

QATAR UNIVERSITY  
COLLEGE OF BUSINESS AND ECONOMICS  
ASSESSING THE ENTREPRENURIAL INTENTION OF UNDERGRADUATE  
STUDENTS:  
A MULTI-DIMENSIONAL APPROACH  
BY  
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## Abstract

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Title: Assessing the Entrepreneurial Intention of Undergraduate Students: A Multi-dimensional Approach

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**Purpose-** The purpose of this study was to develop and test a comprehensive model incorporating insights from three distinct approaches namely behavioral, psychological and contextual factors, aiming to identify significant variables influencing entrepreneurial intention among undergraduate students in Qatar.

**Design-** This research was developed by involving a sample of undergraduate students enrolled in Qatar University. Data was collected via a self-administered questionnaire containing several group of questions related to behavioral, psychological, and contextual constructs and entrepreneurial intention. In addition, two new factors that are pertinent to the region was measured.

**Findings-** The result show that personal attitude, perceived behavioral control and self-confidence significantly influence entrepreneurial intention. In addition, other variables in the model influence entrepreneurial intention indirectly.

**Research limitation-** Performing focus groups in order to gain deeper insights into factors shaping entrepreneurial intention among undergraduate students who are faced with forces that are unique to the region, such as extreme wealth and high earning jobs to fresh graduates.

**Originality-** This is the first study of its kind that aims to assess entrepreneurial intention from more than one approach. Also, two new factors are introduced which have the potential to explain entrepreneurial activity.

**Keywords-** Entrepreneurial intention, Behavioral approach, Psychological approach, Contextual approach

**Paper type-** Research project

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## Chapter 1: Introduction

Since the 1990's, the term “entrepreneurship” has been overly used in the media and political debate as it is widely accepted by analysts and economic theoreticians that economic growth, employment, innovation and productivity are fueled by entrepreneurship and entrepreneurs (Ahmad & Hoffman 2008). This recognition is evident today in the actions of several policy makers, both in developing and developed economies, which sometimes can be as direct as offering subsidies to start-ups (Ahmad & Hoffman 2008).

Throughout history, there are many confirmations that entrepreneurial function aided in the process of economic growth (Baumol 1968). According to Baumol (1968), policy makers are very well aware of entrepreneurial contribution in the process of economic growth and achieving self-sufficiency. Hence, identifying entrepreneurial talent and assessing their drivers is of significant interest to policy makers. In addition to sustaining long-term economic growth, Soriano (2017) argues that supporting entrepreneurs has the potential to impede the impact of economic crisis.

This research aims to test the entrepreneurial intention of undergraduate students enrolled in Qatar University. Undergraduate students upon completing their degree requirements would partially stimulate the pace of economic growth by either joining an established entity or starting up an idea of their own. In previous literature, models has been established that can significantly determine the entrepreneurial intention; however, such models have not been examined in economies that are seeking to diversify its economy from its over-dependence on natural resources, such as Qatar. In addition to assessing established models, this study also aims to measure some new factors that are pertinent to



the region only. Assessing the impact of established and new factors should help policy makers and academic institutions in creating an environment that nurtures new ideas and takes them through the process of implementation.

The following sections will provide a summary of extensive literature written on the subject of entrepreneurial intention. This paper will then state the tools and techniques incorporated in this study to test the proposed model. Lastly, after disclosing the research findings, this paper concludes with a summary of the paper and directions of future research that can add further significance to its findings.

## Chapter 2: Literature Review

The two major strands of entrepreneurial intention (EI) research is identified are, the theory of planned behavior from the social psychology field and the other more specifically examining the field of entrepreneurship by assessing individual attributes of would-be entrepreneurs (Linan & Fayolle 2015). It is crucial to mention that while recent research also encompass entrepreneurship at an organizational level, known as entrepreneurship orientation, similar to Linan & Fayolle (2015) this paper solely works with entrepreneurship at an individual level.

According to Zhao *et al.* (2005), individuals who demonstrate the belief that they can succeed in entrepreneurship, labelled as those with high entrepreneurial self-efficacy, are more likely to become entrepreneurs or exhibit the intentions of doing so. In addition, their study also validated the proposition that, entrepreneurial learning/education and previous entrepreneurial experience in master level students significantly influenced entrepreneurial self-efficacy and entrepreneurial intention. Furthermore, consistent with previous literature, Van Gelderen *et al.* (2008) via an empirical investigation into the usefulness of approaching entrepreneurial intention by adopting the theory of planned behavior (TPB) states that the TPB indeed is a valid model to predict EI.

The impact on EI is also largely researched from personal level variables namely personality traits, psychological variables, demographics and experience (Linan & Fayolle 2015). Personal level variables could also encompass other dimensions that are pertinent to an individual only. Such was the case with Carr & Sequeira (2007) whose study indicates that, there exist a significant relationship between prior family business and entrepreneurial intent. In addition, exposure to entrepreneurship can expand to also

include, if an individual has had any prior experience starting a business and/or if the individuals close relatives/friends own a business (Gird & Bagraim 2008).

Furthermore, several studies on entrepreneurial intent also aim to analyze the effect on entrepreneurship education on intent. Comparing German-speaking students with their MIT counterparts, Franke & Luthje (2004), discovered that MIT students were more inclined towards entrepreneurship and the significant factor that they ascribed to this difference was entrepreneurship education. Moreover, several studies aimed at examining the influence of regional, cultural or institutional environments on entrepreneurial intention by comparing samples across different countries. Such studies contributed significant context-related differences in participant's intentions. In addition, the literature on entrepreneurship also expands to analyzing it as a process that examines the transition from possessing EI to new venture creation.

