

AN INVESTIGATION OF ENTREPRENEURIAL INTENTIONS OF AGRICULTURAL STUDENTS

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With almost two-thirds of the population (68.4 per cent) below the age of 30, Pakistan is going to experience a youth bulge in coming years, which is likely to change the age structure of labor force over the next couple of decades. The need to provide education, health and livelihood for the growing youth population is now increasingly becoming important. The youth in Pakistan appears to lack entrepreneurial skills. Only 8.3 per cent of the youth is reported as self-employed outside agriculture and only 0.2 percent acting as employers. It has been examined worldwide that entrepreneurship is a fundamental tool for economic growth, expansion and employment generation. The present study has investigated agricultural graduates' intentions towards entrepreneurship. Purposive sampling technique was used to collect information from 120 agricultural students at University of Agriculture Faisalabad, its sub-campuses and alumni. The result showed that gender (male), entrepreneurial education, attitude, family support, mental acceptance, and perceived behavioral control were significantly (positively) related to entrepreneurial intentions among Agricultural students. Based on findings of the study it is suggested that entrepreneurial activity among agricultural graduates' can be increased if the students are provided with business wisdom, inspiration and motivation, either through mentorship by entrepreneurs and experts or by emphasizing the importance of business opportunities in the curriculum. Moreover, supplementary short entrepreneurial courses can create miracles.

Keywords: Unemployment, entrepreneurship, intentions, risk-taking, opportunity seeking, economic growth.

INTRODUCTION

Entrepreneurship has recognized to globe as the engine; to generate business activity, jobs, and escort nations toward economic prosperity (Kautonen *et al.*, 2010; Nabi and Holden, 2008; Haq *et al.*, 2012). No doubt entrepreneurship has more than a few veiled potentials to fetch underdeveloped and developing nations into stream of development with effective human resource utilization (Moriano *et al.*, 2011). Entrepreneurship has built in characteristics for human resource development, credit generation for business activity, innovativeness, and makes obvious outcomes in improving quality of life (Scarborough and Zimmerer, 2003; Roxas *et al.*, 2008). It has become apparent for nations to take entrepreneurship as key agenda, address its prospects, viability, productivity, and create an environment which facilitate entrepreneurial activity and engender positive entrepreneurial inclination among youth (Levenburg, 2008; Devonish *et al.*, 2010). Entrepreneurship is a miracle and utmost virtue of the times to cutback poverty, swell earning hands and production, engage capital up-to its potentials, redistribute income in deprived sections, and boost further entrepreneurial activity (Pihie, 2012; Sommer and Haug, 2011).

Universities are the preeminent forum in regional entrepreneurial environment. Being key stakeholder in education, knowledge, and innovation universities could

exploit colossal support to new ventures (Shane, 2004; Edmondson and McManus, 2007). Nowadays entrepreneurship has come into the first mandate among universities however, policy makers, and academic researchers also reflective for it (Etzkowitz, 2001; OECD, 2007). Therefore, various universities in collaboration to the local governments are trying to establish technological based science parks led through innovativeness for encouraging youth to participate, learn, manage, and move toward start-up, ultimately outcome to support entrepreneurial activity and economy. For instance, MIT, and Stanford had established their close links to industry, entrepreneurs in market, and had established a bilateral mechanism through both partners visit, learn, provide input, and share productive and innovative outcomes (Etzkowitz *et al.* 2000; Roberts and Eesley, 2009). Pakistan has world's largest youth (68.4 percent below 30-year age) could experience a new economic regime through entrepreneurial exposure among university graduates (GOP, 2015). This is a dynamic population may use as instrument to growth and prosperity for the country. To seed university graduates in entrepreneurial inclination may lead country with augmented economic activity, new jobs, innovativeness, human resource development, and improvement in quality of life. Presently, ongoing recession in almost all sectors of economy coupled with stagnant agricultural growth, and decreasing exports cultivate an increase in unemployment among youth. Universities are producing graduates in

increased number which is a yearly addition to unemployment numbers. To cater this fast-growing impasse has become apparent need of the day. Hence, entrepreneurship is the soul instrument to be seen with all the desired solutions for the current circumstances of the country. In this scenario, present study was planned to investigate the entrepreneurial intentions among agricultural graduates. The key objective was to analyze the factors affecting agricultural student's intentions to become entrepreneur.

