

## Countering a Future Crisis of Accountants with Decreasing Credibility: the Influence of Ethical Education and Religiosity on Ethical Perceptions of Accrual, Real Activity and Tunneling Manipulation

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### Abstract

**Purpose:** This study is intended to: First, examine the effectiveness of ethics education to instill core ethical values in students; Second, test the differences between students' ethical perceptions in religious and public universities; Third, examine the effects of individual's ethical ideology on ethical perceptions.

**Method:** Questionnaire was used to collect data and SEM PLS was used to test the hypotheses. A total of 215 undergraduate students from public and private university have taken part in this study.

**Findings:** The study show that business ethics education does not influence ethical perceptions. However, there is a significant difference in students' ethical perceptions between the public university and religious-based universities. Furthermore, result shows that individuals' ethical ideology has an impact on ethical perceptions.

**Novelty:** This study differs from previous research because most of the previous studies focused on the ethical judgments of the accruals and real activity manipulation methods but have limited ethical considerations regarding tunneling. Meanwhile, the business group structure and low legal enforcement have led to many cases of tunneling in Indonesia.

**Keywords:** *Ethical Perception, Creative Accounting, Real Activity Manipulation, Tunneling, Religiosity*

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## INTRODUCTION

An increase in the number of accounting scandals (Sullivan, 2006) and a decline in ethical standards among accountants over a period of 15 years (Abdolmohammadi et al., 2009), caused the public to question the ethical behavior of accountants and auditors (Bean & Bernardi, 2005). One possible explanation of the decline in ethical values of accountants and auditors, among

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others, could be the lack of effectiveness of the ethical training currently being provided for future practitioners. Some researchers argue that ethics education is not effective (Conroy & Emerson, 2004; Mayhew & Murphy, 2009); ethical business classes in college are not sufficient to internalize ethical values (Mayhew & Murphy, 2009; Wolfe & Fritzsche, 1987). Another possibility is the increased pressure on accountants to produce reporting that is appropriate for their company's best interests (Zeff, 2005), which leads to the values of religious ruled out, as predicted by the theory of sacred canopy.

The current study extends prior research by investigating the effects of business ethics education and religious environments on ethical perceptions of creative accounting practices. Creative accounting is designed to prepare financial reports to achieve financial performance targets, resulting in a misrepresentation of corporate performances (Balaciu & Pop, 2008). Accountants take advantage of the flexibility of accounting standards in using discretionary accounting to move reported earnings toward desired goals. It seems that creative accounting does not explicitly violate or only slightly deviate from the rules. But from a user's perspective, this practice is unethical because everyone who uses earning information generated from creative accounting tends to misinterpret and misdirect in decision making. Creative accounting is an ethical dilemma; then the assessment of students' ethical perceptions of such practice measures students' ability to recognize and understand ethical issues, address empathetic conflicts, and evaluate consequences of actions.

There are a myriad of methods of manipulating financial statements such as accrual manipulation, real activity manipulation, and tunneling. Although all creative accounting methods have the same consequences of misinterpretation and degrading the quality of earnings information, the ethical considerations of creative accounting methods differ (Bruns & Merchant, 1990; Elias, 2002; Graham et al., 2005; McGuire et al., 2012). Therefore, we especially examine whether ethics education and religious environment affect ethical perception on creative accounting. In addition, we also test whether the internal factors of individual ethical ideologies influence ethical perceptions on methods of managing earnings. This study differs from the previous in the following ways: first, previous studies have examined the influences of religions on personal behaviors extensively (Lehrer, 2004; Rawwas et al., 2006) but the extent to which religious environments have effects on accounting students' ethical perceptions of creative accounting has received limited attention. According to Ajzen (1991), perceptions determine actual behaviors; students who perceive that earnings manipulation is ethical will have an intention to manipulate earnings; and second, most of the previous studies focused on the ethical judgments of the accruals and real activity manipulation methods (Bruns & Merchant, 1990; Elias, 2002; Graham et al., 2005; McGuire et al., 2012) but ethical considerations regarding tunneling have limited consideration. Meanwhile, with the business group structure and low legal enforcement cause many cases of tunneling in Indonesia, they are difficult to detect (Sari et al., 2017). Recognition of ethical issues in tunneling activities is important because it may cause harm to the company and non-controlling shareholders may even lead to the transfer of state resources to other countries.

Understanding the impacts of ethics education, religious environment, and individuals' ethical ideologies on ethical perceptions of creative accounting is important because it makes us understand the mechanism to increase the ethical values of accountants. Examining the factors that influence the perceptions of ethical students will provide useful insights to educators and regulators. Different from previous studies that focused only on ethical judgments of accrual manipulation and real activities, this study also includes ethical considerations for tunneling manipulation, as many of these cases occur in countries where group structure and law enforcement are low.

The remainder of this paper proceeds as follows. In the next section, we provide a literature review and the development of the study's four hypotheses. In the third section, we describe the research method. In the fourth section, we discuss the results. In the final section, we present a discussion of the conclusions, implications and limitations of this study.

### **Ethical Judgment on Creative Accounting**

Earnings are a central part of financial statements which are measuring financial performance, determining executive compensation, assessing firm's future prospects and firm valuation decisions. The role of earnings in the assessment of firm performance and compensation contracts encourages managers to manipulate earnings (Trueman & Titman, 1988). Manipulation of Financial Statement can fall within boundaries of International Financial Reporting Standards (IFRS) or outside of boundaries of IFRS (non-IFRS). The cases of outside of boundaries of IFRS manipulation are often characterized as Fraud. Meanwhile, creative accounting is manipulation of financial statements by exploiting the discretion allowed under International Financial Reporting Standards (IFRS). Flexibility in the accounting standards provides the opportunity for manipulation and misrepresentation. Creative accounting, in this paper we will use the term creative accounting to refer to earnings management, explains the use of techniques appropriate to accounting standards to present in a favorable position something that does not exist (Marculescu & Dondera, 2012).

