

The mediating role of justification on the relationship of subjective norms, perceived behavioral control and attitude on intention to cheat among students

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ABSTRACT

Cheating is not new in an academic line, but a continuous problem faced by educators. Many studies reported an increase trend of cheating among students from secondary or tertiary institutions from time to time. The primary purpose of this paper is to examine the connection between subjective norms, perceived behavioral control, attitude, and intention to cheat among undergraduate students. Also, the variable of justification to cheat is assigned as moderator variable in this relationship. The paper used a survey method for data collection, administered both in electronic and paper form. The Structural equation model with partial least square (PLS-SEM) was utilized to evaluate the data obtained from 917 undergraduate students in one of the public universities in Malaysia. The results provided support that justification, alongside subjective norms, perceived behavioral control were valid predictors of intention to cheat. However, attitude was significant with the intention to cheat. Further, the findings showed that among the three constructs of the Theory of Planned Behavior, justification could only significantly moderate the perceived behavioral control-intention to cheat relationship. The study was only conducted at one public university in Malaysia. Researchers are recommended to further examine the model in other universities and other countries. Implications for implementing strict anti-academic dishonesty policy and research are discussed.

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1. Introduction

Cheating is not new in an academic line, but a continuous problem faced by educators. Many studies reported a trend of cheating among students from secondary or tertiary institutions. The situation is worsened as more tools are now available in this technology era (Case et al., 2019). Many factors are found associated with the intention of students to cheat. However, a study by Cronan et al. (2018) and Uzun and Kilis (2020) claims that students' intention to cheat is due to factors including attitude, perceived behavioral control (PBC), past behavior and their understanding about moral obligation. This suggests that unethical conducts like cheating are more likely to be developed by the intention to perform that action. In these regards, it is believed that Theory of Planned Behavior (TPB) could be more efficient in explaining the cheating intention of students as compared to other related theories (Hendy & Montargot, 2019). This is because TPB comprises of PBC element, that recognizes the resources or opportunity that an individual has and lead him/her to do a particular action (Ajzen & Madden, 1986). Understanding the opportunity or resources that could encourage action is crucial in order to stop the action from happening. Therefore, the purpose of this study is to explore the intention to cheat among undergraduate students in one public university through the perspective of TPB theory elements: subjective norms (SN), perceived behavioral control (PBC), and attitude (ATT).

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One of the prominent theories in discussing about the relationship between intention and attitude is TPB (Hendy & Montargot, 2019). The interpretation of this relationship through the lens of TPB theory is based on three core elements including SN, PBC and ATT. These elements are interrelated and lead to a particular action by individual. At the beginning, people will develop their perception and evaluation about an action which is done cognitively and affectively. This situation describes an ATT element. Based on that evaluation, individual usually confirm their judgement with that of a social setting and understanding. As a member of society, the judgment about any particular action is made with the comparison of what other member of the society perceived about that action. The SN considers other people expectations to justify whether or not an action is acceptable. Lastly, the element of PBC consists of opportunity or difficulty to perform the actual behavior.

Researchers believed that the existence of the third element in TPB has differentiate it with other theory like Theory of Reason Action (TRA) (Ajzen & Madden, 1986). The PBC element makes TPB stand out more than TRA as it enables the exploration of resources that could encourage or hinder the behavior from happen. In particular, the issue of misconduct in academic like cheating require the understanding about factors that influence the action in order to eliminate any available resources or opportunity that could encourage students to perform that action. Indeed, PBC has been found as a powerful indicator for intention to perform academic misconducts (Stone et al., 2010). However, knowing the high potential of TPB in the relationship between intention and attitude, yet the theory has not widely used in exploring about academic misconducts (Hendy & Montargot, 2019). Thus, in this study, TPB will be used as an underlying assumption to understand the intention to cheat among undergraduate students.

2. Literature Review

Previous academic dishonesty surveys have described the significance of their studies differently, but they still point to individual dishonesty (Hawani et al., 2014). University student academic dishonesty depicts a group of unethical behavior that violates academic integrity (Zhang et al., 2017). Academic dishonesty is a major concern in academia. This has brought about universities having the mission statements which include, excellence in research and education; creating future leaders exemplifying integrity and regards for other people; while placing the institution's community in a better spotlight. (Finchilescu & Cooper, 2017). The TPB suggest that an individual's willingness to engage in a specific behavior is contingent on the individual's favorable or unfavorable disposition toward the behavior, discernments of social norms regarding such behavior, and self-confidence of the person's in relation to the ability to perform such behavior (Finchilescu & Cooper, 2017). According to Maloshonok and Shmeleva (2019), these convictions, constitute the main constructs of TPB which are attitude, SN, and PBC, influence a readiness to conduct a specific behavior.

