Entrepreneurial Intention among Higher Education Students: Evidence from the Theory of Planned Behaviour

Liu Xing Yue[1], Mohd Rashan Shah Robuan[2]*

Universiti Kebangsaan Malaysia, Selangor, Malaysia

***Corresponding Author**

DOI: https://doi.org/10.47772/IJRISS.2026.1026EDU0367

Received: 17 May 2025; Accepted: 22 May 2026; Published: 20 June 2026

ABSTRACT

This study examines entrepreneurial intention among students at Universiti Kebangsaan Malaysia by applying the Theory of Planned Behaviour as its theoretical foundation. Specifically, it investigates the extent to which personal attitude, subjective norms and perceived behavioural control are associated with students' entrepreneurial intention within a specific higher education institutional context. A quantitative survey design was employed, and data were collected from 103 undergraduate and postgraduate students using an online questionnaire adapted from the Entrepreneurial Intention Questionnaire. The data were analysed using descriptive statistics, reliability analysis and multiple regression analysis. The findings show that the regression model was statistically significant and explained 79.8% of the variance in entrepreneurial intention. Personal attitude and perceived behavioural control were positively and significantly associated with entrepreneurial intention, whereas subjective norms were not a significant direct predictor. Perceived behavioural control emerged as the strongest predictor, indicating that students' confidence, capability and perceived control are central to the formation of entrepreneurial intention. The study contributes to entrepreneurial intention research by providing institution-specific evidence on the relative explanatory strength of TPB constructs in the UKM context, where intention appears to be shaped more by students' personal evaluation and perceived entrepreneurial capability than by perceived social approval. However, the findings should be interpreted cautiously due to the use of convenience sampling, cross-sectional self-reported data and a modest sample size. The findings imply that entrepreneurship education should move beyond promoting entrepreneurship as a desirable career option and place greater emphasis on developing students' practical entrepreneurial skills, confidence and perceived readiness for venture creation.

Keywords: Entrepreneurial intention; Theory of Planned Behaviour; Perceived behavioural control; Higher education students

INTRODUCTION

Entrepreneurship has become an important agenda in higher education as universities are increasingly expected to produce graduates who are not only employable but also capable of creating value, identifying opportunities and contributing to economic and social development. In a labour market characterised by uncertainty, technological change and increasing competition, entrepreneurship offers students an alternative career pathway through self-employment, innovation and venture creation. As a result, higher education institutions have placed greater emphasis on entrepreneurship education, business-related activities, innovation programmes, mentoring and student enterprise initiatives to encourage students to consider entrepreneurship as a viable career option.

Entrepreneurial intention refers to an individual's conscious willingness and plan to engage in entrepreneurial activity in the future. Among university students, it is useful for understanding entrepreneurial readiness because career preferences and professional pathways are still being formed.

Theoretically, entrepreneurial intention is commonly explained through the Theory of Planned Behaviour, which proposes that intention is shaped by attitude toward the behaviour, subjective norms, and perceived behavioural

control (Ajzen, 1991). In entrepreneurship research, personal attitude refers to students' positive or negative evaluation of entrepreneurship as a career option. Subjective norms refer to perceived social support or pressure from significant others, including family members, peers, lecturers and other important social groups. Perceived behavioural control refers to students' perceived ability, confidence and control in performing entrepreneurial activities. These constructs are relevant because entrepreneurship is generally considered a planned behaviour that requires evaluation, motivation, perceived capability and support.

The Entrepreneurial Intention Questionnaire (EIQ) developed by Liñán and Chen (2009) provides a structured instrument for measuring entrepreneurial intention and its antecedents based on the Theory of Planned Behaviour. The EIQ has been widely used in entrepreneurship research because it allows entrepreneurial intention to be examined as a psychological construct influenced by personal attitude, subjective norms and perceived behavioural control. Accordingly, the use of the EIQ is appropriate for examining students' entrepreneurial intention within the UKM context.

Recent studies continue to confirm the relevance of entrepreneurial intention in higher education research. Nájera-Sánchez, Pérez-Pérez and González-Torres (2023) highlighted that entrepreneurship education and entrepreneurial intention remain closely connected research areas, particularly because universities play an important role in shaping students' transition from entrepreneurial learning to entrepreneurial behaviour. Astiana, Malinda, Nurbasari and Margaretha (2022) found that entrepreneurship education increases entrepreneurial intention among undergraduate students, suggesting that structured educational exposure can strengthen students' entrepreneurial motivation and readiness. Similarly, Malathi and Venugopal (2025) showed that student engagement in entrepreneurship education is associated with entrepreneurial intention, further supporting the importance of university-based entrepreneurship initiatives in developing future entrepreneurs.

The present study focuses on students at UKM. This institutional focus is relevant because students' exposure to entrepreneurship-related courses, digital platforms, role models and campus-based support may shape how they evaluate entrepreneurship as a feasible career pathway.

