

An Examination of the Association of Work Experience to Ethical Attitudes and Machiavellianism of Accounting Students

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Business ethics can have high implications for the accounting profession, stakeholders who rely on financial reporting, and entities concerned about business reputation. Professional ethics are required of members by all major accounting organizations. Accounting students learn about business ethics in accounting through their accounting studies, yet unethical practices have persisted in recent decades, often by leaders and managers with accounting foundations. This study examined work experience and other factors that could affect attitudes toward business ethics of accounting students. A survey questionnaire was used to assess ethical attitudes using various statistical techniques to explore significant differences among accounting students who were grouped according to their length of work experience and other factors. Students with a few years of work experience were found to have a more relaxed attitude towards business ethics than students with longer work experience.

Keywords: ethics, ethical attitudes, work experience, Machiavellianism

INTRODUCTION

Business ethics can have high implications for business professionals and others, whether a local practice or a large multinational in this global economy. The fates of organizations such as Enron, WorldCom, and Arthur Andersen that, through unethical business practices negatively impacted members of society with significant losses serve as good examples of such high implications. These scandals were instrumental in the creation of the Sarbanes-Oxley Act (SOX) in 2002 (Eweje & Brunton, 2010), thought by many as the most significant security-legislation act enacted since the Securities Acts of 1933 and 1934 (Gunz, & Thorne, 2019). Is no secret that many business leaders and managers come from business schools that generally have some form of curriculum coverage on ethics. Nonetheless, business scandals involving unethical business acts continue to occur causing significant damage to people, organizations, and the economy.

In the past, several studies have explored multiple factors seeking associations with ethical attitudes in business. One of these factors relates to an individual's work experience and how it may impact ethical attitudes or behaviors in business (Eweje & Brunton, 2010; Miesing & Preble, 1985; Rodriguez, 2017; Rodriguez, Kulesza, & Kusaila, 2021; Ruegger & King, 1992; Yazici & Siniksaran, 2012). This study examines the relationship of work experience and other demographics to ethical attitudes in business using accounting students as participants.

The remainder sections of this study are structured as follows. The first section is a literature review in ethical attitudes in business. The second section is a description of the research design and methodology. The third section summarizes the results, and the fourth section discusses the findings, implications, study limitations, and recommendations for future research.

LITERATURE REVIEW

Named after the Florentine politician Niccolo Machiavelli (1469-1527), memorialized for his work *The Prince* (1513), Machiavellianism is a philosophy inferred from egoism theory that in business realm prioritizes efficiency over virtue in the pursue of business success (Miesing & Preble, 1985). In *The Prince*, Machiavelli downplays morality in the political decision-making process, focusing on the results regardless of how these are achieved. Grounded in realism, Machiavellianism can be thought of as an amoral philosophy that centers on winning as a sufficient reason for achieving goals. Machiavellian practices can make a person overly aggressive and manipulative, using deceitful tactics to attain financial goals (Li-Ping Tang, Chen, & Sutarso, 2008); hence, Machiavellianism is counter to social responsibility (Stevens, 1979).

Various studies have explored the relationship between Machiavellianism and fraud. In a study by Elias (2015), the author highlighted how Machiavellianism has been attributed as a common trait of business executives who committed fraud during the Great Recession (2008-2012). Setyaki, Pesudo, Andreas, and Chang (2022) studied the association between Machiavellianism and personality type on academic fraud and found male students with type-A personality with high Machiavellian traits to show increased tendencies to commit fraud. In a study by Utami, Astiti, and Mohamed (2019), the authors posited a significant relationship between the triangle of fraud and the psychology of Machiavellians and their level of fraud intention. In other words, those with high levels of Machiavellianism tend to be more prone to commit fraud than those with low levels. In another study by Utami, Wijono, Noviyanti, and Mohamed (2019), the authors suggested Machiavellian personality as a factor that may contribute to fraudulent activity, in addition to pressure, rationalization, and capability. More specifically, the authors suggested that Machiavellianism directly promotes the intention to commit fraud. Under Machiavellianism, people tend to engage in manipulative behaviors that depart from generally accepted ethical standards (Ahadzadeh et al., 2020). The more Machiavellian the person the higher the likelihood of engaging in unethical behavior (Maggalatta & Adhariani, 2020). Machiavellian people tend to be manipulative and exploitative, lack trust in other people, and are more wary of opportunities and situations around them; this could be why they are more likely to engage in unethical behavior (Sayal & Singh, 2020).