TPB assumes that intention to act in a particular way results from attitudes towards that conduct and SN, i.e. from assumptions as to how others react to one's behavior (Chudzicka-czupała et al., 2015). Further, when a person perceives a behavior as challenging or encounters significant obstacles in exhibiting such behavior, this portrays a low PBC. This low PBC might become a substantial influence in deterring a person from carrying out that behavior, even though their behavioral attitudes and SN intensely support it (Chudzicka-czupała et al., 2015; Kashif, Zarkada, & Ramayah, 2016). Based on the fact the students try to rationalize their academic cheating action, it has been recommended to include justification to cheat in the TPB model due to its importance in predicting intention to cheat (Rajah-Kanagasabai & Roberts, 2015).

The justification to cheat may affect the attitude, SN, and PBC of a student. This is because the likely justifications for committing academic cheating include perceptions of peers involved in academic misconduct, assisting a friend, peer pressure, extenuating circumstances, fear of failure, no enforced policy against cheating and no strict consequences (Maloshonok & Shmeleva, 2019; Stone et al., 2009). For these reasons it is postulated that justification towards cheating will significantly moderate attitude, SN, and PBC towards cheating.

Examination malpractice, plagiarism, and other types of academic dishonesty are evident instances of such behaviors which can be highly influenced based on PBC. These unethical activities which violate academic integrity policies, are generally restricted by means, such as surveillance by invigilators and the inaccessibility to cheat by spying from other students (Stone & Kisamore, 2010). Further, cheating involves not only giving undeserving grades to dishonest students but also causes disadvantages for students who are not dishonest (Finchilescu & Cooper, 2017). Such occurrence demoralizes even the best of students; hence further studies are encouraged to be carried out, most especially in countries with different cultural contexts (Maloshonok & Shmeleva, 2019). Most previous studies have been conducted on students who have investigated cheating behaviors in mostly industrialized nations (Yussof, 2016). For instance, the study of Stone et al., (2009) on undergraduate students in US showed that attitude, SN, PBC and Justification to cheat were significantly related to intention to cheat among the students.

The rationalization for the hypothesized relationships between PBC, attitude, SN, and justification for cheating refers to the manner in which each of the underlying constructs is conceptualized in a reasoned approach to action (Martinez & Lewis, 2016). When students believe they can act on their attitude or normative beliefs, including influence from social norm (peer pressure), as well as the ease and availability to cheat, based on justification of their dissonance, they become more inclined toward the intention to cheat. Justification towards cheating is also referred to as neutralization (Ismail & Yussof, 2016).

Students who engage in cheating usually look for ways to validate their unethical behavior (Yussof & Ismail, 2018), even though they perceive such action as wrong. This means that students give justification for cheating in order to reduce dissonance between belief and action of cheating. Sykes and Matza, (1957) initiated the notion of neutralization, which recognizes five categories of neutralization techniques that may be likely utilized by students to support their unethical behavior. The five neutralization types are denial of injury; denial of responsibility; denial of the victim, the condemnation of the condemners and the appeal to higher loyalties. Studies have supported this claim in relating the reasons given by students for cheating. Studies showed that the justifications of students include the pressure of obtaining good grades in order maintain their scholarship; inconsideration in the workload allocated by the academics; academics failed to check if students are actually following the coursework through feedbacks; and academics provided the avenue to cheat by leaving the students unattended to during tests, quizzes or examinations (Adeyemi & Adelaja, 2011). Other studies indicate that justification for cheating include peer pressure, insufficient time for studying due to having a part time job; perceived irrelevance of the study material and difficulty in memorizing a lot in assignment (Freire, 2014; Iberahim et al., 2013; McCabe & Trevino, 1997).