### Entrepreneurship Intention in the Middle-east

Kedar (2009) categorized major factors, into push and pull factors, which can attract females into entrepreneurship worldwide. The main push factor include drive for personal independence and pull factors refer to forces in the environment that encourage a person to pursue entrepreneurial activity.

Sadi and Al Ghazali (2010) compared male and female perceptions on female entrepreneurship motivation and discovered that according to women, factors such as independence, improving social status and increasing wealth motivated female entrepreneurship. Whereas, men attributed factors such as limited employment opportunities and personal control over their life and freedom in their endeavors as factors that motivated female entrepreneurship.

Ahmed (2011) upon interviewing 314 female entrepreneurs in Saudi Arabia discovered that women tend to pursue entrepreneurship in areas that they relate with such as beauty and child-related services. In addition, there was a lack of young female entrepreneurs which indicated that societal pressures limit entrepreneurial activity among females. Ahmed (2011) also inferred that Saudi female entrepreneurs are well equipped with the necessary skills and competencies to succeed.

Aloulou (2016) assessed the entrepreneurial intentions of final year Saudi business students by applying the theory of planned behavior. The study discovered that the theory of planned behavior indeed is a significant tool to predict the entrepreneurship intention where subjective norm influenced personal attitude more than it did on perceived behavioral control.

Saiqal & Yousif (2017) conducted a quantitative study on UAE national's enrolled in business and engineering majors, to assess their entrepreneurial intention adopting the theory of planned behavior. Their study shows that attitude and perceived behavioral control directly influences entrepreneurial intention while subjective norm indirectly influences intention via attitude and perceived behavioral control.

### Proposed Model Derived from Literature

A holistic measurement of entrepreneurial intention (EI) requires incorporating insights from both, psychological and behavioral approaches (Ferreira *et al.* 2012). A psychological approach involves understanding the relationship between an individual's unique characteristic and entrepreneurship. Whereas, the behavioral approach examines the behavior of an individual and how it can foment entrepreneurship. Moreover, the entrepreneurial support model (ESM) incorporates perceived structural and educational

support into the entrepreneurial intention function. The ESM aims to measure the extent to which an individual's perception of contextual support factors influence entrepreneurial intention.

### Psychological Approach

Entrepreneurial intention from a psychological approach is “an individual prospective and innovation of venturing a self-owned enterprise or starting up a new business” (Nasip *et al.* 2017). Espiritu-Olmos & Sastre-Castillo (2015) assessed EI among public university students in Madrid (Spain) and deduced six dimensions of personality trait that significantly influence EI. Those dimensions are, internal control, need for achievement, kindness, tolerance of ambiguity, tolerance for risk and extroversion. Furthermore, another study performed on undergraduate students in Malaysia concluded that innovativeness, self-confidence, propensity to take risk, need for achievement and tolerance for ambiguity significantly influence EI (Nasip *et al.* 2017). According to Bolton & Lane (2012), porosity to risk, innovativeness and pro-activeness are significant factors influencing EI. In addition, the desire to achieve, labelled as “Need for achievement” in the literature, significantly influence EI (Ferreira *et al.* 2012).

Comparing undergraduate students with minors in entrepreneurship with non-entrepreneurship minors, Robinson *et al.* (1991) found that students with minor in entrepreneurship reported higher degrees of self-confidence. Ho & Koh (1992) had even gone as far to conclude that self-confidence is crucial to the entrepreneurship equation and that it also influences other psychological variables.

It is widely understood in the business realm that risk-taking correlates with returns. Several studies in the literature have attempted to examine the relationship between

porosity to risk and EI. In situations where an entrepreneur holds the belief that he/she is in little control of the outcome, they tend to prefer taking moderate risks (Yusof *et al.* 2007). Furthermore, Innovativeness as suggested by Schumpeter (1934) and Mitton (1989) is an essential entrepreneurial characteristic and the focal point of entrepreneurship. The literature on entrepreneurship reports that entrepreneurs are more innovative relative to non-entrepreneurs (Yosuf *et al.* 2007).

In addition, the literature links individuals who take initiative as often being pro-active. Taking initiative not only is fundamental for entrepreneurs, but also is an attribute of a leader. Pro-activeness and other psychological variables linked with entrepreneurial intention can better explain the variations towards being entrepreneurially inclined. From the above we propose the following hypothesis we aim to test from the psychological approach:

**PSY H1: Self-confidence (SC) significantly influence EI**

**PSY H2: Porosity to risk (RSK) significantly influence EI**

**PSY H3: Being pro-active (PRO) significantly influence EI**

**PSY H4: Being Innovative (INV) significantly influence EI**

Behavioral Approach

Ajzen's (1991) theory of planned behavior (TPB) is widely employed in several studies in explaining entrepreneurial intention (Ariff *et al.* 2010). The following section discuss the three conceptually independent determinants of intention towards entrepreneurship; namely attitude towards entrepreneurship, subjective norm, and perceived behavioral control (Ajzen 1991).

According to Ajzen (1987), the variable attitude refers to the perception of an individual's personal desirability to perform a particular behavior. Adopting the TPB in EI implies that, personal desirability in becoming an entrepreneur is what constitutes attitude towards entrepreneurship. Therefore, holding high expectations and beliefs towards entrepreneurship reflects a positive attitude towards entrepreneurship (Ariff *et al.* 2010).