There are a myriad of manipulations of financial statement choices. First, accrual management is earnings manipulation through the discretionary accrual manipulation. Discretionary accruals are accruals used to reduce or enlarge earnings reported by choosing accounting policies subjectively by management (Scott, 2009). Second, real activity manipulation is driven by management's desire to provide the stockholders false understanding regarding the accomplishment of certain financial reporting purposes by creating a deviation from company's normal operating activities (Roychowdhury, 2006). In other words, as an alternative to using accrual management, real earnings management involves management that attempts to alter reported earnings by adjusting the timing and scale of underlying business activities. Third, tunneling is defined as an action of transferring resources out of a company for the benefit of its controlling shareholders (Johnson et al., 2000). It is often hard to identify tunneling activities since they are made and hidden within the seemingly legitimate transactions. The companies may use related party transactions such as receivables, asset transactions, trading transactions, cash payments and equity transactions to related parties in tunneling activities (Cheung et al., 2009; Cheung et al., 2006; Wong & Jian, 2005). For example, a huge amount of receivable with long credit period and soft credit term is given to a related party and is treated as a put option, in which the related party may choose to not paying the receivable in a bad situation (Atanasov et al., 2014).

Each type of creative accounting has the costs and consequences. Accrual management has no direct effect on cash flow; therefore, less likely to destroy firm values (Badertscher, 2011). Because accrual management is done within IFRS boundaries, so the possibility to be detected by investors, regulators and auditors is low. Real activity manipulation and tunneling are more costly than accrual manipulation. Real activity manipulation and tunneling are impacts on cash flow, have negative impact on optimal business activity and destroy long the firm value (Badertscher, 2011; Bertrand et al., 2002; Cheung et al., 2006; Sari et al., 2017). The risk of detection of real activity manipulation is lower than the real activity of accrual manipulation (Badertscher, 2011). For example, if management engages in a real activity manipulation by cutting discretionary expenditures such as research and development costs (R & D); such activities will not be scrutinized by the auditor or regulator.

Related party transactions are often exploited for tunneling purposes. Detection risk of tunneling manipulation is low because related party transactions are difficult to audit for some reasons. First, related party transaction warranting examination would be difficult to detect. Second, auditor should rely on management to provide detailed information regarding related party transactions and the related parties. Third, internal controls have difficulty in tracking related party transactions because of the large number of parties and types of transactions, also some transactions are probably not given accounting recognition, such as free service receipts from related parties (Gordon et al, 2007).

Creative accounting is an ethical dilemma phenomenon. From an accountant's perspective, creative accounting is justified by accounting standards. Accountants take advantage of the flexibility of the accounting standards in making discretionary accounting options or timing operating decisions to move reported earnings toward desired goals. It seems that creative accounting is not explicitly prohibited or is only a slight deviation from the rules. But from a user perspective, this practice is unethical because the quality of accounting information for decision making by users is questionable. Anyone using earnings information is prone to misinterpretation, manipulation, or deliberate fraud.

Although all creative accounting methods have the same consequences of misinterpretation for the user and degrade the quality of information, the ethical judgment on creative accounting methods is different. Ethical judgment among managers, auditors, and other professionals in finance of the creative accounting practices are very diverse. Bruns & Merchant (1990) conducted a survey that provides evidence that few managers (only 13%) consider creative accounting as unethical, and most managers (87%) consider it as either ethical or questionable.

A survey by Belski et al. (2008) provides evidence that students view changes in accounting methods as being mostly ethical while timing economic events and changes in accruals are viewed as being the least ethical. Bruns & Merchant (1990) found that managers consider real activity earnings management as being more ethical than accrual-based methods. Based on the results of a survey involved accounting practitioners, lecturers, and students, Elias (2002) found that accrual manipulation is rated as unethical by all three groups, with practitioners being the most likely to view real activity manipulation as unethical.

Graham et al. (2005) found that managers prefer real activity manipulation to accrual management since it is viewed as being difficult to detect by auditors and regulators so it is a less risky option. More recently, McGuire et al. (2012) found that managers in religious areas prefer real earnings management to accrual manipulation.

Together, evidence from these studies suggests that real activity manipulation is viewed as more ethical rather than accrual manipulation. Although its impact the cash flow, real activity manipulation and tunneling are difficult to detect by auditors and regulators because the activity is created and hidden in seemingly legitimate transactions. Therefore, we propose the following hypothesis:

**H<sub>1</sub>: Ethical perception of undergraduate students in creative accounting practices views accrual manipulation as the most unethical method, followed by accrual tunneling, and real activity manipulation.**

### **Ethics Education and Ethical Perception on Creative Accounting**

In general, creative accounting is unethical because creations are designed to prepare the financial statements in order to meet the expectations of managers regarding financial positions and performances, resulting in mis-representation of the performance of the company (Balaciu & Pop, 2008) and causing negative consequences (Badertscher, 2011; Bertrand et al., 2002; Cheung et al., 2006). But ethical judgment on creative accounting varies, most accountant and managers said it is ethical (Bruns & Merchant, 1990). This raises the question whether or to what extent business ethics education has been effective in internalized ethical values, thereby reducing the intention of doing creative accounting in the future.