MATERIALS AND METHODS

Theoretical framework: This study was based on theory of planned behavior (TPB¹) developed by Ajzen (1991) as an extension to theory of reasoned action (TRA) by Fishbein and Ajzen (1975). Following theoretical framework was used to conduct this study.

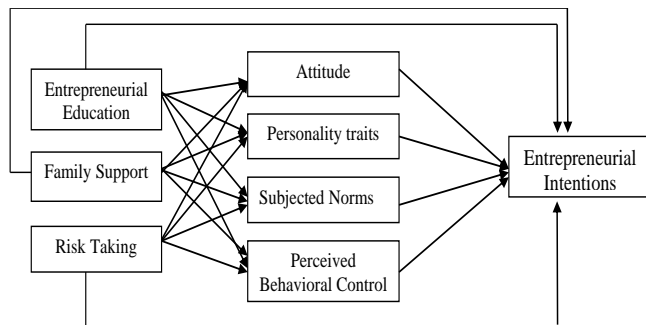


Figure 1. Research Theoretical Framework.

Turker and Selcuk (2009) divulged that entrepreneurial education have positive consequences in choice of entrepreneurial career, it makes students more rational for seeking their place in market. According to Roxas *et al.* (2008) entrepreneurial education gained through formal sector institutions lead to escalate entrepreneurial intentions. Entrepreneurial education escort skills development and increase risk taking capabilities. Attitude is the integral determinant in entrepreneurial intentions and starting a new venture (Ajzen, 1991). Attitude has confirmed as the most significant factor in youth's entrepreneurial inclination (Kautonen *et al.* 2009; Fini *et al.* 2009; Moriano *et al.* 2011). According to Ismail *et al.* (2009) individual(s) with particular personality traits could be more inclined toward entrepreneurial intentions. Similarly, Yusof *et al.* (2007) described that due to positive psychological factor youngsters are exposed to entrepreneurship; choose adventure, found of success, seek pleasure in new ventures, having higher propensity to take risks, and bared to innovativeness with prior locus of control. Subjected norms are antecedents of

social factor, which have their pressure in performing or not performing the behavior (Ajzen, 1991). Many researchers have different and controversial views on association between subjected norms and entrepreneurial intentions (Carr and Sequeira (2007); Gelderen *et al.* (2008);Kautonen *et al.* (2009); Moriano *et al.* (2011). Findings of Gelderen *et al.* (2008); Schwarz *et al.* (2009); Shook and Bratianu (2010); Moriano *et al.* (2011) are in line to having positive perceived behavioral control and its significance in starting a new business activity.

Population and Sample: Agricultural students (enrolled and alumni) in University of Agriculture, Faisalabad and at its two sub-campus (Burewala Vehari, and Toba Tek Singh) were the potential population for current study. A sample of 120 students was selected by using online sample selection at www.samplesurvey.com by using 95 percent confidence interval. To select a non-homogeneous, unbiased and representative sample, respondents (enrolled and alumni) was taken as given below;

Table 1. Respondents subjects.

Degree programs	Frequency	Percentage
Agriculture Economics	14	11.67
Agriculture Engineering	12	10.00
Agriculture Marketing	16	13.33
Agronomy/plant sciences	24	20.00
Animal Sciences	18	15.00
Food and Nutrition	15	12.50
Social Sciences	11	9.17
Environmental sciences	10	8.33
Total	120	100.00

Source; Authors own calculation at study area

Research instrument, data collection, and analysis: A well prepared and pre-tested questionnaire was used as research instrument for this study. All factors in the questionnaire were selected by referring prior literature. Particularly, five point Likert-scale, and odd ratios were designed considering past studies of Ajzen (1991), Krueger *et al.* (2000), Birdthisle (2008), Fini *et al.* (2009), Devonish *et al.* (2010), Wu (2010), Do Paço *et al.* (2011) and Moriano *et al.* (2011). Purposive sampling was used for data collection through conducting structural interview of respondents in University of Agriculture, Faisalabad, sub-campus (Burewala Vehari, and Toba Tek Singh), and aluminum at their respective sites. Descriptive statistics (mean and standard deviation), and empirical model (Binary Logistic Regression) was employed to test the study hypotheses (Man, 2002; Silva *et al.* 2009; Caliendo *et al.*, 2014). Data were analyzed by using SPSS 20.0.

they are: (i) attitude; (ii) subjective norm and; (iii) perceived behavioral control (Engle *et al.*,2010).

