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Original Article

Application of the Theory of Planned Behavior and Fraud Triangle Theory in Preventing Academic Fraud Behavior among Indonesian Students

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Abstract

In the era of globalization, job search has become very competitive. To compete and get accepted in the world of work, students are required to secure high achievements. This prompts some of them to participate in academic fraud to achieve high test scores. This research investigates academic fraud behavior among university students in Indonesia. Drawing on the theory of planned behavior and the theory of fraud triangle, this study investigated various factors that influence academic fraud behaviors among students. The sample of the study was 260 students, studying accounting education courses in Indonesia. Data were collected by questionnaires and analyzed using PLS-SEM. The results showed that subjective norms (β = .15, *p* = .00) and perceived behavioral control (β = .31, *p* = .00) were positively and significantly related to the intention to commit academic fraud behavior. Intention (β = .23, *p* =.00), pressure (β = .34, *p* = .00), and opportunity (β = .21, *p* = .00) had a significant positive effect on academic fraud behavior. However, an insignificant effect has been found in the relationship between attitudes toward behavior on intention (β = .04, *p* = .22) and rationalization on academic fraud behavior (β = .02, *p* = .30). These findings imply that academic fraud behavior is influenced by various factors, the main influence is pressure to cheat. From these findings it is recommended that the universities rearrange policies related to the factors prevent academic fraud in the university environment by reducing the pressures on students.

Education is essential in building generations with good personalities and high intelligence, emotional and spiritual (Purwatmiasih et al., 2021). The purpose of education should produce not only knowledgeable human resources but also good personalities. Therefore, it is necessary to maximize the learning process. However, the learning process is not carried out correctly (Purwatmiasih et al., 2021; Sasongko et al., 2019). Students assume that getting low grades will make it difficult to get a job (Sasongko et al., 2019). Getting high marks at graduation is the primary purpose for students (Aron et al., 2020; Meitriana et al., 2019; Nainggolan, 2020; Rahmadina & Hapsari, 2020; Sasongko et al., 2019). As a result, the learning process is no longer considered. (Dewanti et al., 2020; Meitriana et al., 2019). Thus, in the implementation of the learning process, fraudulent practices occur (Aron et al., 2020; Dewi & Pertama, 2020; Purwatmiasih et al., 2021; Yulianto et al., 2020).

Academic fraud behaviors such as cheating in exams, plagiarism, and cooperating in individual assignments have increased substantially in higher education (Lewellyn & Rodriguez, 2015). Wandayu et al. (2019) found the existence of academic fraud behavior at the University of Brawijaya, Malang, Indonesia. Artani (2017) also found the same case in the diploma students in Bali, Indonesia. This academic

fraud behavior also happened at the magister level. Research conducted by Murdiansyah et al. (2017) found that academic fraud behavior carried out by magister students of the accounting study program of the University of Brawijaya Malang, Indonesia, was in the form of cheating or giving answer sheets, using technological aids, taking small notes, and committing plagiarism by copying and pasting the same as the source, combining answers from friends' assignments or compiling and committing partial plagiarism. Students consider that plagiarism and cheating with colleagues during exams not fraudulent behavior (Bicer, 2020).

Due to the COVID- 19 outbreaks, the learning process has changed from offline to online learning, using platforms such as Zoom and Google Meet. Newton (2020) argues that the learning process in online testing creates an increase in cheating behaviors. In the online learning, academic fraud behavior increased from 7% (2018-2019) to 21% (2019-2020) (Clements, 2020). This increase was in the form of cheating and plagiarism at Jacksonville University (Clements, 2020). It also happened at Inha University, South Korea, where 90 students cheated during online exams (Kang, 2020). While in Central Lampung, Indonesia, academic fraud happened at the end of the semester assessment. Bicer (2020) states that this behavior is recognized as significantly threatening the vital values of education. Therefore, it needs more attention at the academic level, especially at the university level.

Previous research investigated that one of the factors that influence academic cheating behavior is intention (Dewanti et al., 2020). Research by Czupała et al. (2016) found that attitudes toward behavior, perceived behavioral control and moral obligations influence the intention to cheat. Meanwhile, research by Stone et al. (2010) and Winardi et al. (2017) found that the intention to commit academic fraud behavior is influenced by attitudes toward behavior, subjective norms, and perceived behavioral control. These results lead to the theory of planned behavior. However, although the theory of planned behavior mentions the factors of attitudes toward behavior, subjective norms, and perceived behavioral control that influence the intention to commit academic fraud behavior, the conclusion is still unclear. Wandayu et al. (2019) examined attitudes toward behavior, perceived behavioral control, and moral obligations which are reflected in one of the elements of the fraud triangle, namely rationalization. The results show that it does not affect students' intentions to commit academic fraud. Research by Alleyne and Phillips (2011) found that subjective norms had a low effect on predicting intentions, so committing academic fraud behavior was low.

One of the causes of academic cheating behavior is the desire to succeed and win. They thought people would respect them if they had a high-grade point average (GPA) without acknowledging their extra-academic abilities (Dewanti et al., 2020). Many want to become graduation students with the highest GPA and receive the cum laude predicate. According to Hsiao (2015), peer perspectives provide normative support for academic fraud behavior. If peers commit fraudulent behavior, there is a possibility of committing fraudulent behavior as well. Situations and conditions supporting it make it possible to commit fraud (Sastri & Pertamawati, 2020). In addition, students are always looking for reasons to commit academic fraud (Muhsin et al., 2018). Many tasks, limited time, environment, or peers committing fraud are rational reasons for participating in fraudulent behavior (Muhsin et al., 2018). Previous studies show that academic pressure, opportunities to cheat, and rationalization affect academic fraud behavior (Becker et al., 2006; Meitriana et al., 2019; Muhsin et al., 2018). Further research by Sasongko et al. (2019) found that pressure and rationalization do not affect academic fraud behavior. Meanwhile, Sastri and Pertamasai (2020) stated that pressure and rationalization influence someone to carry out academic fraud behavior.