There are differing opinions about the trainability of ethical decision making. Some argue that character development has been formed at the college age, so that ethics cannot be taught (Cragg, 1997). One ethical business class or series of classes in college will not go beyond what was built at the beginning of one's life. It is reasonable to argue that it is difficult to transmit the values of ethics in a business course because of the cruel nature of our focus on outcome and competitive economy. In some cases, business students can be more unethical after completing their college than before (Wolfe & Fritzsche, 1987). Wu (2003) provides evidence that students' ethical values, the ability to recognize ethical issues and ethical decision-making skills, increase

after following business ethics of courses, although ethical behavior is still not optimal. Conroy & Emerson (2004) provide evidence that business ethics education does not affect ethical perception. Similarly, Mayhew & Murphy (2009) suggest that ethics education does not result in internalized ethical value.

However, many professional organizations and researchers believed that some components of ethical decision making can be taught. They argue that a properly designed and implemented ethics curricula will result in an effective learning (Sims, 2002). Some empirical evidence shows that teaching ethics in the classroom would impact on improvement in ethical sensitivity, moral reasoning, and even ethical behaviors (Loe & Weeks, 2000; Lowry, 2003; Sims, 2002; Weber & Glyptis, 2000). Gautschi & Jones (1998) found students' improvement in the ability to recognize ethical issues after business ethics classes.

There are conflicting evidences about the effectiveness of ethics education in internalizing ethical values. Therefore we propose the following hypothesis in the form of null hypothesis:

**H<sub>2</sub>: There is no difference in the perception of creative accounting ethics before and after ethics education.**

### **Religiosity and Ethical Perception of Creative Accounting**

According to the theory of social norms, social norms influence behavior for the individuals' preferences to be in line with their groups (Kohlberg, 1984) and to avoid punishment for violations of accepted standards, values, and beliefs (Sunstein, 1996). Human behavior is strongly affected by the social norms (Cialdini & Goldstein, 2004; Sunstein, 1996).

Religiosity, as a social norm, is a main social mechanism for controlling behavior and belief (Kennedy & Lawton, 1998). Religion provides specific ethical guidelines. It is a salient component of a person's identity; therefore, deviation from religious values will result in greater cognitive and emotional discomfort. If all else were equal, the more salient a person's religious identity, the more his/her behavior would increase in accordance with the expectations of his/her religion.

Weaver & Agle (2002) stated that religion influences business ethics. Longenecker et al. (1989) found that business managers and professionals in the U.S. believe that religious values are less likely to lead to the approval of unethical behaviors. Conroy & Emerson (2004) examined the influence of religiosity on the use of "accounting tricks to conceal". With an experimental design, they found that religiosity had a negative effect on accounting manipulation. McGuire et al. (2012) found that firms in religious areas are less likely to engage in financial reporting irregularities. They argue that religiosity reduces acceptance of unethical business practices. Du (2014) found that religion mitigates tunneling. These findings are consistent with the view that religion has an important influence on corporate behavior and can be a set of social norms and/or alternative mechanisms for reducing unethical tunneling behavior.

A major component of the Berger principle is that the religious worldviews are a construction in which societies legitimize social rules and defend their values. Religious legitimacy is built and maintained by human activities so that if its existence is forgotten, there will be alienation from religion (Kline, 1981).

Alienation is associated with the problems caused by rapid social changes, such as industrialization and urbanization (see Industrial Revolution), which have broken down traditional relationships among individuals and groups. The Sacred canopy theory argues that the increasing materialism of modern society has led religions to lost their influences in many aspects of our life (Berger, 1967; Gorski, 2000). People have become very pragmatic and putting aside religious values. For example, politicians who are legitimized religiously may at the same time do their activities in contrary to religious values such as corruption and so on (Berger, 1967).

Several studies support the theory of sacred canopy. For example, among others, Rawwas et al. (2006) examined ethical belief differences in academic dishonesty among students at religious and secular universities in Japan. They found that religion is not an impediment to academic dishonesty. Because of the high pressure of the capital market to meet the profit targets, McGuire

et al. (2012) found that religiosity and real activity manipulation are positively associated. Managers in religious areas remain to manipulate earnings. Since real activity manipulation is viewed as more ethical and less risky, they prefer to use real activity manipulation rather than accrual manipulation (Graham et al., 2005).

Social norms theory predicts that students are influenced by religious norms of the people around them because these norms are essential elements of the environment where they live and learn (Kohlberg, 1984). Students are influenced by religion especially in environments with strong religious social norms such as in religious-based universities (Kennedy & Lawton, 1998). But the increasing materialism in modern society and high pressure to meet targets result in people becoming very pragmatic and putting aside religious values. The influence of religiosity began to weaken in some aspects of life as predicted by the sacred canopy theory. Therefore, we propose the following hypothesis:

**H<sub>3</sub>: There is difference in perceptions of creative accounting ethics between students at public universities and religious universities.**

### **Ethical Orientation on Ethical Perception of Creative Accounting**

An individual's ethical orientation (relativism vs. idealism) has an impact on business decision making such as earnings management decisions (Greenfield et al., 2008). Individual ethical orientation is a continuum, relativism on the side and idealism on the other side (Forsyth, 1980). Relativism is an individual concern to the universal set of rules or standards, while idealism is more focused on human well-being. Idealistic individuals tend not to manipulate earnings because it will harm the welfare of others, so they tend to avoid it (Forsyth, 1992). They will consider earnings management actions as unethical, whereas relativistic individuals will consider the situation rather than the potential negative impact of the decision (Elias, 2002). Relativistic individuals tend to have more ethical acceptance on earnings management actions than idealistic individuals do.

Barnett et al. (1996) and Davis et al. (2001) provide evidence that ethical orientation is relevant to the business context. Shaub (1993) found that relativistic auditors tend not to be sensitive to ethical issues in auditing scenarios compared to idealistic auditors. Douglas & Wier (2000) present empirical evidence that the individual's ethical orientation explains the creation of budgetary slack.