This extant literature findings show that students rationalize their cheating actions, even though they know it is wrong and thus, result in the formation of intention to cheat. When the justification to cheat is because fellow students cheat, this could mean such student do not want to be left out and the need to level the competition in academic performance. McCabe, Butterfield, and Trevino, (2012) opined that students may justify cheating as a way to level the playing field among other students similarly cheating. Justification would also raise the favorable disposition towards cheating, most especially when there is no explicit or reinforced policy against cheating. For instance the study by Chirikov, Shmeleva, and Loyalka, (2019) indicated a high tolerance for cheating among the academics. This gives the strong justification to cheat, because the students have formed a favorable attitude toward cheating because they perceive it is not ethical cheating due to the lax policy in place. Justifications may also be related to behavioral control in the sense that, when students perceive the ease of cheating as high, while the risk involved is rather low as a justification to cheat, hence they will form a locus of control which is susceptible to cheat. In the study by Diekhoff, LaBeff, Shinohara, & Yasukawa, (1999), it is revealed that there is a significant difference between the cheaters and the non-cheaters in their outlooks towards cheating neutralization (justification). Likewise, the study by Ismail and Yussof, (2016) studied the justifications for cheating and effective deterrent among accounting students in a Malaysian university. Findings showed that cheaters give more justification for cheating as compared to the non-cheaters. However, this study did not include how such justification affects the attitude, social norms or perceived behavioral control of the students. Besides the study was focused only on accounting student, which is rather limited. Further, Chudzicka-Czupala et al., (2016) cross-cultural study of academic cheating declared that TPB is the best predictor of intention to cheat. Hence this study aims to study the effect of subjective norms, PBC, Attitude and justification on the intention to cheat among students. Further, this study looks into the moderating role of justification among the three antecedents of intention in a TPB model. Hence, it is hypothesized that

- H₁**. Subjective norm is significantly related to intention to cheat.
- H₂**. Perceived behavioral control is significantly related to intention to cheat.
- H₃**. Attitude toward cheating is significantly related to intention to cheat.
- H₄**. Justification for cheating is significantly related to intention to cheat.
- H_{5a}**. The relationship between Subjective norms and Intention to cheat will be higher when justification is stronger.
- H_{5b}**. The relationship between Perceived behavioral control and Intention to cheat will be higher when justification is stronger.
- H_{5c}**. The relationship between Attitude and Intention to cheat will be higher when justification is stronger.

The originality of this study is the testing of the relationship between subjective norms, perceived behavioral control, attitude and Justification toward cheating, with intention to cheat. Further, the moderating effect of Justification between the relationships mentioned above makes this study unique. The proposed research model is shown in Fig. 1.

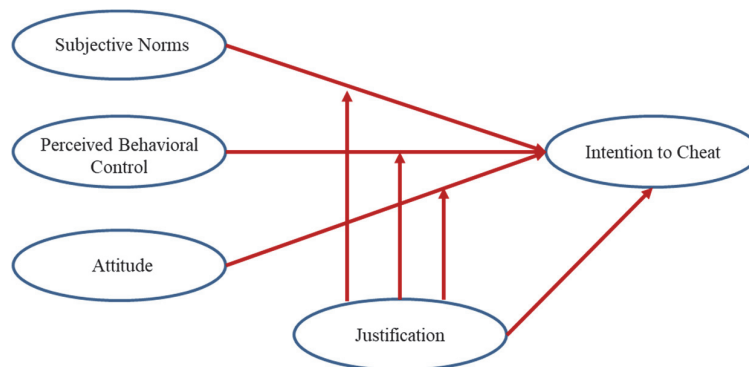


Fig. 1. Research Framework

3. Methodology

This study designed using quantitative analysis through cross-sectional study (survey questionnaire). The participants were students in one of the public universities in Malaysia. A total of 1427 questionnaires were distributed through online survey to target respondents. Of these 1427 questionnaires distributed, a total of 917 questionnaires were returned. The survey consisted of measures of SN, PBC, attitude, justification, and intention to cheat. Four measurement items of justification were adapted (Scrimshire et al., 2017). Attitude toward cheating scale developed by (Stone et al., 2010) is used to capture responses on a five point Likert scale (1- Strongly disagree to 5-Strongly agree). PBC were measured through four items were adapted from (Stone et al., 2010). To measure SN, seven items were adapted from (Stone et al., 2010). Finally, intention to cheat were measured through eight items were adapted (Stone et al., 2010). The survey questions were modified to capture response on a five-point Likert scale (1- to a very unlikely extent to 5- to a very likely extent). The data analyzed using structural equation model with partial least square (SEM-PLS).

4. Results

4.1 Data Screening

Data screening is the way of ensuring the data is clean and prepared to go before further statistical analysis is carried out. To ensure that the data is accurate, reliable and appropriate for testing causal relationship, data must be filtered out. In total, 1427 questionnaires were distributed among students in the 8 schools (faculties). About 917 responses were received; hence the response rate was 64.30%. By referring the value of Casewise, we found that there are 9 samples are outliers. Thus, we decided to drop the sample from the data set. In the next section, we present the result of normality testing. However only 894 respondents` data was relevant for the analysis.

Table 1
Normality findings of data

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|-------------------------|---------------------------------|-----|--------|--------------|-----|-------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Unstandardized Residual | 0.021 | 894 | 0.200* | 0.996 | 894 | 0.012 |

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table 1 above shows that the distribution of the data is normal. It can be detected from the probability value of Kolmogorov-Smirnov is more than 5% or 0.05, which means that the data used in this study is normally distributed.

