



An Analysis of the Theory of Planned Behaviour in Shaping Students' Entrepreneurial Intentions

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ABSTRACT

Entrepreneurial intention is an important precursor to entrepreneurial behaviour and has received increasing attention in higher education research. This study examines the influence of Attitude toward Entrepreneurship, Subjective Norms, and Perceived Behavioural Control on students' Entrepreneurial Intention using the Theory of Planned Behaviour (TPB) as the underlying theoretical framework. A quantitative, cross-sectional research design was adopted, and data were collected from approximately 250 undergraduate students in Malaysian higher education institutions using a structured questionnaire. The measurement items were assessed using a seven-point Likert scale and analysed using SPSS Version 29. Descriptive statistics, reliability analysis, and multiple linear regression were employed to analyse the data and test the proposed hypotheses. The reliability results demonstrated satisfactory internal consistency across all constructs, with Cronbach's alpha coefficients ranging from 0.908 to 0.953. The regression findings revealed that Attitude toward Entrepreneurship had a positive and significant effect on Entrepreneurial Intention ($\beta = 0.123$, $p = 0.004$). Perceived Behavioural Control also demonstrated a positive and significant effect and emerged as the strongest predictor of Entrepreneurial Intention ($\beta = 0.710$, $p < 0.001$). In contrast, Subjective Norms had a positive but insignificant effect on Entrepreneurial Intention ($\beta = 0.105$, $p = 0.149$). Overall, the findings support the applicability of TPB in explaining students' entrepreneurial intentions, particularly through the roles of attitude and perceived behavioural control. The findings highlight the importance of strengthening students' entrepreneurial capabilities, confidence, and positive perceptions through effective entrepreneurship education and institutional support.

INTRODUCTION

Entrepreneurship is widely recognised as a catalyst for economic growth, innovation, employment creation, and sustainable national development. As economies become increasingly knowledge-driven and technology-oriented, entrepreneurial activities have become essential for enhancing competitiveness, fostering innovation, and addressing socio-economic challenges (Ziane et al., 2025). In Malaysia, entrepreneurship has been identified as a strategic mechanism for achieving sustainable economic development and reducing graduate



unemployment through various government initiatives and entrepreneurship education programmes. Consequently, higher education institutions play an important role in nurturing entrepreneurial competencies and encouraging students to consider entrepreneurship as a viable career option (Nor et al., 2025).

Entrepreneurial intention (EI) has emerged as one of the most widely studied constructs in entrepreneurship research because it represents an individual's conscious plan or willingness to establish a new business venture in the future. Since entrepreneurship is generally a planned and intentional behaviour rather than a spontaneous action, understanding the determinants of entrepreneurial intention is essential for predicting future entrepreneurial activities (Ajzen, 1991). Previous studies have consistently demonstrated that individuals with stronger entrepreneurial intentions are more likely to engage in entrepreneurial behaviour and eventually establish new ventures (Liñán & Fayolle, 2015).

Moreover, psychological characteristics such as self-efficacy, achievement motivation, innovativeness, risk-taking propensity, and perceived behavioural control have been found to significantly influence entrepreneurial intentions among university students (Gómez-Jorge et al., 2025).

Among the theoretical models used to explain entrepreneurial intention, the Theory of Planned Behavior (TPB) proposed by Ajzen (1991) remains one of the most influential and extensively validated frameworks. According to TPB, behavioural intention is determined by three key antecedents: attitude towards the behavior,

subjective norms, and perceived behavioural control. Attitude refers to an individual's positive or negative evaluation of becoming an entrepreneur, subjective norms represent the perceived social pressure from significant others to perform or avoid entrepreneurial behaviour, while perceived behavioural control reflects an individual's confidence in possessing the necessary skills, resources, and opportunities to perform entrepreneurial activities (Ajzen, 1991; Ajzen, 2020). Collectively, these constructs explain why individuals develop varying levels of entrepreneurial intention despite facing similar external environments. Recent studies continue to support the applicability of TPB in explaining entrepreneurial intention across different educational and cultural settings (Ashari et al., 2022; Tinnes-Vigne et al., 2025).

Despite the extensive application of TPB in entrepreneurship research, previous empirical findings remain inconsistent, particularly regarding the influence of subjective norms on entrepreneurial intention. While numerous studies have reported that attitude and perceived behavioural control are significant predictors of entrepreneurial intention, the effect of subjective norms has been found to be weak, insignificant, or inconsistent across different countries and educational contexts (Liñán & Chen, 2009; Ashari et al., 2022). These inconsistencies may be attributed to differences in cultural values, entrepreneurship education, family background, institutional support, and socio-economic environments. Furthermore, rapid technological advancement, digital entrepreneurship opportunities, and changing labour market conditions have reshaped students' perceptions towards entrepreneurship, suggesting the need to re-examine the TPB model in contemporary higher education settings.