Greenfield et al. (2008) found a significant relationship between individuals' ethical orientation and earnings management behavior. In particular, relativistic individuals are more likely to engage earnings management. Conversely, idealistic individuals are less likely to engage earnings management practices. Based on this discussion, we propose the following hypothesis:

**H<sub>4a</sub>: There are negative relationships between relativism and ethical perception on creative accounting. In particular, relativistic individuals are more likely to perceive that creative accounting is ethical.**

**H<sub>4b</sub>: There are positive relationships between idealism and ethical perception on creative accounting. In particular, idealistic individuals are more likely to perceive that creative accounting is unethical.**

## **METHODS**

### **Participants and Procedure**

Business students from two religious-based universities and one public university in Indonesia participated in this study. The use of undergraduate students as participants in this study because one of the objectives of the study was to test the effectiveness of business ethics education as measured by differences in ethical perceptions before and after ethics learning. Participants

were currently enrolled in ethical business courses. A pretest and a posttest field experimental design were used to examine the effectiveness of the business ethics education. The pretest of students' ethical perception was given before the course began and the post test was given after the final examination. Field study has advantages because it can give no artificial research settings and show real evaluation. The course evaluation is sequential, because it can affect the subject offering, course staffing (Fox, 2006) and global assessment to learning method improvement.

### Variable Definition and Measurement

#### Ethical Perception of Creative Accounting

Ethical perception is personal views on the morality of respective action on a number of measurement items of Creative Accounting. We used modified Bruns & Merchant (1990) questionnaire to measure ethical perception of creative accounting. The questionnaire contained accrual and real activity manipulation cases and we added a tunneling case. The respondents were required to rate each question on a five-point Likert scale ranging from 1 to 5 as follows: 1: ethical practice; 2: questionable practice; 3: minor practice; 4: serious infraction; 5: totally unethical.

#### Ethical Orientation

Individual ethical orientation is relative individual attention to a set of universal rules or on human welfare. Ethical Position Questionnaire (EPQ) developed by Forsyth (1980) was used to measure students' ethical orientation.

Ethics Education is measured by a dummy variable equal to 1 after students finish the ethical business course and 0 for before. The type of university is measured by a dummy variable, 0 for public university and 1 for religious-based university. Gender is measured by variable dummy: 0 for female and 1 for male. Equation 1 is the model we use to examine the effect of ethics education, religiosity, and ethical orientation on the perception of creative accounting ethics.

$$\text{Ethical Perception on Creative Accounting} = B_0 + \beta_1 \text{Ethics Education} + \beta_2 \text{Type of University} + \beta_3 \text{Ethics Orientation} + \beta_4 \text{Gender} + e \dots\dots\dots(1)$$

The dependent variable, ethical perception, represents three measures of creative accounting for accrual-based, real earnings management, and tunneling. In addition to our interest variables, we also added gender variables that, according to previous research, are related to ethical perceptions (Ritter, 2006). The model employed in our study is depicted in Figure 1.

The hypotheses formulated are tested using component-based Structural Equation Modeling (SEM), i.e. Partial Least Squares (PLS). SEM is selected because it can analyze multiple dependent and independent variables simultaneously. The reason to employ PLS because the model contains second order latent variables (ethics orientation and ethical perception variable) and has reflective and formative measures, ethic orientation and ethical perception, respectively. The software used to analyze the data is WarpPLS5.0.

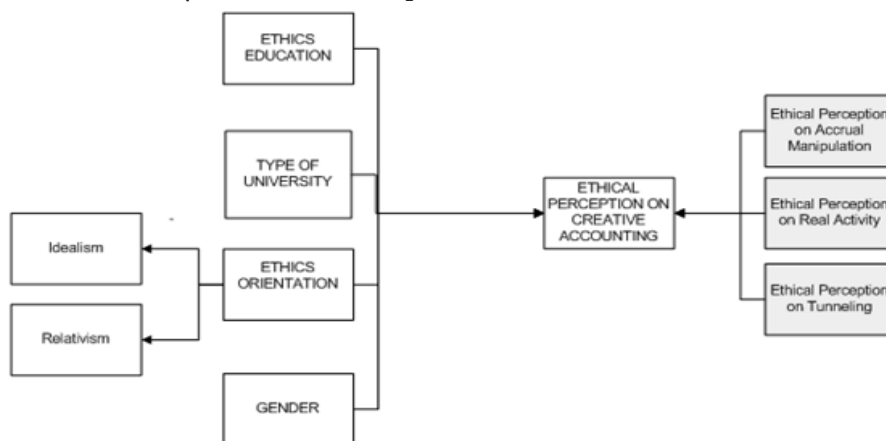


Figure 1. Model of the study

**Table 1.** Sample characteristics

	Public University		Religious-based university	
	Mean	SD	Mean	SD
Age	20.6	0.78	20.5	0.86
GPA	3.57	0.16	3.47	0.21
Percent in Each Category				
	Male	Female	Male	Female
Number of Samples Observed	35	64	46	80

## RESULTS AND DISCUSSION

### Sample Characteristics

A total of 215 students have taken part in this study. There were 25 male and 64 female respondents in the public university. In the religious-based university, there were 46 male and 80 female students. Table 1 shows the Sample characteristics.

The average age of the public university students is 20.6 and that of the religious-based universities is 20.5. Meanwhile, the average GPA at public universities is 3.57 and 3.47 at the religious-based universities.

As previously mentioned, SEM-PLS is able to test the measurement and structural model simultaneously. Whilst the measurement model tests the reliability as well as the validity of the measures (indicators) for each construct, the structural model examines the relationship of the variables in the model. Chenhall & Moers (2007) content that PLS is powerful to test the validity of variables within the total model. Following Hulland (1999), we interpret measurement and structural models separately.

