bidding process based on the seniority of personnel. Primarily, corporate flights occur between the hours of 2:00 a.m. and 5:00 a.m. because Federal Aviation Regulations 121.503 through 121.525 regulate the hours of flight duty time crew members may experience. The corporate crew resource management regulations specify the flight duty times for individual crew members. The host firm has a fatigue policy that allows crew members to report sick days as work attendance when they feel unable to safely perform work tasks and adequately satisfy duty requirements.

METHODOLOGY

The research design for this pilot study involved the use of a formal survey process that queried personal experiences with fatigue. The survey consisted of Likert scale responses for hypothesis testing and a section for the collection of demographic data. All responses and respondents associated with this research were anonymous. The processing of data occurred through the use of Z-test calculations. The stratification of recipient responses was accomplished through the classification of respondents into the categories of captain versus first officer. The survey population and sample for this study were generated completely from the host airline. This research included the corporate positions of captain and first officer. All of the crew members were members of night flight cargo crews. The respondents had either completed fatigue countermeasures training or were currently undergoing some form of countermeasures training. A cumulative total of approximately 3,000 flight crew members composed the overall population. However, because this study was a pilot study, only 150 surveys were issued. A response rate of approximately 62 percent was manifested with respect to the issued surveys.

DISCUSSION AND CONCLUSIONS

Each of the hypothesis statements were tested with respect to personnel perceptions regarding the suggested fatigue corporate countermeasures. Three key areas of fatigue countermeasures suggested by the host airline's crew resource management department were examined: 1) home status, 2) flight duty, and 3) travel duty. The purpose of this study was to examine personnel perceptions of fatigue and the corporate crew countermeasures suggested by the host airline. The stratification of data involved classifying responses based on positions of captains versus first officers. The hypothesis statements queried personal experiences with respect to fatigue and the sleep habits of crew personnel. The following table presents the outcomes of each of the tested hypothesis statements:

Table 1: Hypothesis Testing Outcomes

H_O	H_A	Z-Value	Z-Critical	Significance
Crew members do not commence duty flights with a sleep deficit.	Crew members do commence duty flights with a sleep deficit.	0.43	1.96	No
Two or more sleep periods while on the road allow crew members to accumulate an average 7 to 8 hours of sleep.	Two or more sleep periods while on the road do not allow crew members to accumulate an average 7 to 8 hours of sleep.	0.56	1.96	No
A 15-minute nap before traveling diminishes fatigue during a trip.	A 15-minute nap before traveling does not diminish fatigue during a trip.	0.86	1.96	No
Crew members make sleep a priority during personal hours at home.	Crew members do not make sleep a priority during personal hours at home.	0.57	1.96	No
"Anchor sleep" patterns when at home help to increase energy.	"Anchor sleep" patterns when athome do not help toincrease energy.	0.35	1.96	No
Utilizing the circadian rhythm improves the quality of sleep.	Utilizing the circadian rhythm does not improve the quality of sleep.	0.93	1.96	No
A pre-sleep routine promotes faster sleeping during travel.	A pre-sleep routine does not promote faster sleeping during travel.	0.67	1.96	No
Napping in the cockpit increases alertness during flight.	Napping in the cockpit does not increase alertness during flight.	0.55	1.96	No

The hypothesis testing did not show a statistically significant outcome for any of the tested hypothesis statements. In each case, the null hypothesis was accepted with respect to the categories of personnel perceptions concerning sleep deficit, sleep periods used to accumulate seven to eight hours of sleep, napping, making sleep a priority during personal hours, anchor sleep, the circadian rhythm, pre-sleep routines, and cockpit naps.

SIGNIFICANCE AND RECOMMENDATIONS

Overall, the hypothesis testing outcomes indicate that the perceptions of the respondents regarding the countermeasures suggested by the host firm may be helpful in reducing fatigue during periods when personnel reside in their personal homes, when performing flight duties, and when traveling for business purposes. It is recommended that the use of the corporate fatigue countermeasures be continued. However, because this research was conducted as a pilot study, it is suggested that further investigations be performed regarding the personal use of anchor sleep

patterns using a larger data set. The stratification and categorization of responses used within the Z-test data processing were solely based on the respondents' job classification, e.g., captain or first officer. This study does not examine the suggested corporate fatigue countermeasures from any other perspectives. Therefore, it is suggested that additional data processing use the responses based on respondent age, personnel seniority, flight routes, marital status, and aircraft type. Further, this study was conducted within the work setting of a significant commercial cargo airline. As a result, these research outcomes may not be applicable to military personnel, passenger airlines, chartered services, private aviation, or other airline services. Therefore, it is recommended that research initiatives be undertaken within each of these settings with respect to the given hypothesis statements.

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CONSUMER PERCEPTION ON THE ENVIROMENTAL CONSUMERISM ISSUE AND ITS INFLUENCE ON THEIR PURCHASING BEHAVIOR

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ABSTRACT

Despite the growing awareness of the consumerism and social responsibility issues in academia as well as in the industry, the investigation of the influence or effect of these issues on the consumer purchasing behavior especially in terms of environmental consumerism issue (macro consumerism issue) is very limited. Though there exist very few prior studies which tend to conceptually show the effect of the consumerist issues/ethical issues on the consumer purchasing behavior, empirical evident are yet to be explored. Convenience sampling technique was applied for collecting the relevant data with a sample size of 313 respondents from two central regions such as Kuala Lumpur and Negeri Sembilan and two southern regions such as Melaka and Johor Bahru of Malaysia. The investigation was applied to the food products since it is very delicate sector and where there is much concern for the consumerist issues as suggested by Bushan (2003); Brunk (1973); and Turner (1995). The result revealed that the environmental consumerism practice was found to have positive association with the consumer ethical purchasing behavior.

INTRODUCTION

The prior marketing literatures demonstrated growing concern for ethical issues or consumerist issues among consumers. However, despite the attention to the subject and rising concern for 'ethical' issues in society, research has tended to neglect the ethical consumer (Mintel 1999). In recent years, business ethics has drawn increased interest from business and marketing practitioners as well as from academicians. Uusitalo and Oksanen(2004) mentioned that although business ethics and corporate social responsibility have gained more attention in recent years, the empirical research of consumers perspective on ethics is still minimal. There is also lack of research that has attempted to investigate the consumers' perceptions on the environmental consumerism practice (macro consumerism issue) in the marketplace and its influence on their purchasing behavior. Thus, this study is going to investigate consumers' perceptions towards the environmental consumerism practice in the marketplace and the extent of its influence on their purchasing behavior in food industry in Malaysia.