Although numerous studies have investigated entrepreneurial intention globally, empirical evidence focusing on Malaysian university students remains relatively limited (Narmaditya et al., 2026), particularly in understanding how the three TPB constructs jointly influence students' entrepreneurial intentions within the current economic and educational landscape. Given Malaysia's continuous efforts to strengthen entrepreneurial education and graduate employability, further empirical investigation is warranted to provide updated evidence that can inform educators, policymakers, and higher education institutions in designing more effective entrepreneurship development initiatives.

Therefore, this study aims to examine the influence of attitude, subjective norms, and perceived behavioural control on entrepreneurial intention among university students by applying the Theory of Planned Behaviour. The findings are expected to contribute to the growing body of entrepreneurship literature by providing empirical evidence regarding the applicability of TPB in the Malaysian higher education context. Practically, the study offers useful insights for universities and policymakers in developing educational strategies and support mechanisms that can effectively cultivate entrepreneurial intention and encourage future entrepreneurial participation among graduates.

LITERATURE REVIEW

Entrepreneurship has become an important driver of economic growth, innovation, and employment creation, making it a key area of interest among policymakers and researchers. As graduates increasingly face uncertain labour markets, entrepreneurship has emerged as a viable career option that contributes to both individual success and national economic development. Since entrepreneurial activities involve risk-taking, long-term commitment, and deliberate planning, researchers have focused on understanding the factors that motivate individuals to pursue entrepreneurial careers. Among these factors, entrepreneurial intention has been recognised as the most immediate predictor of entrepreneurial behaviour (Ajzen, 1991; Suanpong et al., 2025).

Entrepreneurial intention refers to an individual's conscious state of mind that directs attention and commitment towards starting a new business venture (Nemiño et al., 2025). It reflects a person's willingness and determination to engage in entrepreneurial activities in the future. Previous studies have consistently demonstrated that individuals with stronger entrepreneurial intentions are more likely to establish new businesses than those with weaker intentions (Otache et al., 2024). Consequently, entrepreneurial intention has become one of the most widely investigated constructs in entrepreneurship research.

Several theoretical models have been proposed to explain entrepreneurial intention, among which Shapero's Entrepreneurial Event Model (EEM) and Ajzen's Theory of Planned Behaviour (TPB) are the most prominent.

While both models have demonstrated strong explanatory power, TPB has become the dominant framework because it provides a comprehensive explanation of behavioural intention through three psychological determinants: attitude, subjective norm, and perceived behavioural control (Ajzen, 1991; Boucif et al., 2025). Compared with EEM, TPB has received broader empirical support across different countries, cultures, and educational settings, making it one of the most robust theories for predicting entrepreneurial intention.

The Theory of Planned Behaviour (TPB), developed by Ajzen (1991), extends the Theory of Reasoned Action by incorporating perceived behavioural control to account for behaviours that are not entirely under an individual's control. According to TPB, behavioural intention is determined by three factors: attitude toward the behaviour, subjective norm, and perceived behavioural control. Within the entrepreneurship context, TPB suggests that students are more likely to develop entrepreneurial intentions when they possess favourable attitudes toward entrepreneurship, receive encouragement from important people around them, and believe they have the capability and resources to establish a business (Muda et al., 2025).

TPB has been widely applied in entrepreneurship studies because of its strong theoretical foundation and predictive ability. A meta-analysis conducted by Schlaegel and Koenig (2014) concluded that TPB is one of the most reliable frameworks for explaining entrepreneurial intention. More recent studies have similarly confirmed the applicability of TPB among university students and aspiring entrepreneurs across various countries (Liu & Yao-Ping Peng, 2025). Although TPB has consistently demonstrated strong explanatory power, previous findings also suggest that the influence of its three determinants may vary across different cultural and educational contexts. Therefore, further investigation is required to validate its applicability among Malaysian university students.

Attitude

The first determinant of TPB is attitude, which refers to an individual's positive or negative evaluation of performing a particular behaviour (Ajzen, 1991). In entrepreneurship, attitude reflects the extent to which students perceive entrepreneurship as an attractive and rewarding career option. Individuals who believe entrepreneurship offers opportunities for personal achievement, financial independence, and career satisfaction are generally more willing to pursue entrepreneurial careers. Numerous empirical studies have reported that attitude has a significant positive influence on entrepreneurial intention (Tian et al, 2025). These findings suggest that students with favourable perceptions of entrepreneurship are more likely to develop entrepreneurial intentions. Perak. The following hypothesis is proposed:

H1: Attitude has a significant and direct effect on entrepreneurial intentions.