According to Ajzen (1987), subjective norm refers to an individual's perception of social forces for or against performing the behavior in question. When an individual is of the opinion that close influential people such as family and friends, would approve performing a particular behavior then subjective norm will influence the intention of performing that behavior (Ariff *et al.* 2010). Kolvereid (1996), upon investigating the relationship between the preference for self-employment, new business start-up intentions and actual start-up efforts found that subjective norm is a significant variable in predicting intention toward entrepreneurship.

According to Ajzen (1987), perceived behavioral control (PBC) is the perceived confidence to perform a target behavior. The perceptions of access to skills, resources and opportunities to perform the target behavior impacts PBC. Hence, an individual's belief that, they exert significant control over the aforementioned situational factors, encourages them to perform that behavior and vice versa. Among Norwegian master students, Kolvereid (1996) established that PBC significantly influenced entrepreneurship. The same was also found by Davidson (as cited by Autio *et al.* 2001) among Swedes.

Further studies on the matter reveal that, the antecedents of TPB namely personal attitude, subjective norm and perceived behavioral control; significantly influence the EI with subjective norm being the strongest influencer (Aloulou 2016). DINC & BUDIC (2016), upon exploring the TPB on entrepreneurial intention conclude that subjective norm influence personal attitude and perceived behavioral control; in addition, personal attitude and perceived behavioral control significantly influence entrepreneurial intention. Therefore, from the above discussion, we present the following hypothesis derived from behavioral approach:

**TPB H1: Attitude (ATT) significantly influence EI**

**TPB H2: Subjective Norm (SN) significantly influence EI**

**TPB H3: Perceived behavioral control (PBC) significantly influence EI**

Entrepreneurial Support Model (ESM)

Entrepreneurship knowledge via universities is an efficient medium of transferring knowledge to currently enrolled students who consider entrepreneurship as a career. According to Henry *et al.* (1997), at least certain aspects of entrepreneurship can be educated successfully. Franke & Luthje (2004), found that MIT university students exhibited higher entrepreneurial intentions when compared with German-speaking university students and entrepreneurship education was the factor attributed to this difference. Entrepreneurship education programs raise awareness among students about the opportunities that they could avail; in addition, has the potential to positively impact EI (Pittaway & Cope 2007). A comparative study among business students who underwent entrepreneurship education as opposed to engineering students who did not



found that, business students were more inclined to entrepreneurship as a result of the entrepreneurial education (Gerba 2012). Gelaidan & Abdullateef (2017) also examined the relationship of perceived educational and relational support on entrepreneurship and infer the same conclusion. However, the moderating role of self-confidence on perceived educational and relational support is not significant (Gelaidan & Abdullateef 2017).

Furthermore, Turker & Selcuk (2009) explore the impact of contextual factors, namely educational and structural support, discovering that they play a significant role in influencing EI. In addition, perceived opportunities or threats for entrepreneurs presented by economic and political mechanisms largely has the potential to shape EI (Turker & Selcuk 2009). From the above discussion, we infer the following hypothesis we aim to analyze from the support model:

**ESM H1: Perceived education support significantly impacts entrepreneurial intention**

**ESM H2: Perceived structural support significantly impacts entrepreneurial intention**

Hence from the above discussion we depict our research model below:

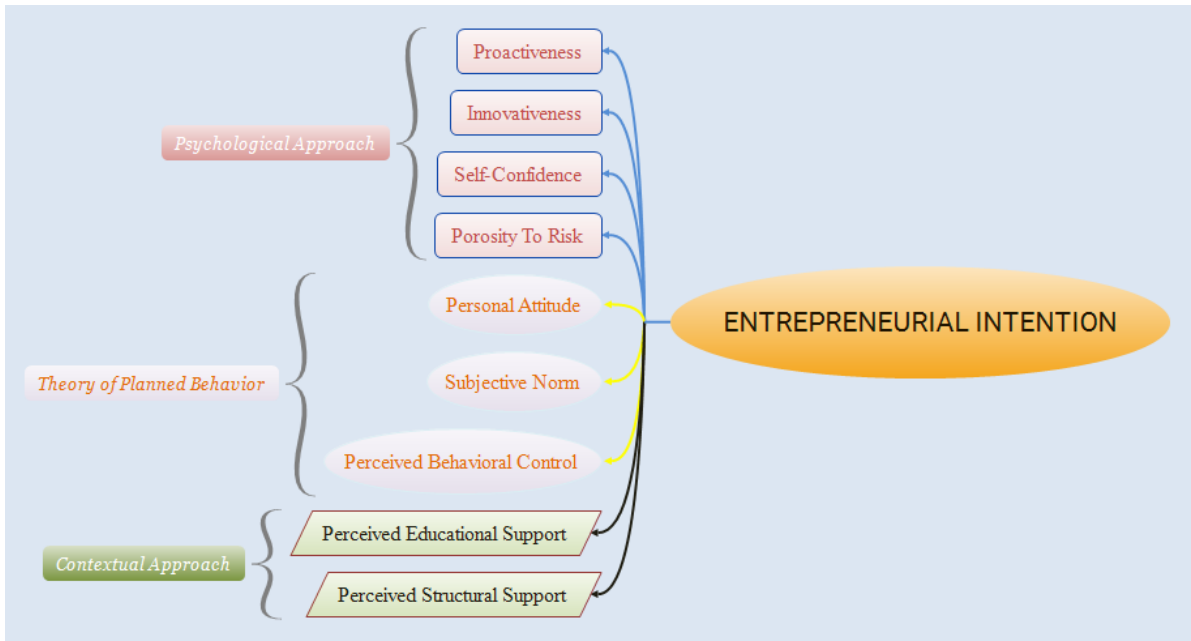


Figure 1. Research Model

## Chapter 3: Methodology

### Questionnaire

The questionnaire (Appendix A) developed consisted of six sections. Section 1 consisted of items that describe the respondent's demographics and the rest of the questionnaire measured the entrepreneurial intention and possible determinants. Likert scale was employed to measure Section 2 to Section 5, 1 being strongly disagree and 5 being strongly agree. Section 6 consisted of two statements measured asking respondents Yes or No questions.

