



INTERNATIONAL JOURNAL OF ENTREPRENEURSHIP AND MANAGEMENT PRACTICES (IJEMP)

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THE ROLE OF GENDER IN SHAPING STUDENTS' ENTREPRENEURIAL INTENTIONS: AN EXAMINATION THROUGH THE TPB MODEL

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Article Info:

Article history:

Received date: 26.02.2024

Revised date: 13.03.2024

Accepted date: 19.05.2024

Published date: 13.06.2024

To cite this document:

Zakaria, N. H., Akhir, N. E. F. M., & Rani, N. (2024). The Role Of Gender In Shaping Students' Entrepreneurial Intentions: An Examination Through The TPB Model. *International Journal of Entrepreneurship and Management Practices*, 7 (25), 30-44.

DOI: 10.35631/IJEMP.725004.

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Abstract:

An entrepreneurial intention could be influenced by a variety of factors. Numerous studies have examined how the Theory of Planned Behavior (TPB), which considers students' attitudes toward behaviour, subjective norms and perceived behavioural control may have influenced students' propensity for entrepreneurship. In addition, formal entrepreneurship education also has certain impact on the development of entrepreneurial intention among students. Students may have different preferences for entrepreneurship based on these criteria. Our research uses the Theory of Planned Behavior (TPB) to enhance and incorporate earlier findings of students' entrepreneurial intention. The aim of this study was to investigate potential differences in the likelihood of becoming an entrepreneur between the gender and independent variables examined. A questionnaire with multiple scales was used to gather self-reported data. The study findings showed that there was a difference in the two genders of UiTM Cawangan Terengganu (UiTMCT) students' preferences to become entrepreneurs, except for the perceived behavioral control variable. Furthermore, it was discovered that the biggest factor impacting female students' preference for business was formal entrepreneurship education.

Keywords:

Entrepreneurship Intention, Gender, Theory Of Planned Behaviour, Formal Entrepreneurship Education

Introduction

A strong economy depends on entrepreneurship, which is a key component of many economies around the world. The term entrepreneurship refers to the idea of creating and running a company venture to make money by taking various risks in the corporate world. The economic growth of the expanding global market has been greatly aided by entrepreneurship. Entrepreneurship contributes to a nation's overall economic growth (Navarro et al., 2009). It is a process of locating opportunities, allocating resources, and developing values to assist people in running a business and fostering expansion and prosperity. Finding unmet needs or change-opportunities is a frequent way to put values into action. Entrepreneurship includes the growth and development of a continuing business as well as the process that results in the establishment of a legal business organization. It requires more than just starting a firm; it also entails an innovation process that involves developing a new enterprise with four main dimensions: person, organizational, environmental, and process.

Due to their significant contributions to technological advancement and the creation of new jobs, entrepreneurs are essential to economic progress. Additionally, company owners contribute to the development of their local communities by creating jobs, doing business locally, participating in entrepreneurial networks, funding local initiatives, and supporting nonprofit organizations. The number of entrepreneurs worldwide is currently rising steadily due to the factors such as the decline in employment prospects, future safety precautions, the advantages of entrepreneurship, as well as people's aspirations to start their own businesses and/or carry on their family's successful business tradition.

For many years, entrepreneurs have been profoundly altering the conventional educational model. One method for fostering an entrepreneurial spirit and culture among tertiary students is to implement an entrepreneurial education programme in universities. By connecting fundamental concepts to practical experiences, entrepreneurship education keeps students interested. Students will be able to refine their ideas for starting a company endeavour and learn more about the abilities and talents required to be entrepreneurs. This area of study may encourage students to choose entrepreneurship as a career. This will strengthen their positive outlook, perceived behavioural control, and intentions for entrepreneurship even more (Wilson et al., 2007; Souitaris et al., 2007).