Therefore, this study proposes to fill the gap in the literature by investigating what factors can influence academic cheating behavior in the university environment. Based on the theory of planned behavior, a person's behavior can be identified through intention. An individual's intention to behave can be influenced by three constructs, namely, attitudes toward behavior, subjective norms, and perceived

behavioral control (Dewanti et al., 2020). According to theory of planned behavior (TPB), the greater a person's intention to behave, the greater the behavior is carried out. According to the fraud triangle theory, academic fraud is influenced by pressure, opportunity, and rationalization. Parents never ask about the learning process that their children are doing, whether they cheat or not. Parents only focus on their learning outcomes, as evidenced by their GPA (Dewanti et al., 2020). The higher the academic pressure obtained, the higher the student's willingness to commit academic fraud behavior. Thus, this research aims to determine the effect of attitudes toward behavior, subjective norms, and perceived behavioral control on the intention behavior and the impact of pressure to cheat, opportunities for cheating, and rationalization on academic fraud behavior.

Literature Review

This part will describe the relevant literature, theories, concepts, and previous studies to support the effect of attitudes toward behavior, subjective norms, perceived behavioral control, intentions, pressures academic, opportunities, rationalization, academic fraud, and research hypotheses. The detailed information is described in the following explanation.

Theory of Planned Behavior

The theory of planned behavior is a theory that provides a practical conceptual framework for dealing with the complexities of human social behavior (Ajzen, 1991). In explaining behavior, one must consider behavioral intention (Alleyne & Phillips, 2011). The theory of planned behavior consists of three constructs: Attitudes toward behavior, subjective norms, and perceived behavioral control. According to Czupała et al. (2016), this theoretical model is a suitable model from a conceptual point of view to explain academic fraud behavior. Czupała et al. (2016) state that this theory helps explain variability in intentions to behave dishonestly, including students' intentions to engage in academic fraud. Therefore, this research tests whether the theory of planned behavior can predict academic fraud behavior in students of accounting education courses.

Attitudes toward Behavior to Cheat

Attitudes toward behavior to cheat are beliefs individuals hold about behavior, and the consequences can be good or bad (Stone et al., 2010). Good or bad judgments that a person has behavior become a reference of attitudes (Winardi et al., 2017). Previous experiences should also positively and negatively impact behavior that has been carried out. According to Meitriana et al. (2019), the more a person believes that behavior gives positive results, the more that person likes it. Beliefs that make someone behave similarly are called behavioral beliefs. According to Dewanti et al. (2020), attitude toward behavior to cheat is a strong predictor of measuring intentions. Previous studies have found that attitude toward behavior to cheat is positively and significantly related to the intention to commit academic fraud (Stone et al., 2010). Alleyne and Phillips (2011), and Harding et al. (2007) also found that attitude toward behavior to cheat significantly predicts the intention to commit fraud behavior. Therefore, the proposed hypothesis is:

H1: Attitudes toward behavior to cheat positively effects behavioral intention to commit academic fraud behavior.

Subjective Norm

Subjective norms are people's perceptions of social pressure imposed on individuals to perform or not perform the intended behavior (Ajzen, 1985). Peer perceptions are one of the driving factors for committing Academic fraud behavior (Dewanti et al., 2020). According to Czupała et al. (2016), a subjective norm is an assumption from people about how a person will respond to behavior. If students who believe in the references obtained motivate them to carry out academic fraud behavior, it would produce

positive subjective norms and vice versa (Winardi et al., 2017). Czupała et al. (2016) stated that subjective norms have an important role in predicting the intention to commit fraudulent behavior. The same thing was stated by Stone et al. (2010) that subjective norm is a significant predictor of intention to commit academic fraud behavior. Previous research stated that subjective norms affect behavioral intentions to commit academic fraud behavior (Dewanti et al., 2020; Hsio, 2014; Winardi et al., 2017). Therefore, the proposed hypothesis is:

H2: Subjective norms positively effect behavioral intention to commit academic fraud behavior.

Perceived Behavior Control

Perceived Behavioral Control is the perception of ease and difficulty in carrying out behavior and assumes that this perception reflects an experience from the past in anticipation of an obstacle (Dewanti et al., 2020). This factor can later influence the intention to behave directly or indirectly. Winardi et al., (2017) argue that the more resources and opportunities students get or have in committing academic fraud and the fewer obstacles anticipated, the greater the ease students feel in committing academic fraud behavior. Previous research states that behavioral control has a positive and significant effect on the intention to commit academic fraud behavior (Stone et al., 2010). These findings are also supported by research by Ajzen (1991), Alleyne and Phillips (2011), Czupała et al. (2016), Dewanti et al. (2020), and Winardi et al. (2017). The lack of strict rules and penalties may factor into committing fraudulent behavior. These factors are also thought to influence student behavior control, leading to decision-making to commit academic fraud (Winardi et al., 2017). Therefore, the proposed hypothesis is:

H3: Perceived behavioral control positively effects behavioral intention to commit academic fraud behavior.

Intention to Cheat

Ajzen (1991) suggests that the primary goal of the theory of behavior is to explain and predict an individual's behavior. The theory of planned behavior states that three constructs influence intentions: attitudes, subjective norms, and perceived behavioral control. These three constructs affect an individual's intention to behave (Dewanti et al., 2020). The intention is assumed as a motivating factor to influence behavior. Ajzen (2005) states that intention is the best predictor of behavior, making intention used to explain Academic fraud behavior. A low relationship between intention and behavior indicates that a person has reached a reasonable level of behavior (Ajzen, 2011). A person is said to perform a behavior because he has the intention to do it, supported by the ability and skills, and there are no constraints on environmental factors that can prevent the formation of an intention to perform a behavior. Therefore, an intention is a form of will and desire to carry out the behavior with the ability and skills as well as environmental factors, namely the control of owned behavior. Previous research stated that intention influences academic fraud behavior (Biduri, 2018). Intention to perform behavior can be predicted accurately from attitudes toward behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). Therefore, the proposed hypothesis is:

H4: Intentions to cheat positively effect academic fraud behavior.

