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**Entrepreneurial Intentions among
Saudi University Students: Examining
the Role of Personality Traits,
Demographic Factors and Govern-
ment Support**

Abstract

Managing economic development process without entrepreneurial activities is like trying to drive a car without fuel. Governments in developed and developing countries have been trying to boost entrepreneurial activities by offering direct and indirect support. In this regard, researchers have been trying to highlight different factors that contribute to enhance entrepreneurial activities. Therefore, the aim of this study is to investigate the effects of personality traits, demographic factors and government support on entrepreneurial intentions among Saudi university students. Data was collected from 802 final year university students by using convenient sampling method. Multiple regression and t-test with SPSS 20 were used to analyze the data. Findings of this study reveal that female students have lower entrepreneurial intentions as compare to male students. In addition, with reference to education major, students with major in business have higher entrepreneurial intention as compare to students with non-business major. Similarly, students with prior entrepreneurial experience have higher entrepreneurial intentions as compare to their counterpart. The findings of this study also explain that students who have family business display higher entrepreneurial intentions as compare to students without family business. Finally, results of this study reveal that the need of achievement and locus of control are the personality traits that affect entrepreneurial intentions most significantly. In addition, government support significantly influence entrepreneurial intentions of students in Saudi universities. Implications for entrepreneurial researchers, policy makers at government level and top management in universities have been discussed.

Keywords: entrepreneurial intentions, personality traits, government support, Saudi university students.

ملخص البحث

إن السعي نحو إنجاح عملية النمو الاقتصادي دون أنشطة ريادة الأعمال يشبه قيادة المركبة دون وقود، لذا نجد أن الجهات الحكومية في الدول النامية والمتقدمة على السواء تدعم ريادة الأعمال بكل الوسائل والطرق.

وتهدف الدراسة إلى التعرف على تأثير الخصائص الشخصية والديموغرافية والدعم الحكومي على النية الريادية لدى طلاب الجامعات السعودية. وتوصلت الدراسة من خلال استقصاء ٨٠٢ طالب من طلبة السنة النهائية بجامعة الملك فيصل أن النية الريادية لدى الطالبات أقل منها عن الطلاب. كما تبين أن النية الريادية لطلبة إدارة الأعمال أعلى منها عن طلبة التخصصات الأخرى، وفي ذات الوقت أكدت نتائج الدراسة أن الطلبة الذين لديهم خبرة ريادية أو ينتمون لعائلات تملك مشاريع ريادية، نوابهم الريادية أعلى من غيرهم. كما أثبتت الدراسة أن الدعم الحكومي له تأثير على النية الريادية لدى طلاب الجامعات في المملكة العربية السعودية. وفي ضوء تلك النتائج تم تقديم عدد من التوصيات تم عرضها في نهاية الدراسة.

الكلمات الدالة:

النية الريادية، الخصائص الشخصية، الدعم الحكومي، طلبة الجامعات الحكومية.

Introduction

Entrepreneurship has become a widely used practice to increase innovation and technological progress, creating new jobs, and enhancing the competitiveness of society (Zhang, Duysters, and Cloudt 2014). Therefore, encouraging and supporting entrepreneurship and SMEs and facilitating conditions in which they flourish have become a priority for policy-makers around the world (Pfeifer, Šarlija, and Zekić Sušac, 2016). Policy-makers in Saudi Arabia have adopted an encouraging policy to support entrepreneurial activity in the country. For many years now, a persistent high unemployment rate has been both a social and economic problem in Saudi Arabia. The total number of Saudis reaching working age (15-19 years old) has almost tripled, from 789,000 in 1990 to 2.2 million in 2018, with projected increases continuing to 2.5 million in 2020 and 4.5 million in 2030 (Al-Kibsi et al., 2015; General Authority for Statistics, 2018; World Bank, 2017). Cammett (2018) and Ghanem (2018) makes the argument that the effects of a large and growing number of unemployed youth could, over a period of time, lead to an upset in government stability and social unrest. Therefore, policy-makers should commit to giving young Saudis the opportunity to create new ventures and lead firms that can generate more jobs for Saudi men and women, as well as further facilitate national economic development. The Global Entrepreneurship Monitor (GEM)

