Entrepreneurial Intentions among Saudi University Students:

The Role of Motivations and Start-Up Problems

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Abstract

Using Azjen's Theory of Planned Behavior (TPB), we study the effect of entrepreneurial motivations and perceived start-up problems on the entrepreneurial intentions of Saudi university youth. To explore our research questions, we use data from a unique survey of the entrepreneurial attitudes of students at King Saud University, the oldest and largest university in Saudi Arabia, conducted in the Spring of 2010 (n=909). We find that the strife for independence is a very strong predictor of expressing entrepreneurial intentions and its effect is universal across gender. While most of the potential start-up problems are assessed as serious by both men and women, their individual effect is not so strong as to significantly affect the likelihood of expressing entrepreneurial intentions. In addition, as can be expected from the different socialization experiences of young Saudi men and women, there are significant differences by gender in both the motivations for and perceived problems in starting a new venture. Theoretical and public policy implications are discussed.

Introduction

After a decade of stable economic growth, the diversification of the economic base and the "Saudization" of the labor force are currently two critical priorities for Saudi economic policy. These tasks are exacerbated by the dual challenges of the "youth bulge" (roughly half of the Saudi population is younger than 24 years old) and the high unemployment rate in the 15-24 age bracket, which stood at 28.4% as of 2009 (Ministry of Economy and Planning, 2010). One way of accelerating the diversification of the country's economic base while addressing youth unemployment is by fostering entrepreneurship among university students. Research generally shows that young university graduates demonstrate the highest propensity towards starting a firm (Lüthje & Franke, 2003). University students combine the creativity and energy of the young generation with high levels of education and mastery of technological know-how. They are well prepared to establish innovative new businesses and create high-quality jobs, thus facilitating the transition to a knowledge-based economy, an explicit mandate set by the Ninth Development Plan (2010-2014) of the Kingdom of Saudi Arabia (Ministry of Economy and Planning, 2010; Alshumaimri, Aldridge,

& Audretsch, 2010). Not surprisingly, identifying the factors affecting the entrepreneurial intentions of Saudi university youth is a matter of considerable interest to both public policy makers and entrepreneurship educators (Porter, 2009).

Findings from the 2010 Global Entrepreneurship Monitor (GEM), representative of the general Saudi population, point to an interesting paradox. Seventy-five percent of the Saudi respondents believed there were entrepreneurial opportunities in the country, 69.3% stated they had the capabilities to launch an entrepreneurial venture, fully 92.3% reported that successful entrepreneurs had high status in society. Yet only 1% of the people surveyed reported they had entrepreneurial intentions, the lowest rate among the 59 countries included in the 2010 GEM study (Kelley, Bosma, & Amorós, 2010). The mismatch between the highly positive attitudes towards entrepreneurship and the low levels of expressing entrepreneurial intentions among the general population prompted us to explore in more depth the drivers of entrepreneurial intentions among university students, a dynamic group that holds high potential for productive engagement in entrepreneurial and innovative economic activities.

Theoretical Framework and Research Questions

We frame our exploration of the drivers of entrepreneurial intentions among Saudi university youth in the theory of planned behavior (TPB) from social psychology (Azjen, 1987, 1991). In the psychological literature, intentions have proven the best predictor of any planned behavior (in our case, starting an entrepreneurial venture), particularly when the behavior is rare, hard to observe, or involves unpredictable time lags (Krueger, Reilly, & Carsrud, 2000). Entrepreneurial intentions, or states of mind that direct attention, experience, and action toward a business concept, set the form and direction of organizations at their inception (Bird, 1988). Thus, intentions predict planned behaviors, while in turn certain specific attitudes predict intentions.