Various other studies have explored the relationship between Machiavellianism and bullying. Valentine and Fleischman (2017) found that Machiavellian employees are often inclined to manipulate and exploit their colleagues to gain recognition or fulfill a personal ambition. Such actions find support under the Cognitive Dissonance Theory (CDT) which holds the view of a positive relationship between bullying and Machiavellianism. Furthermore, CDT explores the psychological mechanisms by which individuals exposed to suppressed bullying or Machiavellian behavior may feel the need to embrace such conduct to endure and flourish (Valentine & Fleischman, 2017). The relationship between Machiavellianism and bullying was examined from various entities in Poland. Pilch and Turska (2015) studied the association between Machiavellianism and bullying with participating workers in Poland and found that participants who experienced bullying displayed higher levels of Machiavellianism compared to those who were never involved in bullying.

The current study is primarily centered on examining the relationship of Work experience to attitudes towards business ethics and Machiavellianism using junior and senior accounting students as participants.

Researchers continue to investigate students' ethical attitudes and ethical behaviors, especially from business schools. After all, many future managers and leaders are ultimately alumni of business schools (Yazici & Siniksaran, 2012). One of the earliest studies that investigated the ethical attitudes of college students was the study by Preble and Reichel (1988). Participants in the study were management students from the United States and Israel. These students received high marks in their study with regard to moral standards. Just a year earlier, the Attitudes Towards Business Ethics Questionnaire (ATBEQ) was developed by Neumann and Reichel (1987). A tool that was motivated by Stevens' (1979) seminal work, which was comprised of nine business philosophies that Stevens related to Kohlberg's (1976) levels of moral development. Many years later, Bageac, Furrer, and Reynaud (2011) mapped the ATBEQ to five of these nine business philosophies of which one of them, Machiavellianism, is explored in the current study as a subscale of the Attitudes Towards Business Ethics (ATBE) dependent variable. (see Appendix for Machiavellian vignettes).

Recent studies in ethical attitudes, specifically Machiavellianism, continue to attract researchers with the use of business students as participants. For example, Setyaki, Pesudo, Andreas, and Chang (2022) studied the association between Machiavellianism and personality type on academic fraud, among other factors, and found male students with type-A personalities with high Machiavellian traits to be more prone to commit fraud. Kurniawan and Anjarwati (2020) posited that understanding the accounting code of ethics positively impacts the ethical perceptions of accounting students, whereas Machiavellianism has a negative significant impact. Machiavellianism and the love of money are linked to unethical behavior, which has a negative impact on accounting students' perceptions of ethical behavior (Maggalatta & Adhariani, 2020). Helmy, Dwita, and Cheisviyanny (2021) found that tax evasion among accounting students to be significantly influenced by gender. Their study found females as more compliant and males as more prone to commit tax evasion; however, they found no link between Machiavellian behavior and tax evasion. Machiavellianism, according to Shafer and Wang (2017) plays a significant role in taxpayers' perception of social norms as well as their intent to commit tax fraud. In a study by Edit and Jones (2019), the authors also found that Machiavellianism in males was positively correlated when it came to planning, whereas females were negatively correlated. Barbaranelli et al. (2018) found amoral-Machiavellian students to be more likely to engage in academic dishonesty in situations where their peers practice it. Machiavellian students who attempt to gain information from their peers are more likely to hurt others (Spanou et al., 2020). On the other hand, in an earlier study by Nguyen and Pham (2015) who examined ethical attitudes of business students from Vietnam and the United States, the authors found high ethical attitudes towards business. The authors attributed these results to the greater opportunities students from these countries have had interacting and learning from other countries. Dkadek, Guelzim, and Elaissaoui (2022) reported that in terms of educational attainment, students with five years of higher education showed a higher level of commitment to business ethics than those with three years of higher education. To some extent, these results are consistent with the current study.