In Malaysia, higher education institutions are expected to support graduate employability, innovation and entrepreneurship development. However, the presence of entrepreneurship-related programmes does not automatically translate into entrepreneurial intention. Evidence from UKM can therefore help educators and administrators identify whether students' intentions are shaped more by attitudes, perceived capability or social support.

This focus is analytically important because previous TPB-based studies show inconsistent effects across contexts, particularly for subjective norms. Examining the UKM setting therefore provides an opportunity to assess whether students' entrepreneurial intention is primarily self-directed, capability-driven or socially influenced.

Accordingly, this study aims to examine students' entrepreneurial intention in the UKM context. Specifically, the study investigates the extent to which personal attitude, perceived behavioural control and subjective norms are associated with entrepreneurial intention using data collected through the Entrepreneurial Intention Questionnaire and analysed quantitatively using SPSS. The study is guided by the following research question: To what extent do higher education students in the UKM context demonstrate entrepreneurial intention, and how are personal attitude, perceived behavioural control and subjective norms associated with entrepreneurial intention?

This study contributes to the entrepreneurial intention literature in three ways. First, it offers a context-specific empirical assessment of how the established TPB predictors operate within the UKM higher education setting, rather than treating TPB as a uniform model across all student populations.

Second, it identifies the relative importance of personal attitude, subjective norms and perceived behavioural control in the sampled UKM students, which is useful because institutional support alone does not ensure strong entrepreneurial intention.

Third, the study provides practical insight for entrepreneurship education. By identifying perceived behavioural control as the strongest predictor of entrepreneurial intention, the findings suggest that entrepreneurship initiatives should not only promote entrepreneurship as an attractive career option, but also strengthen students' confidence, practical skills and perceived readiness to engage in entrepreneurial activity.

LITERATURE REVIEW

Entrepreneurial Intention and the Theory of Planned Behaviour

Entrepreneurial intention reflects a conscious orientation toward future entrepreneurial activity and is commonly used to assess students' readiness to consider self-employment or venture creation as a career pathway.

The Theory of Planned Behaviour explains intention through three antecedents: attitude toward the behaviour, subjective norms and perceived behavioural control (Ajzen, 1991). In entrepreneurship research, these constructs capture students' evaluation of entrepreneurship, perceived social support and perceived capability to perform entrepreneurial activities.

Although the Theory of Planned Behaviour is well established, previous entrepreneurial intention studies do not always show equal predictive strength among its three components. Personal attitude and perceived behavioural control are often found to be stronger predictors because they reflect students' own evaluation of entrepreneurship and their confidence in performing entrepreneurial tasks. By contrast, subjective norms often show weaker or inconsistent effects, suggesting that social approval may not always translate directly into entrepreneurial intention. This inconsistency is important because it indicates that TPB should not be treated as a mechanically uniform model across all student populations. Instead, its predictors should be examined within specific educational and institutional settings.

The Entrepreneurial Intention Questionnaire developed by Liñán and Chen (2009) remains a suitable instrument for this study because it operationalises entrepreneurial intention and the TPB antecedents in a structured and widely applied form.

Entrepreneurial Mindset and Intention Formation

Entrepreneurial mindset is relevant to entrepreneurial intention because it reflects the cognitive and motivational orientation that enables individuals to recognise opportunities, tolerate uncertainty and act proactively. Rather than representing a simple interest in business, entrepreneurial mindset involves broader attitudes, beliefs, perceived capabilities and opportunity-oriented thinking. In this sense, entrepreneurial mindset may function as a psychological foundation that supports the formation of entrepreneurial intention.

Cater et al. (2023) found that entrepreneurial mindset is associated with entrepreneurial intention, suggesting that students with stronger entrepreneurial ways of thinking may be more likely to express willingness to engage in entrepreneurship. Similarly, De la Gala-Velásquez et al. (2024) showed that entrepreneurial mindset among university students is shaped by educational and institutional factors, including curriculum, lecturer competence, problem-solving ability and university culture. These findings suggest that entrepreneurial mindset is not only an individual characteristic but may also be developed through appropriate learning environments.

In the present study, entrepreneurial mindset is treated as a supporting concept rather than the main empirical construct. Since the study is based on the Liñán & Chen (2009) Entrepreneurial Intention Questionnaire, the primary focus remains entrepreneurial intention and its theoretically related dimensions. However, the mindset literature is useful because it helps explain why students' attitudes, confidence, opportunity awareness and perceived capability may influence their willingness to consider entrepreneurship as a future career pathway.

Entrepreneurship Education in Higher Education

Higher education institutions play an important role in shaping students' entrepreneurial intention. Entrepreneurship education can expose students to business knowledge, entrepreneurial skills, experiential

learning, role models, mentoring, business projects, and innovation-related activities. These experiences may influence students' attitudes toward entrepreneurship and their perceived behavioural control, both of which are central to the Theory of Planned Behaviour.