In Azjen's (1987) model, intentions are determined to a large extent by three factors: (1) the personal attitudes towards the planned behavior, or the perceived desirability of performing the behavior, (2) the social norms about the planned behavior, or the perceptions of what important people in respondents' lives think about performing the behavior, and (3) the perceived feasibility of the behavior, or the perceived behavioral control. The personal attitudes towards the behavior depend on the expectations and beliefs about the personal utilities resulting from the behavior and include outcomes such as personal wealth, autonomy, or community benefits (Krueger et al., 2000; Shapero, 1982). Perceived social norms tap into the most important social influences (for example, family and friends) including any "role models" or "mentors" (Krueger et al., 2000). Finally, the perceived behavioral control overlaps with Bandura's (1986) view of perceived self-efficacy, or the perceived ability to execute the target behavior (Azjen, 1987; Krueger at al., 2000).

Several studies have tested the TPB framework in the context of university students' entrepreneurial intentions. Krueger et al. (2000) compared the predictive power of the TPB model to Shapero's model of the entrepreneurial intent and found strong statistical support for

both models, which led them to conclude that intentions models would predict behavior better than either individual (for example, personality) or situational (for example, employment status) variables. A recent study by Liñan, Urbano, and Guerrero (2011) among Spanish university students found that attitudes towards entrepreneurship, perceived social norms, and perceived behavioral control were all significantly and positively associated with entrepreneurial intentions. In related research, a survey of 512 students at the MIT School of Engineering (Lüthje & Franke, 2003) found that entrepreneurial attitudes were strongly linked with the intention to start a business and that entrepreneurial intent was directly affected by perceived barriers and support factors in the entrepreneurship-related context. In a study of female business students in Dubai, Gallant, Majumdar, and Varadarajan (2010) established that Emirati female students showed a high inclination to become entrepreneurs provided they underwent a specialized training program. In sum, empirical research on the entrepreneurial intentions among university youth has largely validated the key tenets of the TPB framework.

In our study, we use entrepreneurial motivations as a proxy for the personal attitudes, or the perceived desirability of starting a new venture. We take a broader perspective on social norms, by looking more generally at the perceived regulatory, financial, and social problems associated with starting a new venture. Finally, we use the perceived cognitive problems with starting a new venture in order to assess the perceived feasibility of entrepreneurial behavior. Admittedly, our model is broader in scope compared to the traditional TPB model, but given the paucity of prior research on youth entrepreneurship in the Middle East, the novelty of the research context, and the exploratory nature of our study, we opted for a more broad interpretation of the model. We were particularly careful not to exclude potential explanatory variables that may be significantly associated with entrepreneurial intentions in the context of Saudi university youth.

Under the broad framing of the TPB model, we addressed the following research questions: (1) What is the effect of entrepreneurial motivations on the entrepreneurial intentions of Saudi university students?; (2) What is the effect of perceived start-up problems on the entrepreneurial intentions of Saudi university students?; and (3) What is the effect of perceived cognitive problems on the entrepreneurial intentions of Saudi university students?

Because of the different social roles and socialization experiences of young Saudi men and women, we were also interested in the effect of gender on the drivers of entrepreneurial intentions. The gender ideology promoted in the political culture of Saudi Arabia idealizes women's domesticity and elevates gender segregation (Al-Dabbagh, 2009; Mostafa, 2005). Although Saudi women increasingly have access to a well-rounded education, and the right to work, they do not have the full opportunity to participate appropriately in economic life (Almunajjed, 2010) and are restricted in their participation in political life (Alturki & Braswell, 2010). In addition, the relatively recent phenomenon of women's entrepreneurship has not provided enough role models of successful women-entrepreneurs in order to reinforce the pursuit of entrepreneurial initiatives as a legitimate and desirable career path (Sadi & Al-Ghazali, 2010). That is why we added research question (4)

What are the gender differences in the effect of entrepreneurial motivations and perceived start-up problems on entrepreneurial intentions?

Methodology

To explore the research questions, we used data from a unique survey of the entrepreneurial intentions among Saudi university youth (n = 909), carried out in the Spring of 2010 in King Saud University, the oldest and largest Saudi University. The respondents ranged in age between 18-24. The survey was administered in Arabic and included sections on entrepreneurial motivations, perceived start-up problems, as well as self-assessed qualifications and skills. Entrepreneurial intentions were measured by a single binary variable, whether or not the respondent wanted to start a new business (0 = no, 1 = yes).

