

Personal Characteristics as Determinants of Entrepreneurial Self-Efficacy among University Students in Pakistan

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Abstract

Entrepreneurship is considered as a solution to unemployment. It is believed that Entrepreneurial Self-Efficacy (ESE) is imperative for a person to be an entrepreneur. This study aims to examine the determinants of ESE among university students in Pakistan. This is one of the fundamental constructs in the psychology of entrepreneurship research and often integrated in entrepreneurial intentions models to explain why some persons are more likely than others to become entrepreneurs. Entrepreneurial Self-Efficacy Scale prepared by Chen, Greene, and Crick (1998) was used in this study for collecting data. Total 800 questionnaires were distributed among conveniently selected students out of which 742 completely filled questionnaires were returned with a response rate of 92.75%. The results revealed a significant difference between bachelor and master class students in terms of ESE. The model R-squared indicated that 5.7 percent of the variation in the ESE is explained by the personal characteristics. The paper concludes by pointing out some limitations of the study and discussing the possible effect of personal characteristics on ESE.

Keywords: entrepreneurship, entrepreneurial self-efficacy scale, self-efficacy

Introduction

Unemployment is a silent and collective dilemma in Pakistan. People get higher education to get employment but due to lesser number of job opportunities, very few land up with a job of their own choice. Setiawan (2014) identified that it is the responsibility of higher education institutions to offer such courses that prepare the students for the challenges of unemployment. He argued that the universities should prepare students in such a manner that they should be able to generate their own jobs and also create employment for others. To accomplish this task, entrepreneurship is fundamental not only to fulfil individual needs but also

for a prosperous economy of a country (McCarver, Jessup, & Davis, 2010). It is an emerging trend for financial benefit and creation of job (Wennekers & Thurik, 1999). Nevertheless, innovation is the key of staying ahead in a globally competitive world (McCarver, Jessup, & Davis, 2010).

Thoughtful education improves students' awareness about entrepreneurship. It gives students demeanors, information and abilities to adapt complex tasks as an opportunity chasing, asset gathering, and driving the task for achievement (Wilson, Kickul & Marlino, 2007). This is the demand of the day to introduce people with emerging trends of entrepreneurship in developing countries. In Pakistan, 40% of the contribution in GDP comes from small and medium sized organizations and these companies provide 80% employment. As the importance of entrepreneurship emerged, higher education institutes began to initiate separate centers, Entrepreneurship Center, having facilities for a range of activities from research to idea generation and from incubation to commercialization; cultivating networks to encourage their students to initiate startups (Qureshi, Cheema, & Sana, 2016). But in Pakistan only 9 universities out of 140 have entrepreneurship centers and even these centers are under resourced (Qureshi, Cheema, & Sana, 2016). However, Pakistan has recently acknowledged the role of entrepreneurship for the economic growth of a country and the government is taking measures to promote such as seminars and workshops at various forums to promote entrepreneurship (Shabbir, Shariff, Alshaibani, Faisal, & Salman, 2018).

Trainings are needed to upgrade student self-efficacy through knowledge, and supports them in active learning exercises needed to run a private enterprise (Fiet, 2001). One of the aims of education should be to help students set up their own particular business (Segal, Borgia, & Schoenfeld, 2005). Thus entrepreneurship education not only focuses upon the technicalities of entrepreneurship, but it is also responsible to strengthen students' self-confidence to become entrepreneurs by presenting to them various business opportunities. Enhancing students' ESE empowers them to put more efforts over an extended time, overcome the difficulties and create arrangements for accomplishing higher entrepreneurial objectives (Shane, Locke, & Collins, 2003). Higher education institutions are considered as the pillar of enhancing ESE of students through proper guideline, instruction, facilitation and practical work. Hence, this study explores the personal characteristics as determinants of ESE among university students in Pakistan.

Literature Review

Henry, Hill, and Leitch (2005) defined entrepreneurship as the procedure of generating something new by allocating the required time and resources conceited the extra economic supernatural and societal threat, getting the consequential rewards for own pleasure and self-rule. Bolton and Thompson (2004) and Setiawan (2014) expressed that someone who consistently generate and assemble expected cost just about apparent chance is a successful entrepreneur. Different studies found that trends for entrepreneurship depend on numerous aspects, such as facilitative, innovative, adoptive, creative, self-efficacy and calculated risk taking etc. These characteristics make a successful entrepreneur.

