


Exploring the Antecedents of Entrepreneurial Intention With the Theory of Planned Behaviour on Tunisian University Students

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ABSTRACT

This study proposes to use the theory of planned behaviour to predict students' entrepreneurial intentions in Tunisian context. A questionnaire-based survey was conducted to collect responses from 257 students. Regressions analysis was used to test hypotheses. The result shows that attitude, perceived behavior control, and subjective norms significantly influence the entrepreneurial intention. The findings will be useful for government to support entrepreneurship and encourage graduates to start their own businesses to solve even part of the unemployment problem among the youths. The article is one of the initial attempts in Tunisian context to understand the entrepreneurial intention by using the theory of planned behaviour.

KEYWORDS

Theory of Planned Behaviour, Entrepreneurial Intention, Students, Tunisia

INTRODUCTION

Encouraging entrepreneurship is viewed as a potential solution to the unemployment of young people (Aloulou, 2016). It has been perceived as an engine of socioeconomic growth by providing job opportunities and diverse goods/services to the population (Reynolds et al., 2000). Guerrero, (2008) state that entrepreneurship is seen as an innovative and creative process, which play the potential role in creating added and new value to products/services, increasing productivity, creating new job opportunities, revitalizing and diversifying markets, improving social welfare, and developing the national economy.

According, to official statistics from National Institute of Statistics for the third quarter of 2022, the unemployment rate is estimated at more than 37% among youth ages (15 - 24 year) (about 38.5% among men and 36.2% among women). It should be noted that the unemployment rate for higher education graduates increased to 24.3% in the third quarter of 2022 against 22.8% in the second quarter of the same year. This rate is 15.2% among men and 32.0% among women in the third quarter of 2022, according to the same source. The increasing rate of unemployment of higher education graduates

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is a major challenge for government. Tunisian Government has been offering many agencies and programs to encourage young people to start their own businesses. Moreover, during their educational lives, many universities offer entrepreneurship courses to foster entrepreneurship spirit in the society. These initiatives and programs have not enough impact on the number of business start-ups in Tunisia.

Understanding entrepreneurial intention is fundamental since it is considered a key factor for individuals to become entrepreneurs (Gird & Bagraim, 2008; Krueger et al., 2000; Mensah et al., 2021). Thus, countries that want their young people to be highly entrepreneurial should seek to know and explore the predictor dimensions of entrepreneurial intention.

As the entrepreneurial intention, is a planned behavior shaped by an individual's attitude toward venturing, perceptions of abilities to operate their new venture and perceptions of social norms about venturing, we adopt the Theory of Planned Behaviour perspective to explain entrepreneurial intention.

The Theory of Planned Behavior has been one of the most widely used theories to explain entrepreneurial intention and this theory is composed of three dimensions (Fayolle & Gailly, 2015; Mensah et al., 2021; Zaremohzzabieh et al., 2019): attitude, subjective norm and perceived behavioral control toward entrepreneurship. However, the relative importance of each of these predictors varies across analyzed behaviors and situations (Ajzen, 1991). The Theory of Planned Behaviour model have not been widely tested to predict the formation of entrepreneurial intentions of university business students in developing countries such as Arab countries in general (Aloulou, 2016; Ahmed et al., 2019; Nasri & Morched, 2023) and Tunisia in particular. The study aimed to examine the determinants of entrepreneurial intention of university business students by using the Theory of Planned Behavior.

The paper is organized as follows. The first section describes the theoretical framework, the key concepts, and the hypothesized model of entrepreneurial intentions based on theory of planned behaviour. Then, the methodology section describes the sample and measures used as well as present reliability analyses and descriptive statistics. The third section presents the empirical results while the last section discusses the findings, their implications, limitations and recommendation for further researches.