Combining prior research on entrepreneurial motivations (Carter, Gartner, & Shaver, 2003) with research on opportunity and necessity-based entrepreneurship (Reynolds, Camp, Bygrave, Autio, & Hay, 2002), we measured entrepreneurial motivations by 6 binary items, asking respondents to check the most important motivations to start a new business, as follows: necessity, achieving a personal vision, financial gain, self-achievement, creativity, and independence.

To broadly assess the social acceptance of entrepreneurial behaviors, we focused on the perceived start-up problems in starting a new venture. We followed Amine and Staub (2009) to classify the start-up problems into regulatory, financing, and normative, and measured them on a five-point Likert-type scale, from 1=completely disagree to 5 = strongly agree, with 3 as a neutral anchor. Two items measured perceived regulatory problems: problems with laws and regulations, and problems with unfair competition. Two items represented perceived financial problems: fear of financial liabilities and financing difficulties. Two items measured perceived normative problems: family disagreement and social attitudes.

We used perceived cognitive problems as a proxy for the perceived ability (or self-efficacy) of engaging in entrepreneurial behavior, and measured them by four items: lack of knowledge, fear of failure, conflict with student responsibilities, and lack of experience. In addition, we assessed the perceived problems with the burden of entrepreneurial commitment, using two items: fear of commitment and fear of the administrative burden of running an enterprise. Table 1 presents all variables included in our analysis.

Using the logistic regression procedure in STATA (StataCorp, 2009), we specified a logistic regression assessing the effect of entrepreneurial motivations and perceived start-up problems on the likelihood of expressing entrepreneurial intentions, controlling for gender, start-up experience, and prior entrepreneurial qualifications and training. To assess the joint effect of motivations and start-up problems, we included two joint tests of significance.

TABLE 1
DESCRIPTIVE STATISTICS AND FREQUENCES

VARIABLE	N	M	SD	Min	Max	Frequences*	
						Yes/Male	Percent
Dependent Variable							
Entrepreneurial Intentions	948	0.9	0.29	0	1	855	90.19
Controls							
Gender	950	0.63	0.48	0	1	597	62.84
Start-up experience	950	0.12	0.33	0	1	119	12.53
Qualifications and training	949	0.07	0.26	0	1	73	7.69
Independent Variables							
Entrepreneurial Motivations							
Lack of alternative jobs	950	0.11	0.32	0	1	109	11.47
Realize a vision	950	0.25	0.43	0	1	239	25.16
Financial gain	950	0.81	0.39	0	1	774	81.47
Self-achievement	950	0.43	0.49	0	1	405	42.63
Creativity	950	0.48	0.5	0	1	462	48.63
Independence	950	0.37	0.48	0	1	352	37.05
Regulatory Problems							
Laws and regulations	944	3.76	1.04	1	5		
Unfair competition	944	3.72	1.01	1	5		
Financing Problems							
Financial liabilities	944	3.73	1.17	1	5		
Financing difficulties	944	3.74	1.14	1	5		
Normative Problems							
Family disagreement	944	2.21	1.21	1	5		
Social attitudes	940	2.12	1.12	1	5		
Cognitive Problems							
Lack of knowledge	946	3.6	1.2	1	5		
Fear of failure	947	3.39	1.28	1	5		
Contradicts student duties	946	3.54	1.31	1	5		
Lack of experience	944	3.79	1.05	1	5		
Commitment Problems							
Fear of commitment	943	3.15	1.25	1	5		
Fear of administrative burden	943	3.24	1.24	1	5		

* binary variables only

Results

Results from statistical testing are presented in Table 2. In the whole sample (Model 1), entrepreneurial motivations significantly affected the likelihood of expressing entrepreneurial intentions (joint test of significance chi-square(df) = 34.13(6), $p<0.001$). Collectively, the perceived problems also significantly affected the likelihood of expressing entrepreneurial intentions (joint test of significance chi-square(df) = 23.82(12), $p<0.05$). These results are consistent across the subsamples split by gender (Models 2 and 3)

Among the individual factors, the strongest motivator was the desire for independence. Those who reported that the strife for independence was a motivation to embark on an entrepreneurial career had 3.17 times the odds of expressing entrepreneurial intentions relative to those who were not motivated by a desire for independence. The desire for creativity also significantly increased the odds of expressing entrepreneurial intentions, while the lack of alternative jobs had a significant negative effect.