The Fraud Triangle Theory

Cressey is a criminologist who developed the fraud triangle theory model. This theoretical model is a framework for analyzing fraudulent behavior (Cressey, 1953). According to Muhsin et al. (2018), the fraud triangle theory is the first theory capable of investigating the causes of fraud. This model is considered the most appropriate for preventing fraudulent behavior (Becker et al., 2006). The best factor for preventing fraud (Bicer, 2020). Cressey termed fraud a "breach of trust" involving three important constructs: pressure,

opportunity, and rationalization. Previous research stated that these three constructs positively and significantly influenced academic fraud behavior (Heriyati & Ekasari, 2020). Therefore, this study examines the term components of the fraud triangle: pressure, opportunity, and rationalization.

Pressure to Cheat

According to Becker et al. (2006), pressure is a motivation or encouragement from within oneself or others to commit fraudulent behavior. Cause or encouragement from social factors such as family, close people, and the environment. These social factors can lead to student pressure to get good grades. In addition to academic burdens such as a lot of workload, difficult exam questions significantly affect the pressure to commit academic fraud (Becker et al., 2006). An academic load that is too high tends to make students experience depression. If students experience depression, they will commit academic fraud more than those with low learning pressure (Muhsin et al., 2018). Previous research states that pressure to cheat has a positive and significant effect on academic fraud behavior (Lewellyn & Rodriguez, 2015; Muhsin et al., 2018; Wandayu et al., 2019). The findings of Muhsin et al. (2018) state that pressure to cheat is the most dominant factor compared to opportunity and rationalization. Therefore, the proposed hypothesis is:

H5: Pressure to cheat positively effecst academic fraud behavior.

Opportunity to Cheat

Opportunity is an integration of situations and conditions that allows the individual to commit fraud (Deliana et al., 2020). According to Muhsin et al. (2018), opportunities can influence students to commit academic fraud. Students can cheat when they know if their colleagues are committing fraudulent behavior (Becker et al., 2006). Technology advances increase opportunities for students to commit fraudulent behavior (Bicer, 2020). Previous research has shown that opportunity positively influences academic fraud behavior (Wandayu et al., 2019). This finding is also supported by Bicer (2020), Lewellyn and Rodriguez (2015), and Muhsin et al. (2018). According to Sastri and Pertamawati (2020), the more opportunities are given, the greater the possibility of committing fraudulent behavior. Therefore, the proposed hypothesis is:

H6: Opportunity to cheat positively effect academic fraud behavior.

Rationalization

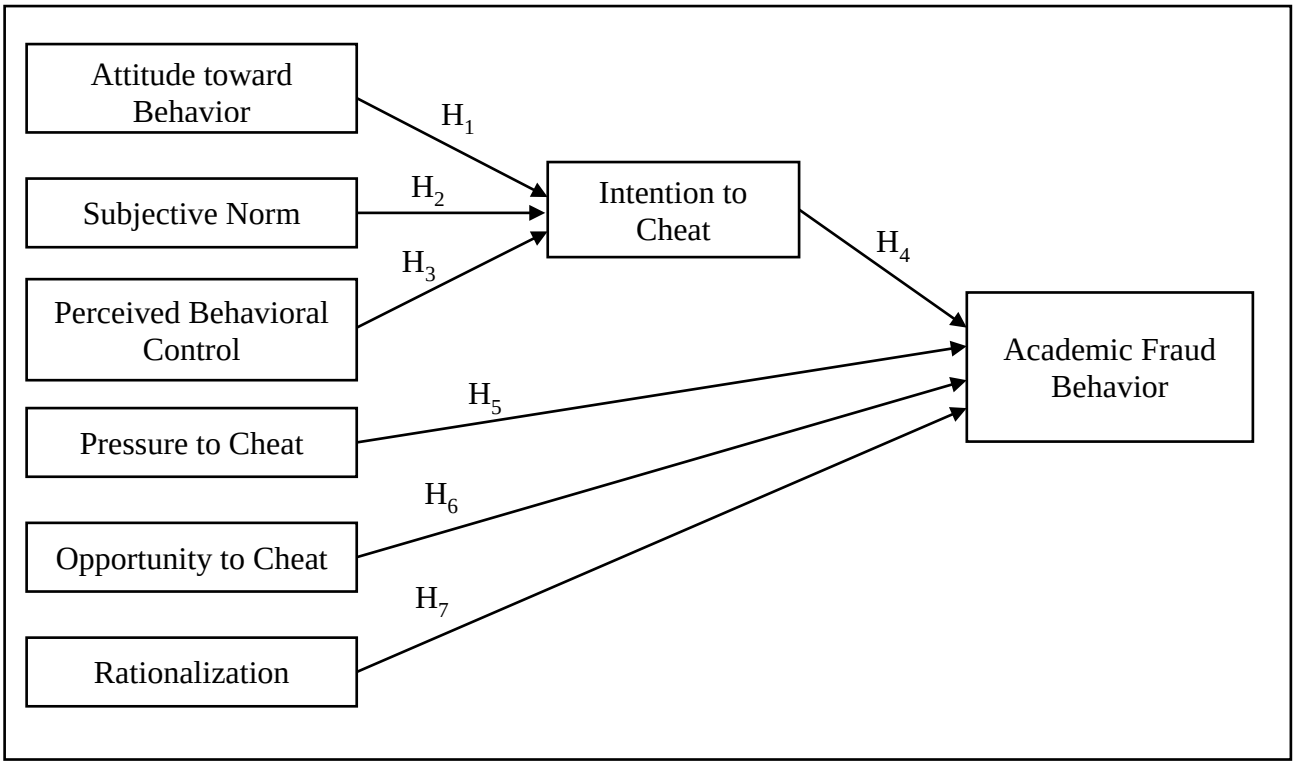
Rationalization is a justification for a mistake, such as justifying oneself that an error is not detrimental and acceptable (Deliana et al., 2020). The assumption that other people perform the same behavior in academic fraud is a factor in the rationalization of committing academic fraud (Murdiansyah et al., 2017). Muhsin et al. (2018) state that excessive assignments, limited time, and colleagues are rational reasons to support academic fraud behavior. The lack of law enforcement for violators contributes to students' ability to rationalize cheating (Becker et al., 2006). Previous research stated that rationalization positively and significantly affects academic fraud behavior (Becker et al., 2006). Bicer (2020), Lewellyn and Rodriguez (2015), and Muhsin et al. (2018) stated that rationalization has a positive and significant effect on academic fraud behavior. The existence of rationalizations for committing fraud triggers the possibility of greater academic fraud behavior (Sastri & Pertamawati, 2020). Therefore, the proposed hypothesis is:

H7: Rationalize cheating positively effect academic fraud behavior.