**Table 2.** Result of measurement model, factor loadings, reliability and validity

Constructs	Items	Factor loadings	$\alpha$	CR	AVE
Idealism	i1	0.723	0.973	0.826	0.613
	i3	0.828			
	i4	0.795			
Relativism	r1	0.723	0.828	0.830	0.550
	r3	0.707			
	r4	0.760			
	r5	0.775			
Real	real3	0.810	0.836	0.792	0.656
	real4	0.810			
Tunneling	t1	0.808	0.796	0.865	0.616
	t2	0.831			
	t3	0.764			
	t4	0.732			
Accrual	a1	1.000	1.000	1.000	1.000

Note: i = idealism, r = Relativism, real = real  $\alpha$  = Cronbach's alpha, CR = Composite Reliability, AVE = Average Variance Extracted



**Table 3.** Discriminant validity

	Idealist	Relativist	Real	Accrual	Tunnel
Idealism	0.783	0.133	0.141	0.057	0.203
Relativism	0.133	0.742	-0.058	-0.210	-0.049
Relativistic	0.141	-0.058	0.810	0.271	0.180
Accrual	0.057	-0.210	0.271	1.000	0.354
Tunneling	0.203	-0.049	0.180	0.354	0.785

Note: Square roots of average variances extracted (AVEs) shown on diagonal.

**Table 4.** Full collinearity VIFs

Idealist	relative	real	accrual	tunnel
1.081	1.070	1.104	1.255	1.194

### Measurement Model Analysis

In the measurement model we test the reliability and the validity of each construct. In this study we examine both the convergent validity and the construct validity. The convergent validity is examined by observing the loading factors. Following Chin (1998) we use the benchmark of 0.60. For the construct validity, we employ average variance extracted (AVE) as the measure and use 0.50 as the cut off point (see Hulland, 1999).

The results of the measurement analysis of this study indicate that all measures are significant and above the loading level of 0.7 (see Table 2). This suggests that the measures share more variance with their respective constructs than with the error variance.

Discriminant validity assesses whether the construct shares more variance with its measures than with other constructs. The evaluation was conducted by comparing the square root of the AVE to the correlation between the constructs. If the square root of AVE of the constructs is greater than the correlation between the construct and other constructs, then it is considered valid. The analysis results in Table 3 includes the correlation between the off-diagonal constructs and the square root of AVE in the diagonal. Diagonal elements are all larger than the off-diagonal elements of each which indicates adequate discriminant validity. Overall, the analysis shows that the model is a reliable and valid measurement.

Table 4 shows that the reliability of construct has a composite reliability coefficient above 0.70, indicating adequate construct validity. Additional criterion for convergent validity has also been fulfilled with an AVE of above 0.50. The prerequisite non-multi-collinearity also complied with a VIF under 3.33. Overall, it can be concluded that the measurement model is reliable and valid.

**Table 5.** Goodness-of-fit indices for structural equation model

Goodness-of-fit index	Score	Acceptable
Average path coefficient (APC)	0.011	P < 0.05
Average R-squared (ARS)	0.071	P < 0.10
Average adjusted R-squared (AARS)	0.094	P < 0.10
Average block VIF (AVIF)	1.002	≤ 5
Average full co-linearity VIF (AFVIF)	1.018	≤ 5
Tenenhaus GoF (GoF)	0.205	≥ 0.1
Sympson's paradox ratio (SPR)	1.000	≥ 0.7
R-squared contribution ratio (RSCR)	1.000	≥ 0.7, ideally = 1
Statistical suppression ratio (SSR)	1.000	≥ 0.7

**Table 6.** Descriptive statistics

Variables	Public University		Religious-based University	
	Mean	SD	Mean	SD
	Ethical Perception on Accrual Manipulation	2.88	0.76	2.67
Ethical Perception on Real Activity Manipulation	2.87	0.75	2.68	0.71
Ethical Perception on Tunneling Manipulation	3.28	0.47	3.04	0.61

**Model Fit**

This study evaluated ten goodness-of-fit indices for structural equation models. Table 5 represents those indices as well as acceptable criteria for each index. For a model to be considered a good fit, the average path coefficient (APC) should be significant ( $< 0.05$ ), as is the case in this study (0.011). Average R-squared (ARS) and average adjusted R-squared (AARS) are significant indicators of a fitting model. Other goodness of fit include average block VIF (AVIF), Tenenhaus GoF (GoF), Sympon's paradox ratio (SPR), R-squared contribution ratio (RSCR), and statistical suppression ratio (SSR). Each of these tests is considered a good fit.

**Test of Hypothesis**

Table 6 provides the variables' descriptive statistics. The mean response of accrual manipulation of public university students (2.88) is higher than the mean response of religious-based university students (2.67). This implies that students in the public university view accrual manipulation as unacceptable, in contrast with students in the religious-based universities. The same response also occurs concerning real and tunneling practices.

Hypothesis 1 predicts ethical perception of students in creative accounting practices view accrual as the most unethical method, followed by accrual tunneling, and real activity manipulation. The results of weight indicators (see Table 7) suggest that this hypothesis is supported by the differences in the coefficients among the real, accrual, and tunneling manipulation; each significant coefficient shows ( $p < 0.01$ ). The greatest effect is for accrual manipulation (0,510) followed by tunneling (0.468) and real activity manipulation (0.412).

We assess the second four hypotheses based on their respective coefficient path value in the structural equation model and present those results in Figure 2.

Hypothesis 2 predicts that there is no difference in the perception of creative accounting ethics before and after ethics education. The observed coefficient path of ethics education is not significant (see Table 8). This result is consistent with Conroy & Emerson (2004) and Mayhew & Murphy (2009) who found that ethics education is not sufficiently effective in instilling ethical values.

