Entrepreneurial Cognitions in Academia: A Case of Pakistan

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Abstract
This study aims to examine the factors that influence the development of entrepreneurial intentions among faculty members having stable jobs and income. The data was collected through well designed questionnaire using five point Likert scale. The Structural Equation Modeling (SEM) algorithm was used for reaching meaningful results. The results based on the responses of 257 faculty members reveal that attitude towards entrepreneurship, instrumental reasoning, locus of control, and need for achievement have positive and statistical significant linkage with the development of faculty members' entrepreneurial intentions. The results also show that general education overall promote the entrepreneurship intention among the highly qualified faculty member irrespective of their specialization.
Keywords: Attitude towards entrepreneurship, Instrumental reasoning, Locus of control, Need for achievement, Perceived support, Subjective norms, and Entrepreneurial intentions.

The primary goal of all the economic policies is to achieve faster and sustainable economic growth and entrepreneurial process is a major factor in achieving sustainable economic development (Schumpeter, 1934). Entrepreneurship has gained enormous interest in recent literature as it generates a handsome share of national income, create jobs and improve the competitiveness of an economy (Brownson, 2013). Entrepreneur's role as a prime mover of innovations and a major contributor to R&D in western countries development has urged the developing nations to be conscious of the significance of entrepreneurship as a key figure in economic development (Bakotic & Kruzic, 2010).

Entrepreneurial education has received global attention that creates a fertile culture of entrepreneurship by opening up minds of masses (Garba, 2010). Attempts have been made in the past through researches, courses and programs offered in both educational institutions and entrepreneurship research centers for developing spirit and culture of entrepreneurship (Johnson, Craig, & Abrand, 2006; Solomon, 2007; Dickson, Solomon & Weaver, 2008; Adejimola & Olufunmilayo 2009). The educated entrepreneurs can use and implement new combinations of resources to identified, unidentified and unexploited opportunities through own or borrowed funds to finance entrepreneurial venture (Stefenovic & Stosic, 2012).

Studies have been conducted on new horizons like entrepreneurial education, level of education on entrepreneurship intentions (Lin, 2004) and mixed outcomes have been drawn from such studies with positive relationship between education and entrepreneurship of GEM researchers (Calvo & Wellisz, 1980; Acs et al., 2004) while negative relationship between education and entrepreneurship (Sluis et al., 2008). But studies on whether the general professionals in the field of Math, Computer, Sociology, Economics, English and finance fields have also the entrepreneurial intentions or have started such activities in less developed countries having higher degrees of MS and PhD with handsome salaries considering in the less developed countries scenario is missing in the literature.

The study will be important from the economic point of view for the developing countries in a sense that not only the persons having entrepreneurial education can start entrepreneurial activity but also the persons having education in other fields can also contribute to the economic wellbeing of nation as a

whole. Therefore, the purpose of this study is to find out whether the faculty members with diverse fields are also interested in or having entrepreneurial intention with stable position or job in their lives.

Literature Review

Behavioral intention is considered to be a step in making decisions to initiate behavior (an action). The literature suggests intention has better explanation ability than other factors like Psychological. Entrepreneurial intention is a driving force for entrepreneurial activities. Different approaches regarding entrepreneurial intention have been used addressing different facets of intentional entrepreneurial activities. However, Ajzens' theory of planned behavior (TPB) predicts and elucidate behavior in precise context is a frequently used theory that explains individual behavior(s) and addresses entrepreneurial intentions (Krueger et al., 2000; Renko et al., 2012). The main premise of the theory of planned behavior is that behavior is preceded by one's intentions to perform the behavior and perceived control over the behavior (Ajzen, 1991). The theory of planned behavior identifies three attitudinal antecedents like personal attitude towards the behavior, subjective norms and perceived behavioral control (Naia et al., 2015).

Personal attitude refers to the gesture of an individual's own idea and perception about the behavior. In other words, it is the personal attitude that explains the individual allure of any behavior (Krueger et al., 2000). The higher and optimistic assessment of the outcome of getting starting a business venture is, the more constructive attitude towards that behavior would be and ultimately the stronger the intention will be to start a business venture (Maresch et al., 2016). The subjective norms speak for the acuity of others about specific behavior. It is a human nature that is adopted according to other people's outlook towards specific activities (Engle et al., 2010). The more encouraging the reference group judgment is, the higher the motivation a person receives for starting an activity. The reference group may be family or colleagues for job seekers and friends for students. However, the effect of subjective norms has been questioned due to insignificant and non-systematic previous results. The study by Piperopoulos (2012) indicates that people close to the students and business faculty in Greek exert less influence on starting an entrepreneurial activity due to the reason that entrepreneurial intentions are not deep rooted in the culture of Greek society (Tsordia & Papadimitriou, 2015). But in collectivistic culture like in many Muslim countries, subjective norms play a vital role for explaining the intention (Siu et al., 2013).