LITERATURE REVIEW AND HYPOTHESIS

Entrepreneurial Intentions

Entrepreneurial intentions play a central role in the entrepreneurship process because it is the starting stage and the incentive of entrepreneurship that encourages individuals to start their new businesses (Krueger & Carsrud, 1993). Different definitions of entrepreneurial intention have been proposed in previous research. Do and Dadvari, (2017) define intention as "individual's state of mind that directs their attention and personal experience to planned entrepreneurial behaviour." Entrepreneurship is moreover a process (Gartner et al., 2005; Linan & Chen, 2009) in which entrepreneurial intention is the first step (Lee & Wong, 2004). To be more specific, entrepreneurial behavior is the process of searching, evaluation, and exploitation of business opportunities to make new business activities (Shane & Venkataraman, 2000) with entrepreneurial intentions being the very first and very important step of the whole process (Krueger et al., 2000). Strong intention encourages behaviors, especially planned behaviors (Ajzen, 1991), so it is considered as a determinant of behaviors (Fayolle & Lassas-Clerc, 2006). Studying entrepreneurial intention is thus a practical and useful approach to understanding actual entrepreneurial behavior in the context of business students.

A number of theories from social psychology have been used to predict intentions. The Theory of Planned Behavior (Ajzen, 1991) is derived from the Theory of Reasoned Action (Fishbein & Ajzen, 1975), has become one of the most influential theories of human behaviour applied in almost every discipline concerned with understanding some type of human behaviour (Armitage & Conner, 1998), especially entrepreneurial behaviour (Kautonen et al., 2015; Krueger & Carsrud, 1993; Krueger et al., 2000). Thus, the Theory of Planned Behavior offers a coherent, parsimonious, highly generalizable,

and robust theoretical framework for understanding and predicting intentions (Kautonen et al., 2015; Krueger et al., 2000). An assumption of this theory is that, as most human behaviors are under volitional control, intention to perform a certain behavior is a good predictor of actual behavior (Fishbein & Ajzen, 1975). The Theory of Reasoned Action suggests that an individual's behaviour is predicted by his/her behavioural intention. This in turn is determined by the individual's attitude toward and subjective norm regarding the behaviour. Each attitude and subjective norm is affected by a set of noticeable beliefs (Ajzen, 1991). The Theory of Planned Behaviour is an extended form of Theory of Reasoned Action, with the addition of a new variable, perceived behavioural control.

The Theory of Planned Behavior postulates that intention is shaped by perceived behavioral control, attitudes, and subjective norms related to performing a behavior (Ajzen, 1991). The Theory of Planned Behavior has been used in entrepreneurial research and a guideline to develop the conceptual models. The Theory of Planned Behavior proposes three factors that account for variations in entrepreneurial intention and that can thus be used to predict entrepreneurial behavioral intention. These are personal attitudes, subjective norms, and perceived behavioral control.

Attitude Towards Entrepreneurship

In the Theory of Planned Behaviour model, attitude is considered as one of the determinants of intention. Ajzen (1991) defines it as "the degree to which a person has a favorable or unfavorable evaluation of a particular behavior". Several studies demonstrate a positive correlation between attitude and behaviour (Krueger et al., 2000; Souitaris et al., 2007; Gird & Bagraim, 2008). In entrepreneurial studies, attitude is the positive or negative evaluations of an individual concerning the construction of a new business (Krueger et al., 2000; Autio et al., 2001; Segal et al., 2005; Gelderen et al., 2008, 2006; Linan & Chen, 2009; Maes et al., 2014). A positive attitude towards entrepreneurship of individuals may also be recognized by the preference and desire to own a business rather than to be hired (Miranda et al., 2017). Attitude towards entrepreneurship is also associated with the assessment of advantages and disadvantages (Maresch et al., 2016). Individuals who are more positive about the results of entrepreneurship have higher positiveness about entrepreneurial activities; hence, stronger entrepreneurial intentions (Krueger et al., 2000; Maes et al., 2014). Miranda et al., (2017) found out that the most important factor in entrepreneurial intention is attitude towards entrepreneurship. This implies that a positive attitude towards entrepreneurship will strengthen an individual's intention to open an entrepreneurial enterprise (Kautonen et al., 2015; Nasri & Morched, 2023). Hence, the following hypothesis is developed:

H1: The attitude towards entrepreneurship has a positive impact on the entrepreneurial intentions of students.