reports that Saudi Arabia's economy, which has been oil-based for several generations, is facing major challenges as it undertakes Vision 2030, the most ambitious plan in its history, to boost the growth of nonhydrocarbons. Vision 2030 is designed to reduce Saudi Arabia's dependence on oil and to stimulate the kingdom's economy by diversifying its revenues. This vision underscores the importance of supporting entrepreneurship and SMEs in the country to reinforce economic growth and create jobs by developing business-friendly regulations, creating access to funding and providing SMEs privileged access to government contracts, thus raising SME contribution to GDP from 20% to 35% (Vision 2030).

Given the potential benefits of entrepreneurship to the kingdom as acknowledged by Vision 2030, the government has established many agencies and programs to encourage young people to start their own businesses. However, all these initiatives and programs have little impact on the number of real businesses start-ups. In addition, the 2017-2018 Global Entrepreneurship Monitor (GEM) of Saudi Arabia report showed that Total Entrepreneurial Activity-which represents a correlation between entrepreneurial intentions and activities-, fell to 0.34 in 2017 from .44 in 2016. At the same time, the amount of published research on the topic of entrepreneurial intention and its antecedents worldwide is extensive. However, research regarding entrepreneurial intentions in the Arab World is limited and little is known of entrepreneurial intentions in Saudi Arabia (Alammari, Newbery, and Haddoud 2018, Almobaireek and Manolova, 2013, 2012, Almobaireek, Alshumaimeri, and Manolova

2011). Therefore, this study attempts to fill this gap in the literature. It has three main objectives: first, to assess the level of entrepreneurial behavioral intentions among university students in King Faisal University; second, to examine the influence of personality factors (such as need for achievement, locus of control and risk tolerance) on entrepreneurial behavioral intentions; and third, to examine the influence demographic factors have on university students' entrepreneurial intentions.

Theoretical Background and Hypotheses Development

Entrepreneurial Intentions

Entrepreneurial intentions is the intent to launch a business and/or to start a new venture (Krueger 2009). Generally, intentions have been considered as the best predictor of individual future planned behaviors (e.g. Ajzen, 1991; Krueger, Reilly, and Carsrud, 2000). Many researchers suggest that entrepreneurial behavior is a planned and intentional behavior which can be predicted by entrepreneurial intentions (Krueger et al., 2000; Linan and Chen, 2009; Liñán and Fayolle, 2015). Empirical studies have found support for the strong influence entrepreneurial intention exerts on the actual behavior of launching and creating a new business (Krueger et al., 2000; Lee et al., 2011). Therefore, as a valuable and practical predictor of future entrepreneurial behavior, scholars have become increasingly invested in understanding how entrepreneurial intention is formed (Shane and Venkataraman, 2000).

In their efforts to explain the development of entrepreneurial intention, previous studies have considered a variety of factors. According to Nabi and Linan

(2013), there are two main research streams in entrepreneurial intention research. The first stream focused on an individual's related factors. Those factors include the personality traits, demographic factors, and cognition of a given individual. The second stream focused on factors related to the external environment, such as culture and government support. The current study focuses on personality and demographic factors as individual related factors, as well as government supports as an external factor, in explaining the formation of entrepreneurial intentions. Forthcoming sections discuss those factors and their relationship with entrepreneurial intentions.

Personality Factors

The relationship between personality characteristics and entrepreneurial behavioral intentions is one the most established research streams in entrepreneurship literature. According to Turker and Selcuk (2009) personality traits have a strong impact on an individual's decision to launch his or her own business, and therefore the effects of personality traits should be considered alongside other important determinants when evaluating entrepreneurial intentions. Several personality traits have been suggested to have an influence on an individual's entrepreneurial intentions, thus distinguishing entrepreneurs from non-entrepreneurs. This study focuses on *need for achievement*, *locus of control*, and *risk tolerance* as important personality factors in predicting students' entrepreneurial behavioral intentions. These factors have been examined in similar studies in the Middle Eastern context (Karimi, et al., 2017; Karabulut, 2016)