Shome and Rao (2009) studied differences in Machiavellianism between public accountants at a senior management level and partners. Their study found no apparent differences, except for managers who generally showed lower Machiavellian personalities than their older counterparts. Studies involving work experience, however defined, are found in the literature going back several decades. Some of these studies have explored the association between work experience and ethical attitudes and behaviors of students. For example, in 1985, work experience was examined against Machiavellianism. Students with greater work experience were reported as having significantly less signs of Machiavellianism than those with less or no experience (Miesing & Preble, 1985). Ruegger and King (1992) uncovered conditions through class interaction indicating higher ethical attitudes in students with greater work experience than those with none or limited work experience. Similarly, Yazici and Siniksaran (2012) and Arlow (1991) found duration of work experience as relevant to influence ethical awareness, that is, the higher the length of work experience the higher the ethical awareness. The current study is aligned with these latter studies in that greater length of work experience seems to positively impact ethical attitudes more than shorter lengths. Length of work experience has also been positive associated with ethical decision-making (Kidwell et al., 1987). As is evident from these prior studies, work-experience construct is predominantly measured in terms of length

of work experience, and, although studies incorporating qualitative components in the construct do exist, these are few in comparison. For example, studies by Quiñones et al. (1995) and Tesluk and Jacobs (1998) have a higher level of sophistication in this regard. Their studies emphasized qualitative measurement limitations in the literature, and thus incorporated qualitative- measurement modes to the construct of work experience.

Studies in ethical attitudes are known to include gender as a factor. For example, Bageac et al. (2011) surveyed business students and found males more inclined to Machiavellianism than females. In a study conducted at a university in Spain, Tormo-Carbó et al. (2016) uncovered significant differences showing male students with less favorable ethical attitudes than female students. On the other hand, Triki, Cook, and Bay (2017), who studied Machiavellianism using Canadian accountants, found no significant association regarding gender differences. Also, Pham, Nguyen, and Favia (2015) found no significant differences in ethical attitudes between genders to report.

In a study by Hildebeitel and Jones (1992), the authors suggest that when a student makes an ethical decision the student often leans on learned ethical concepts and principles acquired through curriculum. Accounting students are a good example since most accounting courses (if not all) have business ethics embedded in one form or another, including code of conducts from various accounting organizations – e.g., the American Institute of Certified Public Accountants (AICPA), Institute of Management Accountants (IMA).

STUDY OBJECTIVES AND HYPOTHESES

Objectives

The first objective of this research is to study the relationship between work experience and attitudes toward business ethics (ATBE) in accounting students. Work experience is defined as the length of employment (McDaniel, Schmidt, & Hunter, 1988), with the exclusion of quality or distinction between part-time or full-time employment. ATBE was defined as “that which reflects the subjective assessment by a given individual concerning sets of premises which make up various business philosophies” (Preble and Riechel, 1988) (p. 942). The authors hypothesize that there is a positive and significant relationship between work experience and attitudes towards business ethics – e.g., higher lengths of work experience are positively associated to higher ethical values. Low scores in the scale indicate higher ethical values than higher scores.

The second objective is to study the relationship between junior/senior classification and gender and attitudes towards business ethics.

The third objective aims to explore for significant differences in the Machiavellianism subscale among accounting students who are grouped according to their length of work experience.

The fourth objective aims to explore significant differences in the Machiavellianism subscale among accounting students who are grouped according to their junior/senior classification and gender.

Hypotheses

The authors tested two hypotheses for each independent variable. The formal statements of all six hypotheses are as follows presented in the alternate form only to prevent redundancy.

***H1:** There are significant differences in attitudes towards business ethics among groups of accounting students who are grouped according to their length of work experience.*

***H2:** There are significant differences in attitudes towards business ethics among groups of accounting students who are grouped according to their Junior/Senior classification.*

***H3:** There are significant differences in attitudes towards business ethics among groups of accounting students who are grouped according to their gender.*

H4: There are significant differences in Machiavellianism among groups of accounting students who are grouped according to their length of work experience.