¹ TPB model come into view as a significant cognitive model for evaluation of entrepreneurial intention. Most importantly, it described human behavior as cause of intention, and intentions are directly affected by three antecedents,

$$L_i = \ln\left[\frac{P_i}{1-P_i}\right] = Z_i = \beta_0 + \sum \beta_i X_i + \mu_i$$

$$Y = \ln\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \mu_i$$

Where,

L_i = Is the entrepreneurial intention ranges from 0 to 1.
(0= No intention; 1= Yes, I want to be a future entrepreneur).

β_0 = Intercept term

X_1 = Gender (0 for Female^{RC2}; 1 for Male)

X_2 = Age (Number of years)

X_3 = Entrepreneurial education (0 No need^{RC}; 1 Yes, it is necessary)

X_4 = Attitude (5 point Likert scale)

X_5 = Background (0 for Rural^{RC}; 1 for Urban)

X_6 = Family support (5 point Likert scale)

X_7 = Mental acceptance (5 point Likert scale)

X_8 = Perceived behavioral control (5 point Likert scale)

X_9 = Subjected norms (5 point Likert scale)

μ_i = Error term

RESULTS AND DISCUSSION

Respondent's background indicates that highest numbers of respondents (52.50 percent) belonged to rural areas, and lowest (21.67 percent) having their habitation in urban areas (Table 2). Higher population of the country fit in rural areas which was the rationale of supplementary number respondents from rural areas. Results exhibited that majority of the respondent's (52.50) families were not engaged in business activity as source of livelihood (Table 3).

Table 2. Respondent's background.

Background	Frequency	Percentage
Rural	63	52.50
Urban	31	25.83
Peri-urban	26	21.67
Total	120	100.00

Table 3. Respondent's family business background.

Business Background	Frequency	Percentage
Yes, my family is engaged in business	57	47.50
No, my family is not engaged in business	63	52.50
Total	120	100.00

Results revealed that most of the respondents were having positive entrepreneurial intention (Table 4). All of the mean score for student's attitudinal queries confirmed significant results (mean score higher than 3). To find an opportunity and sufficient resources were observed with highest score (4.20).

Hence, most of the respondents were opportunity oriented and seeking opportunities for start-up. Descriptive results revealed that entrepreneurial education was highly significant (4.03 mean score) toward entrepreneurial intentions among students; attitude, and risk-taking behavior were reported second and third in highest related factors respectively (Table 5). Subjected norms, mental acceptance, family support, access to credit, and perceived behavioral control were probed to having insignificant impact in entrepreneurial intentions. Moreover, it was concluded that entrepreneurial education was the foremost factor in entrepreneurial intentions.

Table 4. Respondents entrepreneurial intentions.

Entrepreneurial Attitude	Mean	St. Dev.	Rank
I want to start my business instead of having a secure job	3.54*	1.27	5
Career as entrepreneur is attractive for me	3.84*	1.00	3
If I could find an opportunity and resources, I'd like to start a business	4.20*	1.00	1
Being an entrepreneur would entail great satisfactions for me	3.81*	0.98	4
I believe that if I start business, I will certainly be successful	3.86*	0.98	2

Table 5. Factors affecting entrepreneurial intentions.

Factors	Mean	St. Dev.	Rank
Subjective norms	3.23*	1.25	4
Mental acceptance	2.94 ^{NS}	1.28	6
Entrepreneurial education	4.03*	0.97	1
Personality traits	3.18*	1.06	5
Entrepreneurial intentions	3.61*	1.08	4
Self-sufficiency/risk taking	3.68*	1.16	3
Family support	2.83 ^{NS}	1.23	7
Access to credit	2.80 ^{NS}	1.25	8
Attitude	3.85*	0.23	2
Perceived behavioral control	2.67 ^{NS}	1.17	9

*Mean score greater than 3 statistically significant; NS stand for non-significant.