Need for Achievement

Need for achievement (McClelland 1961) is a strong psychological characteristics behind human action and has long been proposed as one of the most important factors in explaining entrepreneurial intention. It describes an individual's motivation to achieve in a unique way, departing from what has previously been achieved by others. This motivation to achieve is developed when people compare their current achievements to their preferred level of achievement (Elali and Al-Yacoub, 2016). Furthermore, researchers suggested that there is a strong link between the desire for success and the need for achievement which can lead an individual to start her/his business. Similarly, several empirical studies supported the significant relationship between students' need for achievement and their entrepreneurial intentions (Kristiansen and Indarti, 2004; Hansemark, 1998; Johnson, 1990). **Consequently, the following hypothesis is proposed:**

H1. Need for achievement has a positive effect on students' entrepreneurial intentions.

Locus of Control

Locus of control is another widely researched trait in the area of entrepreneurship. It is a personality trait that refers to the degree to which an individual perceives failure and success as being dependent on her or his personal control (Koh 1996). Individuals with an external locus of control believe that circumstances that shape life events are beyond their control and related to factors such as luck. They also believe that others affect their actions in performing the many activities in their lives. On the other hand, people with an internal lo-

cus of control believe they are able to control events and consequences in their lives (Ho and Koh, 1992; Koh, 1996). It is widely accepted that entrepreneurs have higher internal locus of control than other people (Thomas and Mueller, 2000). Several studies found that locus of control has a significant impact on university students' entrepreneurial intentions (Sesen, 2013; Bonnett and Furnham, 1991). Therefore, our second hypothesis is:

H2. Locus of control has a positive effect on students' entrepreneurial intentions.

Risk Tolerance

Risk tolerance can be defined as the amount of risk that an individual is willing to accept and, consequently, take (Karhunen and Ledyeva, 2010). Entrepreneurial careers are associated with individuals who have less risk aversion than those who want to find a secure employment with an established company (Douglas and Shepherd, 2002). This is because the creation of new business is associated with considerable levels of uncertainty and risk and, therefore, entrepreneurship is more attractive to individuals who are more risk-tolerant (Stewart and Roth, 2001). Several studies reported that propensity to take risks is higher among entrepreneurs than it is among other individuals (Gürol, and Atsan, 2006; Cromie, 2000). Previous studies provide evidence that people with a greater risk acceptance had higher levels of entrepreneurial intention (Hmieleski and Corbett 2006; Douglas and Shepherd, 2002). Therefore, the following hypothesis is proposed:

H3. Risk tolerance has a positive effect on student's entrepreneurial intentions

Government Support

Entrepreneurship is highly influenced by government policy because entrepreneurial decisions are usually made within institutional environments shaped by such policy (Minniti 2008). Therefore, government support for entrepreneurship can play an important role in enhancing an individual's intentions to start up a new business and become an entrepreneur. Toward the end of promoting entrepreneurship and supporting entrepreneurs in their early stages, government agencies can provide such support services as financial support plans, entrepreneurship education, and advice and training services, including public incubators and other forms of support. (Fini, Grimaldi, and Sobrero, 2009).

Previous studies found a positive relationship between government support for entrepreneurship and entrepreneurial intention. For example, Kim and Cho (2009) found that the institutional support to new ventures is likely to increase those entering self-employment. Malebana (2014) found that students' knowledge of government entrepreneurial support significantly influences their entrepreneurial intention. Therefore, the following hypothesis is proposed:

H4. Government Support for Entrepreneurship has a positive effect on students' entrepreneurial intentions

Demographic and Background Variables

Individual characteristics such as age, gender, education, previous entrepreneurial experience, and business ex-

perience have been shown to be associated with entrepreneurial intentions (Fitzsimmons, and Douglas, 2011). The current study focuses on students' gender, prior entrepreneurial experience, exposure to entrepreneurial experience, and education major as important factors in the evaluation of entrepreneurial intention.