Hypothesis 3 predicts that there is a difference in perceptions of creative accounting ethics between students at public universities and religious universities. The significant path coefficient (-0.17) of the type of university for ethical perception supports the hypothesis (see Table 8). The negative signs of coefficients indicate that students at the religious-based universities consider creative accounting practices as acceptable practices compared to public university students. This result supports the theory of sacred canopy that the values of religion have faded due to the increasing trend of materialism life style in our modern society.

Hypothesis 4a predicts that relativistic individuals are more likely to perceive that creative

**Table 7.** Indicator weight

	Ethical perception	SE	P value	VIF
Real activity manipulation	0.412	0.045	$< 0.001$	1.089
Accrual manipulation	0.510	0.045	$< 0.001$	1.204
Tunneling manipulation	0.468	0.045	$< 0.001$	1.153

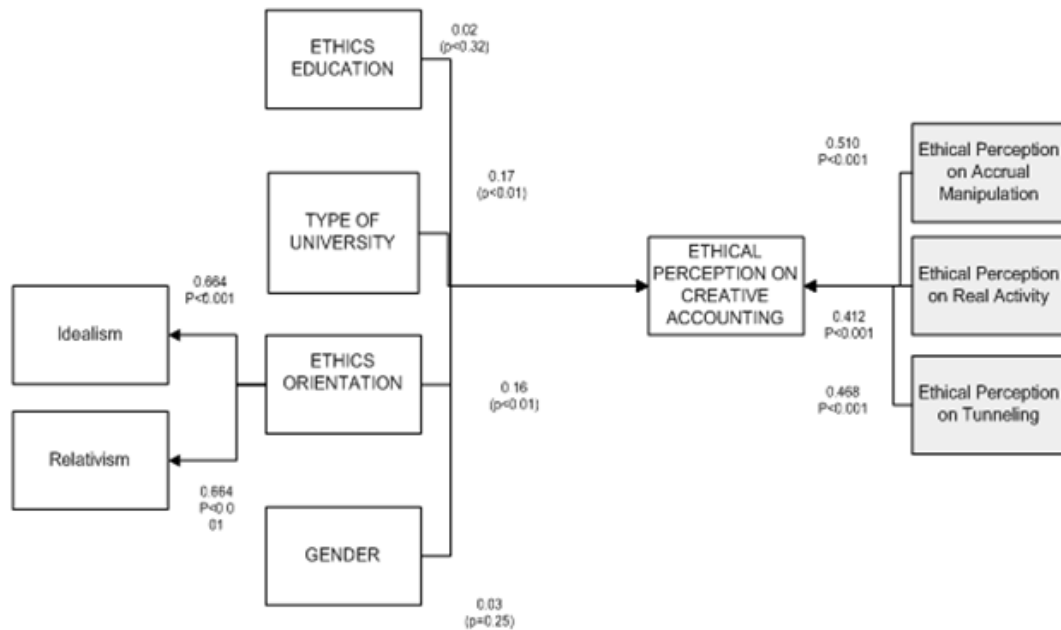


Figure 2. PLS results

accounting is ethical, suggesting the negative relationship between relativism and ethical perception on earnings management. The path coefficient is significant but in the opposite sign (0.664 x 0.16). This result is not consistent with Greenfield et al. (2008) who found that relativistic individuals will more likely to engage in earnings management behaviors. An explanation of the difference in results will be discussed in the discussion section.

Hypothesis 4b predicts that idealistic individuals are more likely to perceive that creative accounting is unethical, suggesting the positive relationship between idealism and ethical perception on earnings management. The positive and significant path coefficient (0.664 x 0.16) supports hypothesis 4a. These results are consistent with Greenfield et al. (2008) who found that individuals with an idealistic ethical orientation would tend to engage in earnings management behavior. The path coefficient for gender is not significant, indicating that there is no difference in the ethical perception between male and female students.

Table 8. PLS results (Path coefficient, t-statistics, and R)

Variable	Path To	
	Ethical Perception on Creative Accounting	Ethics Orientation
Ethics Education	0.02	
Type Of University	0.17***	
Ethics Orientation	0.16***	
Gender	0.03	
Ethical Perception on Accrual Manipulation	0.15***	
Ethical Perception on Real Manipulation	0.412***	
Ethical Perception on Tunneling	0.468***	
Idealism		0.664***
Relativism		0.664***

\*\*\* p<0.01; \*\*p<0.05; \*p<0.10

## CONCLUSION

The flexibility of accounting standards is one of the drivers of creative accounting (Largay & James, 2002). Although all the creative accounting methods have the same consequences of misinterpretation for the user and degrade the quality of information, the ethical judgment on creative accounting methods is different. Students view accrual manipulation as the most unethical method followed by accrual tunneling and real activity manipulation.

The results show that there is no ethical difference in perception on creative accounting before and after business ethics courses. These results are consistent with the studies by Conroy and Conroy & Emerson (2004) and Mayhew & Murphy (2009) which suggest that ethics education does not result in internalized ethical values. Students in religious-based universities perceive that creative accounting is more ethically acceptable than the students in the public university do. This phenomenon supports the sacred canopy theory which contends that religious values have faded due to the high materialism. Other results of this study indicate that relativistic and idealistic individuals view creative accounting as ethically unacceptable.

Overall, the results may be beneficial to academicians, practitioners, and accounting researchers. Innovation is needed in the teaching of business ethics in order to instill ethical values in prospective practitioners. Most business ethics textbooks contain case studies of ethical scandals, remaining within the boundaries of cognitive reasoning. Park (1998) proposes learning using experiential and practical levels of learning necessary for ethical reasoning.