The relationship between entrepreneurship education and entrepreneurial intention should not be understood merely as a direct relationship. From a TPB perspective, entrepreneurship education may strengthen entrepreneurial intention by improving students' evaluation of entrepreneurship and increasing their perceived capability to engage in entrepreneurial activity. In other words, entrepreneurship education may influence intention because it changes how students perceive entrepreneurship and how confident they feel about performing entrepreneurial tasks.

Previous studies support this interpretation. Jung and Lee (2020) found that educational experiences can influence college students' entrepreneurial mindset and may be more influential than demographic factors such as gender or academic major. This suggests that entrepreneurship-related learning experiences can develop entrepreneurial thinking among diverse groups of students. Astiana et al. (2022) also found that entrepreneurship education increases entrepreneurial intention among undergraduate students, indicating that structured entrepreneurship education can strengthen students' motivation and readiness to pursue entrepreneurship.

Recent studies further confirm the continuing importance of entrepreneurship education in entrepreneurial intention research. Nájera-Sánchez et al. (2023) showed that entrepreneurship education and entrepreneurial intention remain closely connected research areas, reflecting continued scholarly interest in how educational institutions influence students' entrepreneurial behaviour. Malathi and Venugopal (2025) further found that engagement in entrepreneurship education is related to entrepreneurial intention. Taken together, these studies suggest that universities should not only offer entrepreneurship courses but also create learning environments that encourage practical exposure, confidence building, mentoring, and active participation in entrepreneurial activities.

Entrepreneurial Intention within the Malaysian Higher Education Context

The Malaysian higher education context provides a relevant setting for examining entrepreneurial intention because universities are increasingly expected to support graduate employability, innovation, and entrepreneurship development. Entrepreneurship education and student enterprise initiatives are often used by higher education institutions to encourage students to consider entrepreneurship as a viable career pathway. Nevertheless, the existence of entrepreneurship-related programmes does not necessarily mean that students possess high entrepreneurial intention. Empirical evidence is therefore needed to understand students' actual entrepreneurial readiness.

Teoh et al. (2024) examined entrepreneurial intention among business undergraduates in Malaysia and found that personal attitude, subjective norms, perceived behavioural control and entrepreneurial education are relevant in explaining entrepreneurial intention. This finding is important because it provides recent Malaysian evidence supporting the relevance of the Theory of Planned Behaviour in the study of student entrepreneurial intention. It also indicates that entrepreneurial intention among Malaysian students is influenced by both individual perceptions and educational exposure.

Institution-specific evidence remains useful because entrepreneurship curricula, support structures, mentoring opportunities and campus cultures differ across universities. The present study therefore treats UKM as a concrete institutional setting through which the operation of TPB predictors can be assessed.

Research Gap and Positioning of the Present Study

The reviewed literature shows that entrepreneurial intention is theoretically grounded in the Theory of Planned Behaviour and can be measured using established instruments such as the Entrepreneurial Intention Questionnaire. Prior studies have shown that entrepreneurial intention is closely associated with personal attitude, subjective norms, perceived behavioural control, entrepreneurship education, and students' perceived entrepreneurial readiness. However, the relative importance of these predictors varies across empirical contexts.

One important issue in the literature is that TPB predictors do not always perform uniformly. Personal attitude and perceived behavioural control are often found to have stronger effects on entrepreneurial intention, while subjective norms sometimes show weaker or non-significant effects. This pattern suggests that students' entrepreneurial intention may be more strongly shaped by their own evaluation of entrepreneurship and perceived capability than by external social approval. Therefore, further empirical evidence is needed to examine how these predictors operate in specific higher education settings.

Within the Malaysian higher education context, institution-specific evidence remains useful because universities differ in their entrepreneurship curriculum, student support systems, mentoring opportunities, business exposure, and campus-level entrepreneurial culture. Therefore, rather than assuming that the Theory of Planned Behaviour operates in exactly the same way across all higher education institutions, the present study examines how personal attitude, subjective norms, and perceived behavioural control are associated with entrepreneurial intention among students at UKM.

Theoretical Background and Hypotheses

This study is grounded in the Theory of Planned Behaviour (TPB), which views intention as a function of attitude toward the behaviour, subjective norms and perceived behavioural control (Ajzen, 1991). The framework is suitable because entrepreneurship involves deliberate evaluation, perceived feasibility, resource consideration and social influence. Entrepreneurial intention has long been recognised as a central precursor to entrepreneurial action because it reflects the cognitive commitment that directs attention, motivation and behaviour toward future venture creation (Bird, 1988; Krueger et al., 2000).

Entrepreneurial intention is examined using the Entrepreneurial Intention Questionnaire developed by Liñán and Chen (2009), which enables entrepreneurial intention to be assessed as a structured psychological construct rather than a general interest in business.

Within this framework, students are expected to report stronger entrepreneurial intention when they evaluate entrepreneurship positively, perceive themselves as capable of performing entrepreneurial activities and perceive approval from significant referent groups.