H5: There are significant differences in Machiavellianism among groups of accounting students who are grouped according to their Junior/Senior classification.

H6: There are significant differences in Machiavellianism among groups of accounting students who are grouped according to their gender.

STUDY DEPENDENT VARIABLES

The current study uses two dependent variables, the ATBE and the business-philosophy subscale of Machiavellianism.

RESEARCH METHODOLOGY

Survey Instrument

The authors used survey questions that included the ATBEQ developed by Neumann and Reichel (1987). Survey answers were collected from Junior and Senior accounting-major students at a public university in Pennsylvania. The courses were Intermediate Accounting I, Intermediate Accounting II, Cost Accounting, Advanced Accounting, and Auditing. Students taking a multiple of these courses only completed one survey, and thus were counted once. Of 86 students enrolled in these courses, 74 (or 86%) completed the survey. The 12 students who did not complete the survey were absent on the day the survey instrument was distributed to the class. The ATBEQ required answers on a five-point Likert scale, varying in range from 1 to 5, where 1 signifies a strong disagreement and 5 a strong agreement. Due to the structure of the ATBEQ, answers with higher scores are associated with a more relaxed ethical attitudes towards business than answers with lower scores. The ATBEQ was used to test for hypotheses 1 through 3. Bageac et al. (2011) mapped the ATBEQ to five business philosophies, one of which is Machiavellianism, used in this study to test hypotheses 4 to 6. Answers provided on the questionnaires were statistically analyzed at a group level based on work experience, junior/senior classification, and gender. Prior to any study activity the authors received approval by the Institutional Review Board (IRB), which requires researchers to have good standing with the Collaborative Institutional Training Initiative (CITI) intended to protect human research participants.

Data Analysis

To test the formulated hypotheses, the researchers used one-way analysis of variance (ANOVA), Spearman correlation coefficients, and ordinary least square (OLS) linear regressions.

STUDY RESULTS

Table 1 shows descriptive statistics for each variable of this study. From the three factors studied, Junior/Senior and Gender showed no significant relationships to ATBE or Machiavellianism, however defined. Only Work experience showed significant differences in ATBE and Machiavellianism among accounting students who were grouped according to their length of work experience.

Work Experience

Table 1 shows descriptive statistics, while Tables 2 through 6 show statistics for Work experience with significance mostly at the $p < .01$ and $p < .05$ levels. The results of the one-way ANOVA presented in Table 2, show a significant effect of Work experience on ATBE at the $p < .05$ level, with $F(3,69) = 3.181$, and $p = 0.029$. These results indicate that Work experience has a significant effect on ATBE. The mean ATBE score for at least one group significantly differs from the other groups. The results of a post-hoc analysis

reveal which mean pairs are different. Tukey post-hoc analysis is presented in Table 3 and was used to reveal which group pairs are significantly different. Group 2 to 3 years of work experience significantly differs from the more than 6 years of work experience ($Mdiff = 9.74, p = .030$). A Spearman correlation coefficients (Table 5) and OLS linear regression (Table 6) show significance at the $p < .01$ level, $p < .05$ and $p < .10$ levels, respectively.

Machiavellianism as a sub-scale measure of ethical attitudes from the ATBE questionnaire was assessed using a one-way ANOVA. These results are shown in Table 4 with a significant effect of Work experience on Machiavellianism at the $p < .01$ level, with $F(3,69) = 4.443, p = 0.007$. This result indicates that Work experience has a significant effect on Machiavellianism. The mean Machiavellianism score for at least one group significantly differs from the other groups. The results of a post-hoc analysis reveal which mean pairs are different. Tukey post-hoc analysis is presented in Table 4 and was used to reveal which group pairs are significantly different. Group 2 to 3 years of work experience is significantly different from the more than 6 years of work experience ($Mdiff = 6.13, p = .007$) and Group 4 to 5 years of work experience is significantly different from the more than 6 years of work experience ($Mdiff = 4.21, p = .033$).