Perceived regulatory, financing, or normative problems had no significant effect on entrepreneurial intentions. Among cognitive problems, the overall significant effect was due to a single individual item, fear of failure, which significantly decreased the odds of expressing entrepreneurial intentions. Among the control variables, gender was significantly associated with entrepreneurial intentions, with male students having two times the odds of expressing entrepreneurial intentions compared to females. Students who reported prior entrepreneurial qualifications and training had 3.52 times the odds of expressing entrepreneurial intentions relative to those who did not.

We next reran the model specifications on subsamples split by gender. In the male-only sample (Model 2), both the desire for creativity and the desire for independence significantly increased the odds of expressing entrepreneurial intentions. Similarly, for the female-only sample (Model 3), the desire for independence significantly increased the odds of expressing entrepreneurial intentions. Its effect, however, was coupled with the significant effect of the lack of alternative jobs, which decreased the likelihood of expressing entrepreneurial intentions. Among the start-up problems, the male students were mostly worried about the lack of experience, whereas female students mostly feared failure. Finally, it is interesting to note that prior qualifications and training positively affected the likelihood of expressing entrepreneurial intentions for women, but not for men.

In sum, we conclude that the strife for independence was a very strong predictor of expressing entrepreneurial intentions and its effect was universal across gender. While most of the potential start-up problems were assessed as serious by both men and women (e.g. with an average score above 3, the neutral anchor), their individual effect was not so strong as to significantly affect the likelihood of expressing entrepreneurial intentions. In addition, as can be expected from the different socialization experiences of young Saudi men and women, there were significant differences by gender in both the motivations for and perceived problems in starting a new venture.

TABLE 2
LOGISTIC REGRESSION ESTIMATES ON THE LIKELIHOOD OF EXPRESSING ENTREPRENEURIAL INTENTIONS

VARIABLE	Model 1 Whole Sample (n = 909)		Model 2 Men only (n = 557)		Model 3 Women only (n = 352)	
	OR	**S.E.**	**OR**	**S.E.**	**OR**	**S.E.**
Controls						
Gender	**2.01***	0.59				
Start-up experience	1.06	0.43	1.25	0.73	0.66	0.43
Qualifications and training	**3.52†**	2.68	0.71	0.79	**6.03†**	6.43
Independent Variables						
Entrepreneurial Motivations						
Lack of alternative jobs	**0.48***	0.16	0.54	0.26	**0.39†**	0.2
Realize a vision	1.08	0.41	1.11	0.61	0.72	0.43
Financial gain	1.39	0.39	1.67	0.74	1.41	0.57
Self-achievement	0.89	0.26	1.13	0.38	0.86	0.51
Creativity	**1.76***	0.52	**2.49†**	1.26	1.32	0.55
Independence	**3.17*****	0.99	**4.17****	2.08	**3.52****	1.59
Regulatory Problems						
Laws and regulations	1.07	0.23	0.89	0.3	1.08	0.33
Unfair competition	1.15	0.25	1.58	0.54	1.04	0.33
Financing Problems						
Financial liabilities	1.05	0.13	1.12	0.18	0.89	0.17
Financing difficulties	1.16	0.13	1.08	0.17	1.26	0.22
Normative Problems						
Family disagreement	0.91	0.09	1.02	0.15	0.79	0.14
Social attitudes	0.98	0.11	0.97	0.16	0.99	0.19
Cognitive Problems						
Lack of knowledge	0.89	0.11	1.00	0.16	0.81	0.15
Fear of failure	**0.82†**	0.09	1.17	0.18	**0.54****	0.10
Contradicts student duties	0.91	0.09	1.01	0.14	0.81	0.13
Lack of experience	0.91	0.12	**0.63***	0.13	1.22	0.23
Commitment Problems						
Fear of commitment	0.71	0.18	0.69	0.25	0.73	0.28
Fear of administrative burden	1.02	0.25	0.99	0.36	0.96	0.34
Regression Function						
-2 Log likelihood	-250.6525		-133.3766		-101.3795	
LR chi-square (df)	**76.85(21)*****		**50.78*****		**54.60(20)*****	
Pseudo R^2	0.1329		0.1599		0.2122	
Joint Test of Significance	**Chi-square(df)**					
Entrepreneurial Motivations	**34.13(6)*****		22.56(6)***		**13.59(6)***	
Perceived Problems	**23.82(12)***		**17.53(12)†**		**25.05(12)***	