4.2 Demographic Profile

Fig. 2 below displays that most of the participants were females at 515 (56.2 percent) and 402 (43.8 percent) males. Their mean age group is the range 21-23 years. Majority of the respondents were Malays at 83.2 percent.

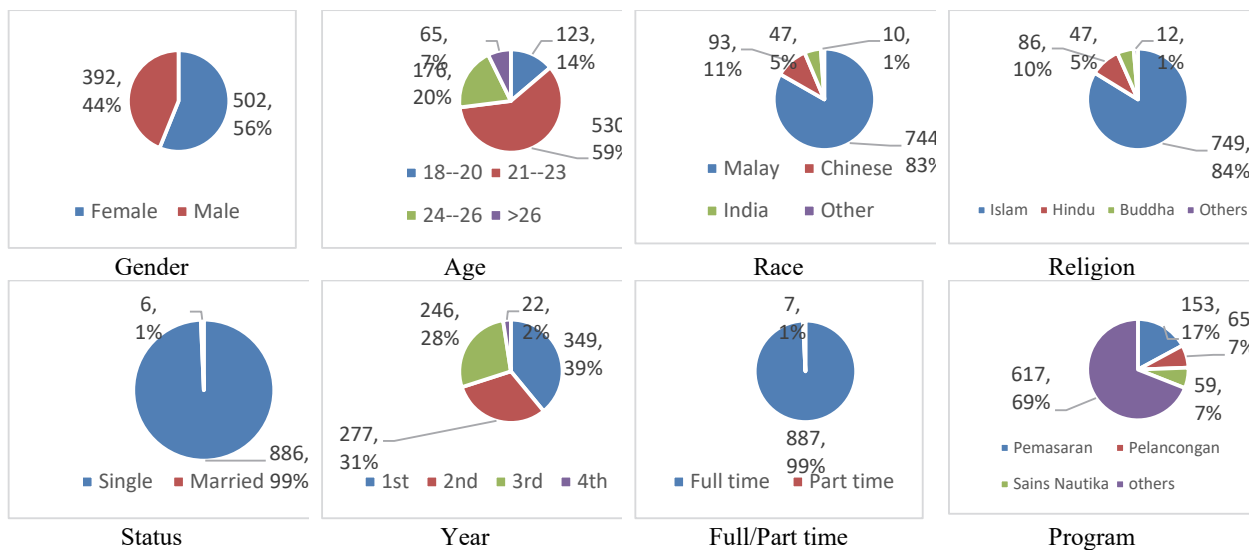


Fig. 2. Demographic data for respondents

Further, Fig. 2 above informs that mostly the participant's race is Malay i.e. 744 or 83.2 percent and followed by Chinese are 93 or 10.4 percent. Also, a total of 749 respondent or 83.8 percent is Islam and followed by Hindu as much as 86 or 9.6 percent. For marital status, we found that the respondents are single as much as 886 or 99.1 percent and remaining respondents categorized as married, divorced, and widowed is 9 percent. The respondents were participated in this study distributed from several states in Malaysia and mostly from Johor is 103 or 11.5 percent.

Table 2
Descriptive statistics (N=894)

| Variable(s) | Mean | Std. Deviation | Decision |
|------------------------------|------|----------------|----------|
| Attitude | 2.34 | 1.054 | Low |
| Perceived Behavioral Control | 2.36 | 0.963 | Low |
| Subjective Norms | 3.06 | 1.100 | Moderate |
| Intention to Cheat | 2.19 | 0.938 | Low |
| Justification | 2.76 | 1.170 | Low |

Note: Attitude (ATT), Perceived Behavioural Control (PBC), Subjective Norms (SBN), Justification (JSF), and Intention to Cheat (INT).

Table 2 illustrates the average value of the constructs based on a 5 point Likert scale. According to Sekaran and Bougie, (2016), the standardized interpretation of mean variables on a 5 point Likert scale are; ≤ 2.99 = Low, 3 to 3.99 = Moderate, ≥ 4.00 = High. Based on table 3, it is indicated that the respondents' attitude, perceived behavioral control and justification toward cheating intention is low, nevertheless, the subjective norms among the students toward intention to cheat was discovered to be moderate while the intention to cheat among the students was recorded as low, based on the mean values.

4.3 Data Analysis

4.3.1 Measurement Model

For the analyses of the research model, SPSS 25 and Smart PLS 3.0 was used. The measurement model was evaluated, preceded by a structural model examination based on established rules (see Anderson & Gerbing, 1988; Hair, Hult, Ringle, & Sarstedt, 2016). Table 3 shows that the constructs significantly weighs each of their items.