TABLE 1
DESCRIPTIVE STATISTICS OF THE STUDY VARIABLES

	N	Minimum	Maximum	Mean	Std. Deviation
Junior/Senior ¹	73	1	2	1.58	.498
Gender ²	73	1	2	1.58	.498
WE ³	73	1	4	2.77	1.034
ATBE	73	54	95	75.99	10.089
Machiavellianism	73	17	42	28.64	5.511

¹Junior = 1; Senior = 2

²Female = 1; Male = 2; Other = 3

³0-1 year = 1; 2-3 years = 2; 4-5 years = 3; 6+ years = 4

TABLE 2
ONE-WAY ANALYSIS OF VARIANCE (ANOVA)

Independent Variables	DF	Value	Sig.
Junior/Senior	1	710.061	0.806
Gender	1	710.386	0.537
WE	3	693.181	0.029**

**Significant at 5% level of significance using two tails test

**TABLE 3
ONE-WAY ANOVA: POST-HOC TEST MEASURES - TUKEY HSD**

DV=ATBE

(I) WE	(J) WE	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					LL	UL
0-1 year	2-3 years	-2.038	3.867	.952	-12.22	8.14
	4-5 years	2.000	3.333	.932	-6.77	10.77
	6+ years	7.700	3.527	.138	-1.59	16.99
2-3 years	4-5 years	4.038	3.242	.600	-4.50	12.57
	6+ years	9.738**	3.441	.030	.68	18.80
4-5 years	6+ years	5.700	2.828	.192	-1.75	13.15

** The mean difference is significant at the 0.05 level.

**TABLE 4
ONE-WAY ANOVA: POST-HOC TEST MEASURES - TUKEY HSD**

DV	(I) WE	(J) WE	(I-J) Mdiff	SE	Sig.	95% CI	
						LL	UL
Machiavellianism	0-1 year	2-3 years	-1.97	2.063	.776	-7.40	3.46
		4-5 years	-.05	1.778	1.000	-4.73	4.63
		6+ years	4.17	1.882	.130	-.79	9.12
	2-3 years	4-5 years	1.92	1.730	.685	-2.63	6.47
		6+ years	6.13***	1.836	.007	1.30	10.97
		4-5 years	6+ years	4.21**	1.509	.033	.24

*Significant at 10% level of significance using two tails test

**Significant at 5% level of significance using two tails test

**TABLE 5
SPERMAN CORRELATION COEFFICIENTS**

	ATBE	WE
WE	-.308***	
Machiavellianism	.896***	-.343***

***Significant at 1% level of significance using two tails test

**TABLE 6
REGRESSION ANALYSIS**

ATBE		
Independent Variables	t Coeff.	Sig.
Junior/Senior	0.110	0.913
Gender	0.430	0.668
WE	-2.517	0.014**
Adj. R ²	0.051	
F	2.294	0.085*

*Significant at 10% level of significance using two tails test

**Significant at 5% level of significance using two tails test

DISCUSSION

In the current study, the authors investigated significant differences between work experience, gender, and junior/senior factors to attitudes towards business ethics and Machiavellianism using undergraduate junior and senior accounting students. Students were grouped according to these factors, however defined. A one-way analysis of variance (ANOVA), Spearman correlation coefficients, and regression analysis techniques used showed significant differences between work experience and ATBE and Machiavellianism as indicated in the study results. Post-hoc test measures of the one-way ANOVA clarified which groups had significant differences. As indicated in the study results, Group 2 to 3 years of work experience to ATBE results significantly differed from the more than six years of work experience. With regards to Machiavellianism, Group 2 to 3 years of work experience and Group 4 to 5 years of work experience were found to be significantly different from the more than six years of work experience. Since no significant differences were found for gender or Junior/senior factors, the discussion focuses mainly on the associations with work experience.