These results must be interpreted in the context of certain limitations. One such limitation is related to the inability to control the differences in the teaching methods or in the quality of the lecturers, although the field study provides a real assessment of the effectiveness of learning business ethics that occurs at the university. Further research can consider the quality of ethical learning as a control variable.

## REFERENCES

- Abdolmohammadi, M. J., Fedorowicz, J., & Davis, O. (2009). Accountants' cognitive styles and ethical reasoning: A comparison across 15 years. *Journal of Accounting Education*, 27(4), 185–196.
- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Alsop, R. J. (2006). Business ethics education in business schools: A commentary. *Journal of Management Education*, 30(1), 11–14.
- Atanasov, V., Black, B., & Ciccotello, C. S. (2014). Unbundling and Measuring Tunneling. *University of Illinois Law Review*, 2014. Retrieved from <https://heinonline.org/HOL/Page?handle=hein.journals/unilllr2014&id=1717&div=&collection=>
- Badertscher, B. A. (2011). Overvaluation and the choice of alternative earnings management mechanisms. *Accounting Review*, 86(5), 1491–1518.
- Balaciu, D., & Pop, C. M. (2008). Is creative accounting a form of manipulation? *Annals of the University of Oradea, Economic Science Series*, 17(3), 936–941.
- Barnett, T., Bass, K., & Brown, G. (1996). Religiosity, Ethical Ideology, and Intentions to Report a Peer's Wrongdoing. *Journal of Business Ethics*, 15(11), 1161–1174.
- Bean, D., & Bernardi, R. (2005). Accounting Ethics Courses: A Professional Necessity. *The CPA Journal*, 75(12), 64–65.
- Belski, W. H., Beams, J. D., & Brozovsky, J. a. (2008). Ethical Judgments in Accounting: An Examination on the Ethics of Managed Earnings. *Journal of Global Business Issues*, 2(2), 59–68.
- Berger, P. (1967). *The Sacred Canopy: Elements of a Sociological Theory of Religion*. New York: Anchor.
- Bertrand, M., Mehta, P., & Mullainathan, S. (2002). Ferreting out Tunneling: An Application to Indian Business Groups. *The Quarterly Journal of Economics*, 117(1), 121–148.
- Bruns, W. J., & Merchant, K. A. (1990). The Dangerous Morality of Managing Earnings. *Management Accounting*, 72(2), 22.
- Chenhall, R. H., & Moers, F. (2007). The issue of endogeneity within theory-based, quantitative management accounting research. *European Accounting Review*, 16(1), 173–196.
- Cheung, Yan-Leung, Qi, Yuehua., Raghavendra Rau, P., Stouraitis, A. (2009). Buy high, sell low: How listed

- firms price asset transfers in related party transactions. *Journal of Banking & Finance*, 33(5), 914–924.
- Cheung, Y.-L., Rau, P. R., & Stouraitis, A. (2006). Tunneling, propping, and expropriation: evidence from connected party transactions in Hong Kong. *Journal of Financial Economics*, 82(2), 343–386.
- Chin, W. W. (1998). The partial least squares approach for structural equation modeling. *Modern Methods for Business Research*, (April), 295–336.
- Cialdini, R. B., & Goldstein, N. J. (2004). Social Influence: Compliance and Conformity. *Annual Review of Psychology*, 55(1), 591–621.
- Conroy, S. J., & Emerson, T. L. N. (2004). Business Ethics and Religion: Religiosity as a Predictor of Ethical Awareness Among Students. *Journal of Business Ethics*, 50(4), 383–396.
- Cragg, W. (1997). Teaching Business Ethics: The Role of Ethics in Business and in Business Education. *Journal of Business Ethics*, 16(3), 231–245.
- Davis, M. A., Andersen, M. G., & Curtis, M. B. (2001). Measuring ethical ideology in business ethics: A critical analysis of the ethics position questionnaire. *Journal of Business Ethics*, 32(1), 35–53.
- Douglas, P. C., & Wier, B. (2000). Integrating ethical dimensions into a model of budgetary slack creation. *Journal of Business Ethics*, 28(3), 267–277.
- Du, X. (2014). Does Religion Mitigate Tunneling? Evidence from Chinese Buddhism. *Journal of Business Ethics*, 125(2), 299–327.
- Elias, R. Z. (2002). Determinants of earnings management ethics among accountants. *Journal of Business Ethics*, 40(1), 33–45.
- Forsyth, D. R. (1980). A taxonomy of ethical ideologies. *Journal of Personality and Social Psychology*, 39(1), 175–184.
- Forsyth, D. R. (1992). Judging the morality of business practices: The influence of personal moral philosophies. *Journal of Business Ethics*, 11(5–6), 461–470.
- Fox, C. R. (2006). The availability heuristic in the classroom: How soliciting more criticism can boost your course ratings. *Judgment and Decision Making*, 1(1), 86–90.
- Gautschi, F. H., & Jones, T. M. (1998). Enhancing the ability of business students to recognize ethical issues: An empirical assessment of the effectiveness of a course in business ethics. *Journal of Business Ethics*, 17(2), 205–216.
- Gioia, D. A. (1995). Personal Reflections on the Pinto Fire Case. In L. K. Trevino and K. Nelson (Eds.). *In Managing Business Ethics* (pp. 101–105). New York: Wiley.
- Gordon, E. A., Henry, E., Louwers, T. J., & Reed, B. J. (2007). Auditing Related Party Transactions: A Literature Overview and Research Synthesis. *Accounting Horizons*, 21(1), 81–102.
- Gorski, P. S. (2000). Historicizing the Secularization Debate: Church, State, and Society in Late Medieval and Early Modern Europe, ca. 1300 to 1700. *American Sociological Review*, 65(1), 138.
- Graham, J. R., Harvey, C. R., & Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, 40(1–3), 3–73.
- Greenfield, A. C., Norman, C. S., & Wier, B. (2008). The effect of ethical orientation and professional commitment on earnings management behavior. *Journal of Business Ethics*, 83(3), 419–434.
- Hulland, J. (1999). Use of Partial Least Squares (PLS) in Strategic Management Research: A review of four recent studies. *Strategic Management Journal*, 20, 195–204.
- Johnson, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2000). Tunneling. *American Economic Review*, 90(2), 22–27.
- Kennedy, E. J., & Lawton, L. (1998). Religiousness and Business Ethics. *Journal of Business Ethics*, 17(2), 163–175.
- Kline, T. (1981). *The Philosophy of Moral Development: Moral Stages and The Idea of Justice*. San Francisco, CA: Harper & Row.
- Kohlberg, L. (1984). *The Psychology of Moral Development*. Harper & Row.
- Largay, I., & James, A. (2002). Lessons From Enron. *Accounting Horizons Vol.*, 16(2), 153–156.
- Lehrer, E. L. (2004). Religion as a determinant of economic and demographic behavior in the United States. *Population and Development Review*, 30(4), 707–726.
- Loe, T. W., & Weeks, W. A. (2000). An experimental investigation of efforts to improve sales students' moral reasoning. *Journal of Personal Selling and Sales Management*, 20(4), 243–251.
- Longenecker, J. G. ; Mckinney, J. A. ; & Moore, C. W. (1989). Ethics in Small Business. *Journal of Small Business Management (Vol. 27)*.
- Lowry, D. (2003). An investigation of student moral awareness and associated factors in two cohorts of an