Through an overview of the basic theory and the proposed hypotheses about the relationship between attitudes toward behavior, subjective norms, perceived behavioral control, intentions, pressures, opportunities, rationalization, and academic fraud, the authors propose a conceptual research model shown in Figure 1.

Figure 1

Proposed Conceptual Framework



Method

Participants

The population of this study were students of bachelor's degree of accounting education courses at four public universities in Indonesia. A preliminary survey was conducted, and the population was selected because the students of the accounting education courses are prospective teachers, which has a big role in character building and transferring knowledge to students. The data collection process lasted for two months. A sample of 260 was selected based on a random sampling technique. The data collection was carried out for two months, from April to May 2021. The survey was conducted online using a Google Form.

Instruments

Attitudes toward behavior were measured using seven items of indicators (Stone et al., 2010). For example, "I would report an incidence of cheating by a student whom I do not know". Due to the validity problem, this study employed the six indicators to measure the subjective norm (Stone et al., 2010). Some items included were "Some of my friends cheat and have not been caught" and "Plagiarism occurs in my campus". Measuring perceived behavioral control also adopts four indicator items (Stone et al., 2010). For example, "If I want to cheat on an assignment, it will be easy for me to do it". Meanwhile, pressure, opportunity, and rationalization were measured using four items of indicators (Becker et al., 2006). Each example was "The assignments given by the lecturer are too much, so I chose to commit academic fraud", "The lecturers do not check for plagiarism in your assignment", and "The faculty or university does not take substantial action to prevent academic fraud".

Intention to engage in academic mistakes was measured using eight indicator items (Stone et al., 2010). Examples of questions were "How likely are you to consider copying from someone else during a test", and "How likely are you to consider turning in another's work done as one's own". This research

employed 15 items of indicators (Ampuni et al., 2019) to measure academic fraud. The sample items were "Copying friends' answers during a test", "Helping others to cheat on tests", and "Copying the material and acknowledge it as a result of my own work". All items were scored on a four-point Likert scale with responses (1 = Never, 4 = Always).

Procedure

The data in this study were analyzed using the Partial Least Squares Structural Equation Model (PLS-SEM). This method adopted a structure based on a variant of the structural equation model approach for multivariate analysis recognizing the assumptions of more flexibility and offering more accurate model hypothesis testing (Garson, 2016). Another advantage is that this approach is oriented towards the target variable and measures its antecedents' predictive strength. The analysis of this approach included the measurement model testing and the hypothesis assessment stage.

Ethical Considerations

In the questionnaire, the researcher did not include filling in the identity of the name, making the respondent not required to fill in. Besides, the researcher also stated that as a form of the researcher's responsibility, all answers and the identity of the respondents would be guaranteed by the researcher to keep it confidential. In addition, the university approved this study with permit number 677/UN34.18/PK.01.04/2021 on 19 April 2021. Then, the research was declared completed on 7 June 2021 with certificate number 084/UN40.F7.2/LL/2021.

Results

Sample Description

Table 1 presents descriptive characteristics, including the characteristics of the respondents concerning gender and GPA. The sample of this study consisted of 260 students (75% female and 25% male). Respondents with a GPA of less than 2 are 0%, a GPA of 2 – 2.5 are 0%, a GPA of 2.6 -3.0 are 2%, a GPA of 3.1 -3.5 is 29%, and while a GPA of more than 3.5 is 69%.

Table 1

Characteristics of the Respondents

Profile	Category	Frequency	Percent
Gender	Male	65	25
	Female	195	75
GPA	<2	0	0
	2 – 2.5	0	0
	2.6 – 3	4	2
	3 – 3.5	76	29
	3.6 – 4	180	69

Note. GPA = Grade Point Average

The Measurement Model

The measurement model is examined to test the reliability and validity of the proposed model. The reliability and validity of the measurement model were measured using factor loadings, Cronbach's alpha (CA), composite reliability (CR), average variance extract (AVE), and discriminant validity. The results are shown in Table 2.

Table 2
Reliability and Validity Analysis

Construct	Items	Standardized Loading	Composite reliability	Cronbach's alpha	AVE
Academic Fraud Behavior	12	.73-.85	.95	.95	.64
Intention to Cheat	8	.77-.88	.95	.94	.71
Attitudes toward Behavior	7	.73-.91	.93	.92	.71
Subjective Norm	6	.73-.81	.90	.87	.61
Perceived Behavioral Control	3	.84-.90	.91	.85	.77
Pressure to Cheat	4	.78-.84	.89	.84	.68
Opportunity to Cheat	4	.75-.77	.84	.76	.58
Rationalization	3	.79-.88	.89	.83	.67

Table 2 shows that the loading factor is calculated to check the reliability of the indicator, where the value must be greater than or equal to .50 (Hair et al., 2019). If the loading factor value is ≤ .50, the indicator is eliminated and not used. The results show that only 46 indicators meet the threshold value. In addition, convergent validity is measured by AVE, and the findings show that all values are above the accepted level of .50 (Hair et al., 2019). Furthermore, reliability testing employed composite reliability and Cronbach's alpha. Tests were carried out to assess the quality of construct reliability, and the results show that all constructs exceeded the required threshold of .70 (Hair et al., 2019). Lastly, two methods were adopted to assess discriminant validity, as illustrated in Table 3.