Items in Section 2 and Section 3 were adapted from DINC & BUDIC (2016) which was developed using the Entrepreneurship Intention Questionnaire. The aforementioned study intended to assess the impact of the theory of planned behavior on entrepreneurial intentions of women in Bosnia (DINC & BUDIC 2016).

Items in Section 4 were adapted from two studies. Items to measure Section 4a was adapted from Gelaidan & AbdulLateef (2016), who concluded that the EI of business students at an AACSB-accredited university in Malaysia is significantly influenced by perceived educational support. In addition, items from Section 5a were adapted from Gelaidan & AbdulLateef (2016) to measure the impact of self-confidence on EI.

Items to measure Section 4b was adapted from Turker & Selcuk (2008), who tested the entrepreneurial support model (ESM) on university students in Turkey and found that perceived structural support significantly influence entrepreneurial intention. The remaining items of section 5 were adapted from Bolton & Lane (2012) whose study

developed a measurement instrument for individual entrepreneurial orientation (IEO) which was generated, validated and tested on 1100 university students.

Items in Section 6, are new factors we propose might explain EI pertinent to the region only which are of interest to all entrepreneurial stakeholders.

### Questionnaire Distribution

All items of the questionnaire was developed in English and an Arabic version of the same was translated as it is the prime language of the state and the academic institution in which the study was conducted. The questionnaire obtained ethical approval from Qatar University IRB. The questionnaire then was created on Qualtrics platform and the same was used to record all responses. Due to accessibility, the questionnaire was distributed to undergraduate Qatar University students via the office of associate dean for student affairs. Qatar University (QU) is the largest and the national university of the country and hence we find it to be representative of our target population, undergraduate students. In addition, QU undergraduate students represent the largest undergraduate population in the country and hence we propose that they are representative of the undergraduate student population in the country. Furthermore, several studies in the literature assessed the EI's of students enrolled in business majors with non-business majors (Gerba 2012). And hence, emails were sent to students from business, engineering, pharmacy, education, arts and science majors.

## Chapter 4: Descriptive Statistics

A total of 341 students attempted the questionnaire of which 285 respondents completed the questionnaire. 91% of the respondents were from the College of Business and Economics (CBE) and the remaining were from the College of Pharmacy, Engineering, Arts & Science (CAS) and Education. 40% of the respondents were categorized as Senior meaning they completed 90 credit hours or more. Almost 65% of the respondents belonged to the age group of 20 to 23. Almost 85% of the sample stated that they were single when they took the survey. 73% of the sample were female and 27% male. Almost 10% of the sample claimed that their parents were self-employed. While 58% of the sample claimed their parents served in the public sector. Almost 53% of the population claimed they were proficient in both English and Arabic. 75% of the sample stated they were Qatari.

Table 1. College Descriptive

<i>College</i>	Frequency	Percent
Engineering	5	1.8
Pharmacy	16	5.7
Education	1	.4
CBE	259	91.5
CAS	2	.7
Total	283	100.0

Table 2. Gender Descriptive

<i>Gender</i>	Frequency	Percent
Female	208	73.5
Male	75	26.5
Total	283	100.0

*Table 3. Nationality Descriptive*

<i>Nationality</i>	Frequency	Percent
Qatari	214	75.6
Non-Qatari	69	24.4
Total	283	100.0

## Chapter 5: Data Preparation

Missing values were treated with complete case analysis basis (Tabachnick *et al.* 2007). Two questions (Q14\_3 and Q14\_4) were recoded to reverse them as the statements were negative and values were hence reversed for the analysis. The reliability analysis of measurement items for all independent variables reveals a good level of internal consistency after eliminating certain items that lowered Cronbach's Alpha. (Appendix B)

### Independent Variables Correlation

The Pearson correlation matrix below show that only Innovativeness and Self-confidence are highly correlated. This could be because these two variables were taken from two different studies and hence could be the reason for such a significant relation. (Appendix C)

### Testing Multiple Regression Assumptions for EI

We have 9 predictor variables and hence our assumption with regards to the sample size is met as we have 285 completed responses. Responses whose standardized residual values were outside the -3 to 3 range were removed considering them as potential outliers. After removing two respondents, the standardized residuals were within the normal range. (Appendix D)

The scatterplot of the standardized residual supports assumptions of homoscedasticity and linearity. However, the Shapiro-Wilk test of normality for our dependent variable (EI) depicted below state that we cannot reject our null hypothesis that our dependent variable, entrepreneurial intention is not normally distributed (Appendix E). Hence, the



values of entrepreneurial intention was transformed using the Lg10 Arithmetic function which created a new variable EI\_Log.