Many nations, including Malaysia, have been persistently promoting entrepreneurial education over the past few decades. To guarantee that students learn entrepreneurial skills and knowledge, several universities and higher education institutions in Malaysia have added entrepreneurship course as a main or elective course in many programs. As for UiTM, to achieve its objective to be recognized as one of the entrepreneurial universities, all students are obliged to enroll in and successfully complete the Entrepreneurship Course. Along with studying entrepreneurship theory, students from various academic backgrounds also get hands-on experience starting and growing their own businesses. Thus, the study of entrepreneurship indeed helps UiTM students grow their understanding of entrepreneurship.

Problem Statement

Despite advancements in gender equality, significant disparities persist in the entrepreneurial landscape. Research indicates that women remain underrepresented in entrepreneurship compared to men globally (Brieger & Gielnik, 2021). This underrepresentation translates into missed economic opportunities, reduced innovation potential, and limited diversity in business perspectives. Understanding and addressing the gender differences in entrepreneurship are

crucial for fostering a more inclusive and equitable entrepreneurial ecosystem (Lim, 2019). Researchers believe it is imperative to pay attention to this issue as well, especially considering the findings of past studies on how gender affects entrepreneurial intention (Hägg et al., 2022). Welter (2020) encourages researchers to consider more deeply the gendering of contexts in studies exploring gender and entrepreneurship, recognising that gender shapes and is shaped by context. Identifying and understanding the differences between female and male students has substantial implications to enlighten the entrepreneurial career interests among students. Thus, it will contribute to develop effective education initiatives in facilitating students to ensure they are able to achieve their entrepreneurial potential and fostering entrepreneurial intent. Since UiTM is one of the public universities that aspires to generate graduates who may use entrepreneurship abilities in their future careers, researchers believe it is critical to pinpoint the most important variables that might influence graduated students' inclination for entrepreneurship. Knowing the significance of the variables is essential, especially for academics. It enables them to offer the greatest environment and options for fostering students' interest in entrepreneurship and raising their level of concern about it. To learn more about how gender affects entrepreneurial intention and its antecedents, the Theory of Planned Behavior (TPB) is applied for this study. This theory is the model most frequently used to study entrepreneurial intentions (Arias, Restrepo & Restrepo, 2016).

Objectives of Study

The objectives of this study are as follow:

- i. To examine the differences in students' entrepreneurial intention based on gender.
- ii. To examine the differences in students' attitudes towards entrepreneurship based on gender.
- iii. To examine the differences in students' subjective norms based on gender.
- iv. To examine the differences in students' perceived behavior control based on gender.
- v. To examine the differences in students' formal entrepreneurship education based on gender.

Scope of Study

The study focuses on to what extent variables such as gender and the TPB (attitude toward entrepreneurship, subjective norms, perceived behavior control) can affect entrepreneurship intention among students. The study also attempts to discuss the impact of gender on formal entrepreneurship education to the students regarding their intention to become entrepreneurs after they finish their study.

Literature Review

Purusottama et al. (2020) assert that the entrepreneurship education curriculum is unquestionably successful and in line with students' desires for entrepreneurship. It has evolved into the main factor that students now consider when choosing entrepreneurship as their preferred career path.

Attitude Toward Entrepreneurship

The degree to which a person has a favourable or unfavourable opinion about being an entrepreneur impacts his attitude towards the conduct or personal attraction. According to Ajzen (2005), how people create their attitudes depends on their perceptions of the effects of engaging in the behaviour. Azjen (2012b) further points out that people's attitudes can be automatically activated, whether they are favourable or unfavourable, depending on whether the conduct is genuine or symbolic.

As a result, people's attitudes, whether positive or negative, are shaped by their experiences and how they see the results of their role models engaging in entrepreneurial action. Both intrinsic and extrinsic rewards such as financial rewards, independence or autonomy, personal rewards and family security may lead to the intention to start a business (Choo & Wong 2006; Vanevenhoven & Liguori 2013). Entrepreneurial self-efficacy makes entrepreneurs more proactive, increasing the likelihood of venture success (Asante & Affum-Osei, 2019). Adverse or costly outcome expectancies such as the perception of risky entrepreneurial activities badly affect the intention to start their own business. Krueger (1993) highlights that people's knowledge of entrepreneur's potential benefits or hardships is accumulated by having a direct experience with the entrepreneurial behaviour and observing the behaviour among their next of kin entrepreneurs. When an individual is more positive toward entrepreneurial experience, he will be more intrigued to embark in entrepreneurship as his career.