Table 3
Indicator reliability

| Item(s) ← Construct(s) | Beta | SE | T-stat | P Value |
|------------------------------------|-------|-------|---------|---------|
| ATT_1 ← Attitude | 0.599 | 0.092 | 6.513 | 0.000 |
| ATT_2 ← Attitude | 0.605 | 0.096 | 6.338 | 0.000 |
| ATT_3 ← Attitude | 0.917 | 0.018 | 50.253 | 0.000 |
| ATT_4 ← Attitude | 0.912 | 0.018 | 51.143 | 0.000 |
| ATT_5 ← Attitude | 0.846 | 0.035 | 24.328 | 0.000 |
| INT_1 ← Intention to Cheat | 0.783 | 0.016 | 49.520 | 0.000 |
| INT_2 ← Intention to Cheat | 0.706 | 0.021 | 34.261 | 0.000 |
| INT_3 ← Intention to Cheat | 0.796 | 0.016 | 51.309 | 0.000 |
| INT_4 ← Intention to Cheat | 0.706 | 0.018 | 38.734 | 0.000 |
| INT_5 ← Intention to Cheat | 0.831 | 0.013 | 61.529 | 0.000 |
| INT_6 ← Intention to Cheat | 0.846 | 0.010 | 80.935 | 0.000 |
| INT_7 ← Intention to Cheat | 0.848 | 0.012 | 72.133 | 0.000 |
| INT_8 ← Intention to Cheat | 0.796 | 0.013 | 59.927 | 0.000 |
| JSF_1 ← Justification | 0.887 | 0.009 | 95.005 | 0.000 |
| JSF_2 ← Justification | 0.913 | 0.008 | 117.082 | 0.000 |
| JSF_3 ← Justification | 0.892 | 0.010 | 89.455 | 0.000 |
| JSF_4 ← Justification | 0.912 | 0.008 | 119.010 | 0.000 |
| PBC_1 ← Perceived Behavior Control | 0.902 | 0.008 | 106.238 | 0.000 |
| PBC_2 ← Perceived Behavior Control | 0.900 | 0.008 | 108.465 | 0.000 |
| PBC_3 ← Perceived Behavior Control | 0.896 | 0.009 | 101.492 | 0.000 |
| PBC_4 ← Perceived Behavior Control | 0.309 | 0.041 | 7.497 | 0.000 |
| SBN_1 ← Subjective Norms | 0.801 | 0.015 | 53.389 | 0.000 |
| SBN_2 ← Subjective Norms | 0.827 | 0.011 | 72.408 | 0.000 |
| SBN_3 ← Subjective Norms | 0.862 | 0.010 | 83.952 | 0.000 |
| SBN_4 ← Subjective Norms | 0.818 | 0.011 | 72.106 | 0.000 |
| SBN_5 ← Subjective Norms | 0.868 | 0.010 | 88.497 | 0.000 |
| SBN_6 ← Subjective Norms | 0.857 | 0.011 | 75.097 | 0.000 |
| SBN_7 ← Subjective Norms | 0.856 | 0.010 | 82.189 | 0.000 |

In order to examine the model, a convergent validity, followed by the discriminant validity is evaluated. According to Hair, Hult, Ringle, Sarstedt, & Thiele, (2017), the average variance extracted (AVE), the factor loading, and composite reliability (CR) are utilized in evaluating the convergent validity.

Table 4
Construct Validity and Reliability

| Construct(s) | Item(s) | Loading(s) | AVE | CR |
|----------------------------|---------|------------|-------|-------|
| Attitude | ATT_1 | 0.599 | 0.622 | 0.888 |
| | ATT_2 | 0.605 | | |
| | ATT_3 | 0.917 | | |
| | ATT_4 | 0.912 | | |
| | ATT_5 | 0.846 | | |
| Intention to Cheat | INT_1 | 0.783 | 0.625 | 0.93 |
| | INT_2 | 0.706 | | |
| | INT_3 | 0.796 | | |
| | INT_4 | 0.706 | | |
| | INT_5 | 0.831 | | |
| | INT_6 | 0.846 | | |
| | INT_7 | 0.848 | | |
| | INT_8 | 0.796 | | |
| Justification | JSF_1 | 0.887 | 0.812 | 0.945 |
| | JSF_2 | 0.913 | | |
| | JSF_3 | 0.892 | | |
| | JSF_4 | 0.912 | | |
| Perceived Behavior Control | PBC_1 | 0.902 | 0.631 | 0.86 |
| | PBC_2 | 0.900 | | |
| | PBC_3 | 0.896 | | |
| | PBC_4 | 0.309 | | |
| Subjective Norms | SBN_1 | 0.801 | 0.708 | 0.944 |
| | SBN_2 | 0.827 | | |
| | SBN_3 | 0.862 | | |
| | SBN_4 | 0.818 | | |
| | SBN_5 | 0.868 | | |
| | SBN_6 | 0.857 | | |
| | SBN_7 | 0.856 | | |