Previous studies support the relevance of TPB constructs in explaining entrepreneurial intention among university students. Hossain et al. (2023) found that entrepreneurial attitude, subjective entrepreneurial norms, and perceived behavioural control were associated with entrepreneurial intention among Generation Z university students. Similarly, Teoh et al. (2024) showed that personal attitude, subjective norms, perceived behavioural control, and entrepreneurial education were relevant in explaining entrepreneurial intention among Malaysian business undergraduates. These studies provide empirical support for applying a TPB-informed framework to examine students' entrepreneurial intention.

Although the Theory of Planned Behaviour proposes that all three antecedents may influence intention, their relative influence may differ across contexts. In entrepreneurial intention research, personal attitude and perceived behavioural control are often expected to be especially important because entrepreneurship requires personal motivation, perceived feasibility and confidence in one's own ability to act. Subjective norms may also be relevant, but their effect may be weaker when students rely more on their own evaluation and perceived capability than on social approval. Therefore, examining the relative strength of the three TPB predictors is important for understanding whether students' entrepreneurial intention is primarily self-directed or socially influenced.

Based on the TPB framework and prior empirical evidence, this study examines the associations between personal attitude, perceived behavioural control, subjective norms and students' entrepreneurial intention at UKM. Accordingly, the following hypotheses are proposed:

H1: Personal attitude toward entrepreneurship is positively associated with students' entrepreneurial intention.

H2: Perceived behavioural control is positively associated with students' entrepreneurial intention.

H3: Subjective norms are positively associated with students' entrepreneurial intention.

METHODOLOGY

Research Design

This study employed a quantitative research design to examine students' entrepreneurial intention at Universiti Kebangsaan Malaysia (UKM). A survey-based approach was considered appropriate because the study aimed to measure students' entrepreneurial intention, personal attitude, subjective norms and perceived behavioural control using structured questionnaire items. The study was guided by the Theory of Planned Behaviour and used the Entrepreneurial Intention Questionnaire developed by Liñán and Chen (2009), which was designed to measure entrepreneurial intention and its antecedents within the entrepreneurship context. Liñán and Chen's instrument is particularly suitable because it applies Ajzen's Theory of Planned Behaviour to entrepreneurial intention and demonstrates sound psychometric properties.

Population and Sampling

The target population of this study consisted of higher education students enrolled at Universiti Kebangsaan Malaysia. The respondents included both undergraduate and master's students from different academic backgrounds. A convenience sampling method was used to access respondents due to the practical nature of the study and the need to collect responses from students who were available and willing to participate.

Although convenience sampling limits generalisability, it is appropriate for a preliminary institutional study based on accessible student respondents. The findings are therefore interpreted as evidence from the sampled UKM students rather than as representative of all Malaysian university students.

Data Collection

Data were collected over a period of three weeks using an online questionnaire. The survey link was distributed through WhatsApp groups and other digital communication platforms commonly used by students. This method enabled efficient access to respondents across different academic levels and disciplines while preserving participants' anonymity.

Participation in the study was voluntary. Respondents were informed that their responses would be used for academic research purposes only and that no personally identifiable information would be disclosed. The online survey format was appropriate for reaching university students, particularly because digital survey distribution has become increasingly common in higher education research and student-based entrepreneurship studies.

Sample Size

A total of 103 valid responses were included in the final analysis. The sample consisted of 63 undergraduate students (61.2%) and 40 master's students (38.8%). Although modest, the sample is acceptable for an exploratory institutional study of entrepreneurial intention in the UKM context.

Measurement Instrument

The study used a structured questionnaire adapted from the Entrepreneurial Intention Questionnaire developed by Liñán and Chen (2009). The EIQ is widely used in entrepreneurial intention research and is grounded in the Theory of Planned Behaviour. It measures entrepreneurial intention and its related antecedents, including personal attitude, subjective norms, and perceived behavioural control. The instrument has been applied in different cultural and educational contexts and remains one of the most established tools for measuring entrepreneurial intention.

All main constructs were measured using multi-item Likert-type scales. Respondents were asked to indicate their level of agreement with each statement using a seven-point scale, ranging from 1 = strongly disagree to 7 =

strongly agree. A higher score indicates a stronger level of agreement with the respective construct.

Entrepreneurial intention was measured using six items that captured students' willingness, readiness and future plan to engage in entrepreneurial activity. Personal attitude was measured using five items that assessed students' evaluation of entrepreneurship as an attractive, desirable and beneficial career option. Subjective norms were measured using three items that assessed perceived social approval from important referent groups, including family members, friends and colleagues. Perceived behavioural control was measured using six items that assessed students' perceived capability, confidence, and control in performing entrepreneurial activities.