Subjective Norms

Subjective norms are individuals' awareness of the values, beliefs, and norms of powerful people as well as of family members, instructors, friends, or other business people, which are seen as crucial to the individual's desire to fulfil such norms. Perceived behavioural control and the attitude to become an entrepreneur are greatly influenced by social norms, (Linan & Krueger, 2013; Byabashaija & Katono, 2011; Linan et al., 2011; Linan & Chen, 2009) along with the plan to venture into a business (Schlaegel & Koenig, 2014). As a result, people will be more motivated to start their own businesses and have stronger intentions to do so if others notice and appreciate the entrepreneurial activity in them. By fostering good entrepreneurial attitudes and enhancing perceived capacity to launch a business, entrepreneurial activity that is encouraged by societal norms increases entrepreneurial motivation. According to Hopp & Stephan (2012), strong and supportive social norms which exist in the environment and acknowledge the accomplishment of an individual will enhance start-up motivation.

Perceived Behavioral Control

The term "perceived behavioural control" describes how individuals feel when engaging in behaviours that they can adopt, manage, and master (Ajzen, 1991; Scholten et al., 2004; Nabi & Holden, 2008). People are more likely to launch a business when they believe they have the capacity to act entrepreneurially (Amorós & Bosma, 2014). Ajzen (2012a, 2011, 2005) contends that perceptions of behavioural control are based on control beliefs about the existence of factors that can facilitate or impair the performance of the behaviour. The capacity to identify, assess, and take advantage of market opportunities is crucial. This is because having the necessary skills will enable people to access possibilities in the market, resources, role models, social support from others, and entrepreneurial help. This can increase their ability to have better perceptions of control over the behaviours. According to Geissler & Zanger (2013) and Ramos-Rodriguez et al. (2010), those who have the knowledge and abilities necessary to launch a business and can identify other entrepreneurs are more likely to spot business possibilities.

According to Townsend et al. (2010), perceived competence has a bigger impact on motivation to start a business than perceived outcomes. In other words, individuals must initially assume that they have all the components necessary to successfully complete the task of beginning a business firm, allowing them to perceive the predicted consequences. Accordingly, opportunity identification has been linked positively to entrepreneurial intent (Zhang & Yang, 2006).

Formal Entrepreneurship Education

The entrepreneurship education is not just a study of business management; rather, it helps students prepare themselves for starting a new endeavour by integrating their experience, talents, and knowledge to launch and grow a business (Hynes and Richardson, 2007; Nabi and Holden, 2008). In addition, by giving students access to mastery experiences, role models, social support, and assistance, education increases their entrepreneurial efficiency. This takes shape because of their participation in hands-on learning exercises, the creation of business plans, and simulated or actual small business operations (Fiet, 2020; Segal et al., 2005).

Universities clearly play a beneficial role in shaping and encouraging entrepreneurial purpose. By exposing the students to the underlying theories and practicalities, this will immediately influence their entrepreneurship. Many nations throughout the world have addressed the implementation of entrepreneurial education in schools and colleges (Rubin and Cunniff, 1996; Erkkila, 1996; Cohen et al, 2000; Fayolle et al., 2005; Kuratko, 2006; Cheung, 2008). Over the globe, more than 1600 universities offered at least one tertiary-level course on entrepreneurship.

Locally, Hardy et al. (2015) emphasise the two primary internal and external components that make up Malaysia's ecosystem for entrepreneurship education. The term "external factors" refers to a group of closely related exterior characteristics, including the corporate environment, government and private sector support, NGOs, society, and institutions. Whilst internal aspects include higher learning institutions' management, academic and non-academic personnel, university entrepreneurship centres' performance, educational initiatives, the growth of student entrepreneurs, the competence of teachers, and students' preparation. The success of entrepreneurship education in tertiary learning institutions with the goal of instilling entrepreneurial spirit and attitudes among students can be influenced by a good combination of these two variables.