Gender

Gender is one of the demographic factors that has received much attention in the evaluation of entrepreneurial behavior in previous research. In addition to growing participation of women in workforce, women have also become more active in entrepreneurial activities, which leads to the increasing number of studies on the relationship between gender and entrepreneurial intention (Langowitz and Minniti, 2007; Micozzi and Lucarelli, 2016; Fietze and Boyd, 2017; Miranda Chamorro-Mera, Rubio, Pérez-Mayo 2017). However, several studies suggested that women exhibit a lower preference for being self-employed. For example, Zhao et al. (2005) found that there is a direct relationship between gender and entrepreneurial intention and that women reported lower entrepreneurial intention than men did. In a study of 1027 Danish students, Fietze and Boyd (2017) investigated the entrepreneurial intention (EI) among university students. A gender differences shows a significant lower mean value for female students compared to male students. Following these studies, we can establish this hypothesis:

H5. Female students have lower entrepreneurial intention than male students do.

Prior Entrepreneurial Experience

Previous entrepreneurial experience is another important factor in the evaluation of entrepreneurial intention. An individual's previous experience with entrepreneurship is expected to influence positively his or her intention to become an entrepreneur again (Fitzsimmons and Douglas, 2011). There is also some evidence to suggest that people with rich entrepreneurial knowledge, through work experience and/or education, can show higher levels of entrepreneurial attitude (Miralles Giones, and Riverola 2016). In addition, Diamanto (2008) argued that prior entrepreneurial experience provide knowledge that help entrepreneurs to overcome conventional problems. Furthermore, Politis (2008) highlighted that individuals with prior entrepreneurial experience can better evaluate the opportunities and select solid solution of the problems. Based on these arguments, this study conclude that students with prior entrepreneurial experience could be more inclined towards starting up their own business. Therefore, the following hypothesis is proposed:

H6. Students who had prior entrepreneurial experience have higher level of entrepreneurial intentions than others.

Exposure to Entrepreneurial Experience

Exposure to entrepreneurial experience is another important factor in explaining entrepreneurial intention. Individuals who have prior entrepreneurial exposure, such as growing up in family business environments, are exposed to the necessary information and skills th-

at help them to be self-employed and start their own business. In such environments, parents teach their family members the values, skills, and confidence that is needed to create their own business (Zhang et al., 2014; Carr and Sequeira, 2007).

Previous studies explored the positive association between previous exposure to entrepreneurial experience and entrepreneurial intention (Karhunen and Ledyeva, 2010; Carr and Sequeira, 2007). Consequently, we expect that students who have exposure to a family business environment are more likely to have higher intentions to become entrepreneurs. Therefore, the following hypothesis is proposed:

H7. Students who had previous exposure to entrepreneurial experience (family business) have higher level of entrepreneurial intentions than others.

Education Major

Education major has been integrated as an important factor in exploring individuals' entrepreneurial intentions in many previous studies (eg. Solesvik, 2013; Linan and Chen, 2009). According to Solesvik (2013), having a major in a business discipline could be one of the significant factors that influence the intention of a student to start a business. In the same line, Levenburg, Lane, and Schwarz (2006) asserted that those who have majored in business regard their education as adequate preparation to start a new business. Many studies found that students who had majored in business and economics reported a higher level of entrepreneurial intentions (eg. Karhunen and Ledyeva, 2010; Tkachev and Kolvereid, 1999). Nevertheless, other studies of the effects of education

major on entrepreneurial intentions suggest that other major like engineering is more likely to influence a student to become an entrepreneur (Lüthje and Franke, 2003; Kuckertz and Wagner, 2010; Zhang et al., 2014). Therefore, the following hypothesis is proposed:

H8. Students who had majored in business have higher level of entrepreneurial intentions than non-business students.

Methodology Sample

This study employed a survey method for data collection. The target population was final year university students at King Faisal University in the eastern province of Saudi Arabia. The use of university students is common in previous entrepreneurial intention research

(eg. Krueger, Reilly and Carsrud 2000; Liñán and Chen 2009). The survey was first pre-tested with a sample 30 students. All students showed adequate understanding of all items. The final version of the questionnaire was sent as a web-based form by e-mail to all final year students in the year of 2017. The students were encouraged to take the survey on a voluntary basis. In accordance with Dillman's (2006) recommendations, weekly reminders were sent to those who did not complete it. After data cleaning, the final sample includes 802 responses, of which 64.2 percent are from female students. Eighty-six percent of the students were between 21 and 29 years old. The sample characteristics are shown in table 1.