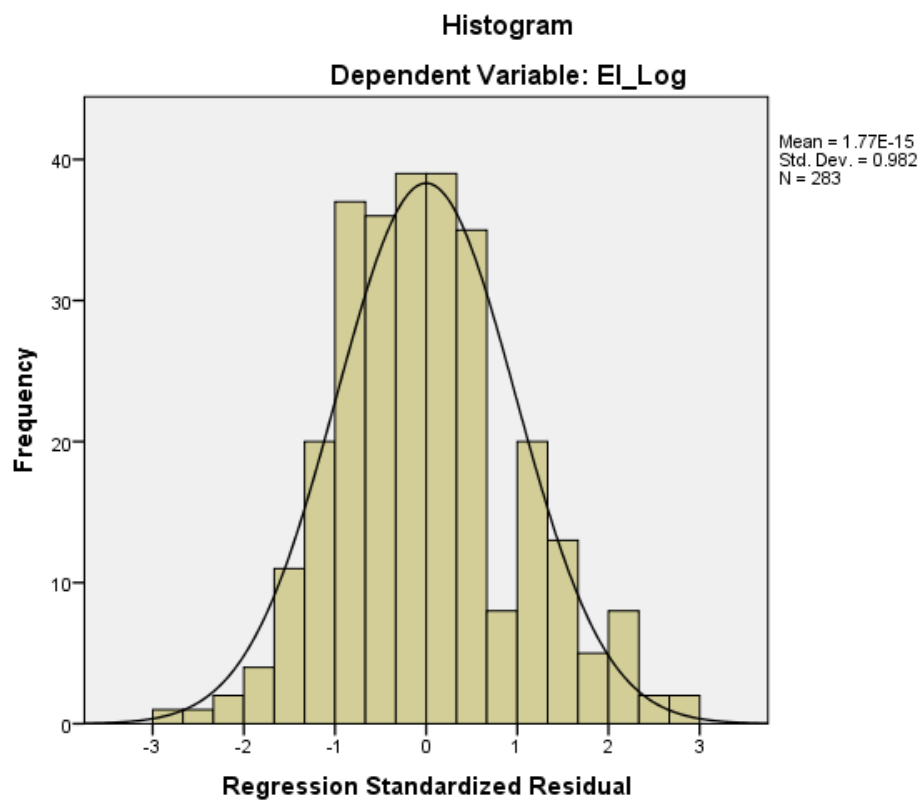


Figure 2. EI\_Log Normality

## Chapter 6: Data Analysis

### Multiple Regression Model Stage 1

Performing Stepwise regression on our model we find that only three variables namely; Personal Attitude (PA), Perceived Behavioral control (PBC) and Self-confidence (SC) are statistically significant variables. The adjusted R square of the model is 44.6% meaning that the three independent variables (PA, PBC, SC) explain 44.6% of the variation in EI. The ANNOVA table testifies that our model, incorporating the three independent variables to explain the entrepreneurial intention, is statistically significant. Furthermore, in support of the correlation matrix, PA has the largest standardized beta followed by PBC and SC. In addition, all the variables hold a positive influence on EI. Furthermore, the collinearity statistics tolerance show that all three independent variables are unique as their tolerance levels are far from 0.2 with PA and SC  $> 0.8$  and PBC as far as .944. The model in stage 1 has adjusted  $R^2$  of .446 with significant F-test (76.802, .000).

Table 4. Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
3	.673 <sup>c</sup>	.452	.446	.10404

c. Predictors: (Constant), Personal\_Attitude, Perceived\_BC, Self\_confidence

Table 5. ANOVA

ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
3	Regression	2.494	3	.831	76.802	.000 <sup>d</sup>
	Residual	3.020	279	.011		
	Total	5.514	282			

a. Dependent Variable: EI\_Log

d. Predictors: (Constant), Personal\_Attitude, Perceived\_BC, Self\_confidence

Table 6. Coefficients

Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics			
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF	
3	(Constant)	-.228	.027		-8.447	.000		
	Personal_Attitude	.121	.016	.386	7.826	.000	.807	1.238
	Perceived_BC	.052	.008	.295	6.460	.000	.944	1.059
	Self_confidence	.058	.011	.249	5.073	.000	.817	1.224

a. Dependent Variable: EI\_Log

## Multiple Regression Model Stage 2

### Testing Significance on Self-confidence

We find that all psychological variables significantly influences self-confidence. Also, personal attitude a variable from TPB significantly influences self-confidence. However, the contextual factor does not influence self-confidence significantly. (Appendix F)

### Testing Significance among the TPB Variables

We find subjective norm to significantly influence personal attitude. Also, personal attitude is found to significantly influence perceived behavioral control. Testing the significance of contextual factors on personal attitude we discover that perceived educational support significantly influences personal attitude. Moreover, both variables of the contextual factor, perceived educational and structural support significantly influences perceived behavioral control. In addition, we test the psychological variables significance on personal attitude and perceived behavioral control and discover that innovativeness, pro-activeness, and porosity to risk are associated significantly with personal attitude. Moreover, porosity to risk and pro-activeness are also associated with perceived behavioral control. (Appendix G)

## Chapter 7: Discussion

Of all the psychological variables tested, our results indicate that Self-confidence is the only significant variable influencing EI positively. This result is supported in the literature dating back as far as 1992 (Ho & Koh 1992). In addition, our result is also consistent with Ferreira *et al.* (2012), where EI was assessed incorporating insights from both psychological and behavioral perspectives, performed on secondary students in Portugal. Furthermore, investigating the relationship between individual psychological characteristics and EI among undergraduate students in Malaysia, Nasip *et al.* (2017) concluded that self-confidence positively impacted EI.

Self-confidence is a positive attribute generally considered to be a significant predictor in achieving personal success. As suggested by Turker & Selcuk (2009), certain factors namely level of education and support of family and friends contribute in enhancing self-confidence. The literature on entrepreneurship holds self-confidence as a significant psychological characteristic as it has the potential to influence other psychological variables associated with entrepreneurship; however, even though our results does not portray any direct significance between the other psychological variables and EI, we tested the impact they could have on EI indirectly via self-confidence and we discovered that all psychological variables hold a significant positive relationship with self-confidence.