The use of these constructs is consistent with previous entrepreneurial intention studies based on the Theory of Planned Behaviour. For instance, Hossain et al. (2023) examined entrepreneurial attitude, subjective entrepreneurial norms, perceived behavioural control, and entrepreneurial intention among Generation Z university students, while Teoh et al. (2024) examined personal attitude, subjective norms, perceived behavioural control, entrepreneurial education, and entrepreneurial intention among Malaysian business undergraduates.

Demographic and Background Information

The questionnaire also collected demographic and background information from respondents. These included academic level, faculty or programme background, year of study, age, gender, ethnicity, entrepreneurship education exposure, entrepreneurial knowledge, work experience, self-employment experience, family business background, and entrepreneurial role models. These variables were included to provide a clearer profile of respondents and to support interpretation of the findings.

Data Analysis

The data were analysed using the Statistical Package for the Social Sciences. Prior to the main analysis, the dataset was screened to ensure that the responses were complete and suitable for statistical analysis. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarise respondents' demographic characteristics and the level of each main construct.

Reliability analysis was conducted using Cronbach's alpha to assess the internal consistency of the measurement items for each construct. Multiple regression analysis was then conducted to examine the extent to which personal attitude, subjective norms, and perceived behavioural control were associated with entrepreneurial intention. Entrepreneurial intention was entered as the dependent variable, while personal attitude, subjective norms, and perceived behavioural control were entered as independent variables.

Multiple regression was used to assess the direct associations between the three TPB predictors and entrepreneurial intention within a single model. The results are interpreted as statistical associations rather than causal effects because the design was cross-sectional and did not test mediation, moderation or latent construct relationships.

RESULTS

Demographic Analysis

The demographic profile of the respondents is presented in Table 1. A total of 103 students participated in the study. In terms of level of study, the majority of respondents were undergraduate students, with 63 respondents representing 61.2% of the total sample. Meanwhile, 40 respondents, representing 38.8%, were postgraduate master's students. This indicates that the sample was dominated by undergraduate students, although postgraduate students were also adequately represented.

With regard to year of study, the largest group of respondents was from Year 3, comprising 36 students or 35.0% of the sample. This was followed by students in Year 5 and above, with 28 respondents representing 27.2%. Year 2 students accounted for 23 respondents or 22.3%, while Year 1 and Year 4 students each represented 8

respondents or 7.8%, respectively. These findings suggest that the sample included students from different stages of study, with stronger representation from more advanced years.

In relation to prior entrepreneurial experience, 54 respondents, representing 52.4%, reported that they had started a business, while 49 respondents, representing 47.6%, had not started a business. This finding indicates that slightly more than half of the respondents had some form of business start-up experience. This is an important characteristic of the sample because prior entrepreneurial exposure may influence students' perceptions of entrepreneurship, entrepreneurial confidence, and intention to engage in future entrepreneurial activity.

The results also show that 51 respondents, representing 49.5%, had received entrepreneurship training, whereas 52 respondents, representing 50.5%, had not received such training. The almost equal distribution between trained and non-trained respondents suggests that the sample provides a balanced view of students with and without formal entrepreneurship training exposure. This is relevant because entrepreneurship training may shape students' entrepreneurial knowledge, attitudes, and perceived behavioural control.

Overall, the demographic findings indicate that the study involved undergraduate and postgraduate students with varying levels of study, business experience and entrepreneurship training exposure.

Table 1. Demographic Profile of Respondents

Variable	Category	Frequency, n	Percentage, %
Level of study	Undergraduate	63	61.2%
	Master	40	38.8%
Year of study	Year 1	8	7.8%
	Year 2	23	22.3%
	Year 3	36	35.0%
	Year 4	8	7.8%
	Year 5 and above	28	27.2%
Previous business start-up experience	Yes	54	52.4%
	No	49	47.6%
Entrepreneurship training exposure	Yes	51	49.5%
	No	52	50.5%

Descriptive Statistics and Reliability Analysis

Table 2 presents the descriptive statistics and reliability results for the main constructs. The mean scores ranged from 5.1326 to 5.3301, indicating that respondents generally reported moderately high levels of personal attitude, perceived behavioural control, subjective norms and entrepreneurial intention. The standard deviation values ranged from 1.08649 to 1.20565, indicating reasonable dispersion in respondents' answers. The Cronbach's alpha values ranged from 0.846 to 0.950, exceeding the commonly accepted threshold of 0.70 for internal consistency (Nunnally & Bernstein, 1994). Therefore, all constructs demonstrated good internal consistency and were considered suitable for subsequent analysis.

Table 2. Descriptive Statistics and Reliability Analysis

Construct	**No. of Items**	**Mean**	**SD**	**Min**	**Max**	**Cronbach's α**
Personal Attitude (PA)	5	5.3301	1.08837	1.00	7.00	0.885
Subjective Norms (SN)	3	5.2199	1.20565	1.00	7.00	0.846
Perceived Behavioural Control (PBC)	6	5.1326	1.08649	1.00	7.00	0.898
Entrepreneurial Intention (EI)	6	5.2621	1.16320	1.00	7.00	0.950

Note**.** Constructs were measured using a seven-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree.