Subjective norm

The second determinant is subjective norm, which refers to the perceived social pressure to perform or avoid a particular behaviour (Ajzen, 1991). Within the entrepreneurial context, subjective norm reflects the influence of family members, friends, lecturers, mentors, and other significant individuals on students' entrepreneurial decisions. Social encouragement and support can enhance students' confidence and motivation to become entrepreneurs. Previous studies have generally found a positive relationship between subjective norm and entrepreneurial intention (Khetarpal et al., 2025). However, some researchers have reported inconsistent findings regarding the strength of this relationship, indicating that social influence may differ according to cultural background and educational environment. These inconsistencies highlight the need for further empirical investigation in different contexts. The following hypothesis is proposed:

H2: Subjective norm has a significant and direct effect on entrepreneurial intentions

Perceived behavioural control

The third determinant is perceived behavioural control, which refers to an individual's perception of the ease or difficulty of performing a behaviour based on available resources and personal capabilities (Ajzen, 1991). In entrepreneurship research, perceived behavioural control reflects students' confidence in their ability to identify business opportunities, manage risks, acquire entrepreneurial knowledge, and successfully establish a business. Students who believe they possess sufficient skills and resources are generally more likely to develop entrepreneurial intentions. Previous studies have consistently demonstrated that perceived behavioural control significantly influences entrepreneurial intention (Huang & Kee, 2024). Nevertheless, its influence may vary depending on students' entrepreneurial education, prior experience, and institutional support. The following hypothesis is proposed:

H3: Perceived behavioral control has a significant and direct effect on entrepreneurial intentions

RESEARCH METHODOLOGY

Research Design

This study adopts a quantitative research approach using a cross-sectional survey design to examine the influence of attitude, subjective norm, and perceived behavioural control on students' entrepreneurial intention. A quantitative approach is appropriate because it enables the researcher to objectively measure relationships among variables and test the proposed hypotheses using statistical analysis (Ghanad, 2023). Furthermore, a cross-sectional design allows data to be collected from respondents at a single point in time, making it suitable for investigating behavioural intentions and identifying relationships among variables (Saunders & Darabi, 2024).

The study is explanatory in nature, as it seeks to explain the causal relationships between the independent variables (attitude, subjective norm, and perceived behavioural control) and the dependent variable (entrepreneurial intention) based on the Theory of Planned Behaviour (Ajzen, 1991). The target population comprises undergraduate students enrolled at Malaysian higher education institutions. University students are selected because they represent potential future entrepreneurs and are frequently examined in entrepreneurial intention research. A simple random sampling technique was employed to ensure that every student has an equal probability of being selected, thereby reducing sampling bias and improving the representativeness of the sample (Hasim et al., 2022; Hasim et al., 2023). The minimum sample size will be determined using the recommendations of Hair et al., (2022). For multiple regression analysis, a sample of at least 200 respondents is considered adequate to achieve reliable statistical results. However, this study managed to collect approximately around 250 of respondents. Thus, collecting 250 responses is considered appropriate for conducting multiple regression analysis in this study.

Primary data was collected through a structured self-administered questionnaire distributed both online (e.g., Google Forms) and in printed form where appropriate. Before the main data collection, a pilot study involving approximately 30 respondents will be conducted to evaluate the quality of the questionnaire. The primary



purpose of the pilot study is to ensure that the questionnaire items are clear, understandable, and interpreted consistently by respondents. It also helps identify ambiguous wording, confusing instructions, or technical issues that may affect respondents' answers (Hasim et al., 2019; Nasir et al., 2026). All measurement items will be assessed using a seven-point Likert scale, ranging from 1 = Strongly Disagree to 7 = Strongly Agree, as a seven-point scale gives respondents more options to express the intensity of their opinions compared with a five-point scale (Hasim et al., 2026; Nasir et al., 2026). This allows researchers to capture small differences in respondents' perceptions or attitudes.

The measurement items were adapted and modified from validated instruments developed by Al-Jubari et al., (2018), and other entrepreneurship studies to ensure content validity, as demonstrated in Table 1.