Even though subjective norm is not found to be a significant predictor of entrepreneurial intention, it is found to hold a significant positive relationship with self-confidence. This result shows the importance of assessing entrepreneurship from a multi-dimension

approach. Incorporating insights from the theory of planned behavior we find that subjective norm can aid into entrepreneurship indirectly via self-confidence.

Testing the significance of subjective norm on other independent variables on the TPB we find a significant positive influence on personal attitude (DINC & BUDIC 2016). This result is also consistent with Ferreira *et al.* (2012) who also discovered that subjective norm positively influence personal attitude. Subjective norm as tested by Saiqal & Yousif (2017) also appear to contribute to EI indirectly. This is turn again emphasizes the role of family and friends in shaping the EI among undergraduate students. Hence, by being supportive towards entrepreneurship, family and peers have the potential to motivate undergraduate students to pursue entrepreneurship as a career. It is the role of policy makers to initiate a positive outlook in the society towards entrepreneurship as a culture. Furthermore, similar to Linan & Chen (2009) we could not establish a direct relationship between subjective norm and entrepreneurial intention.

Testing the significance of personal attitude on perceived behavioral control as suggested by Ferreira *et al.* (2012) we discover that indeed there exists a significant positive relationship between the variables. Consistent with DINC & BUDIC (2016) our results show that personal attitude towards entrepreneurship and perceived behavioral control significantly influence entrepreneurship. As proposed by Feola *et al.* (2017), we extended the TPB by testing the significance of contextual factor significance on TPB variables and we discovered that the contextual factor has the potential to aid in entrepreneurial intention indirectly.

Furthermore, consistent with Feola *et al.* (2017), our results indicate that among the TPB variables, only personal attitude and perceived behavioral control significantly influence

entrepreneurial intention directly. Thus it is imperative that academic institutions and policy makers devise strategies to raise the perception's held by undergraduate students in order to stimulate the entrepreneurial intention in them. In addition, porosity to risk a distinctive entrepreneurial trait in our study is associated with the personal attitude and perceived behavioral control (Zhang *et al.* 2015). This implies that universities play a critical role in instilling in their students the courage to initiate actions that are well-calculated for risks.

A study by Saiqal & Yousif (2017) in UAE indicate that personal attitude towards entrepreneurship is the strongest predictor of entrepreneurial intention, consistent with our results. This implies that undergraduate students perceive entrepreneurship as an attractive career option. Moreover, the results of perceived behavioral control among the sample indicate high levels of self-confidence in their ability to pursue entrepreneurship as a career.

Furthermore, 95% of the sample stated that they would prefer working for someone after graduation and earn experience as opposed to pursuing an entrepreneurial career. This could be attributed to many factors from extremely well-paid salaries for nationals relative to their experience to social pressures to maintaining a stable career. Also, almost 70% of the sample would rather franchise relative to engaging in entrepreneurial activity. These two figures gives us insight into how policy makers have contributed to deter entrepreneurial interest indirectly. High salaries coupled with limited working hours could explain such behavior.



## Chapter 8: Implications of Research

This research is the first of its kind in the region that aims to address undergraduate student's entrepreneurial intention incorporating insights from three different models. Although our study was conducted in one country, Qatar; the results applies as well to other countries who are shaped by similar forces. Forces that are not limited but includes, extremely well-paid monetary incentives in the public sector to fresh Qatari graduates and convenient working hours relative to that of working in the private sector, left alone starting one's own business where one needs to dedicate many working hours in return for minimal monetary gains at least in the initial stages. In addition, to the job offers from the public sector to fresh graduates, this study also extends its proposed model to incorporate a new variable which we believe can deter entrepreneurial activity. This new variable aims to understand the degree to which undergraduate students are willing to take risks by asking them if they would prefer franchising over entrepreneurial activity.

Almost 95% of the sample stated that they would prefer working at either a reputable firm or the public sector after graduation and almost 70% stated that they would rather franchise than start something of their own. This implies that even though our sample hold high perception related to entrepreneurship as a career and their ability to start something of their own, they find other alternatives to be more attractive. It is the role of the university to graduate students from their programs who aspire to be leaders and innovators willing to input the desired level of work and dedication. In addition, policy makers should also reconsider their offers to graduates as they are often too large for a graduate to reject relative to starting one's own business.

This study has many implications and recommendations for academic institutions and policy makers in shaping the entrepreneurial intentions of not only undergraduate students but also shaping the culture of the country in supporting entrepreneurship. Our study that aimed at addressing entrepreneurship from more than one dimension finds that personal attitude is the strongest influencer of entrepreneurial intention. It is the role of the academic institutions and policy makers to not only enhance the attitude towards entrepreneurship in students but also in their immediate people of influence, such as family and close peers. Promoting such culture might take decades for a society to embrace; however, as our study indicates that personal attitude is significantly influenced by the perceived educational support from their university, universities play a crucial role in shaping the culture for the generations to come.

The second most significant predictor of entrepreneurial activity is perceived behavioral control, a variable of the TPB. Our results indicate that perceived behavioral control which significantly predicts EI, is significantly influenced by perceived structural and educational support. Here again, it is the role of both government bodies and academic institutions to increase the perceptions held by students of the structural support systems the state has to offer; in addition, educate students on the details of pursuing entrepreneurship as a career perhaps via internships opportunities to successful start-ups and incubators of such start-ups.