TABLE 1
Sample Characteristics

Factor	Frequency	Percentage (%)
Gender		
Male	287	35.8
Female	515	64.2
Age		
18 - 25	641	79.9
25 - 30	150	18.7
more than 30	5	.5
Educational Major		
Business	152	19.0
Non Business	648	80.8
Missing	2	.2
Entrepreneurial experience		
Yes	269	33.5
No	531	66.2
Family Business		
Yes	249	31.0

No	550	68.6
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Measures

All items used to measure the factors were adopted from previous studies. The study used a five-point Likert scale ranging from 1 for “strongly disagree” to 5 for “strongly agree” for all items (excluding the demographic characteristics). Entrepreneurial intentions was measured with six items based on Liñán and Chen (2009). The items capture the degree to which students had favorable intentions to start a new business. The three personality factors were adopted from previous studies. The items of need for achievement and locus of control were adopted from Kristensen and Indarti (2004). Risk tolerance was measured by two items based on Karabulut. (2016). Additionally, government support was measured by four items adopted from Anggadwita, and Dhewanto (2016).

Reliability and Validity of Constructs

Cronbach’s alpha and composite reliability are used to assess reliability of constructs. As shown in table 2, all constructs had alpha values above the threshold of 0.60 (Hair et al. 2006). The composite reliability values of the all constructs are above the cut-off point of 0.7 (Bagozzi and Yi, 1988). Thus, the results indicated that the reliability of the all constructs is established in this study.

To assess the validity of the constructs, confirmatory factor analysis was conducted using SmartPLS 2.0. Construct’s average variance extracted (AVE) and factor loadings are used to test convergent validity. Convergent validity is established when all constructs have an average variance extracted (AVE) value greater than 0.50 (Fornell and Larcker, 1981). As shown in table 2, all the values of AVEs are above 0.50. The absolute standardized loadings of items are above 0.50. Chin (1998) believes that loadings over 0.5 still be acceptable if there exists other indicators in the block for comparison. All the items loading are also significant ($p < 0.001$). Therefore, the convergent validity of constructs is confirmed in this study.

TABLE 2
Measurement Properties of Constructs.

Construct	Item	Factor loading	AVE	Composite Reliability	Cronbach’s Alpha
Need For Achievement	NA1	0.729***	0.548	0.828	0.720
	NA2	0.828***			

	NA3	0.620***			
	NA4	0.769***			
Locus of Control	LC1	0.905***	0.748	0.856	0.669
	LC2	0.823***			
Risk Tolerance	RT1	0.852***	0.791	0.883	0.742
	RT2	0.926***			
Government Support	GS1	0.839***	0.686	0.897	0.849
	GS2	0.873***			
	GS3	0.770***			
	GS4	0.828***			
Entrepreneurial Intention	EI1	0.745***	0.618	0.906	0.876
	EI2	0.750***			
	EI3	0.830***			
	EI4	0.776***			
	EI5	0.795***			
	EI6	0.816***			

*** $p < 0.001$

Discriminant validity is established when the indicators loadings on their measured construct are all higher than the cross-loadings on other constructs and the square root of each construct's

average variance extracted (AVE) is larger than its correlations with other constructs (Chin, 1988). As shown in table 3, all the items are well loaded on their constructs much higher than the cross loadings on other constructs.

TABLE 3
Factor Loadings and Cross-Loadings

	Entrepreneurial Intentions	Government Support	Locus of Control	Need For Achievement	Risk Tolerance
EI1	0.745	0.204	0.223	0.324	-0.130
EI2	0.750	0.149	0.205	0.259	-0.157
EI3	0.830	0.178	0.239	0.289	-0.195
EI4	0.776	0.165	0.279	0.258	-0.218
EI5	0.795	0.182	0.235	0.215	-0.219
EI6	0.816	0.180	0.241	0.327	-0.214
GS1	0.194	0.839	0.144	0.117	0.014
GS2	0.218	0.873	0.155	0.118	0.060
GS3	0.137	0.770	0.151	0.111	0.015
GS4	0.182	0.828	0.152	0.137	0.021
LC1	0.295	0.150	0.905	0.326	-0.067