Among many traits of entrepreneurs, ESE is very important in entrepreneurship. In relation to its qualities and characteristics, self-efficacy and career choice are well established in the career theory literature of entrepreneurship (Markman, Balkin, & Baron, 2002). Self-efficacy or faith on one's capabilities to achieve something as an entrepreneur look important because it is a complex task to first create an opportunity, then accumulate the needed resources; use the opportunity and resources to set up a business, and lastly, to change it into a thriving unit (De Noble, Jung, & Ehrlich, 1999; Wilson, Kickul, & Marlino, 2007). Self-efficacy is one of the essential constituents of entrepreneurial intention that encourages persons to increase entrepreneurial performance (Markman et al., 2002).

ESE is the determination and a person's faith in his/her personal talents to chase a new prospect (De Noble, Jung, & Ehrlich, 1999). Thus, persons with high self-efficacy for a definite task have more potential to chase and be successful in that task. Self-efficacy varies across not only tasks and but also conditions (Wilson et al., 2007) because a person may show low self-efficacy in one field and high self-efficacy in another field (Wood & Bandura, 1989).

ESE is also influenced by personal characteristics such as gender, family background, source of income, society in which a person lives, education and past practice (Hollenbeck & Hall, 2004; Pihie & Akmaliah, 2009). The review of the literature provides some useful insights into how various factors impact ESE. In an early work, Scott and Twomey (1988) explored that influence of parents and experiences with work are significant predictors of motivations of university students towards ESE. Begley et al., (1997) were of the view that socio-cultural factors

cannot be ignored and social position of entrepreneurs plays a vital role in ESE. Lee, Chang, and Lim (2005) examined the variances in the attitudes of university students to venture creation in their cross-cultural study of four countries and came up with the idea of modified entrepreneurship education. They proposed that each country should adopt entrepreneurship education according to its own social setting. On the other hand, Autio, Keeley, Klofsten, and Ulfstedt (1997) explained that meeting entrepreneurs and inspiring university atmosphere influences the ESE of university students.

Different studies have yielded different results with reference to ESE in students. A study found that students in Catalonia and Puerto Rico found their intentions comparatively low in ESE (Veciana, Aponte, & Urbano, 2005). Parnell and Menefee (1995) compared the entrepreneurial tendency of American and Egyptian university students in their study. Entrepreneurial tendency took as a function of self-efficacy, perceived level of education, and perceived opportunities. The study exposed that entrepreneurial tendency of American students' remains greater than Egyptian students. These studies showed that social, cultural, work experience and motivation through education effect on students' ESE. This study was undertaken to gauge ESE of Pakistani university students.

Methodology

The present study investigates personal characteristics as determinants of ESE among university students in Pakistan. To explore and properly address the issue, descriptive research design was found appropriate (Haider & Qureshi, 2016) where survey research was considered to be the most suitable to draw dependable results. Therefore, in the present research the data was collected with the help of Entrepreneurial Self-Efficacy Scale.

Sample

The participants in this study included 800 students of 10 different departments (economics, commerce, management sciences, education, computer sciences, physics, chemistry, political science, psychology and Islamiyat) from 04 universities (Islamia University of Bahawalpur, University of Punjab, Shah Abdul Latif University Sindh and Gomal University D.I.Khan). Total 200 students from each university and 20 students, 10 master classes and 10 BS (Hons) classes, from

each department were conveniently selected in the study. From master classes, the students of 3rd and 4th semester and from BS (Hons) classes, the students of 7th and 8th semester were selected. The students of second last and last semesters were chosen because they were near to completion of their study and ready to enter the practical life. Total 800 questionnaires were distributed among university students out of which 742 completely filled questionnaires were returned with a response rate of 92.75%.

Table 1
Personal Characteristics of Respondents

Personal Characteristics	Category	n	%
Gender	Male	394	53.10
	Female	348	46.90
Residence	Urban	398	53.60
	Rural	344	46.40
Class	Master	364	49.10
	BS (Hon)	378	50.90
Semester	3rd	182	24.50
	4th	182	24.50
	7th	190	25.60
	8th	188	25.30
Fathers' Qualification	Illiterate	24	3.20
	Under Matric	120	16.20
	Matric to Graduation	286	38.50
	Master and High	312	42.00
Mothers' Qualification	Illiterate	136	18.30
	Under Matric	260	35.00
	Matric to Graduation	192	25.90
	Master and High	154	20.75
Fathers' Profession	Private Employee	186	25.10
	Public Employee	194	26.10
	Self-Employed	222	29.90
	Retired	106	14.30
	Unemployed	34	4.60
Fathers' Monthly Income	1000 - 10000	82	11.00
	11000 - 25000	320	43.00
	26000 - 50000	220	29.70
	51000 - 75000	36	4.90
	76000 - 100000	72	9.70
	More than 100000	12	1.60