† significant at p<.1; * significant at p<.05; ** significant at p<.01; *** significant at p<.001

Implications and Conclusions

The findings from the study have important implications for theory, entrepreneurial education, and public policy. For theory development, the results from the joint tests of significance for both entrepreneurial motivations and perceived problems were consistent across all model specifications, offering broad support for Azjen's (1987, 1991) TPB model. This is in keeping with prior work on entrepreneurial intentions carried out in the context of university youth in different institutional and cultural contexts, such as the United States (Krueger et al., 2000) or Spain (Liñan et al., 2011). We call for future surveys in a representative sample of Saudi university youth, using instruments validated by prior empirical research, in order to ascertain the results from our exploratory study and build a cumulative body of empirical evidence based on the TPB model across national and institutional contexts.

Our study has important implications for entrepreneurship education, as well. As the results suggest, the likelihood of expressing entrepreneurial intentions is significantly and positively affected by prior qualifications and training. This is consistent with prior work by Autio, Keeley, Klofsten, and Ulfstedt (1997) who surveyed technology students from four different countries and found that entrepreneurial convictions were influenced by the image of entrepreneurship and the support received from the university environment. Targeted entrepreneurship courses, workshops, simulations, boot camps, and other "hands-on" business experiences, therefore, can effectively promote entrepreneurship as a career choice. At the same time, the model specifications by gender strongly suggest that the perceived ability (or self-efficacy) problems differ significantly between male and female university youth. While young men are concerned about their lack of experience, young women fear failure. This implies the need for carefully targeted programs for men and women would-be entrepreneurs. While entrepreneurial education and training will likely be beneficial for both men and women, it needs to be complemented by mentoring programs and the creation of support networks for female university students, aimed at raising their self-efficacy and nurturing a high level of self-confidence (Gallant et al., 2010).

Last but not least, our findings have important public policy implications. First, broad private-public partnerships in university research and the creation of business incubators can be extremely fruitful in fostering entrepreneurship among university students. The launch of Riyadh Techno Valley, the science park affiliated with King Saud University is one example of the new public initiatives that facilitate technology transfer and knowledge spillovers from the universities for commercialization and entrepreneurial innovative activity (RTV KSU, 2010; Alshumaimri et al., 2010). In addition, business forums featuring high-profile entrepreneurs and increased media exposure will promote powerful role-models for Saudi university youth and will enhance the social desirability of an entrepreneurial career.

Interestingly, the broader environment for entrepreneurship, consisting of perceived regulatory and financial problems, as well as constraining social norms, although perceived as generally unfavorable for entrepreneurship, had no significant effect on entrepreneurial

intentions. We interpret this finding as a very positive indicator of the level of self-reliance and personal empowerment of Saudi university youth.

In sum, our findings suggest that the entrepreneurial intentions of Saudi university students are driven by their entrepreneurial motivations and perceived cognitive abilities and not constrained by perceived regulatory problems or social attitudes. Perhaps the most encouraging finding of the study is that over 90% of our respondents indicated their intention to start an entrepreneurial venture at some point in the future. This signals that a vibrant entrepreneurial class is in the making, bringing vigor and strength to the Saudi economy for years to come.

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