Furthermore, our result also show that self-confidence significantly influence entrepreneurial intention. Other variables from the psychological approach were found to be significant predictors of entrepreneurial activity indirectly via self-confidence. It is the primary role of the academic institutions to foster these characteristics in its graduates

and secondarily, it is the role of policy makers to educate families to encourage these attributes in their children.

Even though our study does not find significant difference in the entrepreneurship intention between male and female students, a well-documented fact states that Qatar University even though graduates more female students compared to male, the same is not mirrored in the employment rate. It is the role of policy makers to understand the needs of female graduates in supporting their entrepreneurship career as they are the segment of the population that prefer to work from home due to familial obligations to which entrepreneurship as a career might serve well.

## Chapter 9: Limitations of Research and Future Direction

From the above discussion, it becomes crucial to assess the perceptions of entrepreneurship held by parents and peers of undergraduate students as they clearly have the potential to influence their entrepreneurial activity. Also, it would be interesting to see to what extent the presence of social networks influences entrepreneurship intention via its link with subjective norm.

We also are of the opinion that in order to gain a broader understanding of entrepreneurship intention in the country, this study be extended to include undergraduate students from other universities also. In addition, as stated in the literature it is mandatory that studies be conducted to address the gap between forming entrepreneurial intention and new venture creation. Furthermore, studies have also indicated that certain tools such as the planned behavior model could be used to filter would-be entrepreneurs from others and accordingly target them to perform longitudinal studies.

Furthermore, the extreme wealth in Qatar and the availability of good jobs for all potential graduates could negatively impact entrepreneurship intention as franchising then becomes the more suitable alternative as ready to manage business which they could pursue alongside their governmental jobs. Lastly, we propose that conducting future research as focus group might yield deeper insights into what could trigger the entrepreneurial intention among undergraduate students.

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# Appendices

## **Appendix A: Questionnaire**

This survey is completely voluntary. You may withdraw at any time or skip any question. By clicking on the link you agree to participate in this research project. No personal data will be gathered. We are trying to assess the Entrepreneurial Intention of Undergraduate business students in Qatar. It will take only 10 minutes of your time to fill the questionnaire. You responses will remain confidential.

If you have any question, you may contact Waleed Shafiq at [200704596@qu.edu.qa](mailto:200704596@qu.edu.qa)

Click YES if you agree and proceed to the questionnaire; If you do not wish to participate, click NO to exit

### **Section 1.**

State the college you are currently enrolled in .....

Age range	18-20/20-23/23-25/25+
Gender	Male/Female
Marital status	Single/Married/Divorced
Parents present occupation	Public/Private/Self/Retired/Unemployed/Other
Check the languages you can communicate in	English Arabic
Nationality	Qatari / Not Qatari

Kindly rate your agreements/disagreements with the following statements from 1 to 5 with 1 being strong disagree to 5 being strong agree and 3 being neutral.

### **Section 2. Entrepreneurial Intention (DINC and BUDIC, 2016)**

- a) I will make every effort to start and run my own firm
- b) I am determined to create a firm in the future
- c) I have the firm intention to start a company some day
- d) My professional goal is to become an entrepreneur

### **Section 3.**

#### ***Personal Attitude (DINC and BUDIC, 2016)***

- a) Being an entrepreneur would entail great satisfaction for me
- b) A career of entrepreneur is very attractive for me
- c) If I had the opportunity and resources, I would like to start a company
- d) Among various options, I would rather be an entrepreneur

#### ***Subjective Norm / Perceived Relational support (DINC and BUDIC, 2016)***

- a) If I decided to create a company my close family would approve of that decision
- b) If I decided to create a company my friends would approve of that decision
- c) If I decided to create a company my colleagues would approve of that decision

#### ***Perceived Behavior Control (DINC and BUDIC, 2016)***

- a) I know the necessary practical details to start a firm
- b) I can control the creation process of a new firm
- c) I am prepared to start a viable firm
- d) I know how to develop an entrepreneurial project

### **Section 4.**

#### ***Perceived Educational support (Gelaidan and Abdullateef, 2016)***

- a) The education in my university encourages me to develop creative ideas for being an entrepreneur
- b) My university provides the necessary knowledge about entrepreneurship

- c) My university develops my entrepreneurial skills and abilities

***Perceived structural support (Turker and Selcuk, 2008)***

- a) In Qatar, entrepreneurs are encouraged by a structural system including private, public, and non-governmental organizations
- b) Qatar economy provides many opportunities for entrepreneurs
- c) Taking loans from banks is quite difficult for entrepreneurs in Qatar
- d) State laws (rules and regulations) are adverse to running a business

**Section 5.**

***Self-confidence (Gelaidan and Abdullateef, 2016)***

- a) Starting one's own business is a great opportunity for success
- b) I believe I can operate a successful business
- c) I would rather operate a small business than be a middle manager with a larger organization
- d) I believe having my own business will assist in defining my vision

***Porosity to Risk (Bolton and Lane, 2012)***

- a) I like to take bold action by venturing into the unknown
- b) I am willing to invest a lot of time and/or money on something that might yield a high return
- c) I tend to act boldly in situations where risk is involved

***Innovativeness (Bolton and Lane, 2012)***

- a) I often like to try new and unusual activities that are not typical but not necessarily risky
- b) I prefer to try my own unique way when learning new things rather than doing it like everyone else does
- c) I favor experimentation and original approaches to problem solving rather than using methods others generally use for solving their problems

***Pro-activeness (Bolton and Lane, 2012)***

- a) I usually act in anticipation of future problems, needs or changes
- b) I tend to plan ahead on projects
- c) I prefer to "step-up" and get things going on projects rather than sit and wait for someone else to do it