Subjective Norm

Another construct within the Theory of Planned Behaviour that is expected to influence intentions is subjective norm (Fishbein & Ajzen, 1975). Ajzen (2002), stated that the influence of people around the individual can be significant toward their behaviors and intention to take action. The subjective norm can be defined as the beliefs of individuals on how people who are important to them can influence their actions or behaviors. In entrepreneurial studies, subjective norm refer to how a person considered the views, values and perspectives of important people, such as family members, spouse and friends, to have on his/her intention to be an entrepreneur (Kautonen et al., 2015; Souitaris et al., 2007; Nasri & Morched, 2023). Moriano et al. (2012) suggested that subjective norm influences entrepreneurial intention. In addition, Gelderen et al. (2008), also found that subjective norm was important in explaining intention towards entrepreneurship. Similarly, Carr & Sequeira (2007) and Kautonen et al. (2015) have also obtained positive relationship between social norm and entrepreneurial intention in their studies. Therefore, the following hypothesis is proposed:

H2: Subjective norm has a positive impact on the entrepreneurial intentions of students.

Perceived Behavioural Control

Perceived behavioural control is one of the main constructs of the Theory of Planned Behaviour and defined as the individual's perception of the ease or difficulty of acting (Ajzen, 2002). Perceived behavioural control would include not only the feeling of being able but also the perception about the control ability of the behavior. Ajzen (1991) has divided perceived behavioral control into two components, which include the availability of resources required to conduct the behavior and the focal individual's self-confidence in the capacities to perform the behavior. In addition, Ajzen & Cole (2008) argue that perceived behavioral control is identified by control beliefs involving in the availability of factors (market opportunities, resources, role models, social capitals) which might facilitate or impede performance of behavior. For the purposes of this study perceived behavioural control is understood as the the ability to leverage human, social and financial resources necessary to start an entrepreneurial enterprise (Botha & Bignotti, 2017). The entrepreneurial ability refers to the knowledge and skills necessary for entrepreneurship, such as management, negotiation, marketing, finance, and law. Previous research has found a significant positive relationship between perceived behavioral control and an entrepreneurial intention (Krueger et al., 2000; Souitaris et al., 2007; Gelderen et al., 2008; Gird & Bagraim, 2008; Solesvik et al., 2012; Nasri & Morched, 2023). Therefore, the following hypothesis is proposed:

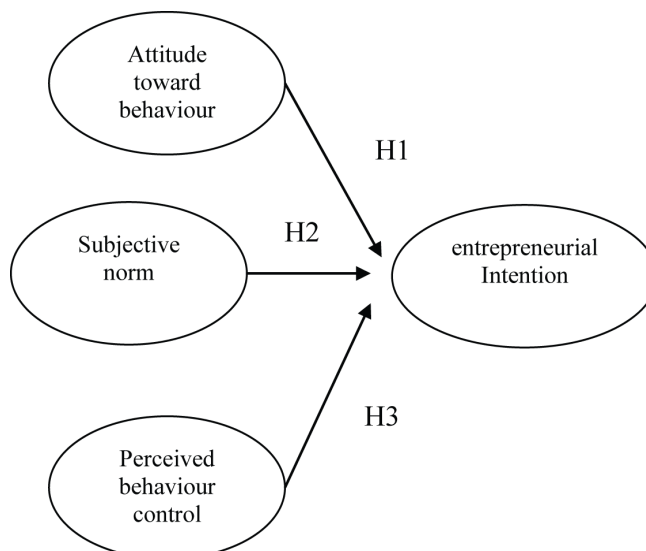
H3: Perceived behavioural control has a positive impact on the entrepreneurial intentions of students.

RESEARCH METHODOLOGY

Data Collection

This study employed the survey method to investigate entrepreneurial intention of business students of the Higher Institute of Management, at Gabes University. The use of student samples must be appropriate, because the respondents were "students facing an immediate career choice, for whom

Figure 1. Conceptual model based on theory of planned behaviour



starting a business may be a realistic option” (Krueger et al., 2000). These samples become very common in entrepreneurship research (Linan & Chen, 2009). Data will be collected in a classroom setting, whereby the respondents will be given 10-15 minutes to answer the questions. It is done so to ensure that respondents are given enough. In addition, the data was gathered over a period of two months extending from October to the end of November 2020.