In summary, the results suggest that accounting students with lesser years of work experience have a more relaxed attitude towards business ethics and a more relaxed view of Machiavellian attitudes towards business. An interesting observation from the results was the association between 0-1 year of work experience and the other groups, where no significant differences were found. This latter result in counterintuitive to the assumption stated herein by the authors that students with less work experience are more prone to view unethical attitudes towards business ethics and Machiavellianism as more acceptable than students with greater years of work experience.

This study contributes to the literature exploring the relationship between work experience and ethical attitudes in business and Machiavellianism of junior and senior accounting students. In addition, this study adds value to practitioners and scholars in gaining some understanding of ethical attitudes of accounting students entering the work force and for ethics training at work and academia.

STUDY LIMITATIONS

Limitations for the current study include a convenient sample limited to one public university in the United States; hence, constraining for generalization, the work experience construct made no distinction between part-time or full-time employment nor included qualitative elements in the measure.

RECOMMENDATIONS FOR FUTURE RESEARCH

Future research with a larger population including graduate accounting students from public and private universities is recommended to improve generalization. Work experience definitions with qualitative elements should raise the bar for studies exploring with ethical attitudes in business. Studies that involve different regions and countries may consider additional factors relevant to the region or country that can moderate the construct of work experience, however defined.

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APPENDIX: ATTITUDES TOWARDS BUSINESS ETHICS QUESTIONNAIRE

Item	Description
1	The only moral of business is making money (Machiavellianism)
2	A person who is doing well in business does not have to worry about moral problems (Machiavellianism)
3	Every business person acts according to moral principles, whether he/she is aware of it or not (Moral Objectivism)
4	Act according to the law, and you cannot go wrong morally (Legalism)
5	Ethics in business is basically an adjustment between expectations and the way people behave (Ethical Relativism)
6	Business decisions involve a realistic economic attitude and not a moral philosophy (Machiavellianism)
7	Moral values are irrelevant to the business world (Machiavellianism)
8	The lack of public confidence in the ethics of business people is not justified (Ethical Relativism)
9	“Business ethics” is a concept for public relations only (Machiavellianism)
10	The business world today is not different from what it used to be in the past. There is nothing new under the sun (Ethical Relativism)
11	Competitiveness and profitability are independent values (exist on their own) (Social Darwinism)
12	Conditions of a free economy will serve best the needs of society. Limiting competition can only hurt society and actually violates basic natural laws (Social Darwinism)
13	As a consumer when making an auto insurance claim, I try to get as much as possible regardless of the extent of the damage (Social Darwinism)
14	While shopping at the supermarket, it is appropriate to switch price tags or packages (Social Darwinism)
15	As an employee, I take office supplies home; it does not hurt anyone (Social Darwinism)
16	I view sick days as vacation days that I deserve (Social Darwinism)
17	Employee wages should be determined according to the laws of supply and demand (Social Darwinism)
18	The main interest of shareholders is maximum return on their investment (Social Darwinism)
19	George X says of himself, “I work long, hard hours and do a good job, but it seems to me that other people are progressing faster. But I know my efforts will pay off in the end.” Yes, George works hard, but he’s not realistic (Machiavellianism)
20	For every decision in business the only question I ask is, “Will it be profitable?” If yes - I will act accordingly; if not, it is irrelevant and a waste of time (Machiavellianism)
21	In my grocery store every week I raise the price of a certain product and mark it “on sale.” There is nothing wrong with doing this (Machiavellianism)
22	A business person cannot afford to get hung up on ideals (Machiavellianism)
23	If you want a specific goal, you have got to take the necessary means to achieve it (Machiavellianism)
24	The business world has its own rules (Machiavellianism)
25	A good business person is a successful business person (Machiavellianism)
26	I would rather have truth and personal responsibility than unconditional love and belongingness (Moral Objectivism)
27	True morality is first and foremost self-interested (Moral Objectivism)
28	Self-sacrifice is immoral (Moral Objectivism)
29	You can judge a person according to his work and his dedication (Moral Objectivism)
30	You should not consume more than you produce (Moral Objectivism)

Source: Neumann and Reichel (1987). Mapped to business philosophies by Bageac et al. (2011).