To equip university students with entrepreneurial abilities, the government should use entrepreneurship education as one of its initiatives. According to Badariah et al. (2016), this step will help to nurture entrepreneurial mindset among students which indirectly help to produce more entrepreneurs among graduates in the future. In fact, the program can be a medium to produce entrepreneurs with self-resilience and self-efficacy which are vital for them to possess in facing the challenges and risks as entrepreneurs.

Effects of Gender on Entrepreneurial Intentions

An individual's intention to launch a new business can be greatly influenced by their entrepreneurial intention, which is clearly a conscious action (Tomy & Pardede, 2020). However, studies have also shown that gender perceptions about entrepreneurship have a big impact on people's inclinations to start their own businesses (Gupta et al., 2009). Even though numerous gender differences in entrepreneurship have been shown using data from actual entrepreneurs, some research studies have sought to corroborate these differences at the level of entrepreneurial intention (Zhao, Seibert, & Hills, 2005). Gender is merely a background factor that indirectly affects processes related to employment through other related variables, in accordance with career models (Abele, 2000). Taking this into account, entrepreneurship may be described as a sort of planned behaviour that may be studied using entrepreneurial intention models (Mueller, 2011).

According to Miranda et al. (2017), gender has long been thought to be one of the factors influencing the process of commercialising research findings. According to earlier studies (Karimi et al., 2014; Malebana & Swanepoel, 2015; Robledo et al., 2015; Feder & Nițu-Antonie, 2017; Palupi & Santoso, 2017), gender is substantially associated to entrepreneurial intention and the factors of entrepreneurial intention in the TPB.

Method

Samples

The sample was drawn from a total of 1220 final-year diploma and degree students from UiTM Terengganu three (3) campuses (Dungun, Bukit Besi, and Kuala Terengganu) who had taken the entrepreneurship course during their academic year. 350 respondents were selected for the sampling based on the population. To make sure the sample size has enough statistical power, Krejcie and Morgan's (1970) sampling method was used. The study used a probability approach and stratified random sampling as its sampling technique. Since a larger sample may be obtained using this sampling technique, the results can be broadly extrapolated to represent the population.

Procedures

The research utilises four (4) major contributing elements which are attitude toward entrepreneurship, subjective norm, perceived behaviour control and formal entrepreneurship education to investigate the influence of gender toward entrepreneurship intention among students.