LC2	0.221	0.166	0.823	0.260	-0.064
NA1	0.251	0.098	0.274	0.729	-0.155
NA2	0.278	0.090	0.284	0.828	-0.086
NA3	0.237	0.181	0.222	0.620	0.022
NA4	0.285	0.073	0.231	0.769	-0.029
RT1	-0.176	0.093	-0.026	-0.069	0.852
RT2	-0.244	-0.013	-0.098	-0.080	0.926

In addition, the square root of the AVE of each construct was compared with the correlation between that construct and the other constructs. As shown in table 4, the square root of the

AVEs exceeds the highest correlation between that construct and the other constructs. These results give good support of discriminant validity (Fornell and Larcker, 1981).

TABLE 4
Correlations of Constructs and Discriminant Validity Assessment

Variable	1	2	3	4	5
1- Need For Achievement	<i>0.740</i>				
2- Locus of Control	.335**	<i>0.865</i>			
3- Risk Tolerance	-.076*	-.069	<i>0.889</i>		
4- Government Support	.157**	.184**	.042	<i>0.828</i>	
5-Entrepreneurial Intention	.351**	.293**	-.236**	.219**	<i>0.786</i>

Note: Square root of AVE on the diagonal; ** $p < 0.01$; * $p < 0.05$ (2-tailed).

Data Analysis

The main statistical analyses were conducted using multiple regression and t-test in order to assess the hypotheses proposed for this study. Data analysis was conducted using SPSS 20, which was also used to produce the descriptive statistics.

Results

Entrepreneurial Intentions

Mean values are used to assess the level of entrepreneurial intentions. The

overall mean of entrepreneurial intention is 4.063. This suggests that that majority of the students included in the sample have high intentions to become entrepreneurs and start their own business.

Pearson correlation matrix was calculated to assess the total relationships between all the study variables and entrepreneurial intentions. The results show statistically significant relations be

tween all variables and entrepreneurial intention of students. Among personality traits, need for achievement ($r = 0.351, p < 0.01$) has the highest correlation followed by locus of control ($r = 0.293, p < 0.01$) and risk tolerance ($r = -0.236, p < 0.01$). Finally government support ($r = 0.219, p < 0.01$) has a significant correlation entrepreneurial intentions. Table 4 presents the correlation coefficients.

Personality Factors, Government Support and Entrepreneurial Intentions

Multiple regression was employed to examine the influence of personality factors and government support on students’ entrepreneurial intentions. As shown in table 4, the F statistic of the model is 57.041, which is significant at the 1% level of significance. The coefficient of determination (R^2) is 0.223,

which indicates that 22% of the variation in students’ entrepreneurial intentions is explained by the independent variables.

Table 5 summarizes the multiple regression results. The results showed that need for achievement ($\beta = .256, t = 7.656, p < .001$) and locus of control ($\beta = .163, t = 4.876, p < .001$) have significant influence on students’ entrepreneurial intentions. Therefore, $H1, H2$ are supported. However, risk tolerance ($\beta = -.212, t = -6.760, p < .001$) has a negative influence on students’ entrepreneurial intentions. Therefore, $H3$ is not supported. Government support ($\beta = .158, t = 4.939, p < .001$) was also found to have significant influence on students’ entrepreneurial intentions. Therefore, $H4$ is supported.

TABLE 5
Multiple Regression Results

	Standardized		
	Coefficients	t	Sig.
	Beta (β)		
(Constant)		9.966	.000
Need For Achievement	.256	7.656	.000
Locus of Control	.163	4.876	.000
Risk Tolerance	-.212	-	.000
Government Support	.158	6.760	.000
		4.939	

$R^2 = 0.223$

$F = 57.041***$

Notes. Dependent Variable: Entrepreneurial Intention, ***Significant at 1% level ($p < 0.001$)

Demographic Factors and Entrepreneurial Intentions

T-test was performed to examine the relationship between students' gender, educational major, entrepreneurial experience and exposure to entrepreneurial experience. The following sections discuss the results for each demographic factor.