*For the following statements, answer either Yes/No*

**Section 6.**

***New Factor***

- a) After graduation I would like to earn experience by working at a reputable firm or public sector
- b) I prefer franchising an established business as opposed to starting my own business

**Appendix B: Reliability Analysis of Items**

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<b>Independent Variables and Measurement Items</b>	<b>Cronbach's Alpha</b>	<b>Corrected Item-Total Correlation</b>
<i>Personal Attitude</i>	.552	
PA_1		.340
PA_2		.445
PA_3		.232
PA_4		.341
<i>Subjective Norm</i>	.538	
SN_1		.243
SN_2		.372
SN_3		.452
<i>Perceived Behavioral Control</i>	.824	
PBC_1		.611
PBC_2		.660
PBC_3		.640
PBC_4		.687
<i>Self Confidence</i>	.705	
SC_1		.412
SC_2		.603
SC_3		.356
SC_4		.641
<i>Porosity to Risk</i>	.614	
RSK_1		.278
RSK_2		.449
RSK_3		.592
<i>Innovativeness</i>	.719	
INV_2		.567
INV_3		.567
<i>Pro-activeness</i>	.489	
PRO_1		.250
PRO_2		.371
PRO_3		.308

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<i>Perceived educational support</i>	.818	
PES_1		.699
PES_2		.615
PES_3		.713
<i>Perceived Structural support</i>	.690	
PSS_1		.489
PSS_2		.342
PSS_3		.494
PSS_4		.594

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**Appendix C: Correlation Matrix**

*Correlations*

Variable	1	2	3	4	5	6	7	8	9
1.PA	1								
2.SN	.297**	1							
3.PBC	.212**	.109	1						
4.PES	.164**	.133	.282**	1					
5.PSS	.125*	.098	.275**	.383**	1				
6.SC	.417**	.204**	.183**	.109	-.089	1			
7.RSK	.275**	.137*	.347**	.124*	.002	.446**	1		
8.PRO	.283**	.224**	.307**	.147*	.092	.383**	.302**	1	
9.INV	.292**	.216**	.105	.176*	-.098	.666**	.401**	.355**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Appendix D: Residual Statistics**

*Residuals Statistics<sup>a</sup>*

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-.0283	.5681	.1679	.09733	283
Std. Predicted Value	-2.016	4.112	.000	1.000	283
Standard Error of Predicted Value	.011	.044	.019	.006	283
Adjusted Predicted Value	-.0295	.5601	.1677	.09698	283
Residual	-.28388	.28452	.00000	.10040	283
Std. Residual	-2.777	2.783	.000	.982	283
Stud. Residual	-3.025	2.839	.001	1.009	283
Deleted Residual	-.33698	.30063	.00017	.10615	283
Stud. Deleted Residual	-3.072	2.877	.001	1.014	283
Mahal. Distance	2.139	50.290	9.965	7.947	283
Cook's Distance	.000	.156	.005	.013	283
Centered Leverage Value	.008	.178	.035	.028	283

a. Dependent Variable: EI\_Log

**Appendix E: Tests of Normality**

Tests of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
EI	.291	285	.000	.793	285	.000

a. Lilliefors Significance Correction

**Appendix F: Testing Significance on Self-confidence**

*Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Correlations		
		B	Std. Error	Beta				Zero-order	Partial	Part
3	(Constant)	.338	.120			2.809	.005			
	Innovativeness	.464	.054	.457		8.538	.000	.600	.455	.390
	Porosity_risk	.171	.040	.217		4.267	.000	.446	.248	.195
	Proactiveness	.157	.064	.124		2.436	.015	.383	.144	.111

a. Dependent Variable: Self\_confidence

*Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	1.081	.109		9.909	.000			
	Personal_Attitude	.566	.074	.417	7.683	.000	.417	.417	.417

a. Dependent Variable: Self\_confidence

**Appendix G: Testing Significance among the TPB Variables**

*Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	1.009	.082		12.356	.000			
	Subjective_Norm	.271	.052	.297	5.215	.000	.297	.297	.297

a. Dependent Variable: Personal\_Attitude

*Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	1.706	.155		11.013	.000			
	Personal_Attitude	.380	.105	.212	3.630	.000	.212	.212	.212

a. Dependent Variable: Perceived\_BC

*Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations	
		B	Std. Error	Beta			Zero-order	Partial
1	(Constant)	1.227	.072		17.064	.000		
	Perceived_Educ	.101	.036	.164	2.782	.006	.164	.164

a. Dependent Variable: Personal\_Attitude

*Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations	
		B	Std. Error	Beta			Zero-order	Partial
2	(Constant)	1.381	.152		9.060	.000		
	Perceived_Educ	.229	.067	.207	3.403	.001	.282	.199
	Perceived_SS	.218	.068	.195	3.201	.002	.275	.188

a. Dependent Variable: Perceived\_BC

*Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
_____	(Constant)	.715	.108		6.624	.000			



3	Innovativeness	.118	.049	.158	2.429	.016	.296	.144	.135
	Proactiveness	.157	.058	.169	2.721	.007	.283	.161	.151
	Porosity_risk	.092	.036	.157	2.541	.012	.275	.150	.141

a. Dependent Variable: Personal\_Attitude

*Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
2	(Constant)	.965	.181		5.332	.000			
	Porosity_risk	.292	.060	.280	4.886	.000	.347	.280	.267
	Proactiveness	.371	.096	.222	3.884	.000	.307	.226	.212

a. Dependent Variable: Perceived\_BC