Hypothesis Testing Using Multiple Regression Analysis

Multiple regression analysis was conducted to test the associations between personal attitude, perceived behavioural control, subjective norms and entrepreneurial intention. Entrepreneurial intention was entered as the dependent variable, while the three TPB constructs were entered as independent variables.

The regression model was statistically significant, $F(3, 99) = 130.174$, $p < .001$, indicating that the three predictors collectively explained a significant proportion of the variance in entrepreneurial intention. The model produced an R^2 value of .798 and an adjusted R^2 value of .792, suggesting that approximately 79.8% of the variance in entrepreneurial intention was explained by personal attitude, perceived behavioural control and subjective norms. This indicates that the Theory of Planned Behaviour-based model had strong explanatory ability in the present sample. However, the high R^2 value should be interpreted cautiously because all variables were measured using self-reported questionnaire data collected from the same respondents at one point in time. Therefore, the result may partly reflect conceptual closeness among the TPB constructs and the possibility of common method variance.

The coefficient results show that personal attitude was positively and significantly associated with entrepreneurial intention ($B = .364$, $SE = .084$, $\beta = .362$, $t = 4.333$, $p < .001$). Therefore, H1 was supported. This finding indicates that students who evaluated entrepreneurship more positively were more likely to report stronger entrepreneurial intention.

The results also show that perceived behavioural control was positively and significantly associated with entrepreneurial intention ($B = .637$, $SE = .078$, $\beta = .533$, $t = 8.208$, $p < .001$). Therefore, H2 was supported. This suggests that students who perceived themselves as more capable and confident in performing entrepreneurial activities were more likely to demonstrate stronger entrepreneurial intention. Among the three predictors, perceived behavioural control recorded the highest standardized beta value, indicating that it was the strongest predictor of entrepreneurial intention in the model.

However, subjective norms were not significantly associated with entrepreneurial intention ($B = .085$, $SE = .068$, $\beta = .087$, $t = 1.251$, $p > .05$). Therefore, H3 was not supported. This result suggests that perceived social support or approval from significant others did not significantly contribute to entrepreneurial intention when personal attitude and perceived behavioural control were included in the model.

Overall, the hypothesis testing results provide partial support for TPB: personal attitude and perceived behavioural control were significant predictors, whereas subjective norms were not.

Table 3. Multiple Regression Results for Entrepreneurial Intention

Hypothesis	Path	B	SE	β	t	p-value	Decision
H1	PA → EI	.364	.084	.362	4.333	< .001	Supported
H2	PBC → EI	.637	.078	.533	8.208	< .001	Supported
H3	SN → EI	.085	.068	.087	1.251	> .05	Not supported

Model summary**:** $R = .910$, $R^2 = .798$, Adjusted $R^2 = .792$, $SE = .53024$, $F(3, 99) = 130.174$, $p < .001$.

DISCUSSION

The findings indicate that entrepreneurial intention in the sampled UKM context was driven more by students' positive evaluation of entrepreneurship and perceived capability than by perceived social approval. This pattern supports a more differentiated interpretation of TPB rather than a simple assumption that all three predictors operate with equal strength.

The regression results show that personal attitude was positively and significantly associated with entrepreneurial intention, supporting H1. This finding indicates that students who evaluated entrepreneurship more positively were more likely to report stronger entrepreneurial intention. In other words, when students

perceive entrepreneurship as attractive, desirable and beneficial, they are more inclined to consider it as a future career option. This result is consistent with the Theory of Planned Behaviour, which argues that favourable attitudes toward a behaviour contribute to stronger behavioural intention. In the context of this study, personal attitude appears to represent students' evaluative readiness to consider entrepreneurship as a viable pathway. This suggests that entrepreneurship programmes may not only provide technical business knowledge but also shape students' perceptions of entrepreneurship as meaningful, achievable and professionally valuable.

The findings also show that perceived behavioural control was positively and significantly associated with entrepreneurial intention, supporting H2. Among the three predictors in the model, perceived behavioural control recorded the strongest standardized beta value. This suggests that students' perceived capability, confidence and sense of control in performing entrepreneurial activities were the most important factors associated with entrepreneurial intention. The result is theoretically meaningful because entrepreneurship requires not only interest but also perceived feasibility. Students may view entrepreneurship positively, but they are more likely to develop entrepreneurial intention when they believe they have the skills, knowledge, and confidence required to start or manage a business. Therefore, the strong role of perceived behavioural control indicates that entrepreneurial intention in this sample was closely linked to students' self-perceived readiness for entrepreneurial action.

Subjective norms were not significantly associated with entrepreneurial intention in the regression model, indicating that H3 was not supported. This finding suggests that perceived social support or approval from family members, peers, lecturers, and other significant groups did not directly predict entrepreneurial intention when personal attitude and perceived behavioural control were included in the model. One possible interpretation is that students' entrepreneurial intention is more self-directed than socially driven. In other words, students may be less influenced by whether others approve of entrepreneurship and more influenced by whether they personally view entrepreneurship positively and believe they are capable of performing entrepreneurial activities.