LITERATURE REVIEW

Consumerism is defined as social force to protect consumer interests in the marketplace by organizing consumer pressures against unfair business practices and business injustices (Sherlaker, 1999). Kaynak (1985) and Quazi (2002) notified that consumerism is concerned with both the micro and macro consumerist issues. The micro consumerist issues include the issues like misbranding

practice, misleading advertisement, deceptive packaging, unfair pricing etc. While on the other hand, the macro consumerist issues are mainly concerned with the broader contexts like environmental pollution, health care system, antinuclear issues etc. The micro issues of the consumerism are also known as the fairness on trade practices or fairness on business practices. In this research, one important macro consumerism issue (environmental consumerism practice) has been taken into consideration in order to find out its effect on the consumer purchasing behavior.

Consumer Purchasing Behavior is the decision processes and acts of people involved in buying and using products. Consumer Purchasing Behavior refers to the buying behavior of the ultimate consumer (Assael, 2004; and Berkman and Gilson, 1978). Berkman and Gilson (1978) argued that a purchasing behavior is the sequential activity from buying intention to actual purchasing behavior. In this study the purchasing behavior is linked and has been defined in terms of ethical or consumerist aspects. On the basis of the prior studies by Irving, Harrison and Rayner (2002); Simon (1995); and Uusitalo and Oksanen(2004) the consumer purchasing behavior exhibits the consumers' expressed behavior regarding the consumerist or ethical issues while purchasing their products.

ENVIROMENTAL CONSUMERISM (MACRO ISSUE)

Mandese (1991) defined environmental consumerism as the consumers' environmental consciousness while purchasing any product. Webster (1977) argued that environmental consumerism have concentrated on measuring the personal characteristics of social responsibility and perceived efficiency. Environmental consumerism practice could also be referred as green marketing. Charter and Polonsky (1999) notified that green marketing is the marketing or promotion of a product based on its environmental performance or an improvement thereof. Charter, (1992) defined green marketing as the strategic marketing process that concentrate on the marketing of products that will not adversely affect human or natural environmental well-being. Ellen et.al (1991); and McKenzie-Mohr (2000) argued that consumers' skepticism regarding the environmental consumerism practice discourage them to be involved in ethical and pro-environmental purchasing. Charter (1992); and Moisander(2001) argued that the consumers pro-environmental purchasing behavior is positively influenced by the availability of the ethical and social responsible firms that offer environmental friendly or sound products . So from the above discussions we can develop a hypothesis: There is an effect of environmental consumerism practice on consumer purchasing behavior.

METHODOLOGY

The target population of this study is the end consumers who have at least STPM or Pre-university degree due to the sophistication and complexity of the research area. In this research non probability sampling of convenience sampling was used. The respondents of this study were from central region (Kuala Lumpur and Negeri Sembilan), and southern region (Melaka and Johor Bahru). Out of 400 sample respondents 313 could be gathered at a response rate of 78.25% where some of the respondents refused to actively participate in the survey. Face to face interview was conducted with the sample respondents since it is considered as the more flexible form of data collection and also since the rate of refusal under this method is low (Sherleker, 1999). Questionnaire was the research instrument. All the questions were structured where 6 point likert scale was used from 1=strongly disagree to 6=strongly agree.

Table 1 Descriptive analysis	
Variables	Mean scores
Caring about the impact of products on environment (EC1)	3.09
Offering products in biodegradable package (EC2)	3.03
Offering products in recyclable package (EC3)	3.00
Offering products which cause less pollution (EC4)	2.92
Offering environmentally certified products (EC5)	2.94

From the above table it can be observed that the mean scores for all the responses fall in the moderately disagreeable level. Thus from the result it can be inferred that the consumers perceive that the companies are not engaged in the environmental consumerism practice and hence they cannot be considered as the socially responsible companies.

Table 2: Correlation between environmental consumerism and purchasing behavior		
	Purchasing Behavior (PB)	Sig. Value
EC1	.221**(.000)	.000
EC2	.334**(.000)	.000
EC3	.313**(.000)	.000
EC4	.298**(.000)	.000
EC5	.348**(.000)	.000
EC	.357**(.000)	.000

From the table 2 above it can be observed that the environmental consumerism practice does have significant influence on the consumers' ethical purchasing behavior (ρ value is less than 0.05) i.e. the more the consumers will perceive that there exists adequate social and environmental responsible companies that will offer environmentally friendly products, the more they will feel encouraged to be involved in the ethical purchasing behavior. Accordingly the hypothesis is supported. All the facets of the environmental consumerism practice have significant impact on the consumer ethical purchasing behavior which means that consumer ethical purchasing behavior is significantly influenced by the environmental consumerism practice in all aspects. In respect of the dimensions under the environmental consumerism practice, EC5 has the highest correlation strength which implies that the availability of the environmentally certified products has the highest impact in motivating the consumers in involving in the ethical purchasing behavior. However, EC1 has the lowest correlation strength which implies that consumer ethical purchasing behavior is comparatively less influenced by the companies' consciousness towards the impact of their products on the environment. On the overall there is fairly higher correlation strength between the overall environmental consumerism practice and consumer ethical purchasing behavior. The reason may be that the consumers do not feel encouraged to be involved in the ethical purchasing behavior if they perceive that more or less all the companies are not socially or environmentally responsible. In this situation they perceive that there will be little to choose from between the companies.

MANAGERIAL IMPLICATION

This study has found that the environmental consumerism practice (macro issue) has some impact on the consumer ethical purchasing behavior. Thus it is better for the firms to conduct

business according to ethics to ensure the benefit to the consumers, business and the country. Furthermore by being ethical and by being concerned regarding the consumerist issues especially environmental consumerism a firm can get a competitive advantage in the market. Many reputed companies in the world have been able to attain consumer confidence by putting "ethical claims" such as "environmentally friendly, eco friendly" in their business slogans. The firms' ethical practices should be able to convince the consumers since it has been found that the consumers usually get confused regarding the ethical and environmental claims of the products which often discourage them in getting involved in the ethical purchasing. From the prior studies as well as from the present study it can be observed that the consumers get discouraged to be involved in ethical purchasing if they perceive that more or less all the companies are engaged in unethical practices in some way.

LIMITATION AND FURTHER STUDY

As with most research, this study also has some limitations despite its contribution to some major findings. Firstly the sample size is comparatively small due to the time and cost constraints with 313 respondents where it is difficult to draw the generelisabilty of this research. Moreover the respondents were selected from some geographical areas. The other regions of the country may demonstrate different result regarding the consumers' perceptions towards consumerism issues. Another limitation is that in this research only one product category was considered i.e. food product. So, the result might differ across the product category. Moreover, this research only highlighted one macro consumerism issue (environmental consumerism practice). The other issues might represent different results. However, further research can be conducted on the micro consumerism issues such as product quality, product safety, product adulteration, misbranding practice, misleading advertising and packaging or with the macro issues like health care, tax system, antinuclear issues etc on the consumer behavioral perspective.