In the current study, 394 (53.10%) of students were male and 348 (46.90%) students were female (See table 1). About 398 (53.60%) students hail from urban areas and 344 (46.40%) students were from rural areas. Of the students, 364 (49.10%) were studying in master classes and 378 (50.90%) were studying in BS (Hon) classes. Regarding semester, 182 (24.50%) students were studying in 3rd semester, 182 (24.50%) in 4th semester, 190 (25.60%) in 7th and 188 (25.30%) students in 8th semester. Approximately, 286 (38.50%) fathers have qualification in between matric and graduation, and 312 (42%) have master or higher qualification. Conversely, majority of the students' mothers 260 (35%) have qualification under matric. About 186 (25.10%) students reported their fathers' profession as private employees, 194 (26.10%) government employees, 222 (29.90%) self-employed, 106 (14.30%) retired and 34 (4.60%) unemployed. Of the students, 320 (43%) reported that their fathers' monthly income ranges from 11000 – 25000 and 220 (29.70%) students said that their fathers earn approximately 26000 – 50000 per month.

Instruments

We adopted the Entrepreneurial Self-Efficacy Scale (Chen et al., 1998) that measures the ESE of respondents. The original scale was comprised of 22 items divided into five factors (innovation, marketing, management, financial control and risk taking,) using five-point Likert scale ranging from 1= completely unsure to 5 = completely sure. However, in the current study, 12 items based on three factors (Management, Innovation and Financial Control) were used and the respondents were asked to rate on seven-point Likert scale ranging from (strongly disagree = 1 to strongly agree = 7). The first factor, Management consisted of (05 items), Innovation (04 items) and Financial Control (03 items) respectively. The author reported Cronbach's α of whole scale was .89. The required data from university students was personally collected and consent in written was obtained from respondents.

Data Analysis

In the present study, the process of data analysis takes place in two steps by using SPSS 20th version and AMOS 20th version. Initially, the collected data were analyzed for exploratory factor analysis (EFA), and confirmatory factor analysis (CFA) was used to confirm the factors' structure. In the second phase, descriptive

and inferential statistical measures (Pearson correlation, Paired sample t-test, ANOVA and multiple regression analysis) were applied to the data. To explore the underlying factor structure in the 12-items entrepreneurial self-efficacy scale, we conducted the EFA with Principal Components Method (PCM) followed by Varimax rotation (see Table 2).

Findings

The result of EFA demonstrates that three-factor solutions was observed for data sets on the basis of eigen-values greater than one and accounted for more than 50% of the common variance. The value of Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .780 and Bartlett's Test of Sphericity was $\chi^2(78) = 1966.63$, $p < .000$. The three factors of ESE produced by EFA were Management (5, 7, 8, 11, 13; Cronbach's $\alpha = .825$), Innovation (2, 3, 9, 12; Cronbach's $\alpha = .749$), and Financial Control (4, 6, 10; Cronbach's $\alpha = .808$). Factor loadings of three dimensions range from 0.452 to 0.893. The Cronbach's alpha coefficient of the overall scale was .852. Moreover, we also performed CFA on 12-items to verify the factor structure. The results of CFA demonstrated that the CFA model fitted the data very well, Goodness of Fit Index (GFI) = .89, Comparative Fit Index (CFI) = .92, Normed Fit Index (NFI) = .93, Root Mean Square Error of Approximation (RMSEA) = .041, Tucker-Lewis Index (TLI) = .90.

Table 2

Factor Matrix for the Items of Entrepreneurial Self-Efficacy

Items	Factor Loadings		
	Management	Innovation	Financial Control
5. Reduce risk and uncertainty	.893		
7. Strategic planning and develop information system	.725		
11. Manage time by setting goals	.688		
8. Establish and achieve goals and objectives	.550		
13. Define organizational roles, responsibilities, and policies	.535		
2. New venturing and new ideas		.737	
9. New products and services		.644	
12. New markets and geographic territories		.624	
3. New methods of production, marketing and management		.565	
4. Perform financial analysis			.818
6. Develop financial system and internal controls			.625
10. Control cost			.452
Eigen value	3.32	2.08	1.10
Total Variance Explained % (50.09)	25.56	16.06	8.46

A correlation matrix among the dimensions of ESE shows moderate and high relationship (see Table 3). Management has a moderate correlation with innovation ($r = .442, p < .01$) and high correlation with Financial control ($r = .642, p < .01$). Moreover, innovation has moderate correlation with financial control ($r = .499, p < .01$).