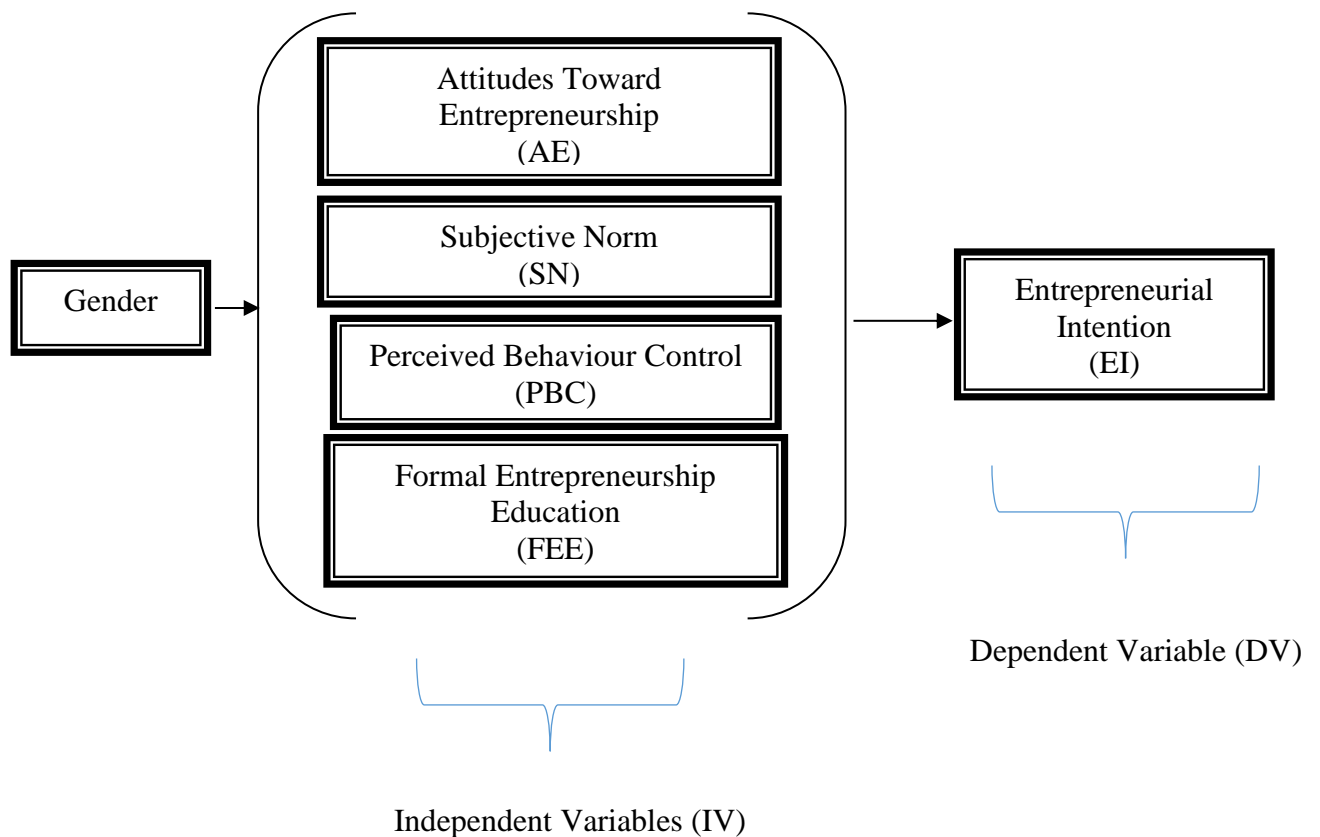


Figure 1: Theoretical Framework of the Study

Hypothesis Development

Based on the review of related literature, this study develops a few main hypotheses as listed below:

Hypothesis 1: Entrepreneurial Intention

H1: There is a differences in students' entrepreneurial intention based on gender.

Ho: There is no differences in students' entrepreneurial intention based on gender.

Hypothesis 2: Attitudes Towards Entrepreneurship

H2: There is a differences in students' attitudes towards entrepreneurship based on gender.

Ho: There is no differences in students' attitudes towards entrepreneurship based on gender.

Hypothesis 3: Subjective norms

H3: There is a differences in students' subjective norms based on gender.

Ho: There is no differences in students' subjective norms based on gender.

Hypothesis 4: Perceived Behavior Control

H4: There is a differences in students' perceived behavior control based on gender.

Ho: There is no differences in students' perceived behavior control based on gender.

Hypothesis 5: Formal Entrepreneurship Education

H5: There is a differences in students' formal entrepreneurship education based on gender.

Ho: There is no differences in students' formal entrepreneurship education based on gender.

Measurement

A series of questionnaires were used to collect the study's data. A Likert scale was used to construct the questionnaire statements and rate them (1 = Strongly disagree to 5 = Strongly agree). Böckenholt (2017) asserts that a measurement scale with 5 or more items would produce better results than one with fewer items. Subsequently, the data were examined using statistical analysis tools. The model creation and analysis in this work were supported with the usage of SPSS version 26 software.

Results and Discussion

Validity and Reliability

Table 1: The Reliability Analysis

VARIABLE	ALPHA
Entrepreneurship Intention (EI)	0.971
Attitude toward Entrepreneurship (AE)	0.798
Subjective Norms (SN)	0.671
Perceived Behavioral Control (PBC)	0.865
Formal Entrepreneurship Education (FEE)	0.894

Table 1 shows the overview of Cronbach's Alpha for all the variables of this research. As recommended by Hair *et al.* (2003), where the value is greater than 0.6, the variables are good and dependable.