Table 1: Questionnaire Items

Items	Questionnaire
Attitude toward Entrepreneurship (AE)	
AE1	Becoming an entrepreneur would be an attractive career choice for me.
AE2	I believe that pursuing an entrepreneurial career would be personally rewarding.
AE3	Starting and managing my own business would be desirable to me.
AE4	I would prefer entrepreneurship over many other career alternatives.
AE5	Overall, I have a positive view of becoming an entrepreneur.
Subjective Norms (SS)	
SS1	My immediate family would support me if I decided to become an entrepreneur.
SS2	My close friends would approve of my decision to start a business.
SS3	People who are important to me would encourage me to pursue entrepreneurship.
SS4	People whose opinions I value would view an entrepreneurial career positively.
SS5	I would receive social support from people close to me if I chose to become an entrepreneur.
Perceived Behavioural Control (PC)	
PC1	I am confident that I could start a business if I decided to do so.
PC2	I believe I have the ability to manage the process of creating a new business.
PC3	I would be able to identify and obtain the resources needed to start a business.
PC4	I believe I could deal effectively with the challenges involved in starting a business.
PC5	Starting and operating my own business would be largely within my control.
Entrepreneurial Intention (EE)	
EE1	I intend to start my own business in the future.
EE2	I am determined to become an entrepreneur at some point in my career.
EE3	I plan to take concrete steps toward establishing my own business.
EE4	I will make a serious effort to start and manage my own business.
EE5	I expect entrepreneurship to form part of my future career.

In this analysis, Statistical Package for the Social Sciences (SPSS) Version 29 was used. First, descriptive statistics will be used to summarise respondents' demographic characteristics and describe the main characteristics of your data before conducting inferential statistical analyses. Second, reliability analysis will be performed using Cronbach's Alpha, where values of 0.60 or above indicate satisfactory internal consistency (Hair et al., 2022). In addition, multiple linear regression analysis was employed to test the proposed hypotheses and determine the influence of attitude, subjective norm, and perceived behavioural control on entrepreneurial intention. Finally, this study adhered to established ethical principles for research involving human participants. Participation in the study was entirely voluntary, and respondents were informed about the purpose of the research before completing the questionnaire. An informed consent statement was provided at the beginning of the survey, explaining the objectives of the study, the estimated time required to complete the questionnaire, and the participants' rights (Wu et al., 2024). No personally identifiable information will be



disclosed in any publication or report resulting from this study.

RESULT

The reliability analysis was conducted to assess the internal consistency of the measurement items used to operationalise the constructs in the study. Cronbach's alpha coefficient was employed to determine the extent to which the items measuring each construct were consistently related to one another. As presented in Table 2, all constructs recorded Cronbach's alpha coefficients exceeding the generally accepted threshold of 0.70, indicating that the measurement instruments demonstrated satisfactory internal consistency and reliability.

As presented in Table X, all four constructs demonstrated satisfactory to excellent internal consistency, with Cronbach's alpha values ranging from 0.908 to 0.953. Attitude toward Entrepreneurship (AE) recorded the highest reliability value ($\alpha = 0.953$), followed by Subjective Norms (SN) ($\alpha = 0.940$), Entrepreneurial Intention (EI) ($\alpha = 0.931$), and Perceived Behavioural Control (PBC) ($\alpha = 0.908$). Overall, the Cronbach's alpha coefficients ranged from 0.908 to 0.953, confirming that all constructs demonstrated high internal consistency. These findings indicate that the items within each construct consistently measure their respective underlying concepts. Therefore, all 20 measurement items were considered reliable and retained for subsequent statistical analysis.

Table 1: Reliability Result

No.	Construct	Number of Items	Cronbach's Alpha
1	Attitude toward Entrepreneurship (AE)	5	0.953
2	Subjective Norms (SS)	5	0.94
3	Perceived Behavioural Control (PC)	5	0.908
4	Entrepreneurial Intention (EE)	5	0.931

Table 3 presents the results of the multiple regression analysis conducted to examine the effects of Attitude toward Entrepreneurship (AE), Subjective Norms (SN), and Perceived Behavioural Control (PBC) on Entrepreneurial Intention (EI). The regression coefficients indicate the direction and magnitude of the relationships between the independent variables and Entrepreneurial Intention, while the significance values determine whether the relationships are statistically significant.

Table 3: Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.17	0.166		-1.02	0.309
Attitude toward Entrepreneurship (AE)	0.124	0.043	0.123	2.887	0.004
Subjective Norms (SS)	0.109	0.076	0.105	1.446	0.149
Perceived Behavioural Control (PC)	0.739	0.073	0.71	10.092	0
a. Dependent Variable: Entrepreneurial Intention (EE)					

The results indicate that Attitude toward Entrepreneurship (AE) has a positive and statistically significant effect on Entrepreneurial Intention (EI) ($B = 0.124$, $\beta = 0.123$, $t = 2.887$, $p = 0.004$). The positive regression coefficient suggests that an increase in individuals' favourable attitudes toward entrepreneurship is associated with an increase in their entrepreneurial intention. Since the p-value of 0.004 is below the 0.05 significance level, the relationship is statistically significant. Therefore, AE makes a significant positive contribution to explaining Entrepreneurial Intention.