Results of Logistic Regression Model (Table 6) divulged that anticipated coefficient for gender (in case of gender as male), entrepreneurial education, family support, mental acceptance, and perceived behavioral control were positively related to entrepreneurial intentions among agricultural students. Estimated slopes reported that entrepreneurial education was strongest predictor (6.39) of student's entrepreneurial intentions. Nonetheless, on contrary age, attitude,

²RC stand for reference categories, it makes comparison in absence of a character. It mostly used in binary logistic regression while taking variables in presence and absence.

background, and subjected norms were insignificantly contributing toward student's entrepreneurial intentions. Finding of the study also in line to the studies of Fini *et al.* (2009),Turker and Selcuk (2009), Schwarz *et al.* (2009), Othman and Ishak (2009),Ul iet *al.* (2010), Engle *et al.* (2010),Morianio *et al.* (2011) and Sommer and Haug (2011).

Table 6.Results of logistic regression model.

Variables	B	S.E.	Exp(β)
Constant	-1.54	4.53	0.86
Gender RC; 0 for Female	-2.32	0.66	4.16*
Age	0.44	0.18	1.56 ^{NS}
Entrepreneurial Education RC; No need for entrepreneurial education	0.33	0.10	6.39*
Attitude	-0.04	0.06	1.91 ^{NS}
Background RC; 0 for Rural background	1.82	0.66	6.14 ^{NS}
Family support	1.26	0.68	3.58*
Mental Acceptance	2.10	0.89	4.13*
Perceived Behavioral control	1.02	0.56	3.17*
Subjected Norms	0.49	0.11	2.13 ^{NS}

Note: * statistically significant at $p \leq 0.05$; NS = Non-significant
Log likelihood Ratio=64.732, Cox and Snell R Square = 0.543,
Nagel-kerke R Square = 0.740
SE = Standard Error; RC = Reference category for respondents
with 0 scale.

Conclusions and recommendations: Entrepreneurship has documented to have significant socio-economic implications. It is recognized as engine escalates economic growth via generation of business activity, new jobs, and human resource development. Human capital has blessed with attributes of non-convergence growth. In this regard, Pakistan by having a huge productive human capital (68.4 percent below 30year age) could encompass a colossal potential to accomplish economic growth and escort country toward prosperity. Presently, ongoing recession in almost all sectors of economy coupled with stagnant agricultural growth, and decreasing exports due to energy crises has cultivate an increase in unemployment among youth. Current distortion has made job market incapable for provision of jobs to yearly based produced graduates. Therefore, entrepreneurship has a big room to play a central role in this environment. To seed university graduates in entrepreneurial inclination may lead country with enhanced economic activity, new jobs, innovativeness, human resource development, and results in economic development of the country. In this scenario, present study was planned to investigate the entrepreneurial intentions among agricultural graduates. Finally, results revealed that anticipated slopes for gender (in case of gender as male), entrepreneurial education, family support, mental acceptance, and perceived behavioral control were positively

related to entrepreneurial intentions among agricultural students. Entrepreneurial education was reported as strongest predictor of student's entrepreneurial intentions. Nonetheless, on contrary age, attitude, background, and subjected norms were insignificantly contributing toward student's entrepreneurial intentions.

Subsequently, entrepreneurial education could have a great deal to exploit unveiled potentials among university graduates. Therefore, there is need to plan entrepreneurial education in line to current prerequisite for new start-up through universities keen interest. It does append enormous positive consequence for country. In addition, there is just needed to properly seed agricultural students with positive attitude concerning entrepreneurship, and entrepreneurial education. Empirical findings of the study recommend collaboration between curriculum planers and entrepreneurs, promotion of entrepreneurial courses and engagement of entrepreneurs in market and industry to academia for sharing their experience, knowledge, and prestigious status of entrepreneurial activity. Moreover, supplementary short entrepreneurial courses can create miracles in making the mind of budding agricultural graduates from service orientation to business orientation.

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