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BAKKE VS. UC-DAVIS: THE CASE BEFORE THE SUPREME COURT'S DECISION

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ABSTRACT

This paper was written before the Supreme Court's final decision concerning Bakke vs. UC-Davis. The preliminaries were wrapped up in 1977 for what many people regarded as one of the most important Supreme Court tests of the principles of minority education since the 1954 Brown vs. Board of Education decision. The issue in the University of California vs. Allan Bakke is the special admission program for minority students at the Medical School of the University of California at Davis. This case led to the questioning of all preferential admission programs for minorities in higher education.

INTRODUCTION

In this case, the Regents of the University of California vs. Bakke, the University is appealing a California State Supreme Court decision in favor of Allan Bakke, a 37-year-old white male who claimed that he was barred from the University of California at Davis Medical School because of a special minority admission program that is constitutionally invalid. Bakke argues that California's Medical School program violates the equal protection clause of the 14th Amendment. The broad issue is that of "reverse discrimination." This is the preferential treatment of minority students to compensate for the effects of past discrimination. In this category, the groups that are usually included are African-Americans, Mainland Puerto Ricans, Mexican-Americans, and American Indians. Some of the other issues at stake are the legality of "racial quotas" and "reverse discrimination."

Just how the Supreme Court will eventually rule will tend to affect not only school admission policies, but also a wide variety of "affirmative action" programs that offer special preference or other help to minorities in job finding or other such matters. Opponents of the special admission programs argue that they amount to racial quotas and that they are illegal, in violation to those who are excluded, and preferential to those whom they assist. Most of these opponents argue that the objectives of special admission programs are worthy but should be achieved by other means.

THE BAKKE CASE

The interest in the Bakke case has been so intense that the Supreme Court has extended the usual period for filing of the *Amicus Curiae* briefs. More than 40 of these briefs had been submitted in support of the University of California by the early-June deadline for briefs. Briefs supporting Bakke will be accepted for 30 days after that deadline. The total number of briefs is expected ultimately to exceed the largest number on record--more than 50 in the case of Brown vs. Board of Education. Few racial cases since Brown vs. Board of Education, which in 1954 outlawed the segregation of schools, have incited such sharp controversy and strong emotions as the Bakke case.

The present context of the Bakke case is the effort of predominantly white professional schools to increase enrollment of minority students since the Civil Rights Act of 1964 prohibited

discrimination on the basis of race, color, national origin, and sex in both public and private institutions of higher learning. In the late 1960s, professional schools, which had historically low enrollments of minority students, instituted "affirmative action" programs to increase their numbers and percentages of minority students, who have been the victims of discrimination in the past. Although such programs were instituted both at the undergraduate and graduate levels, the specific program in question was most conspicuous in the professional schools because of an unprecedented increase in competition for places at these schools. This is particularly true for law and medical schools. According to data published in a study of minority medical education, enrollment of selected minorities rose from 854 in 1968-69 to 4,524 in 1975-76 (Walsh, 1977, August). In terms of percentages, minority representation rose from 2.4 percent to 8 percent of enrollment.

By the University of California's own statistics, Bakke was a better-qualified candidate on the basisof grades and test scores than the specially admitted minority students. Bakke's overall grade point average for undergraduate work was 3.51 out of a possible 4.00 (Anonymous, 1977, October). The average of specially admitted minorities in 1974 was 2.62. Whites have not been admitted under the special program for the "disadvantaged." These figures clearly establish a race quota. Under this program, minority applicants are judged apart from white applicants and are allowed to satisfy lower standards than Bakke and other non-minority applicants.

As competition for medical school places grew keener, the average medical college admission test scores and grade point averages of successful applicants rose considerably. Minority applicants' quantitative credentials also rose steadily, but without special admission programs, it is generally accepted that the representation of minorities would have been drastically smaller. Also, the emphasis on science in academic preparation for medical school increased. The Association of American Medical College's (AAMC) *amicus* brief in support of the University of California notes that the stress on science skills has led to an unusually heavy reliance on numerical admissions criteria.

SPECIAL ADMISSION PROGRAMS

Special admission programs benefiting minority students began to draw objections in the early 1970s. A number of legal challenges against the programs have been mounted on grounds that they discriminate illegally against white or majority students. However, these cases have not produced a definitive answer on the underlying constitutional issue. The Supreme Court nearly did rule on the issue in a case brought by a law school applicant, Marco De Funis, against the University of Washington Law School. The Supreme Court in 1973 agreed to hear an appeal by De Funis, who had won in the Washington State trial court and lost in the State Supreme Court (Buckley, 1977, October). The case had been fully briefed, but the High Court ruled the case moot because De Funis had been admitted to law school by court order and was sure to be graduated by the time the Supreme Court could act on the case, therefore leaving the constitutional issue hanging.

Lawyers on both sides suggested that the High Court could settle Bakke's case without delving into constitutional issues. San Francisco attorney Reynold H. Colvin, representing Bakke, has suggested (outside the Court) that the Justices could "protect Mr. Bakke's rights and do so without making tremendous changes in the progress that has been made in this country" [by minorities] (Ralston, 1977, August). A likely possibility, in the view of some lawyers, is that the High Court might send the Bakke case back to the California courts to decide, either on the basis of some general instructions or for further hearings on the facts.

Many of the briefs supporting minority admission programs state that such admission programs have positive merits. This argument is made strongly in a brief submitted on behalf of Columbia, Harvard, Stanford, and the University of Pennsylvania and supported by seven other private universities. The Bakke case decision would be applicable directly to public institutions of

higher education, but private universities consider themselves also vulnerable to a possible finding against minority admission programs.

Selective professional schools such as medical and law schools must deal with a pool of applicants much larger than can be accepted. Many applicants are well qualified, and therefore they are accepted. On the other hand, many applicants are poorly qualified; hence, they are quickly rejected. The schools are left with a large middle group whose scores on quantitative criteria indicate that they will succeed in the academic program. The problem for the schools is to pick those who will be admitted from this group. Admissions procedures vary from school to school, but most rely on a variety of criteria to complement the criteria of MCAT scores and GPAs. But professional schools admit that it is increasingly difficult to justify choices. Some medical schools have been using a lottery to select from this middle group.