Table 4 indicates that, AVE is above 0.5 and all the CR > 0.7 which indicates that the model is satisfactory (Hair, Hult, Ringle, & Sarstedt, 2014). Regarding the model, the constructs AVE is above 0.5, and the CR is greater than 0.7, hence, the convergent validity of the construct is satisfied (Fornell & Larcker, 1981). Next is the test of discriminant validity as suggested by Gholami, Sulaiman, Ramayah, and Molla, (2013), which posited that discriminant validity is attained if construct is uniquely different from the other constructs and also measures on how many indicators represent only on a single construct. Precise assessment on discriminant validity is vital to confirm that the constructs are statistically unique and differ from other constructs (Hair, Risher, Sarstedt, & Ringle, 2019).

As proposed by Henseler, Ringle, and Sarstedt, (2015), at this stage, the study will report it using the HTMT ratio. It is posited that if the HTMT value is greater than 0.90, this indicates a serious issue in discriminant validity (Franke & Sarstedt, 2019). As shown in Table 5, the HTMT criterion is below 0.90 thresholds, demonstrating that the discriminant validity was established.

Table 5
The Result of Discriminant Validity (HTMT)

| No | Construct(s) | 1 | 2 | 3 | 4 | 6 |
|----|----------------------------|-------|-------|-------|-------|-------|
| 1 | Attitude | 1.000 | | | | |
| 2 | Intention to Cheat | 0.170 | 1.000 | | | |
| 3 | Justification | 0.208 | 0.673 | 1.000 | | |
| 4 | Perceived Behavior Control | 0.325 | 0.851 | 0.589 | 1.000 | |
| 6 | Subjective Norms | 0.533 | 0.556 | 0.570 | 0.631 | 1.000 |

4.3.2 Structural model

Before commencing to the hypothesis testing, it is necessary to confirm that no problem exists with the lateral collinearity in the structural model. In order to ascertain this, the variance inflation factor (VIF) which measure the collinearity must be lower than 3.3 (Diamantopoulos & Siguaw, 2006). Table 04 indicates that all the VIF values are lower than the threshold value set by Diamantopoulos and Siguaw, (2006), thus confirming the collinearity is not a problem for this study. For the hypothesis testing, using the bootstrapping technique with a re-sampling of 5000, the resolution to accept the hypothesis is established on value of the t-value, p-value and also confidence interval bias corrected. According to the analysis, all the seven hypotheses were supported.

Table 6
The result of hypothesis testing (direct effect)

| Path Analysis | Beta | SE | T-Stat | P-Value | LL | UL | Decision | VIF |
|---|-------|-------|--------|---------|-------|-------|-----------|-------|
| Attitude → Intention to Cheat | 0.081 | 0.022 | 3.773 | 0.000 | 0.036 | 0.120 | Supported | 1.342 |
| Justification → Intention to Cheat | 0.323 | 0.028 | 11.590 | 0.000 | 0.262 | 0.375 | Supported | 1.516 |
| Perceived Behavior Control → Intention to Cheat | 0.535 | 0.028 | 19.431 | 0.000 | 0.481 | 0.587 | Supported | 1.413 |
| Subjective Norms → Intention to Cheat | 0.123 | 0.028 | 4.426 | 0.000 | 0.070 | 0.178 | Supported | 1.946 |

Table 6 illustrates that Attitude, Justification, PBC and SN were positively related to intention to cheat among students ($\beta = 0.081$, $t = 3.773$: $LL = 0.036$, $UL = 0.120$, $P < 0.01$); ($\beta = 0.323$, $t = 11.590$: $LL = 0.262$, $UL = 0.375$, $P < 0.01$); ($\beta = 0.535$, $t = 19.431$: $LL = 0.481$, $UL = 0.587$, $P < 0.01$); ($\beta = 0.123$, $t = 4.426$: $LL = 0.070$, $UL = 0.178$, $P < 0.01$) respectively. Result shows that H1, H2, H3 and H4 are supported.