Perceived behavioral control represents the case of ease or difficulty of doing an activity and is considered to be a perception rather than actual control and can be operationalized through self-efficacy (Ajzen, 1991). Self-efficacy is collectively a suitable measure for perceived behavioral control since both deal with ability to execute an activity (Carr & Sequeira, 2007; Ajzen, 2002). In other words, both perceived behavioral control and self-efficacy deal with the perception rather than actual skills or abilities (Kickul et al., 2009). Self-efficacy not only perks up goal setting but also gives persistency for the pre-set goals which strengthen the intention (Luszczynska, 2005). Self-efficacy is an important element for entrepreneurial intention and it is argued that, the greater the self-efficacy, the stronger the entrepreneurial intention(s) will be (Siu et al., 2013).

Human adjustment in life depends upon the mindset of the individuals. Human can be classified as people with internal and external locus of control. Events of life can be negative or positive but due to locus of control people make different interpretations. E.g, a person with external locus of control let them to sail with the wind of life and accepts the oddities of life as a consequence of luck or fate. However, a person with internal locus of control interprets the negative events of life something changeable and is self-employed and possesses higher inner motivation that increases their work efficiency (Bönte & Jarosch, 2011). In similar perspective of internal locus of control, are of the viewpoint that people with higher internal locus of control contain higher entrepreneurial intentions (Gurol & Atsan 2006). Moreover, literature supports the insignificant effect of locus of control on entrepreneurship intention (Nishantha, 2009).

Need for achievement is another impetus for entrepreneurial intention. People having need for achievement tend to trigger themselves in moderate difficult conditions/tasks and try to achieve their goals. As a concept, need for achievement is an inner satisfaction that individuals get after having successful efforts and achievements. Such people are always hunting success of their own as well as their

colleagues/comrades. This terminology seems to be important in small and medium businesses being an important predictor of entrepreneurial intentions for those who wish to start such an activity. However, the studies of Khuong and An (2016) and Hmieleski and Corbett (2006) showed the role of need for achievement work as a blocker to the formation of entrepreneurship intention providing cultural differences in the way personal characteristics affect entrepreneurship intention in Vietnam.

Capital is one of the major requirements for starting an entrepreneurship activity (Gird & Bagraim, 2008). The individuals wish to start up a venture face the obstruction of getting finances from the banking system especially in the developing countries. Likewise, related business information and social network is also an important constituent for having a strong entrepreneurship base. The limitation of knowledge and social network make entrepreneurs handicapped which act as a support system for business (Azhari et al., 2013). However, Taormina and Lao (2007); Sequeira et al. (2007) proved that social networking (instrumental readiness) does not significantly affect entrepreneurial intention.

Relationship between Educational Background and Entrepreneurship Intention

Education is one of the most important investments people make. Education not only helps out people to gain knowledge and improve ability but also improve their quality of life. Literature suggests that enhancing education level increase future earnings and help achieve success. But few studies using TPB model have been done concerning the relationship between educational background and entrepreneurial intention. Since education has two main principles, i-e knowledge transfer and ability development, it would change a person's perception of his/her ability to perform the intentional behavior.

Ewert and Baker (2001) explain higher education prepares people differently i-e humanistic and technical. Entrepreneurship education helped in creating an entrepreneurial and innovative culture in Europe through changing mindset and providing skills (Wilson, 2008). Individuals with different major fields with different knowledge attained act as a mediate role for entrepreneurship abilities. However, the study of GEM researchers (2004) concluded a strong connection among level of education and entrepreneurial performance but vague affiliation among general education and entrepreneurial intention across national boundaries. However, the study of Kristiansen and Indarti (2004) identified age, gender and educational background puts no significant impact on promoting entrepreneurial intention among Indonesian and Norwegian young people.