- undergraduate business degree in a British University: Implications for business ethics curriculum design. *Journal of Business Ethics*, 48(1), 7–19.
- Marculescu, A., & Dondera, O. F. (2012). Ethics or Creative in Professional Accountants Work? *Anale. Seria Stiinte Economice*. Timisoara, 18.
- Mayhew, B. W., & Murphy, P. R. (2009). The Impact of Ethics Education on Reporting Behavior. *Journal of Business Ethics*, 86(3), 397–416.
- McGuire, S. T., Omer, T. C., & Sharp, N. Y. (2012). The Impact of Religion on Financial Reporting Irregularities. *The Accounting Review*, 87(2), 645–673.
- Pamental, G. L. (1991). The course in business ethics: Why don't the philosophers give business students what they need? *Business Ethics Quarterly*, 1, 385–393.
- Park, H. J. (1998). Can business ethics be taught?: A new model of business ethics education. *Journal of Business Ethics*, 17(9–10), 965–977.
- Rawwas, M. Y. A., Swaidan, Z., & Al-Khatib, J. (2006). Does Religion Matter? A Comparison Study of the Ethical Beliefs of Marketing Students of Religious and Secular Universities in Japan. *Journal of Business Ethics*, 65(1), 69–86.
- Ritter, B. A. (2006). Can business ethics be trained? A study of the ethical decision-making process in business students. *Journal of Business Ethics*, 68(2), 153–164.
- Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, 42(3), 335–370.
- Sari, R. C., Fatimah, P. L. R., & Suyanto. (2017). Bringing Voluntary Financial Education in Emerging Economy: Role of Financial Socialization During Elementary Years. *Asia-Pacific Education Researcher*, 26(3–4), 183–192.
- Scott, W. . (2009). *Financial Accounting Theory*. 5th ed. Toronto, Ontario: Prentice Hall Canada.
- Shaub, M. et al. (1993). The Effects of Auditors' Ethical Orientation on Commitment and Ethical Sensitivity. *Behavioral Research in Accounting*, 5, 145–169.
- Simola, S. K. (2010). Use of a "Coping-Modeling, Problem-Solving" Program in Business Ethics Education. *Journal of Business Ethics*, 96(3), 383–401.
- Sims, R. (2002). Business Ethics Teaching for Effective Learning. *Teaching Business Ethics*, 6(4), 393–410.
- Sullivan, K. (2006). Corporate Accounting Scandals. Retrieved from [www.cga.ct.gov/2006/rpt/2006-R-0122.htm](http://www.cga.ct.gov/2006/rpt/2006-R-0122.htm)
- Sunstein, C. R. (1996). Social Norms and Social Roles, 96(4), 903–968.
- Trueman, B., & Titman, S. (1988). An Explanation for Accounting Income Smoothing. *Journal of Accounting Research*, 26, 127.
- Weaver, G. R., & Agle, B. R. (2002). Religiosity and Ethical Behavior in Organizations: A Symbolic Interactionist Perspective. *Academy of Management Review*, 27(1), 77–97.
- Weber, J., & Glyptis, S. M. (2000). and Community Service Experience on Students ', (June), 341–358.
- Wolfe, J., & Fritzsche, D. J. (1987). Teaching Business ethics With Management and Marketing Games. *Hispanic Journal of Behavioral Sciences*, 29(1), 44–59.
- Wong, T. J., & Jian, M. (2005). Earnings Management and Tunneling through Related Party Transactions: Evidence from Chinese Corporate Groups. *SSRN Electronic Journal*.
- Wu, C. F. (2003). A Health Psychology 25: Study of the Recognition and Ethical Adjustment of Ethical Decision-Making of Managers-to-be Across the Taiwan Strait Before and After Receiving a Business Ethics. *Journal of Business Ethics*, 45, 291–307.
- Zeff, S. a. (2005). The Evolution of U.S. GAAP: The Political Forces Behind Professional Standards. *The CPA Journal*, 75, 18–29.