*Analysis Of Respondents' Profile***Table 2: The Demographic Distribution of the Respondents**

Items		Frequency	Percent
Gender	Male	190	54.3
	Female	160	45.7
Age	21-22	345	98.6
	23-24	5	1.4
Faculty	Business Management	66	18.9
	Accounting	30	8.6
	Hotel and Tourism Management	46	13.1
	College of Computing, Informatics and Media	60	17.1
	School of Electrical Engineering	48	13.7
	School of Chemical Engineering	49	14.0
	School of Mechanical Engineering	51	14.6

Table 2 summarizes the demographic information of the respondents. The table shows the frequency and proportion of several items in a data set, together with the respondents' age, gender, and faculty. In the dataset, there were 160 female participants and 190 male participants, or 45.7% and 54.3%, respectively. 1.4% of the respondents were between the ages of 23 and 24, whereas most of the group (98.6%) were between the ages of 21 and 22. The information regarding the respondents' faculties was also included in the data set. The Faculty of Business Management had the largest group, with 66 members (18.9%), while the Faculty of Accounting had the smallest with 30 members (8.6%).

Objective 1: To Examine The Differences In Students' Entrepreneurial Intention Based On Gender.**Table 3: The T-Test of Students' Entrepreneurial Intention Base on Gender**

Gender		N	Mean	Std. Deviation	t-value	sig.
Entrepreneurship Intention	Male	190	3.714	0.626	-5.836	.000
	Female	160	4.126	0.694		

The table presents means and standard deviations for gender differences. The t-values were -5.836; and the significant values indicated that the gender differences were statistically significant ($p < 0.05$). The results were consistent with the previous research conducted by Malebana and Swanepoel (2015), showing notable variations between male and female students. The results of this survey indicated that female students were more likely to start their own business compared to male students. As noted by Abele (2000), gender is merely a background variable that indirectly influences career-related processes through other associated variables. Nevertheless, it is suggested that gender also serves as a determining factor for entrepreneurial intents in this study. This finding is supported by Wilson *et al.* (2004) who have found that social and relational incentives, such as respect, helping others, and

creating jobs, had a greater influence on female participants who were eager to launch their own businesses.

Objective 2: To Examine The Differences In Students' Attitudes Towards Entrepreneurship Based On Gender.

Table 4: The T-Test of Students' Attitudes of Entrepreneurship Based on Gender

	Gender	N	Mean	Std. Deviation	t-value	sig.
Attitude towards Entrepreneurship	Male	190	3.758	0.149	-5.791	.000
	Female	160	3.855	0.165		

Significant gender variations were observed in attitudes towards entrepreneurship. The gender differences were statistically significant ($p < 0.05$), as indicated by the t-values of -5.791. The results were consistent with the study conducted by Malebana and Swanepoel (2015) showing significant differences between male and female students. However, it was shown in this study that female respondents had significantly higher mean scores (3.855) compared to that of male respondents (3.758) for the variable of assessing attitude toward entrepreneurship. This result validated the earlier research conducted by Botha and Bignotti (2017) and Ephrem et al. (2013). The female participants believed that the aspiration for independence, self-discovery, and driving forces serve as significant drivers for pursuing entrepreneurship. This indicates why, rather than the anticipated advantages from their best employment option, respondents felt that a self-employment mentality could provide them with more utilities in terms of money, independence, risk-taking, and work effort.

Objective 3: To Examine The Differences In Students' Subjective Norms Based On Gender.

Table 4: The T-Test of Students' Subjective Norms Based on Gender

	Gender	N	Mean	Std. Deviation	t-value	sig.
Subjective Norms	Male	190	3.689	0.196	3.274	.001
	Female	160	3.611	0.250		

Table 4 indicates there were also significant gender differences. The t-values were 3.274 and the significant values were less than 0.05. Males had significantly higher mean scores (3.689) for subjective norms compared to females (3.611). This finding was in line with the result of the previous study of Malebana and Swanepoel, (2015). This infers that those male respondents agreed that pressure from family, friends and society has effect to their preference to be entrepreneurs.