This result does not mean that social influence is irrelevant. Rather, it suggests that social influence may not operate as a direct predictor in the present model. Subjective norms may influence entrepreneurial intention indirectly by shaping students' attitudes or perceived behavioural control. For example, encouragement from family, lecturers or entrepreneurial peers may strengthen students' confidence or make entrepreneurship appear more desirable. However, such indirect relationships cannot be tested using the present regression model. Future studies may examine whether subjective norms influence entrepreneurial intention through personal attitude or perceived behavioural control using mediation analysis.

Interpretation of the High Explanatory Power of the Model

The regression model explained 79.8% of the variance in entrepreneurial intention, indicating strong explanatory power within the present sample. This finding supports the relevance of the Theory of Planned Behaviour in explaining entrepreneurial intention among the sampled UKM students. However, the high R^2 value should be interpreted with caution. Because all constructs were measured using self-reported questionnaire items collected from the same respondents at a single point in time, the strength of the relationships may partly reflect common method variance.

In addition, the conceptual closeness between personal attitude, perceived behavioural control, and entrepreneurial intention may have increased the explanatory power of the model. For example, students who report favourable attitudes toward entrepreneurship may also be more likely to report stronger entrepreneurial intention because both constructs involve positive evaluations of entrepreneurial behaviour. Similarly, students who perceive themselves as capable of starting a business may also express stronger intention to do so. Therefore, although the findings provide support for the TPB framework, the high R^2 should not be interpreted as evidence of causal certainty or as proof that the model fully explains entrepreneurial intention.

This interpretation strengthens rather than weakens the study because it demonstrates appropriate caution in discussing the results. The findings suggest that TPB is highly relevant in the present sample, but future research should apply additional procedures to assess construct distinctiveness and reduce common method bias. These

may include longitudinal designs, multiple data sources, procedural separation of predictor and outcome measures or more advanced analytical techniques such as structural equation modelling.

The findings offer several practical implications for entrepreneurship education at UKM. Since perceived behavioural control emerged as the strongest predictor of entrepreneurial intention, entrepreneurship programmes should prioritise activities that improve students' perceived capability to engage in entrepreneurship. These may include business model development, pitching exercises, start-up simulations, mentoring by entrepreneurs, student venture projects and exposure to incubation support. Such activities may help students move from general interest in entrepreneurship to a stronger belief that they are capable of performing entrepreneurial tasks.

In addition, because personal attitude was significantly associated with entrepreneurial intention, university initiatives should also present entrepreneurship as a meaningful and realistic career pathway. This can be achieved by exposing students to relatable entrepreneurial role models, alumni entrepreneurs and examples of student-led ventures. Such exposure may strengthen students' positive evaluation of entrepreneurship and help them view entrepreneurial careers as achievable rather than distant or uncertain.

Although subjective norms were not a significant direct predictor, social support should not be ignored. Instead, peer networks, lecturers, mentors, alumni entrepreneurs and family support may be treated as part of a broader entrepreneurial ecosystem that indirectly strengthens students' confidence and attitudes. The findings therefore suggest that entrepreneurship programmes may combine psychological, practical, and social support mechanisms rather than relying only on classroom-based instruction.

Interpretation of Respondent Background Characteristics

The respondent profile provides additional interpretive context. Slightly more than half of the respondents reported previous business start-up experience, while nearly half had received entrepreneurship training. This prior exposure may partly explain the moderately high mean scores for entrepreneurial intention, personal attitude and perceived behavioural control.

However, because these background variables were not tested through subgroup comparisons, the study cannot determine whether students with entrepreneurship training or prior business experience differed significantly from those without such exposure.

Theoretically, the study contributes by confirming the continued relevance of the Theory of Planned Behaviour in explaining entrepreneurial intention within a specific institutional context. However, the findings also suggest that the three TPB predictors do not contribute equally. Personal attitude and perceived behavioural control were significant predictors, while subjective norms were not. This pattern suggests that, within the sampled UKM context, entrepreneurial intention is more strongly associated with students' internal evaluation and perceived capability than with external social approval. Therefore, the study supports a more nuanced interpretation of TPB in which the relative importance of each predictor depends on the educational and institutional setting.

CONCLUSION

This study provides a context-specific assessment of entrepreneurial intention among sampled UKM students using the Theory of Planned Behaviour. Personal attitude and perceived behavioural control were positively and significantly associated with entrepreneurial intention, whereas subjective norms did not directly predict intention. Perceived behavioural control was the strongest predictor, indicating the importance of students' confidence, capability and perceived control.

The findings suggest that entrepreneurship education should strengthen practical skills and confidence, not merely promote entrepreneurship as an attractive career option. Experiential learning, mentoring, pitching activities, business simulations and incubation support may be especially useful for improving students' perceived behavioural control.