Gender

T-test was applied to examine the difference of entrepreneurial intentions

between male students and female students. T-test analysis indicated that there is a statistically significant difference ($t = -2.313$, $p = .021$) of mean values for entrepreneurial intentions between male students and female students. Female students had lower entrepreneurial intentions (Mean = 4.0195) than male students (Mean = 4.1405). Therefore, H5 is supported. See table 6 and table 7 for details.

TABLE 6
Mean and Standard Deviation of Entrepreneurial Intentions; Male Versus Female

	Gender	N	Mean	Std. Deviation
Entrepreneurial Intentions	Female	515	4.0195	.70412
	Male	287	4.1405	.72057

TABLE 7
Independent Samples Test of Entrepreneurial Intentions; Male versus Female

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Entrepreneurial Intentions	Equal variances assumed	.249	.618	-2.313	800	.021	-.12099	.05230
	Equal variances not assumed			-2.298	579.977	.022	-.12099	.05265

Educational Major

T-test was applied to examine the difference of entrepreneurial intentions

between business students and non-business students. As table 8 and 9 show, T-test analysis indicated that there is st-

atistically significant difference ($t = -2.913$, $p = .004$) of mean values for en-

nts. Business students had higher entrepreneurial intentions (Mean = 4.2130) than non-business students (Mean = 4.0268). Therefore, H6 is supported.

entrepreneurial intentions between business students and non-business students.

TABLE 8
Mean and Standard Deviation of Entrepreneurial Intentions; Business Versus Non-Business

	Education	N	Mean	Std. Deviation
Entrepreneurial	Non-business	648	4.0268	.73088
Intentions	Business	152	4.2130	.60777

TABLE 9
Independent Samples Test of Entrepreneurial Intentions; Business versus Non-Business

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Entrepreneurial Intentions	Equal variances assumed	3.723	.054	-2.913	798	.004	-.18619	.06392
	Equal variances not assumed			-3.264	263.736	.001	-.18619	.05705

Prior Entrepreneurial Experience

T-test was also employed to examine the difference of entrepreneurial in-

tentions between students who had prior entrepreneurial experience and those who did not. T-test analysis indicated that there is a statistically significant di-

ference ($t = 10.578$, $p = .000$) of mean values for entrepreneurial intentions students who had prior entrepreneurial experience and those who did not. Students with prior entrepreneurial experi-

ence had higher entrepreneurial intentions (Mean = 4.3872) than students who did not. (Mean = 3.9044). Therefore, H7 is supported (see table 10 and 11).

TABLE 10
Mean and Standard Deviation of Entrepreneurial Intentions;
Experience Versus No Experience

	Experience	N	Mean	Std. Deviation
Entrepreneurial Intentions	Yes	269	4.3872	.54530
	No	531	3.9044	.72073

TABLE 11
Independent Samples Test of Entrepreneurial Intentions;
Experience Versus No Experience

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Entrepreneurial Intentions	Equal variances assumed	17.695	.000	9.673	798	.000	.48285	.04992
	Equal variances not assumed			10.578	682.115	.000	.48285	.04565

Exposure to Entrepreneurial Experience

T-test was applied to examine the difference in entrepreneurial intentions between students who had previous exposure to entrepreneurial experience (family business) and those with no ex-

posure to entrepreneurial experience (family business). T-test analysis showed that there is a statistically significant

difference ($t = 2.436$, $p = .015$) of mean values for entrepreneurial intentions

between students who had a family business and who did not. Students who had a family business had higher entrepreneurial intentions (Mean = 4.1546) than those who did not have a family business (Mean = 4.0241). Therefore, H8 is supported (see table 12 and 13).