Table 3
Discriminant Validity Result

	AFB	ATB	INT	PBC	OPT	RS	SN	PSR
Academic Fraud Behavior (AFB)	.80							
Attitudes toward Behavior (ATB)	.24	.84						
Intention to Cheat (INT)	.42	.10	.84					
Perceived Behavioral Control (PBC)	.46	.13	.37	.88				
Opportunity to Cheat (OPT)	.45	.00	.29	.39	.76			
Rationalization (RS)	.28	.02	.18	.31	.44	.81		
Subjective Norm (SN)	.36	.07	.27	.36	.50	.27	.78	
Pressure to Cheat (PSR)	.54	.20	.35	.46	.47	.35	.45	.82

Note. AFB = Academic Fraud Behavior, INT = Intention to Cheat, ATB = Attitudes toward Behavior, SN = Subjective Norm, PBC = Perceived Behavioral Control, PSR = Pressure to Cheat, OPT = Opportunity to Cheat, RS = Rationalization

Table 3 presents the results of the discriminant validity test using the Fornell-Larcker criteria and the HTMT ratio. The results show that the square root of the AVE exceeds the correlation coefficient of the other constructs, which meets the threshold of discriminant validity. The heterotrait monotrait correlation ratio (HTMT) shows that the results of the HTMT ratio test are lower than the threshold of .90 (Hair et al., 2019). It means that discriminant validity is satisfying because all constructs are independent of one another.

Structural Model Analysis

Structural model testing (R^2) was carried out to determine the relationship between constructs or latent variables from the coefficient of determination. The value of the coefficient of determination is a standard based on the structural models being compared. In other words, researchers can use the cumulative effect of the independent variables on the dependent variable. Hair et al. (2016) state that an R^2 value of .20 is considered high in social science disciplines.

Table 4
Structural Model Assessment

Construct	R^2	R^2 Adjusted	Q^2
Academic Fraud Behavior (AFB)	.39	.38	.49
Intention to Cheat (INT)	.16	.15	

Table 4 shows a summary of the R-square values for each latent variable. As presented in Table 4, the magnitude of the R-Square value for the intention variable is .16. It means that students' intentions to commit academic fraud are influenced by attitudes towards behavior, subjective norms, and perceived behavioral control amounted to 16%. After adding pressure, opportunity, and rationalization, the R-Square value of students' academic fraud behavior becomes 39%. It indicates that academic fraud behavior can be explained by the TPB construct and the fraud triangle theory construct of 49%.

The Q^2 value of more than 0 indicates that the independent variable predicts relevance for the dependent variable (Hair et al., 2016). All predictive relevance values are more significant than zero. It means that this model is very predictive. The variance inflation factor (VIF) value in the model for each variable is <3.3. It can be concluded that there is no collinearity problem. The appropriate value is expressed by standardizing the root mean squared residual (SRMR) with a value of .06 < .08. It means that the model follows empirical data (Hair et al., 2016).

Hypotheses Testing

Hypothesis testing was carried out using the partial least square (PLS) method through the bootstrap method. The criteria for the results of hypothesis testing are: if the *t*-statistic is > 1.96 and the *p*-value is < .05, then the hypothesis is accepted. The hypothesis is not accepted if the *t*-statistic is < 1.96 and the *p*-value is > .05. The results are presented in Table 5.

Table 5
Path Coefficients, t-Statistics, and p-Values

Hypotheses	Path coefficient	*t* statistics	*p* values	Conclusion
ATB → INT	.04	0.75	.22	H1 rejected
SN → INT	.15	2.52	.00	H2 accepted
PBC → INT	.31	4.86	.00	H3 accepted
INT → AFB	.23	4.30	.00	H4 accepted
PSR → AFB	.34	5.75	.00	H5 accepted
OPT → AFB	.21	3.24	.00	H6 accepted
RS → AFB	.02	0.52	.30	H7 rejected

Note. ATB = Attitudes toward Behavior, SN = Subjective Norm, PBC = Perceived Behavioral Control, INT = Intention to Cheat, PSR = Pressure to Cheat, OPT = Opportunity to Cheat, RS = Rationalization, AFB = Academic Fraud Behavior

Discussion and Conclusion

This study aimed to empirically examine a hypothesized model based on the theory of planned behavior and the fraud triangle theory for examining academic fraud behavior in accounting education courses students. When the independent variables attitude toward behavior, subjective norm, and perceived behavior were included in the model, they explained 16% of the variance in intention to engage in academic fraud behavior. Then this model adds to the constructs of the fraud triangle theory, namely pressure, opportunity and rationalization. They explained 39.6% of the variance for committing academic fraud behavior. The overall model explains 49% of the variance for committing academic fraud behavior. Therefore, it can be concluded that the TPB model and the fraud triangle theory can examine the existence of academic fraud behavior in students.

The test result of hypothesis 1 in this research showed that the effect of attitudes toward behavior on the intention to commit academic fraud has a *t*-statistic value of .75 < *t*-table 1.96 and a *p*-value of .22 > .05. Empirically, attitudes toward behavior are not proven to affect academic fraud. The study results show that attitudes toward behavior do not influence academic fraud because of the lack of confidence in academic fraud and ignoring the predetermined consequences for the students. The coefficient with a positive sign indicates a positive influence. The higher the students' positive attitudes towards academic fraud behavior, the higher the students' intention to commit this behavior. These results are in line with the theory of planned behavior that an individual's attitudes consist of beliefs about the consequences of behavior and judgments about a behavior (Alleyne & Phillips, 2011). Students who believe that carrying out academic fraud behavior has a good impact will have a positive attitude towards behavior (Winardi et al., 2017).

Although the theory of planned behavior states that these elements influence intention, previous studies support this study's results. Research conducted by Biduri (2018) and Wandayu et al. (2019) states that attitude does not influence the intention to commit academic fraud behavior. Attitude towards behavior refers to how big a person is whether students have good or bad ratings for behavior. If students assess academic fraud behavior as positive behavior, then the intention to commit academic fraud behavior will tend to be high.