Demographic information of respondents is presented in Table 1. The results of descriptive statistics of demographic indicate that the large proportion of respondents is female, accounting for 88.31% while only 11.7% of respondents are male. This may be attributed to the high number of female students in the Higher Institute of Management, at Gabes University. In terms of fields of study, it was found that 81 of the students (31.5%) were from the Fundamental and Applied Licenses in Economics, followed by 62 students (26.8%) from Masters. Add to those 59 students (23%) from the Fundamental and Applied License in Management, followed by 54 students (21%) from the Fundamental and Applied License in Computer Management.

Measures

The questionnaire used in this study consisted of two parts. In the first part, demographic questions are designed to obtain respondents’ information such as gender and fields of study. The second part is concerned with the antecedents of entrepreneurial intention, which are attitude, subjective norm and perceived behaviour control. All items in questionnaires are to be developed by referring to past literatures. Questions and sources for all variables are presented in Table 4 in the Appendix. Entrepreneurial intentions were measured using six items taken from Davidsson, (1995); Solesvik et al., (2012) and Liñán & Chen, (2006). The measure of attitudes, consisting of six items was adopted from Liñán and Chen, (2006) and Solesvik et al., (2012). The measure of subjective norm, consisting of three items was adopted from Liñán & Chen, (2006); Souitaris et al., (2007) and Solesvik et al., (2012). The perceived behaviour control measure, consisting of five items was adopted from Liñán and Chen, (2006); Souitaris et al., (2007) and Solesvik et al., (2012). The items were translated from English into Arabic and using the back translation method to ensure the reliability of the translation process. The questionnaire was adjusted through discussing with four experts in entrepreneurship in others universities and pilot test with 24 business students. Responses were measured on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), except for demographics and experience of usage, which were measured on a nominal scale. Data obtained from questionnaires will be analyzed through the SPSS 23.0 statistical packet program and the proposed relations were tested through regression analyses.

FINDINGS

Exploratory Factor Analyses

Exploratory Factor Analyses (EFA) were conducted to test the underlying patterns of the measurement scales. Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett test of sphericity tests

Table 1. Demographic profile of the respondents (N=257)

Measures	Items	Frequency	Percentage %
Gender	Male	30	11.70%
	Female	227	88.31%
Field of Study	License in Management	59	23.00%
	Licenses in Economics	81	31.50%
	License in Computer Management	54	21.00%
	Masters	62	24.10%

indicated the appropriateness of data for conducting factor analyses. Principal Component Factoring and Varimax Rotation are employed to the data set. Then Cronbach's alpha analyses were applied to measure internal consistency of the constructs. Nine items, INT1, INT2, ATT1, ATT2, ATT5, ATT6, PBC1, PBC2 and PBC5, were eliminated, due to lower standardized outer loading recommendation by Churchill (1979). No cross-loadings between measurement items were observed which satisfied the condition of discriminant validity at item level. Exploratory Factor Analyses results of attitude, subjective norm, perceived behavioural control and entrepreneurial intention showed that all four scales were unidimensional as expected (see Table 2). Reliabilities were all high above the acceptable threshold (0.786; 0.832; 0.849 and 0.885 respectively). Thus, the measurement model showed an adequate convergent validity and discriminant validity.

Regression Analyses

Having confirmed the construct validity and the instrument reliability, we ran multiple regression analysis. Table 3 summarizes the regression results. Variance Inflation Factor (VIF) is commonly used to detect any collinearity problem (Stevens, 1992). As a guideline, a VIF greater than 10 indicates a multicollinearity problem (Myers, 1990). An examination of VIF (1.083) for both variables in the final model showed that multicollinearity was not a potential problem. In Table 3, the regression results showed that all independent variables contribute significantly to the explanation of the variance in entrepreneurial intention ($F = 42.787, p < .000, R^2 = 0.337$). The regression results also, showed that attitude towards entrepreneurship has the strongest effect on entrepreneurial intention ($\beta = 0.438, p$