Table 3

Correlation Coefficients among the sub-scales of Entrepreneurial Self-Efficacy

	Mean	SD	1	2
1. Management	5.20	1.31	-	
2. Innovation	4.49	1.45	.442**	-
3. Financial Control	4.80	1.47	.642**	.499**

** $p < 0.01$,

Independent sample t-test and one-way ANOVA were performed to discover the effects of personal characteristics of university students as independent variables and ESE as dependent variables (See table 4). The results of t-test reveal that the main effect of gender was not significant. Male ($M = 4.84, SD = 0.97$) and female ($M = 4.82, SD = 1.03$) students do not differ significantly in terms of ESE, $t(740) = .293, p < .770$. However, the difference between urban ($M = 4.77, SD = 0.98$) and rural ($M = 4.90, SD = 1.03$) students is significant considering ESE $t(740) = -1.682, p < .043$. Similarly, there is a significant difference between the students of BS (Hons) class ($M = 4.76, SD = 0.97$) and Master class ($M = 4.90, SD = 1.03$) regarding ESE, $t(740) = -1.895, p < .049$. Moreover, the results of ANOVA also reveal a significant difference between fathers' education $F(3,738) = 2.210, p < .046$, mothers' education $F(3,738) = 2.412, p < .038$, and fathers' occupation $F(4,737) = 2.062, p < .050$. However, in case of fathers' monthly income $F(5,736) = 1.117, p = n.s.$ the difference is not significant.

Table 4

Results of t-test and ANOVA depicting the effect of Personal Characteristics on Entrepreneurial Self-Efficacy of University Students

	Entrepreneurial Self-Efficacy			
	N	Mean	SD	
Gender				
Male	394	4.84	0.97	t (740) = .293, Sig = .770
Female	348	4.82	1.03	
Residence				
Urban	398	4.77	0.98	t (740) = -1.682, Sig = .043
Rural	344	4.90	1.03	
Class				
BS (Hons)	378	4.76	0.97	t (740) = -1.895, Sig = .049
Master	364	4.90	1.03	
Fathers' Education				
Illiterate	24	4.53	1.21	F (3,738) = 2.210, Sig = .046
Under Matric	120	4.76	0.98	
Matric to Graduation	286	4.86	0.97	
Master and High	312	4.98	1.01	
Mothers' Education				
Illiterate	136	4.81	1.03	F (3,738) = 2.412, Sig = .038
Under Matric	260	4.72	0.91	
Matric to Graduation	192	4.96	0.99	
Master and High	154	4.93	1.11	
Fathers' Occupation				
Private Employee	186	4.77	1.02	F (4,737) = 2.062, Sig = .050
Public Employee	194	4.74	1.01	
Self Employed	222	4.91	0.96	
Retired	106	4.81	0.96	
Unemployed	34	5.19	1.21	
Fathers' Monthly Income				
1000 - 10000	82	4.85	1.10	F (5,736) = 1.117, Sig = .350
11000 - 25000	320	4.82	0.98	
26000 - 50000	220	4.92	1.00	
51000 - 75000	36	4.62	0.76	
76000 - 100000	72	4.71	1.05	
More than 100000	12	4.55	1.28	

Multiple regression analysis was used to study the impact of students' personal characteristics on ESE (see Table 5). In this analysis, we included the same personal variables which were used in the previous table. The results revealed that various variables have significant effect on ESE at university level. In model 1, 14% variance ($R^2 = .140$, $F(7, 734) = 4.423$, $p < .000$) in the management was explained by predictors. In model 2, 21.7% variance ($R^2 = .217$, $F(7, 734) = 3.982$, $p < .000$) in the innovation was explained by personal characteristics. In model 3, 18.4% variance ($R^2 = .184$, $F(7, 734) = 4.976$, $p < .000$) in the financial control was explained by predictors. Finally in model 4, a reasonable 30.8% common variance ($R^2 = .308$, $F(7, 734) = 1.724$, $p < .000$) in ESE was explained by predictor variables. In all the models, fathers' education ($\beta = .136$, $p < .01$), ($\beta = .137$, $p < .05$), ($\beta = .122$, $p < .01$) and ($\beta = .136$, $p < .01$) and fathers' occupation ($\beta = .025$, $p < .05$), ($\beta = .039$, $p < .05$), ($\beta = .136$, $p < .001$) and ($\beta = .068$, $p < .05$) remained most significant predictor. The overall results showed that one unit increase in the fathers' education will increase 13.6% in ESE ($\beta = .136$, $p < .01$). Similarly, one unit increase in the fathers' occupation will also cause 6.8% increase in ESE of university students ($\beta = .068$, $p < .05$).