LIMITATIONS AND FUTURE RESEARCH

Several limitations should be acknowledged. First, the study used convenience sampling, which may introduce selection bias because respondents were recruited based on accessibility and willingness to participate. As a result, the findings should not be generalised to all UKM students or to the wider population of Malaysian higher education students. Second, the sample size of 103 respondents is acceptable for preliminary institutional analysis, but it remains modest for making broader claims about entrepreneurial intention among university students. Therefore, the results should be interpreted as context-specific evidence from the sampled respondents.

Third, the study used a cross-sectional design, which captures entrepreneurial intention at only one point in time. This limits the ability to examine changes in entrepreneurial intention over time or to make causal claims about the relationships among personal attitude, perceived behavioural control, subjective norms and entrepreneurial intention. Future studies should consider longitudinal designs to examine whether students' entrepreneurial intention changes after exposure to entrepreneurship education, mentoring, business incubation, or practical entrepreneurial activities.

Fourth, the study relied on self-reported questionnaire data. This may increase the risk of social desirability bias and common method variance, especially because all TPB constructs and entrepreneurial intention were measured using the same survey instrument. The high R^2 value should therefore be interpreted cautiously, as it may partly reflect conceptual overlap among constructs, common method variance, or consistency in respondents' answers. Future studies may reduce this limitation by using multiple data sources, separating the measurement of predictors and outcomes, or applying statistical procedures to assess common method bias.

Fifth, entrepreneurship training exposure and previous business start-up experience were used descriptively and were not incorporated into comparative analysis. Future research should examine whether these variables differentiate entrepreneurial intention or moderate the relationships between TPB predictors and intention.

Finally, the study relied on multiple regression to examine direct associations. Future studies could apply mediation, moderation or structural equation modelling to examine mechanisms such as whether personal attitude mediates the relationship between subjective norms and entrepreneurial intention, or whether entrepreneurship education strengthens the effect of perceived behavioural control.

ACKNOWLEDGEMENTS

This study was supported by Research Grant EP-2023-044 under the Faculty of Economics and Management, Universiti Kebangsaan Malaysia. The authors sincerely thank all participating students for their valuable contributions to this study.

REFERENCES

1. 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
2. Astiana, M., Malinda, M., Nurbasari, A., & Margaretha, M. (2022). Entrepreneurship education increases entrepreneurial intention among undergraduate students. European Journal of Educational Research, 11(2), 995–1008. https://doi.org/10.12973/eu-jer.11.2.995
3. Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. Academy of Management Review, 13(3), 442–453.
4. Cater, J. J., III, Young, M., & Hua, L. (2023). Examining the entrepreneurial mindset and entrepreneurial intentions. Journal of Applied Business and Economics, 25(4), 30–46. https://doi.org/10.33423/jabe.v25i4.6339
5. De la Gala-Velásquez, B., Hurtado-Palomino, A., Monrroy-Villena, A. A., & Gomez-Villegas, O. I. (2024). Roots of the entrepreneurial mindset in university students. The International Journal of Management Education, 22(3), Article 101049. https://doi.org/10.1016/j.ijme.2024.101049

6. Hossain, M. I., Tabash, M. I., Siow, M. L., Ong, T. S., & Anagreh, S. (2023). Entrepreneurial intentions of Gen Z university students and entrepreneurial constraints in Bangladesh. Journal of Innovation and Entrepreneurship, 12, Article 12. https://doi.org/10.1186/s13731-023-00279-y
7. Jung, E., & Lee, Y. (2020). College students' entrepreneurial mindset: Educational experiences override gender and major. Sustainability, 12(19), Article 8272. https://doi.org/10.3390/su12198272
8. Krueger, N. F., Jr., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. Journal of Business Venturing, 15(5–6), 411–432.
9. Liñán, F., & Chen, Y.-W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. Entrepreneurship Theory and Practice, 33(3), 593–617. https://doi.org/10.1111/j.1540-6520.2009.00318.x
10. Malathi, M., & Venugopal, P. (2025). Entrepreneurial intention and engagement in entrepreneurship education. Journal of Innovation and Entrepreneurship, 14, Article 88. https://doi.org/10.1186/s13731-025-00524-6
11. Nájera-Sánchez, J.-J., Pérez-Pérez, C., & González-Torres, T. (2023). Exploring the knowledge structure of entrepreneurship education and entrepreneurial intention. International Entrepreneurship and Management Journal, 19(2), 563–597. https://doi.org/10.1007/s11365-022-00814-5
12. Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). McGraw-Hill.
13. Teoh, W. M. Y., Chong, S. C., Yuen, Y. Y., Ravichander, S., & Chong, C. W. (2024). Entrepreneurial intentions among business undergraduates: The Malaysian case. Journal of Education for Business, 99(7–8), 411–421. https://doi.org/10.1080/08832323.2024.2424181