Table 2. Rotated component matrix

Items	Factor 1	Factor 2	Factor 3	Factor 4
I will make every effort to start and run my own firm. (INT1)	0.679			
I am determined to create a business venture in the future. (INT2)	0.777			
I have very seriously thought about starting firm. (INT3)	0.702			
I have thought of entrepreneurship as a career option. (INT3)	0.618			
It is desirable for me to become an entrepreneur(ATT1)		0.824		
It is attractive for me to become an entrepreneur(ATT2)		0.824		
My closest family members think that I should pursue a career as an entrepreneur (SN1)			0.705	
My closest friends think that I should pursue a career as an Entrepreneur(SN2)			0.780	
People that are important to me think that I should pursue a career as an entrepreneur(SN3)			0.762	
As an entrepreneur I would have sufficient control over my business(PBC2)				0.898
There are very few circumstances outside my control that may prevent me from becoming an entrepreneur(PBC3)				0.898
KMO	0.790	0.668	0.716	0.500
Bartlett	454.90	215.354	296.142	255.690
Percentage of total variance explained	96.405	82.424	74.890	89.807
Cronbach alpha	0.849	0.786	0.832	0.885

Notes: Only loading > 0.5 are shown; Extraction method: Principal Component Analysis; Rotation Method: Varimax with Kaiser normalisation; a rotation converged in 25 iterations

Table 3. Regression analysis for predicting entrepreneurial intentions

Antecedents of the TPB as independent variables	Beta (β)	VIF	Sig.
Attitude	0.438	1.115	0.000
Subjective norm	0.139	1.600	0.007
Perceived behaviour control	0.161	1.689	0.522
R	0.580		
R Square (R^2)	0.337		
Adjusted R Square (R^2)	0.329		
F	42.787		
Significance of F	0.000		

< 0.000), followed by perceived behaviour control ($\beta = 0.161$, $p < 0.001$) and subjective norms ($\beta = 0.139$, $p < 0.001$) respectively. Overall, attitude, perceived behaviour control and subjective norm together explain 58 percent of the variance in the behavioural intention. However we can conclude that H1, H2 and H3 were supported.

DISCUSSION

The purpose of this study was to investigate entrepreneurial intention of students of the Higher Institute of Management, at Gabes University (Tunisia) based on the Theory of Planned Behaviour. The results provide strong evidence that all the main antecedents of entrepreneurial intention contribute significantly to the explanation of entrepreneurial intention. These antecedents explained 33.7% of variance in intention. It has also been noted that attitude has more influence than perceived behaviour control and subjective norm on students' entrepreneurial intentions.

The results of this study show that attitude towards entrepreneurship is found to be a significant determinant to predict the entrepreneurial intention. This is similar to the Theory of Planned Behaviour model, which has been applied in other studies (Kautonen et al., 2009; Moriano et al., 2012; Adekiya & Ibrahim, 2016). Moreover, the result was consistent with Aloulou, (2016), Al-Mamary et al., (2020) and Nasri & Morched, (2023), which found that attitude towards entrepreneurship has a positive impact on entrepreneurial intention of university students in Saudi Arabia.

Another finding from this study is that the perceived behavioural control influences the entrepreneurial intention. The result is confirmed with the original the theory of planned behaviour model, which suggests that perceived behavioural control influences entrepreneurial intention. This is also, in line with the previous findings of Moriano et al. (2012), Aloulou, (2016), Al-Mamary et al., (2020) and Nasri & Morched, (2023), which found significant relationship between perceived behavioural control and entrepreneurial intention. Finally, this study found that subjective norm has a significant effect on entrepreneurial intention. This means that the support of parents, family members and friends will help people who may want to become an entrepreneur (Eid et al., 2019). Therefore, social support is important in the development of entrepreneurship intention, because it will increase the courage and confidence of would-be entrepreneurs (Turker & Sonmez, 2009). This is similar to the theory of planned behaviour model, which has been applied in other adoption studies (Geldereren et al. (2008); Carr & Sequeira, (2007) and Kautonen et al. (2009). These results are also, in line with those of previous studies in entrepreneurship (Karahanna et al., 2006; Hsu et al., 2017; Wang et al., 2011; Aloulou, 2016; Eid et al., 2019; Al-Mamary et al., 2020; Nasri & Morched, 2023).