Table 7
The result of hypotheses testing (moderating effect)

| Path Analysis | Beta | SE | T-stat | P-value | LL | UL | VIF |
|------------------------------|-------|-------|--------|---------|--------|-------|-------|
| JSF×ATT → Intention to Cheat | 0.035 | 0.028 | 1.259 | 0.208 | -0.073 | 0.074 | 1.596 |
| JSF×PBC → Intention to Cheat | 0.172 | 0.028 | 6.117 | 0.000 | 0.116 | 0.227 | 1.618 |
| JSF×SBN → Intention to Cheat | 0.004 | 0.034 | 0.110 | 0.913 | -0.082 | 0.055 | 1.835 |

Table 7 illustrates the moderating effect of Justification to cheat among the three antecedents of intention. The result reveals that, Justification only moderates the relationship between PBC and intention to cheat ($\beta = 0.172$, $t = 6.117$: $LL = 0.116$, $UL = 0.227$, $P < 0.01$). Figure 2 is the Dawson’s plot which elucidates the moderation effect of Justification on the supported hypothesis. As pictured in the image, the line labelled high Justification has a steeper gradient as compared to low Justification. This exemplifies that the relationship between Justification and intention to cheat is stronger when the Justification is high, hence H5b is supported. However, H5a and H5c is not supported ($\beta = 0.035$, $t = 1.259$: $LL = -0.073$, $UL = 0.074$, $P > 0.05$); ($\beta = 0.004$, $t = 0.110$: $LL = -0.082$, $UL = 0.055$, $P > 0.05$).

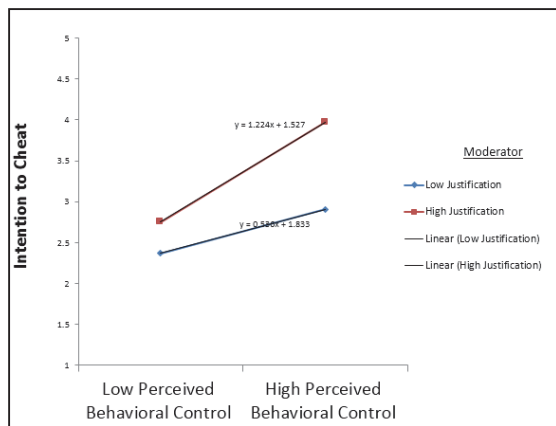


Fig. 3. Moderating effect of justification

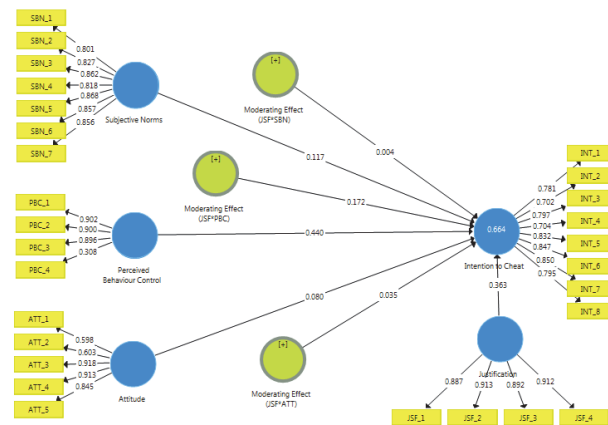


Fig. 4. PLS Algorithm result – R Square

Table 8 shows the evaluation of coefficient of determination (R^2), the effect size (f^2) and the predictive relevance (Q^2) of the independent variables on the dependent variable (INT). Based on the table, the R^2 of 0.664 indicated that Just, SN, PBC and ATT explain 66.4 percent of the overall variance of INT to cheat. It is suggested that R^2 should be 0.10 and above, for the variance explained by the specific endogenous construct to be considered sufficient (Falk & Miller, 1992). In this study with four predictors, R^2 of 66.4% is sufficient. The findings shows the fitness of the model with fit statistics indicating a good fit for the measurement model: chi-square = 2525.904, $df = 894$; CFI=.97, SRMR = .078 (Hu & Bentler, 1999).

Table 8
The result of model fit

| Variable | R Square | R Square Adjusted | SRMR | d_ULS | d_G | Chi-Square | NFI |
|--------------------|----------|-------------------|------------------|------------------|------------------|------------------------|------------------|
| Intention to Cheat | 0.664 | 0.662 | 0.078a 0.077b | 2.445a 2.430b | 0.489a 0.489b | 2525.904a 2515.704b | 0.863a 0.864b |