The aim of the admissions committee is to guarantee diversity in the academic program. Beginning in the 1960s, selection committees became race-conscious. Because minorities tend to group at the bottom of the pool of candidates that are qualified to succeed in medical school, various weighting systems have been adopted to increase minority enrollment. Because these graduates will work in a multiracial society, exposure to diverse groups of people during their training better prepares them to practice after that training is completed. The brief supporting the University of California also asks that the Court focus on the educational process and take into account the obligation of educators to produce the leaders of tomorrow.

The California State Supreme Court, which ordered that Bakke be admitted to the University of California at Davis Medical School, said the professional school's suggestions for achieving racial equality are excellent, but that they should be achieved by other means. The Court suggested such alternatives as increasing the enrollment in medical schools, more aggressive recruitment efforts, and, most seriously advanced, taking into account the "disadvantaged" background of applicants in non-racial terms as a substitute for racial criteria.

ARGUMENTS--PRO AND CON

Those siding with the special admission programs have closely examined these alternatives, particularly the use of the disadvantaged criterion, and subsequently rejected them. The critics argue that data on the economically disadvantaged show that reliance on such status as a criterion would result in a reduction in the enrollment of minorities. As the University of California brief states, "Preferential programs for the disadvantaged administered on a racially neutral basis would result in the admission of a greater number of disadvantaged whites" (Anonymous, 1977, October). This might be desirable, notes the brief, but it would happen at the expense of minority students.

A study for the AAMC indicated relying on that an applicant's lower economic status alone results in a very slight competitive disadvantage because of lower performance in undergraduate work or on the MCAT. On the other hand, the variety of factors represented by minority racial status confers a far greater level of educational disadvantage, which results in lower GPAs and MCAT scores and which is only slightly reduced in the higher income minority group.

Proponents of the reverse discrimination charge emphasize the adverse effects of a double standard of admissions. This was done in a brief prepared for the Anti-Defamation League for the De Funis case by the late Alexander Biskel and University of Chicago law professor Philip B. Kurland. In essence, the brief states that "those for whom racial equality was demanded are now to be more equal than others" (Buckley, 1977, October).

Another line of argument advanced by pro-Bakke partisans is that the minorities profiting from special admissions programs are not the only groups affected by discrimination. This point of view is described briefly in an article by Larry M. Lavinsky in the April 1975 issue of the *Columbia Law Review.* The article states that the white majority is a pluralistic one, with many ethnic and religious minorities. Many of these minorities within the majority, such as Catholics,

Jews, Poles, and Italians, have only recently been able to enjoy the benefits of a free society and they should not be exposed to new forms of discrimination in order to bolster the status of other minorities.

Most of the pro-Bakke supporters making statements on the case seek to settle the goal of increasing the representation of minority students in professional education with the constitutional principle of equal opportunity for all. In more basic terms, this means finding a substitute for selection on the basis of race. To do this, an institution must develop more flexible criteria for selection. For reasons separate from the Bakke case, professional schools have for some time made efforts to expand criteria for selection. Whatever the outcome of the case, it appears certain that Bakke will have spurred attempts to come to terms with such issues as culturally biased objective tests and the need to develop better means of identifying ability and potential in minority students.

At this stage of events, which way the Court will rule in the Bakke case is unpredictable. In the past, the Supreme Court has been reluctant to rule on a constitutional issue if it has been possible to decide on a narrower issue in a case. It is possible that the Court could again decline to address the issue of reverse discrimination directly. It has been argued that the Court should not decide the broad question unless it can be determined that Bakke would actually have been admitted to medical school except for the minority admissions program. The Court may also review a narrowly based decision applicable specifically to the Davis program that would not settle the broader question.

Most observers feel that the Court recognizes that reverse discrimination is an issue whose time has come and that a decision on fundamentals is required. It cannot be an easy decision to make. In Brown vs. Board of Education, the finding that "separate cannot be equal" had the virtues of simplicity and compelling force. A simple formula does not appear to be readily available in the Bakke case. In addition to this, the Court must grapple with the argument that there is no firm constitutional foundation for the preferential programs for minorities of the last decades. However, the Court must be aware of the impact on society if it reaches a decision that appears to reverse the flow of the law against racial discrimination. Such a decision would tend to confirm the belief still held among racial minorities and ethnic groups that the law protects minority rights so long as they do not interfere seriously with the interests of the majority.

The federal government also has a position on the case, that of being a friend of the Court. Congress and the executive branch have concluded race must at times be taken into account in order to achieve equal opportunity. The government has many minority sensitive programs that may help promote minority business, provide assistance to help colleges increase minority faculty, give special scholarships to minority applicants, and develop programs that require companies to use affirmative action in hiring in order to receive government contracts. Government regulations to enforce the civil rights ban on discrimination in education allow a university to give special consideration to minorities.

Since the 14th Amendment protects all people without regard to race, minority sensitive programs must be carefully inspected to ensure that they fulfill a legitimate, positive goal. A 2.6 GPA, which is relatively low, produced by a minority applicant may indicate every bit as much potential to be a physician as a 3.00 GPA by a white applicant, so the government argues. This is because the minority student has demonstrated not only the ability to succeed in obtaining grades but also the determination and ability to overcome non-academic hurdles.

CONCLUSION

In making difficult admission decisions, reasonable selected numerical targets can be useful in order to determine the effectiveness of the decision. Apparently, the California Supreme Court thought that the University of California at Davis made a wrong decision. The government believes that Davis was wrong when it held that race could not be a factor in admissions. Race, it believes,

must be a factor to make special admission programs effective. Other alternatives have not appeared to work. Applicants must be assessed in terms of the obstacles they have had to overcome, including race discrimination.

The conflict is a real and difficult one, and it may be months before the Supreme Court finally reaches its decision. The issues of over-compensating African-Americans for past injustices are so complex that they will be fought out in courts and in Congress for years. Many people believe that the Court should send Bakke's case back to the California courts to determine if the university program was in fact an illegal quota, whether or not the program met legitimate goals, and whether or not Bakke himself would have been admitted without the special program.

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PREVENTING EMPLOYEE IDENTITY FRAUD

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ABSTRACT

This paper will examine the potential legal and employee relations consequences associated with the theft of employer records and identity fraud, what employers can do to prevent theft of employer records, and what employers can do to minimize the negative consequences associated with their records being utilized in identity fraud.