The test result of hypothesis 2 in this research showed that the effect of subjective norms on intention has a *t*-statistic value of 2.52 > *t*-table 1.96 and a *p*-value of .00 < .05. Empirically, subjective norms have a positive and significant effect on the intention to commit academic fraud behavior in accounting education courses students. The study results show that subjective norms affect the intention to behave fraudulently in the form of cheating on exams. These results add to the understanding that academic fraud behavior is influenced by social influences, especially in the peer environment. Social factors in the form of norms, parental or family effects, the impact of the closest people, or environmental influences do not influence respondents to reduce the intention to commit academic fraud behavior (Dewanti et al., 2020). Students believe that the references obtained motivate them to engage in academic fraud behavior to produce positive subjective norms. Consistent with the TPB, subjective norms influence the intention to behave (Ajzen, 1991). The results of this study are in line with the opinions of Alleyne and Phillips (2011), Dewanti et al. (2020), and Winardi et al. (2017).

The test result of hypothesis 3 in this research showed that the effect of perceived behavioral control on intention has a *t*-statistic value of 4.86 > *t*-table 1.96 and a *p*-value of .00 < .05. Empirically, perceived behavioral control has a positive and significant effect on the intention to commit academic fraud behavior in accounting education courses students. It proves that only a few obstacles are anticipated, so the ease students feel in carrying out academic fraud behavior is high (Winardi et al., 2017). In a forum, such as in a class or a specific group of students, it is quite easy to commit fraudulent acts. The cause is because social factors such as peers support academic cheating behavior. In addition, the lack of punishment is a trigger for fraudulent behavior. These triggers affect students' control beliefs, leading to the intention to commit fraudulent academic behavior.

These results are in line with the theory of planned behavior, which explains that perceived behavioral control affects the intention to engage in certain behaviors (Ajzen, 1991). When a student feels that academic fraud behavior such as cheating, cooperating, and plagiarism is easy to do, then the intention to do this behavior will be formed. This result is consistent with previous studies (Alleyne & Phillips, 2011; Stone et al., 2010; Winardi et al., 2017).

The test result of hypothesis 4 in this research showed that the effect of intention on academic fraud behavior has a *t*-statistic value of 4.30 > *t*-table 1.96 and a *p*-value of .00 < .05. Empirically, student intentions have a positive and significant effect on academic fraud behavior. The test results show that intention positively and significantly affects the intention to commit academic fraud behavior in accounting

education courses students. It means that those students have a high intention to commit academic fraud behavior. Intentions to cooperate in individual tasks and ask each other for answers among friends are common. Besides, collecting work done by others as one's own, copying from other students during exams, and committing plagiarism.

The results of this study add to the understanding that the intention to act of the main basis for not committing academic fraud behavior. Therefore, it is important to pay attention to attitudes factors, subjective norms, and perceived behavioral control. Theoretically, these results are in line with the theory of planned behavior that the three constructs of TPB, namely attitudes, subjective norms, and perceived behavioral control influence the intention to carry out this behavior in academic cheating behavior (Ajzen, 1991). The results of this study are also in line with the results of research by (Alleyne & Phillips, 2011; Biduri, 2018; Stone et al., 2010; Winardi et al., 2020).

The test result of hypothesis 5 in this research showed that the effect of pressure on academic fraud behavior has a *t*-statistic value of 5.75 > *t*-table 1.96 and a *p*-value of .00 < .05. Empirically, pressure has a positive and significant effect on academic fraud behavior in accounting education courses students. The results of this study indicate that students feel pressured by assignments from lecturers and various exams. Too many tasks with a high graduation standard make students feel pressured. In addition, the exam questions given by the lecturers are quite difficult, making students feel pressured, which encourages them to commit academic fraud. Becker et al. (2006) argue that workload is a main indicator influencing the pressure to commit academic fraud behavior. Many activities are from outside of lecturing, making students unable to manage time. It encourages students to commit academic fraud behavior.

These results are in line with the fraud triangle theory, which states that three main driving factors motivate someone to commit fraudulent behavior (Heriyati & Ekasari, 2020). The pressure factor is one of the driving factors of this behavior. Academic fraud behavior occurs due to pressure, both from within and outside the individual (Rahmadina & Hapsari, 2020). The results of this study are in line with the results of research conducted by (Deliana et al., 2020; Heriyati & Ekasari, 2020; Sastri & Pertamawati, 2020).

The test result of hypothesis 6 in this research showed that the effect of opportunity on academic fraud behavior has a *t*-statistic value of 3.24 > *t*-table 1.96 and a *p*-value of .00 < .05. Empirically, opportunity has a positive and significant effect on academic fraud behavior in accounting education courses students. The results of this study indicate that students have sufficient opportunities to commit academic fraud behavior. The reason is because the lecturers do not always check for plagiarism in various students' assignments. Besides, the lecturers do not change the pattern of assignments or exams given to different groups of students, which is enough to provide opportunities for fraud behavior. Another opportunity is the lack of lecturers' prevention against fraudulent behavior. Due to the fraudulent opportunity, it encourages the students to commit the academic fraud behavior.

These results are in line with the fraud triangle theory states that opportunity is one of the factors driving fraudulent behavior (Heriyati & Ekasari, 2020). Opportunities such as weak supervision in exams or weak proofreading of assignment answers can lead to plagiarism. This study's result is consistent with the previous research (Becker et al., 2006; Sastri & Pertamawati, 2020). Opportunity will always be a driving factor for academic fraud behavior if the universities do not take serious action to deal with academic fraud behavior (Heriyati & Ekasari, 2020).

The test result of hypothesis 7 in this research showed that the effect of rationalization on academic fraud behavior has a *t*-statistic value of .52 < *t*-table 1.96 and a *p*-value of .30 > .05. Empirically, the rationalization variable has no effect on academic fraud behavior. The results of this study indicate that students' rationalization or justification of academic fraud behavior is low, causing academic fraud behavior is also low. It shows that rationalization is a student's consideration for committing academic fraud behavior. Besides, it is also because many respondents state that they disagree with the statement about

rationalization. According to Utami and Purnamasari (2021), the rationalization of someone committing academic fraud cannot be measured because it is a conscious thought to justify this behavior. Theoretically, the results of this study are inconsistent with the Fraud Triangle Theory, which explains that the trigger for academic fraud behavior is self-claimed justification for committing a wrong behavior. Moreover, this research is in line with the research (Nainggolan, 2020; Rahmadina & Hapsari, 2020; Utami & Purnamasari, 2021).