Note: a is denoted as saturated model, b is represented as estimated model

5. Discussion

The findings of this study reiterate the robustness of TPB model in predicting intention to cheat. The result shows that SN are significantly related to intention to cheat. This finding is aligned with past studies (Maloshonok & Shmeleva, 2019; Stone et al., 2007). SN was a significant predictor of cheating activities among university students in Russia (Maloshonok & Shmeleva, 2019). This shows that when students feel the pressure from fellow students to cheat, either because they want to help their friends or because they want to do what other students are obviously engaged in, there is an inclination to cheat in tests, quizzes, assignments or examinations. Apparently, students would dissuade from cheating when they realize that their peers' frown upon such act. Further, PBC was shown to significantly relate to the intention to cheat. Studies such as Jalilian et al., (2016); Kam, Hue, and Cheung, (2018); Lonsdale, (2017) supports this result. It is discovered that PBC significantly impacted the intention to cheat among students in Hong-Kong (Kam et al., 2018). The more the perceived behavioral control to cheat, the higher the propensity to cheat among students. It is believed that when it is easy to cheat, while the consequences of being caught or severely punished are low, students will tend to form the intention to cheat. There should be measures to reduce of PBC to cheat among students by being stricter in test, assignments and examination procedure.

Attitude toward cheating is revealed to significantly relate to the intention to cheat. This finding is allied with previous studies (Chudzicka-Czupala et al., 2016; Kam et al., 2018; Mustapha et al., 2016; Uzun & Kilis, 2020). Uzun and Kilis, (2020) declared that the attitude of students would determine their plagiarism intention. A student may feel that there is no need to report fellow students cheating because there would not be any concrete action taken against such offender. Consequently, such student may be inclined to cheat as well. Therefore, it is important to change the perspective of cheating practices through communication and reminder of cheating consequences.

Justification to cheat is shown to be significant with the intention to cheat. This finding is similar to previous studies (Rajah-Kanagasabai & Roberts, 2015; Scrimshire et al., 2017; Stone et al., 2009). Concern justification was the strongest predictor on responses to requests assistance with minor cheating-copying homework (Scrimshire et al., 2017). Hence, the higher the justification to cheat, the more tendency to form the intention to cheat. This finding shows that when justification to cheat prevails such as not having enough time to study, or assisting a friend, there is a high tendency to cheat.

Consequently, the finding showed that justification to cheat significantly moderate the PBC to cheat. This result is not surprising because when the assignment or course material is too difficult and there is no time to study, coupled with the fact that academics tend not to supervise the students appropriately during quizzes, tests, assignments or examinations, there will be an increased behavioral volition for such student to cheat. The theoretical contribution of this study is that the model declared that 66.4% of the variance of intention is explained by SN, ATT, PBC, and Justification. This prediction is similar to that of Beck & Ajzen, (1991) which is r^2 of 67% in predicting the intention to cheat. The addition of Justification is also indicated to have increased the predictive power of the model. Hence the relevance of introducing new variables in the TPB model as suggested by (Ajzen, 1991). Further, PBC is shown to have the highest impact on intention to cheat, which is also aligned with various past studies (Beck & Ajzen, 1991; Jalilian et al., 2016). Hence this gives some managerial contributions next.

There is no "one size fits all" solution in the case of cheating among students. However, this study gives some contributions to academics and higher education institutions (HEIs) authorities. There is a need to create a clear policy against cheating among students, with expected and reinforced consequences if caught. This can be made aware to the students when enrolled in the higher education institutions such as during orientation and handing them the HEI's policy/ethics booklets. The HEIs authority should demonstrate that every single defilement of academic integrity is taken seriously by enforcing the policy that has been established and communicated to the students. Academics must likewise act in accordance with this strict policy by communicating it in the class and stating their expectations from the students.

Course work should be made as creative and exciting as possible, in order to make the students excited to learn. Course marks should also be given fairly and any sign of cheating while marking scripts should be noted and further investigated before allocating appropriate marks or not. Strict tests, quizzes, assignments and examinations sessions in which students are arranged in a cheat-proof manner is required, while the academic is present in invigilating the students throughout the session. This measure will deter students from forming the favorable attitude, or perception of ease to cheat. This will also spread a sense of high integrity in the HEI, which will ensure that it is not a norm to cheat, and anyone caught will be severely penalized. This claim is supported by the study of Ismail and Yussof, (2016) which declared that students would deter from cheating if harsh punishment will be given when caught cheating. Consequently, there will also be less justification to cheat if due diligence of academics and HEIs authorities are done.

6. Future Direction

Studies have shown that proactive personality impacts students' academic performance (Ng et al., 2019), and career adaptability (Cai et al., 2015; Fawehinmi & Yahya, 2018; Yahya et al., 2019). Therefore, future studies can shed more light on the role of personality traits such as proactive personality on students' cheating intention. Further, future studies should be carried out on actual academic dishonesty of the students, to determine if there are any discrepancies. Carrying out studies based on

observation of cheating practices would be of great significance in understanding the actual predictors of such action and if it is aligned with the model of this study. Also, this model should be replicated in other universities, mostly in other South-East Asian countries and also western countries, for comparison and also to solidify the robustness of this model.

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