CONCLUSION, IMPLICATIONS, LIMITATIONS, AND FUTURE RESEARCH

The purpose of our study is to apply the theory of planned behaviour model to predict the formation of entrepreneurial intention of students of the Higher Institute of Management, at Gabes University (Tunisia). The direct and significant effect of attitude towards entrepreneurship, perceived behavioural control and subjective norm on the entrepreneurial intention to become an entrepreneur confirmed the earlier research related to testing Theory of planned behaviour in the context of entrepreneurship. The present study has many implications for future research in the field of entrepreneurship in Tunisia. First, the pointing out the factors impacting the entrepreneurial intention of students will contribute to developing the field of entrepreneurship among young people in Tunisia. It is well noted that the attitudinal and perceptual changes are key points in shaping students' intention to entrepreneurship (Zhang, 2018). This provides significant advices for entrepreneurship educators, who should pay more attention to these changes along the educating process. University policymakers would be advised to develop a strategy to promote education about entrepreneurship in different universities in order to cater for students' attitudes toward entrepreneurial career choice. Hence, government policies should use effective media advertising such as radio and TV advertisement, leaflets, brochures, and web pages to introduce entrepreneurship culture to a wider audience and educate young people's acceptance of self-employment. Second, the development of university programs can drive improvements in individuals' entrepreneurial self-efficacy (Sanchez, 2011). This is done through a myriad of activities, including formal academic programs, experiential learning, internships, competitions, and mentoring (Zhang, 2018). Third, the Subjective in this study appears to affect the entrepreneurial intention, there is great need to include young people's families in any strategies or initiatives aimed to enhance young people's entrepreneurial intention (Eid et al., 2019). Thus, including the broader family may help to build a more entrepreneurship-friendly culture that might favour young people's acceptance of self-employment as a career choice. Such involvement could also enhance students' confidence in their skill and ability to become successful entrepreneurs. There are some limitations for this study. First, the main limitation lies in that it would not be possible to generalize the study's findings because the small number of the respondents (especially the number of male students) and with only one field of study (business students) participating in the survey. The second limitation relates to the geographic scope of the sample being limited to one Tunisian university. In order to generalize our findings, a representative sample of business students by including more students from other Tunisian universities, this may show various results. Finally, the factors selected in this study may not cover all factors that could influence the entrepreneurial intention in Tunisia. Therefore future studies can consider other factors, which might have an influence entrepreneurial intention.

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APPENDIX

Table 4. Survey instrument

Constructs	Items	Measures
Entrepreneurial intention Adopted from Solesvik et al., 2012; Liñán and Chen, 2006; Davidsson, 1995	INT1	I am ready to do anything to be an entrepreneur.
	INT2	My professional goal is to become an entrepreneur.
	INT3	I will make every effort to start and run my own firm.
	INT4	I am determined to create a business venture in the future.
	INT5	I have very seriously thought about starting firm.
Attitude towards behaviour Adopted from Solesvik et al., 2012; Liñán and Chen, 2006	INT6	I have thought of entrepreneurship as a career option.
	ATT1	Being an entrepreneur implies more advantages than disadvantages to me
	ATT2	Being an entrepreneur would give me great satisfaction
	ATT3	It is desirable for me to become an entrepreneur
	ATT4	It is attractive for me to become an entrepreneur
	ATT5	If I had the opportunity and resources, I would love to start a business
Subjective Norm Adopted from Solesvik et al., 2012; Souitaris et al., 2007; Liñán and Chen, 2006	ATT6	Among various options, I would rather be an entrepreneur
	SN1	My closest family members think that I should pursue a career as an entrepreneur
	SN2	My closest friends think that I should pursue a career as an Entrepreneur
Perceived behavioural control (SI) Adopted from Solesvik et al., 2012; Souitaris et al., 2007; Liñán and Chen, 2006	SN3	People that are important to me think that I should pursue a career as an entrepreneur
	PBC1	If I wanted to, I could easily become an entrepreneur
	PBC2	It is entirely up to me whether or not I become an Entrepreneur
	PBC3	As an entrepreneur I would have sufficient control over my business
	PBC4	There are very few circumstances outside my control that may prevent me from becoming an entrepreneur
	PBC5	For me, being self-employed would be very easy