Table 5

Regression Analysis of Personal Characteristics and Students' Entrepreneurial Self-Efficacy

Predictors	Model 1 (Management)	Model 2 (Innovation)	Model 3 (Financial Control)	Model 4 (ESE)
Gender	0.039	-0.016	-.084*	-0.007
Residence	.076*	-0.014	0.055	0.053
Class	0.040	.074*	0.024	0.067
Fathers' Education	.136**	.137*	.122**	0.136**
Mothers' Education	.081*	-0.057	0.006	0.093
Fathers' Occupation	0.025*	0.039*	.136***	.068*
Fathers' Monthly Income	-.082*	-0.009	0.037	0.029
F	4.423***	3.982***	4.976***	1.724***
R ²	0.140	0.217	0.184	0.308

* $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

In the present research, we tried to bring into discussion the empirical data concerning personal characteristics as determinants of ESE. This research not only has theoretical but also policy implications. It is one of its kind inclusive study covering the determinants of ESE among the undergraduates and postgraduate university students in a developing Pakistan. Young generation, especially students of higher education institutions need to play a role in accomplishing government initiatives to foster entrepreneurship culture in Pakistan. They must have a comprehensive understanding of the idea before they can establish their own enterprise. ESE research is mostly examined from the behavioral aspects towards career; whereas, ESE plays an important role in deciding students' aspirations that are measured through their confidence and capability to set sustainable vision for the entrepreneurial activities that they pursue.

The analysis of the data reveals many important findings and uncovers developmental steps for further progress in the area concerned. Even though Scherer, Brodzinski, and Wiebe (1990) identified a significant difference in the ESE of the male and the female students where male students were revealed to have high level of ESE as compared to female students; the results of the current study do not support their results. The finding of this study is also in line with studies which revealed that no significant difference between male and female students exist regarding ESE (Mueller & Dato-On, 2008; Sequeira, McGee, & Mueller, 2005; Zhao, Seibert, & Hills, 2005). Another significant difference was found to be between urban and rural students in terms of ESE. The high mean score of rural students showed that they have more ESE as compared to urban students.

Similarly, there is a negligible difference between bachelor and master's class students regarding ESE where ESE in the master's students is slightly more than in bachelor students. Moreover, the findings depict that there is a significant difference between fathers' education, mothers' education, and fathers' occupation regarding ESE. The fathers who have master and higher qualification, their children expressed more ESE as compared to the other students. Similarly, the mothers who have matric to graduation qualification, their children showed more ESE as compared to other groups of students. Moreover, the children of self-employed fathers (individuals) have more ESE as compared to other students. However, there is no significant difference between the fathers' monthly income and ESE of their

children. These results are aligned with the study of Scott and Twomey (1998) who revealed that there is parental influence on ESE of students.

The results of multiple regression analysis revealed that some variables have significant effect on ESE at university level. Entrepreneurial self-efficacy was explained by seven predictor variables. In all the models, the fathers' education and fathers' occupation remained most significant predictor and effective way of promoting ESE among university students in Pakistan. The overall results showed that one-unit increase in the fathers' education will increase 13.6% in ESE. Similarly, one-unit increase in the fathers' occupation will also cause 6.8% increase in ESE of university students.

Conclusion and Recommendations

This study aimed to examine the determinants of ESE among university students in Pakistan. Even though, the ESE is not a solution but it is a single component in the multifaceted procedure of entrepreneurial judgment and accomplishment; nevertheless, a personal characteristic demonstrates indications of being distinctive to the prospective and real entrepreneur. Including this construct into models of investigation, study, counseling, research, education and community involvement may facilitate us better recognize entrepreneurial act and provide us some extra control to interpret entrepreneurial impending into entrepreneurial certainty. The universities must figure out how to improve the ESE of their students in order to achieve economical gains for the country.

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