INTRODUCTION

In May of 2006, the United States Department of Veterans Affairs (VA) reported that identifying information for up to 26.5 million veterans was part of the take in a burglary of one of it's employees homes. The stolen data was stored in a laptop computer and external hard drive the employee had taken home. The employee, a data analyst with the agency, was not authorized to take the data home and his behavior was in violation of VA policies (FirstGov, 2006). The (VA) incident, the largest and one of the latest in a long list of recent security breaches to make headlines. The incident also highlights the role of employer records in this regard. Wells, citing a 2002 report by TransUnion, one of the U.S.'s three credit bureaus, reported that "the No. 1 underlying source of identity fraud is theft of employer records" (Wells, 2002, p. 33). Human Resource (HR) departments are particularly rich sources of information that can be utilized in identity fraud. Personnel files, payroll, benefit, and tax information, all contain pieces of information that can facilitate the identity thief's objective and often are secured under the auspices of the HR function. "When someone steals a wallet, they get one name, one SSN. When they steal personnel files, they get away with 10, maybe 100 names and numbers" (Wells, p33, 2002).

This paper will examine the potential legal and employee relations consequences associated with the theft of employer records and identity fraud, what employers can do to prevent theft of employer records, and what employers can do to minimize the negative consequences associated with their records being utilized in identity fraud.

RECENT INCIDENTS

Recently, a number of very prominent companies have had the personal information of current or former employees compromised. Included on the list are Time Warner, Eastman Kodak, Motorola, MCI, Bank of America, Boeing, Ford, and Equifax. In the Time Warner breach, a records management and storage firm utilized by the company lost tapes containing personal information on nearly 600,000 current and former U.S. based employees (Caterinicchia, 2005). Even the lead federal agency in the government's response to identity theft suffered an information breech on June 22, 2006 when two laptop computers containing personal and financial data of approximately 110 individuals were stolen from an employee's vehicle. The data included names, addresses, and Social Security numbers (FTC, 2006B). While organizations have improved their ability to protect data when it is stored behind firewalls on corporate networks, in recent months the "rash of laptop-related

incidents" have highlighted the difficulty firms have in attempting to protect information when it is outside their protected networks (Regan, 2006).

Table 1: Recent Data Breaches Involving Laptop Computers	
Company	Number of Records Compromised
Nat'l Assn of Securities	
Dealers (NASD)	73
American Red Cross	
Farmers Branch (Dallas, TX)	Unknown
Fed. Trade Comm. (FTC)	110
Equifax	2,500
ING (Washington, DC)	13,000
ING (Miami, FL)	8,500
Union Pacific (Omaha, NE)	30,000
Minn. State Auditor	493
IRS (Washington, DC)	291
YMCA (Providence, RI)	65,000
Ahold USA	Unknown
Buckeye Community Health Plan	72,000
Ernst & Young (UK)	243,000
Dept. of Veterans Affairs	28,600,000
Source: Privacy Rights Clearinghouse (2006).	

While the theft of laptop computers have generated most of the headlines in recent months, employer data breaches have also occurred as a result of hackers, loss of records in transit, inadvertent posting of information on-line, information being faxed mistakenly to a third party, and misappropriation by current, former, or contingent workers.

POTENTIAL LEGAL AND EMPLOYEE RELATIONS CONSEQUENCES

Recent examples where employees and consumers have initiated legal action against employers include Ligand Pharmaceuticals Inc., employees of the City of Detroit, Michigan, and Suzanne Sloane's lawsuit against Prince William Hospital and a Maryland temporary help agency. In the Ligand Pharmaceuticals Inc. case, one of its employees found old personnel records from a Ligand acquisition and along with acquaintances, "established more than 25 credit card accounts

and purchased $100,000 in goods" (Steptoe & Johnson PLLC, 2004). Ligand was eventually sued for negligence by fourteen of the victims and settled out of court for an undisclosed amount (Steptoe & Johnson PLLC, 2004).

In the employees of the City of Detroit, Michigan case, the primary issue was "who bears the liability for the results of identity theft" (Jones, 2005). This case involved emergency service operators who were members of AFSCME, Local 1023 in the City of Detroit. A jury found the Union to have been negligent and the employees were awarded a collective sum of $275,000 (Bell v. Michigan Council 25, 2005). According to Reginald Jones, this decision "broke new legal ground" because it was the first time that a court had found "a custodian of employee information has a duty to guard the data with scrupulous care" (Jones, 2005).

In Suzanne Sloane's multi-million dollar lawsuit against Prince William Hospital and NRI Inc., Sloane alleged that the companies negligently allowed a convicted identity thief to have access to her personal information (Hospital Litigation Reporter, 2006). The temporary worker obtained Sloane's information from her medical records and used it to open several credit accounts and run up thousands of dollars in debt. Settlement agreement terms were not revealed (Hospital Litigation Reporter, 2006).

Lisa Daniel reported on numerous other incidents involving temporary workers, cleaning staff, security staff, and human resource information systems (HRIS) staff. These types of employees "tend to be invisible" according to Philip Deming a security and risk consultant interviewed by Daniel (Daniel, 2006). In the Daniel article, Deming related a case where a temporary cleaning service worker was able to copy the personal information of the CEO of a large, publicly traded company. When an attorney working on the renegotiation of the CEO's contract left the personnel file on the floor by his desk, the cleaning service worker copied the information and sold it on the street for $75 (Daniel, 2006). In another case, Deming described a situation in a large nonprofit association that "paid more than six figures to correct the credit of 100 of its highest-paid employees" in a breech that involved a temporary worker for an insurance broker who had access to key personal information of the executives. While the financial cost to the organization to repair the executive's credit was substantial, the cost to morale was even more devastating (Daniel, 2006).

The impact of identity theft to a victim's daily life can be "devastating". In a widely cited study on the impact of identity theft, examining the drain on employee productivity and morale, a joint study by the PRC and the California Public Interest Research Group found that "on average, victims of identity theft and fraud spend 175 hours researching and tracking the crime, 23 months correcting credit reports and $800 in out-of-pocket expenses to restore their financial standing" (Wells, p. 34, 2002).

POLICY AND PRACTICE RECOMMENDATIONS FOR EMPLOYERS

Like most efforts to reduce an organization's exposure to litigation with respect to HR issues, decision makers should begin by reviewing existing policy and practice. In recent years, with the enactment of laws like the Health Insurance Portability and Accountability Act (HIPPA), the Electronic Communications Privacy Act (ECPA) of 1999, the 2003 Fair and Accurate Credit Transactions Act of 2003 (FACTA), and Sarbanes Oxley, plus the increased attention to privacy issues in general, organizations of all sizes and types should be addressing the privacy issue in their workplaces. As part of an organization's overall approach to ensuring employee privacy, policy and procedures to protect personal information, especially information that can be used to enable identity theft and fraud, should be developed. Gary Clayton, CEO of Jefferson Data Strategies, a Washington, DC based privacy and data management firm, suggest that HR departments should do a "data-flow analysis, looking at what's collected, why it's collected and what the risks are" (Geisel, 2005).