TABLE 12
Means and Standard Deviations of Entrepreneurial Intentions, Yes Versus No

	Family Business	N	Mean	Std. Deviation
Entrepreneurial	Yes	249	4.1546	.70430
Intentions	No	550	4.0241	.70059

TABLE 13
Independent Samples Test of Entrepreneurial Intentions; Yes versus No

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Entrepreneurial Intentions	Equal variances assumed	.002	.969	2.436	797	.015	.13057	.05360
	Equal variances not assumed			2.431	476.739	.015	.13057	.05371

Discussion

The main objective of this study was to explore the role of personality and demographic factors in explaining the entrepreneurial intentions of university students in Saudi Arabia. Understanding the predictors of entrepreneurial in-

tentions is a necessary step in understanding the actual behavior of entrepreneurship. Toward this end, this study confirms the importance of incorporating factors related to individuals, such as personality factors and demographic factors, and those factors in the entrepreneur's environment, such as gover-

nment support and other factors, to give holistic picture of why people become entrepreneurs. The study emphasizes the importance of government support and the importance of universities and other educational bodies in creating a supportive environment for potential entrepreneurs.

Regarding the impact of personality factors and in line with the findings of previous studies, this study found support for the significant influence of personality factors in predicting Saudi students' entrepreneurial intentions. Need for achievement, locus of control and risk tolerance all have a significant impact on students' intentions to become entrepreneurs. Need for achievement was the strongest predictor of student entrepreneurial intentions. Risk tolerance was negatively related to student entrepreneurial intentions. This suggests that students have less tolerance for risk, which is not surprising as Saudi Arabia ranked high in uncertainty avoidance in Hofstede's well known model. According to Hofstede (1980), societies that have high uncertainty avoidance expect individuals to avoid risk-taking behavior in exchange for material gain, which is the heart of entrepreneurship activity.

The study also explored the relationship between the demographic factors of respondents and entrepreneurial intentions. In terms of gender, female students reported lower intentions to become entrepreneurs. The result is consistent with previous studies, which also found females to have lower inclination toward entrepreneurship than males. In the Arab world, many factors contributed to this situation, such as lack

of confidence in success as entrepreneurs, economic and social environments favoring males, and the stereotyping of entrepreneurial activity as a male domain while the role of women in society is the traditional one of wife and mother (Mehtap, Pellegrini, Caputo, and Welsh, 2017).

In terms of educational major, business students reported higher intentions to become entrepreneurs. The result is in line with the findings of previous studies (eg. Solesvik, 2013) and emphasized the importance of entrepreneurial education since business students had been exposed to enterprise modelling during their course of study. Therefore, it is important to involve both business and non-business students in entrepreneurial education and training programs in order to educate them about entrepreneurship and provide them with opportunities to practice real-life situations in which to learn the skills required to help them start their own business. The study also found that students who had prior entrepreneurial experience or a family business had higher entrepreneurial intentions than those who did not. Therefore, it is important to support those students with the appropriate education by giving them the scientific knowledge and skills necessary to complement their prior exposure to entrepreneurship.

Implications

By examining those factors, the study suggests several implications. From a theoretical perspective, the study extended the literature of entrepreneurial intentions by integrating individuals' related factors and external factors to evaluate university students' entreprene-

urial intentions in the context of Saudi Arabia, which has received little attention in current literature. Furthermore, this study also endorsed the reliability of measurement developed by past researchers and explain that these measurements could be used in future studies. From practical perspective, this study obviously showed that entrepreneurial intentions among university students is high (mean = 4.063). However, having high scores in entrepreneurial intention is not enough and it remains necessary to encourage students to transfer their intentions to actual behaviors after graduation. Universities should involve students in education and training workshops and programs that make students more skilled in starting and managing their own businesses. The government and policy-makers can also play a vital role by providing financial support plans for new entrepreneurs, along with facilitating the startup of their businesses and removing any legal and financial barriers.

Limitation and Future Studies

The current study is not without limitations. A few limitations should be considered when interpreting the findings of the study. First, the targeted population of the study is only university students at one university in the Eastern province of the Kingdom, which limits the generalization of the study results. Therefore, future studies can expand the sample to include more universities over a wider geographical area. Second, the study focused on students' personality traits and their demographic factors as idiosyncratic factors in addition to government support as an external vari-

able in explaining entrepreneurial intentions. There are other important factors related to individuals or to their environment that are not considered in this study, such as self-efficacy, access to capital, culture, and economic situation, which can be considered in future studies. Other future research should investigate why female students have lower entrepreneurial intentions.

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