Limitations

Some limitations of this study should be considered for future research directions. First, the data generated is only through a questionnaire. It may cause bias because the obtained information is only based on the respondents' perceptions. Second, the sample used does not represent the population of accounting education courses students in Indonesia. The sample is only students of the accounting education courses students at state universities in Indonesia. Therefore, the conclusions or suggestions described can only be implemented in certain contexts in Indonesia.

Implications for Behavioral Science

This research has theoretical and practical implications. The findings of this study provide empirical support for two theories, the first being the work of Beck and Ajzen (1991), who found that the theory of planned behavior effectively predicts fraudulent behavior. The second is the work of Cressey (1953) which reveals that the fraud triangle can predict fraudulent behavior, and this study shows that the primary influence is the pressure factor. This study expands the application of this theory by testing it in various contexts in universities. While on the practical implications, this study proposes to the university, especially those who make rules and policies, to make or rearrange written and unwritten rules and policies regarding fraudulent behavior by students by giving punishment. Therefore, it can reduce and prevent the emergence of fraudulent behavior in the form of cheating, plagiarism, cooperation, and other dishonest actions that can affect the individual character in the future.

Conclusion

Based on empirical findings, it is determined that attitudes have proven that attitudes impact intentions. Moreover, subjective norms and perceived behavioral control positively and significantly influence intentions. Therefore, it impacts the intentions' results that positively and significantly affect academic fraud behavior. In addition, this study shows the results that pressure and opportunity show that those aspects influence academic fraud behavior. Although rationalization does not affect academic fraud behavior, it can still be concluded that academic fraud behavior can be influenced or caused either through planned theory or the fraud triangle.

References

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action Control* (pp. 11-39). Springer.

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-T

Ajzen, I. (2005). *Attitudes, Personality and Behavior* (2nd ed.). Open University Press.

Ajzen, I. (2011). The theory of planned behaviour: Reactions and reflections. *Psychology & Health*, *26*(9), 1113–1127. https://doi.org/10.1080/08870446.2011.613995

Alleyne, P., & Phillips, K. (2011). Exploring academic dishonesty among university students in Barbados: An extension to the theory of planned behaviour. *Journal of Academic Ethics*, *9*(4), 323-338. https://doi.org/10.1007/s10805-011-9144-1

Ampuni, S., Kautsari, N., Maharani, M., Kuswardani, S., & Buwono, S. B. (2019). Academic dishonesty in indonesian college students: An investigation from a moral psychology perspective. *Journal of Academic Ethics*, *18*, 395-417. https://doi.org/10.1007/s10805-019-09352-2

Aron, E. F., Diana, N., & Junaidi, J. (2021). Analisis pengaruh penyalahgunaan teknologi informasi terhadap perilaku academic fraud mahasiswa akuntansi pada masa pandemi Covid-19 dengan motivasi belajar sebagai variabel intervening (Studi kasus terhadap mahasiswa program studi akuntansi pada perguruan tinggi di kota malang) [Analysis of the effect of misuse of information technology on academic fraud behavior of accounting students during the Covid-19 pandemic with learning motivation as an intervening variable (Case study of accounting study program students at universities in Malang City)]. *Jurnal Ilmiah Riset Akuntansi, 10*(02), 104-117. [in Indonesian]

Artani, K. T. B., & Wetra, I. W. (2017). Academic self-efficacy dan fraud diamond. *Riset Akuntansi, 7*(2), 123–132.

Beck, L., & Ajzen, I. (1991). Predicting dishonest actions using the theory of planned behavior. *Journal of Research in Personality, 25*(3), 285-301. https://doi.org/10.1016/0092-6566(91)90021-H

Becker, D. A., Connolly, J., Lentz, P., & Morrison, J. (2006). Using the Business Fraud Triangle to Predict Academic Dishonesty among Business Students. *Academy of Educational Leadership Journal, 10*(1), 37–54.

Bicer, A. A. (2020). An empirical analysis on students' cheating behavior and personality traits in the context of fraud triangle factors. In Grima, S., Boztepe, E., & Baldacchino, P. J. (Eds.) Contemporary Issues in Audit Management and Forensic Accounting (Contemporary Studies in Economic and Financial Analysis) (Vol. 102, pp. 1-10). Emerald. https://doi.org/10.1108/S1569-375920200000102004

Biduri, S. (2018). Apakah Theory Planned of Behaviour Dapat Mempengaruhi Perilaku Academic Fraud? [Can Theory Planned of Behavior Influence Academic Fraud Behavior?]. *Journal of Accounting Science, 2*(2), 151-164. [in Indonesian]

Clements, L. A. (2020, June 19). *Plagiarism and Cheating in Response to The Pandemic. International Center for Academic Integrity*. https://academicintegrity.org/blog/55-2020/june-2020/153-plagiarism-and-cheating-in-response-to-the-pandemic

Cressey, D. R. (1953). *Other People's Money: A Study of The Social Psychology of Embezzlement.* Free Press.

Czupała, A., Grabowski, D., Mello, A. L., Kuntz, J., Zaharia, D. V., Hapon, N., Lupina-wegener, A., Börü, D. (2016). Application of the theory of planned behavior in academic cheating research cross-cultural comparison. *Ethics & Behavior, 26*(8), 638–659. https://doi.org/10.1080/10508422.2015.1112745

David, L. T. (2015). Academic cheating in college students: Relations among personal values, self-esteem and mastery. *Procedia-Social and Behavioral Sciences, 187*, 88-92. https://doi.org/10.1016/j.sbspro.2015.03.017

Deliana, D., Siregar, D. A., & Nizma, C. (2020). Academic Fraud Behavior of Accounting Students in Higher Education on Sumatera Island. *International Journal of Technical Vocational and Engineering Technology (iJTveT), 2*(1), 79-82. http://www.journal.pktm.org/index.php/ijtvet/article/view/24

Dewanti, P. W., Purnama, I. A., Siregar, M. N., & Sukirno, S. (2020). Cheating intention of students based on theory of planned behavior. *Jurnal Ilmiah Akuntansi dan Bisnis, 15*(2), 268-279.