With respect to "sensitive information" like an employee or job applicant's Social Security Numbers (SSNs), employers should examine when they ask them to provide it. The general consensus on the acquisition of SSNs seems to be to not ask for it until "absolutely necessary". Don't use SSNs as employee identifiers, on insurance cards, benefit claim forms, paycheck stubs, time cards or time sheets, parking permits, staff badges, or training rosters – "on any printed documents that contain an employee's SSN, all but the last four numbers should be masked, just like on credit card receipts" (Caterinicchia, p. 58, 2005). In light of the problems with stolen laptops, employers should not permit employee data to be maintained on laptops or CDs. Additionally "pay particular attention to physical security", and be sure to remind employees to not leave sensitive personal information on the top of their desk – lock up file cabinets, especially in the payroll department or any where personal information is stored (Payroll Manager's Report, 2006).

Once you have collected information, you must monitor what you have, how long you need to keep it, where you will store it, and who may access it. Today, as more and more organizations utilize technology to store information of all types, employers should tightly restrict who may be given access to employee information.). Investing in resources, including training, strict policies, – with enforcement and meaningful consequences for lax application of procedures and the following of procedures, are critical to any effective effort associated with records management. According to Susan Kurdziolek, president of Turn Key Office Solutions in Arlington, VA, "too often, we see that companies address these issues with a wink, and that's it"… organizations must "show that there are consequences for breaking rules". The need for an investment in resources, as in most cases, dictates that "security has to come from the top down" (Daniel, p. 133, 2006). The support from top management has to be more than just lip-service. Real resources, real enforcement with real consequences for not following policy and procedures are critical to demonstrating that the organization is serious about this issue.

From an employee relations prospective, remember the potential debilitating affects on employee morale, productivity, and potential turnover that can occur when employees' personal information is compromised and used in identity theft. Employers that want to minimize their exposure to litigation and potential damage awards and minimize the negative impact on employee morale and productivity can not simply pay lip service to this issue. A top down approach with genuine commitment of resources to effectively protect employee personnel information is necessary.

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GERMAN AND AMERICAN OPINION ON THE ETHICS OF TAX EVASION

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ABSTRACT

This paper examines the issue of the ethics of tax evasion. It begins with a review of the literature and proceeds to discuss the three main views on the issue that have emerged over the last 500 years. The paper then reports on the results of a series of surveys taken of various populations in Germany and the United States. Gender and age differences are also examined.

INTRODUCTION

Tax evasion has probably existed ever since the first tax was instituted thousands of years ago. The Bible discusses the responsibility of the citizen to pay taxes and philosophers have addressed the issue over the centuries. A review of the recent literature found many articles written about tax evasion and avoidance, but the vast majority of them were written from the perspective of either an accountant or an attorney. They took a practitioner perspective and often were published in practitioner journals. Scholarly treatises taking an ethical or philosophical approach were difficult to find.

However, a few scholars have addressed ethical aspects of tax evasion. When this literature was reviewed it was found that philosophers and theologians over the centuries have taken three basic positions on the ethics of tax evasion. Tax evasion has been viewed as never (or almost never) ethical (Cohn, 1998; Smith & Kimball, 1998), always ethical (Spooner, 1870) or sometimes ethical (Angelus, 1494; Crowe, 1944; Morales, 1998; Pennock, 1998), depending on the circumstances. Some scholars have argued that taxpayers have a duty to God to pay taxes, while others assert that the duty is either to the government or to their fellow taxpayers. Another view is that taxation is basically theft and that there is no duty to pay a thief. A less absolutist view is that there is a duty to pay something but the duty is not absolute. The amount that is ethically owed depends on the facts and circumstances.

The present study incorporated these three views into a survey, which was distributed to German and American business students. The objective of the survey was to determine which of the three views is most prevalent. The goal was achieved, since a clear preference for one of the three views emerged.

METHODOLOGY

After reviewing the Crowe thesis (1944), which summarized the 500 year theological and philosophical debate that has been going on regarding the ethics of tax evasion, and after becoming familiar with the scant recent philosophical literature on the topic, a survey was developed that incorporates all the major issues that have been discussed in the literature. The survey includes 18 statements that reflect all three viewpoints on the issue. It was then distributed to business school graduate students and upper level undergraduate students at the Georg-Simon-Ohm Fachhochschule in Nuernberg, Germany. Seventy-one (71) usable responses, 30 from MBA students and 41 from

upper-division International Business (IB) majors, were received. A similar survey was distributed to 119 business students at Saint Thomas University in Miami.

Respondents were asked to indicate their agreement or disagreement with each statement by placing a number from 1 to 7 in the space provided. The statements generally started with the phrase "Tax evasion is ethical if…" A score of one (1) indicated strong agreement with the statement. A score of seven (7) indicated strong disagreement with the statement.

SURVEY RESULTS

Table 1 compares the German and American scores on a statement by statement basis. The American scores are larger than the German scores in 13 of 18 cases, indicating that, on average, the American sample was more firmly opposed to tax evasion than was the German sample. The average American score (5.62) was also higher than the average German score (4.94).

Wilcoxon tests were done for each statement to determine whether the differences in score were significant. In many cases the scores were significantly different at the one percent level. Some other differences in scores were significant at the ten percent level.

Table 1: Comparison of Scores
(1= strongly agree; 7 = strongly disagree)

No.	Statement	German Scores	American Scores	German Scores Larger By	American Scores Larger by	P Value	
1	Tax evasion is ethical if tax rates are too high.	5.07	5.69		0.62	0.007392	*
2	Tax evasion is ethical even if tax rates are not too high.	5.97	5.92	0.05		0.6049	
3	Tax evasion is ethical if the tax system is unfair.	4.24	5.19		0.95	0.000295	*
4	Tax evasion is ethical if a large portion of the money collected is wasted.	4.03	5.15		1.12	0.000217	*
5	Tax evasion is ethical even if most of the money collected is spent wisely.	6.38	6.00	0.38		0.09721	***
6	Tax evasion is ethical if a large portion of the money collected is spent on projects that I morally disapprove of.	4.76	5.68		0.92	0.0005686	*
7	Tax evasion is ethical even if a large portion of the money collected is spent on worthy projects.	6.21	5.97	0.24		0.8743	
8	Tax evasion is ethical if a large portion of the money collected is spent on projects that do not benefit me.	6.04	5.98	0.06		0.9406	
9	Tax evasion is ethical even if a large portion of the money collected is spent on projects that do benefit me.	6.31	5.97	0.34		0.4567	
10	Tax evasion is ethical if everyone is doing it.	5.72	6.17		0.45	0.05623	***
11	Tax evasion is ethical if a significant portion of the money collected winds up in the pockets of corrupt politicians or their families and friends.	3.65	5.51		1.86	3.61e-07	*
12	Tax evasion is ethical if the probability of getting caught is low.	6.00	6.08		0.08	0.4005	
13	Tax evasion is ethical if some of the proceeds go to support a war that I consider to be unjust.	4.25	5.59		1.34	1.057e-05	*
14	Tax evasion is ethical if I can't afford to pay.	4.48	5.43		0.95	0.0001204	*
15	Tax evasion is ethical even if it means that if I pay less, others will have to pay more.	5.13	5.96		0.83	0.9942	
16	Tax evasion would be ethical if I were a Jew living in Nazi Germany in 1940.	3.59	4.99		1.40	0.0007803	*
17	Tax evasion is ethical if the government discriminates against me because of my religion, race or ethnic background.	3.41	4.91		1.5	0.0006941	*