In contrast, Subjective Norms (SN) have a positive but statistically insignificant effect on Entrepreneurial Intention ($B = 0.109$, $\beta = 0.105$, $t = 1.446$, $p = 0.149$). Although the positive coefficient indicates that stronger



perceived social support or approval may be associated with higher entrepreneurial intention, the relationship is not statistically significant at the 0.05 level. Therefore, there is insufficient statistical evidence to conclude that Subjective Norms significantly influence Entrepreneurial Intention in this study.

Perceived Behavioural Control (PBC) demonstrates a positive and statistically significant effect on Entrepreneurial Intention ($B = 0.739$, $\beta = 0.710$, $t = 10.092$, $p < 0.001$). The positive coefficient indicates that individuals who perceive themselves as having greater control, capability, and confidence in performing entrepreneurial activities tend to report higher levels of entrepreneurial intention. The very high standardized beta coefficient ($\beta = 0.710$) indicates that PBC makes the strongest contribution among the three independent variables examined in the regression model. Furthermore, the t-value of 10.092 and significance level below 0.001 provide strong evidence that this relationship is statistically significant.

Overall, the findings demonstrate that Attitude toward Entrepreneurship and Perceived Behavioural Control significantly and positively predict Entrepreneurial Intention, whereas Subjective Norms do not have a statistically significant effect. Among the three predictors, Perceived Behavioural Control is the most influential predictor of Entrepreneurial Intention based on its standardized beta coefficient. These findings suggest that individuals' perceptions of their capability and control over entrepreneurial activities play a particularly important role in shaping their intention to become entrepreneurs.

CONCLUSION

This study examined the influence of Attitude toward Entrepreneurship, Subjective Norms, and Perceived Behavioural Control on students' Entrepreneurial Intention based on the Theory of Planned Behaviour (TPB). The findings provide empirical evidence that two of the three proposed TPB determinants significantly influence students' entrepreneurial intentions. Specifically, Attitude toward Entrepreneurship and Perceived Behavioural Control were found to have positive and statistically significant effects on Entrepreneurial Intention, whereas Subjective Norms did not demonstrate a statistically significant effect.

The findings indicate that students who hold more favourable attitudes towards entrepreneurship are more likely to develop stronger intentions to pursue an entrepreneurial career. This finding highlights the importance of cultivating positive perceptions of entrepreneurship among university students by demonstrating its potential for personal achievement, career development, financial independence, and self-employment. In addition, Perceived Behavioural Control emerged as the strongest predictor of Entrepreneurial Intention, with a standardized beta coefficient of $\beta = 0.710$. This suggests that students' confidence in their ability to identify opportunities, acquire resources, manage challenges, and establish a business plays a particularly important role in shaping their entrepreneurial intentions.

In contrast, Subjective Norms were found to have a positive but statistically insignificant relationship with Entrepreneurial Intention ($\beta = 0.105$, $p = 0.149$). This suggests that although support and encouragement from family members, friends, lecturers, and other significant individuals may contribute positively to students' entrepreneurial intentions, social influence alone may not be sufficient to significantly shape their intention to become entrepreneurs within the context of this study. This finding also highlights the contextual nature of TPB and suggests that the relative importance of its determinants may vary according to students' educational, social, and environmental circumstances.

The findings support the applicability of the Theory of Planned Behaviour in explaining students' entrepreneurial intentions, particularly through the roles of attitude and perceived behavioural control. The results further suggest that universities should place greater emphasis on strengthening students' entrepreneurial capabilities and confidence through practical entrepreneurship education, experiential learning, business simulations, mentoring, opportunity identification activities, and access to entrepreneurial resources. Such initiatives may help students develop the knowledge, skills, and confidence required to translate entrepreneurial intentions into future entrepreneurial activities.

In conclusion, developing entrepreneurial intention among university students requires more than simply creating positive perceptions or providing social encouragement. Students must also feel capable of performing entrepreneurial activities and overcoming the challenges associated with starting and managing a business.



Therefore, strengthening perceived behavioural control, while simultaneously fostering positive attitudes towards entrepreneurship, should be a key priority for higher education institutions seeking to cultivate future entrepreneurs. The findings contribute to the existing entrepreneurship literature by providing empirical evidence on the applicability of TPB in understanding students' entrepreneurial intentions and offer practical insights for educators and institutions seeking to strengthen entrepreneurship development programmes.

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