Objective 4: To Examine The Differences In Student's Perceived Behavioural Control Based On Gender.**Table 4: The T-Test of Students' Perceived Behavioural Control Based on Gender**

	Gender	N	Mean	Std. Deviation	t-value	sig.
Perceived Behavioural Control	Male	190	4.139	0.267	-.558	.577
	Female	160	4.156	0.295		

There was no statistically significant gender difference in perceived behavioural control ($p > 0.05$) as indicated by the t-value of $-.558$ and the significant value of $.577$. This conclusion did not reveal a statistically significant difference in respondents' perceptions of behavioural control between male and female, which contrasts with other studies (Farrington et al., 2012; Malebana and Swanepoel, 2015). All respondents agreed that people would feel more confident in their abilities if they had a variation of successful experiences. Therefore, regardless of gender, the stronger their entrepreneurial aim is, the more successful they must be as an entrepreneur. Consequently, their intention to become entrepreneurs will increase as they perceived themselves as having the power to create and sustain a new business and the capability to act in an entrepreneurial behaviour in the future.

Objective 5: To Examine The Differences In Formal Entrepreneurship Education Based On Gender.**Table 5: The T-Test of Formal Entrepreneurship Education Based on Gender**

	Gender	N	Mean	Std. Deviation	t-value	sig.
Formal Entrepreneurship Education	Male	190	4.607	0.314	-4.008	.000
	Female	160	4.738	0.292		

In terms of formal entrepreneurial education, there were also significant gender differences. Female students scored significantly higher on average (4.738) compared to that of male students (4.607). The finding indicated that entrepreneurship education positively impacted female students' confidence, capacities, and business skills. It is possible that this exposure has enhanced their desire to start their own company. This finding supported a study of Petridou, Sarri, and Kyrgidou (2009), which state that female students are more likely to seek entrepreneurial information, develop associated skills, and face career difficulties. This is consistent with other research (Carter & Collinson, 1999; Galloway & Brown, 2002) that show students are more likely to launch their own business after participating in entrepreneurship programs.

Conclusion

This main goal of the study is to find out if the respondents' mean scores of entrepreneurial aspirations and their variables differ significantly. This study looked at gender disparities in the mean scores for the variables of formal entrepreneurship education, subjective norms, attitude toward entrepreneurship, and perceived behavioural control. It can be concluded that there was a substantial difference in the respondents' gender categories' judgments of every mentioned criterion, except for perceived behavioural control. This finding implies that gender-

sensitive strategies are required for creating and implementing programs for undergraduate students' entrepreneurial development and assistance. When examining gender disparities in undergraduate entrepreneurship, it is critical to consider the opportunities and problems that could result from society norms, cultural expectations, and individual experiences. Ratten (2023) suggests that focusing on developing skills for both genders and broadening concepts of entrepreneurship could help close gaps. Educators, institutions, and associated organizations should make sure that all students, regardless of gender, have equal access to resources, mentorship, funding, and networking opportunities to assist and encourage both male and female undergraduate entrepreneurs. This could contribute to the development of a welcoming atmosphere that uplifts and supports all would-be business owners.

Future research should examine a larger population and sample size comprising more students from higher education institutions in Malaysia that will help to attain a higher degree of generality of the findings. Additionally, more accurate feedback and improved opinion representation will come from a larger sample size of respondents. Future researchers could adjust the variables by including more relevant elements such as personality traits like self-efficacy, achievement need, and ambiguity tolerance, as there were only four variables assessed in this study. Future studies may also consider the roles that demographics and contextual elements like age or programs have in influencing respondents' inclination for entrepreneurship. This could provide more options and viewpoints for consideration.

Acknowledgement

We would like to express our deepest gratitude to all team members (researchers/ authors) who made this research possible. We are also immensely thankful for the guidance, encouragement, and invaluable insights throughout this research. We extend our appreciation to the participants who generously volunteered their time and shared their experiences, without whom this research would not have been feasible. Additionally, we acknowledge the contributions of Universiti Teknologi MARA Cawangan Terengganu Kampus Kuala Terengganu for providing access to necessary resources and facilities. We are indebted to our colleagues/peers for their constructive feedback and assistance during various stages of this project. Their input significantly enriched the quality of our work. Finally, we would like to thank our families for their unwavering support, patience, and understanding during the arduous process of conducting this research.

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