Table 1: Comparison of Scores
(1= strongly agree; 7 = strongly disagree)

No.	Statement	German Scores	American Scores	German Scores Larger By	American Scores Larger by	P Value	
18	Tax evasion is ethical if the government imprisons people for their political opinions.	3.69	4.95		1.26	0.0004119	*
	Average Score	4.94	5.62				

* Significant at the 1% level
** Significant at the 5% level
*** Significant at the 10% level

The German survey did not ask the gender of the respondent so it was not possible to determine if the female scores were different from the male scores. However, the American survey did gather information about gender, which made it possible to compare male and female scores. An analysis of the data found that females were significantly more opposed to tax evasion than men for 9 of the 18 fact situations. Female scores were higher than males scores for all 18 statements.

SUMMARY AND CONCLUSIONS

One must be careful when interpreting the results of these surveys. It is easy to jump to the conclusion that those who have the highest scores are more moral than those with lower scores. Such a conclusion would be overly simplistic and incorrect. To reach that conclusion one must take as the underlying premise the belief that tax evasion is unethical, which might not always be the case. Various scholars have pointed out this fact over the centuries (Angelus, 1494; Crowe, 1944; Morales, 1998; Pennock, 1998). Whether tax evasion is ethical depends on the facts and circumstances according to these scholars. The results of the present surveys show that there is widespread support for this position, since the scores are substantially below 7.0.

The survey findings indicate that the sample population believes that tax evasion is ethical in some cases. If we begin with the premise that tax evasion might be ethical under certain situations, all we can conclude from this study is that American business students are more opposed to tax evasion than are German students and that American females are more opposed to tax evasion than are American males. An analysis of the data from the Human Beliefs and Values survey found that opposition to tax evasion increases with age.

One of the goals of the present study was to determine the viewpoints of various groups on the issue of tax evasion. Another goal was to rank the various arguments that have been used to justify tax evasion over the last 500 years to determine which arguments are strongest and which are weakest. Those goals have been accomplished.

There are many possibilities for further research on this topic. One could give the same survey to another segment of the German or American community. Surveys of seminarians might yield different results, since they are likely to be more familiar with the theological literature than is the average business student. Giving the survey to faculties in philosophy, political science or law might also have different results. Asking mature members of the business community to complete the survey might also result in responses that are substantially different from those of business students. Business owners probably have stronger views on the issue of paying taxes than do business students, who have had little or no exposure to the real world of paying taxes.

One might also replicate this study in other countries, surveying any of the groups mentioned above. One would expect that the views of individuals who live in transition economies might be different than the view of people who live in a developed market economy. This preliminary perception could be tested by conducting a comparative study of one or more transition economies

and one or more developed countries. One might solicit the views of various kinds of students in business, philosophy, theology, political science or law, or business owners.

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SARBANES-OXLEY: A NEW ERA OF GOVERNMENT REGULATION OF ACCOUNTANTS

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ABSTRACT

In 2002 Congress responded to the massive corporate failures of Enron, Tyco and others by enacting the Sarbanes-Oxley Act (SOA), to improve corporate governance and the reliability of financial information.

The purpose of this paper is to provide insight into the Sarbanes-Oxley Act's regulation of public accountants through a new regulatory agency: the Public Company Accounting Oversight Board (PCAOB). Accounting failures had contributed to massive corporate failures. Sarbanes-Oxley seeks to improve auditor performance by making auditors more independent and eliminating conflicts of interest. It is important for public accounting students and practitioners to understand how and why the PCAOB regulates as it does. Through understanding, needless conflict can be avoided and a constructive, mutually beneficial relationship is more likely to ensue.

This paper begins by examining the PCAOB, noting its unique features. The paper then describes and analyzes the Board's inspection process, arguably its most important enforcement mechanism. New sanctions created by Sarbanes-Oxley are then considered. Finally, conclusions are drawn regarding how accountants can best interact with the SOA's new regulatory agency, the PCAOB.

INTRODUCTION

When President Bush signed the Sarbanes-Oxley Act (SOA) in 2002 he stated that it created "the most far-reaching reforms of American business practices since the time of Franklin Delano Roosevelt". The SOA was a federal response to the massive corporate failures of Enron, Tyco and others. These failures were caused, in part, by accounting failures that had misrepresented the financial condition of some corporations. When the truth came out these corporations collapsed, causing losses to investors estimated at between $300 billion and $500 billion. Investor confidence in our capitol markets was shaken. In order to restore that confidence, and to make financial information more reliable, Congress passed the SOA by an overwhelming majority: 423 to 3 in the House of Representatives, and 99 to 0 in the Senate.

Sarbanes-Oxley attempts to correct the various causes of this post-Enron crisis in confidence. To improve corporate governance, new independence requirements were established for corporate board audit committees; new internal control systems were mandated; corporate loans to management were prohibited; new attestation statements and signatures by Chief Executive Officers (CEO)s and Chief Financial Officers (CFO)s were required for reports to the Securities Exchange Commission (SEC); and penalties for fraud were increased. Securities analysts' conflicts of interest were addressed by requiring a wall of separation between the sales staff of a brokerage firm and its analysts, and by prohibiting a brokerage firm from punishing an analyst who issued a negative report on a security. Analysts were also required to disclose their own holdings of the securities they were reporting on.

Sarbanes-Oxley brought sweeping changes to public accountants. Their profession performs the essential function of certifying that the financial information issued by public companies is accurate. Investors in our capitol markets rely on this financial information to make decisions.

Without this reliance and trust our capitol markets could not function effectively. Our economy, which depends upon the health of our capital markets, would be significantly impaired.