Dewi, I. G., & Pertama, I. G. A. (2020). Perilaku kecurangan akademik mahasiswa akuntansi: Investigasi dimensi fraud diamond [Academic fraud behavior of accounting students: An investigation of fraud diamond dimensions]. *Journal of Economic, Management, Accounting and Technology, 3*(2), 147–153. https://doi.org/10.32500/jematech.v3i2.1301 [in Indonesian]

Garson, G. D. (2016). *Partial Least Squares: Regression and Structural Equation Models.* Statistical Associates.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2-24. https://doi.org/10.1108/EBR-11-2018-0203

Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.). SAGE.

Harding, T. S., Mayhew, M. J., Finelli, C. J., & Carpenter, D. D. (2007). The theory of planned behavior as a model of academic dishonesty in engineering and humanities undergraduates. *Ethics & Behavior, 17*(3), 255-279. https://doi.org/10.1080/10508420701519239

Heriyati, D., & Ekasari, W. F. (2020). A study on academic dishonesty and moral reasoning. *International Journal of Education, 12*(2), 56-62. https://ejournal.upi.edu/index.php/ije/article/view/18653

Hsiao, C. H. (2015). Impact of ethical and affective variables on cheating: Comparison of undergraduate students with and without jobs. *Higher Education, 69*(1), 55-77. https://www.jstor.org/stable/43648773

Kang, H. (2020, June 4). *Med school students in south korea caught cheating on online exams during coronavirus pandemic*. abcNEWS. https://abcnews.go.com/International/med-school-students-south-korea-caughtcheating-online/story?id=71043491

Lewellyn, P. G., & Rodriguez, L. C. (2015). Does academic dishonesty relate to fraud theory? A comparative analysis. *American International Journal of Contemporary Research, 5*(3), 1-6.

Meitriana, M. A., Suwena, I. K. R., & Indrayani, L. (2019, January). The influence of fraud triangle and theory of planned behavior on students academic fraud in Bali. In *International Conference on Tourism, Economics, Accounting, Management, and Social Science* (TEAMS 2018) (pp. 136-141). Atlantis.

Muhsin, Kardoyo, & Nurkhin, A. (2018). What determinants of academic fraud behavior? From fraud triangle to fraud pentagon perspective. *KnE Social Sciences, 3*(10), 154. https://doi.org/10.18502/kss.v3i10.3126

Murdiansyah, I., Sudarma, M., & Nurkholis, N. (2017). Pengaruh dimensi fraud diamond terhadap perilaku kecurangan akademik (Studi empiris pada mahasiswa magister akuntansi Universitas Brawijaya) [The influence of the diamond fraud dimension on academic fraud behavior (Empirical study on students of the accounting master's degree at Brawijaya University)]. *Jurnal Akuntansi Aktual (JAA), 4*(2), 121-133. [in Indonesian]

Nainggolan, P. (2020). Perilaku academic fraud dari sudut pandang fraud triangle dan idealisme dari prespektif orientasi etika pada mahasiswa akuntansi di Indonesia [Academic fraud behavior from the fraud triangle perspective and idealism from an ethical orientation perspective of accounting students in Indonesia]. *Seminar Nasional Akuntansi (SENA), 3*(1), 163–190. http://openjournal.unpam.ac.id/index.php/SNU/issue/view/552 [in Indonesian]

Newton, D. (2020, August 8). *Another problem with shifting education online: A rise in cheating*. The Washington Post. https://www.washingtonpost.com/local/education/another-problem-with-shifting-education-online-a-rise-in-cheating/2020/08/07/1284c9f6-d762-11ea-aff6-220dd3a14741_story.html

Purwatmiasih, F., Oktavia, R., & Sudrajat, S. (2021). Academic fraud in online system during the COVID-19 pandemic: Evidence from Lampung-Indonesia. *Asian Journal of Economics, Business and Accounting, 21*(2), 34-52. https://doi.org/10.9734/ajeba/2021/v21i230349

Rahmadina, L. H., & Hapsari, A. N. (2020). Fraud triangle sebagai motif niat melakukan kecurangan akademik [Fraud triangle as motive of intention to commit academic fraud]. *AkMen Jurnal Ilmiah, 17*(1), 77–89. [in Indonesian]

Sasongko, N., Hasyim, M. N., & Fernandez, D. (2019). Analysis of behavioral factors that cause student academic fraud. *The Journal of Social Sciences Research, 5*(3), 830-837.

Sastri, I. I. D., & Pertamawati, N. P. (2020). Economic Students'Academic Fraud Behaviour: Fraud diamond Dimension. *International Journal of Advanced Science and Technology, 29*(6), 3337–3348.

Stone, T. H., Jawahar, I. M., & Kisamore, J. L. (2010). Predicting academic misconduct intentions and behavior using the theory of planned behavior and personality. *Basic and Applied Social Psychology, 32*(1), 35-45. https://doi.org/10.1080/01973530903539895

Utami, D. P. W., & Purnamasari, D. I. (2021). The impact of ethics and fraud pentagon theory on academic fraud behavior. *Journal of Business and Information Systems, 3*(1), 49-59. https://thejbis.org/index.php/jbis/article/view/88

Wandayu, R. C., Purnomosidhi, B., & Ghofar, A. (2019). Faktor keperilakuan dan perilaku kecurangan akademik: Peran niat sebagai variabel mediasi [Behavioral factors and academic cheating behavior: The role of intention as a mediating variable]. *Riset Akuntansi dan Keuangan Indonesia, 4*(1), 89-100. [in Indonesian]

Winardi, R. D., & Anggraeni, M. A. (2017). Academic dishonesty among accounting students: Some Indonesian evidence. *Jurnal Akuntansi Dan Keuangan Indonesia, 14*(2), Article 2. https://doi.org/10.21002/jaki.2017.08

Yulianto, A., Dahriyanto, L. F., Wijayanti, R., & Adininggar, P. (2020, August). The effect of fraud pentagon and academic procrastination dimensions towards academic dishonesty of students of social science in senior high school of Semarang. In *1st Progress in Social Science, Humanities and Education Research Symposium (PSSHERS 2019)* (pp. 1158-1169). Atlantis.