Until the SOA, the accounting profession had been largely self-regulating. The profession's national organization, the American Institute of Certified Public Accountants (AICPA) administered numerous self-regulatory organizations such as the Public Oversight Board (POB), whose task was to oversee the work of public accountants. But self-regulation by the profession was not entirely successful. The POB had no authority to sanction auditors for deficiencies or incompetence. In 2002 the POB voted unanimously to dissolve itself, feeling that it was unable to fulfill its mission with its limited authority. Among other problems, the POB had been unable to get support for its plan to review the Big 5 accounting firms' compliance with auditor independence standards.

This paper begins by examining the PCAOB, noting its unique features. The paper then describes and analyzes the Board's inspection process, arguably its most important enforcement mechanism. New sanctions created by Sarbanes-Oxley are then considered. Finally, conclusions are drawn regarding how best accountants can interact with the SOA's new regulatory agency, the PCAOB.

THE PUBLIC COMPANY ACCOUNTING OVERSIGHT BOARD (PCAOB)

PCAOB Board Member Daniel Goelzer has stated "the Sarbanes-Oxley Act ended the profession's long tradition of self-regulation and peer review. In its place, the Sarbanes-Oxley Act created the Public Company Accounting Oversight Board." The Board consists of a Chair and four other Board Members, selected by the Securities Exchange Commission. This new regulatory agency was created to administer the accounting provisions of the SOA. The PCAOB follows the general pattern of agency action described earlier: hiring experts, promulgating rules, and setting up an enforcement mechanism for those rules.

Several features of the PCAOB are note-worthy. It is an "independent" agency, in that its board members are appointed for fixed terms as opposed to serving at the pleasure of the President. SOA Section 101(e) provides that the five Board members shall be selected by the SEC in consultation with the Chairman of the Board of Governors of the Federal Reserve System and the Secretary of the Treasury. PCAOB Board Members may not be removed before the expiration of their terms except for "good cause shown".

The PCAOB is more independent than most other independent agencies in that its funding comes from an independent source and not from Congress. SOA Section 109 provides that the funding of the Board shall come from "annual accounting support fees" levied on corporate issuers in proportion to their "equity market capitalization". Oversight by Congress is one traditional means of controlling agencies and preventing abuse. Congress controls the purse-strings, and sets the budget of each agency annually. If an agency has aroused the ire of Congress, it can cut back that agency's budget. Agencies, being bureaucracies, strenuously try to avoid this. However, if an agency has independent funding, it is immune from such cutbacks. Very few agencies enjoy this privileged status, but the PCAOB is one that does. Greater independence makes the agency less responsive to political pressures.

THE PCAOB INSPECTION PROCESS

All public accounting firms are inspected, once each year for larger firms and at least once every three years for smaller firms. The Board recognizes the importance of its inspection program. PCAOB Board Member Charles Niemeier stated in 2006 that "our inspection program is the core of our supervision of registered firms". The largest single group of employees of the PCAOB is in the inspections division. In 2005 the Board conducted inspections of 281 registered accounting firms.

It is useful to consider the general approach taken by the PCAOB in its inspection process. An inspection of a public accounting firm usually starts with an assessment of that firm's "tone at the top".

Tone at the top refers to top management's attitudes and behavior regarding regulatory compliance and ethics. It would be hard to overestimate the importance the PCAOB inspectors place on positive tone at the top. If the inspection team determines that the tone at the top is positive, it will feel a reduced need to make in-depth inspections of specific audits.

In a 2004 speech given by Director of the Division of Enforcement of the SEC Stephen Cutler, he emphasized the importance of a healthy tone at the top. He suggested several ways in which top management could act to provide it. These include complying with the "letter and spirit of the rules", taking "good moral character" into account when hiring new employees and making "integrity, ethics and compliance part of the promotion, compensation and evaluation process". Mr. Cutler pointed out that

> It speaks volumes when a company fires or suspends a rainmaker or other important employee for an ethical breach; and just as importantly, it speaks volumes when a company doesn't.

Another aspect of the PCAOB's general approach is that inspectors conduct what has been described as a "risk-based" inspection. Inspectors do not focus their attention equally on all areas of a public accounting firm's work. They focus on those areas which seem to carry the most risk. As the PCAOB Annual Report for 2005 explains:

> The PCAOB uses a risk-based approach to performing its oversight programs. For example, the PCAOB's inspections teams identify audits for review based on an evaluation of the risks of misstatements or omissions in financial reporting, and they further maximize the effectiveness of their reviews by selecting the portions of those audits that are likely to pose the most challenging audit issues.

Using this risk-based approach, inspectors would not randomly select audits to review. Instead they would look for high-risk audits. An example of a high-risk audit might be an audit of a company that had a troubled history of SEC compliance. Another example might be an audit of a company that other public accounting firms had declined to work for.

PCAOB DISCIPLINARY PROCEEDINGS

Unlike its predecessor the Public Oversight Board (POB), which was a self-regulatory organization under the supervision of the American Institute of Certified Public Accountants (AICPA), the PCAOB has very potent sanctions at its disposal. SOA Section 105(b)4 gives the Board the authority to impose disciplinary or remedial sanctions including temporary suspension or permanent revocation of an accounting firm's registration. Without registration a firm may not audit public companies. Revocation of registration would probably lead to the demise of a public accounting firm. The Board can also temporarily suspend or permanently bar an individual accountant from association with any registered public accounting firm. The Board has authority to impose heavy fines on violators. For unintentional (probably negligent) acts, the Board can impose a fine of up to $100,000 for an individual, and up to $2,000,000 for a firm. These limits increase substantially if an intentional act is involved. The limits then go to $750,000 and $15,000,000. Intentional acts include reckless conduct and even repeated instances of negligent conduct that violate the SOA. Other sections of the SOA authorize the imposition of jail sentences for failure to maintain required records or willful destruction of records.

CONCLUSION

The Sarbanes-Oxley Act's Public Company Accounting Oversight Board is an extremely powerful government regulatory agency but it has chosen to exercise its power with great restraint. It has adopted a soft, supervisory approach to enforcement. The Board will try to work with an accounting firm to improve that firm's performance, so long as the firm demonstrates good faith and a capacity to perform audit work that meets the Board's standards.

While parties coming before the PCAOB can assert their legal rights in the enforcement process, they should be mindful that the Board's "supervisory approach" affords them an opportunity to work constructively with the Board. The Board much prefers to preserve public accounting firms rather than to see them fail. In almost all cases a firm will be better off taking advantage of the Board's supervisory approach rather than by aggressively contesting the Board's determinations. After all, both the Board and the profession share the common goal of providing the best possible financial information to decision-makers.

By working constructively with the PCAOB, public accounting firms can best serve their clients and themselves and attain the high standards to which their profession aspires.