Data and Methodology

The research design used for the study was quantitative, cross-sectional and primary data gathered from the actual respondents to test the hypotheses. The data was gathered through Google forms as well as self-administered questionnaire. The questionnaire was consist of 5 parts, moreover, five point Likert scale was used as (1) Strongly disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly agree. A total of 289 questionnaires were distributed and finally retrieved back 270 questionnaires. After feeding the data into software it was realized that only 257 questionnaires were usable. It was ensured that the respondents must possess the MS or PhD degrees to qualify for developing entrepreneurial intentions. Structural Equation Modeling (SEM) was used by using SmartPLS software to get the meaningful results. SEM approach is used particularly in sociology, marketing, psychology, and education. This approach is commonly applied to survey based study due to the reason that it is considered to be more effective. In addition, the approach is not only limit to survey based studies but it can also be employed to data that is collected through other means, additionally to secondary data.

Hypotheses

The study examines the following hypotheses

H_1: Personal attitude towards entrepreneurship (ATE) is positively related to faculty member's entrepreneurial intentions (EI).

H_2: Subjective norm (SN) is positively related to faculty member's entrepreneurial intentions.

H_3: Perceived behavioral control (PSB) is positively related to faculty member's entrepreneurial intentions.

H_4: The locus of control (LoC) positively affects entrepreneurial intentions of Pakistan's highly educated faculty.

H_5: Need for achievement (NFA) positively affect entrepreneurial intention of Pakistan's highly educated faculty.

H_6: Instrumental Readiness (IR) positively affect entrepreneurial intention of Pakistan's highly educated faculty.

Theoretical Framework

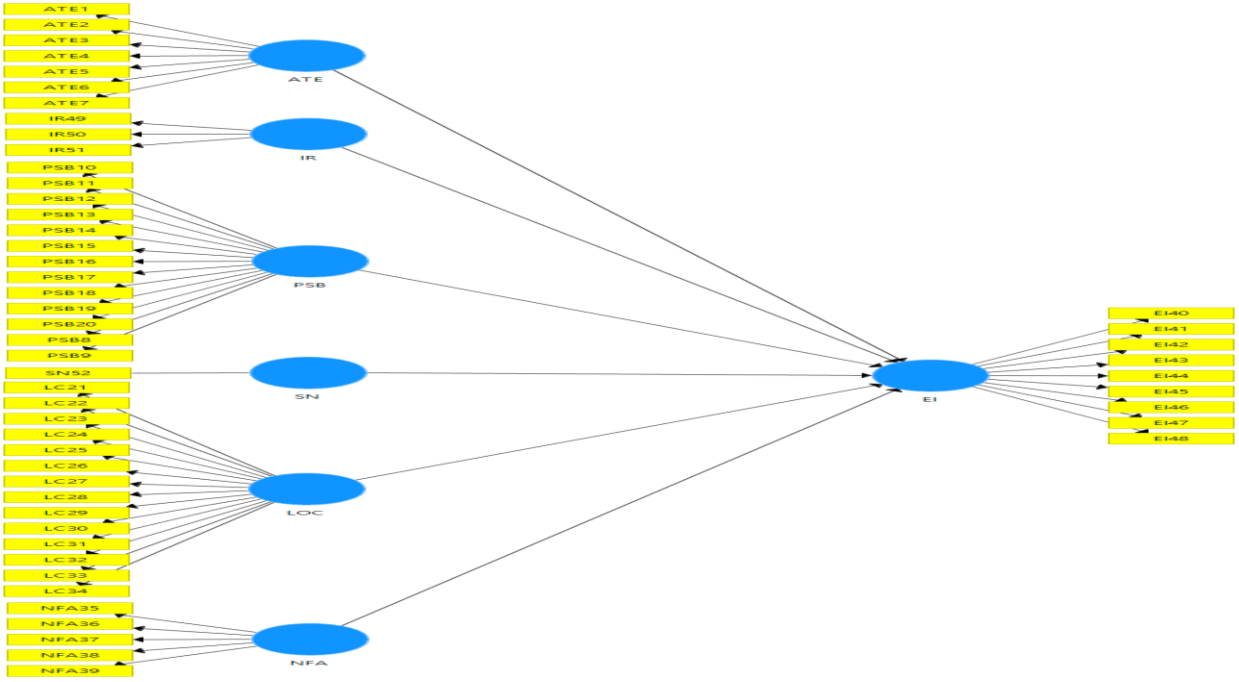

Figure1. Conceptual Model

Findings and Discussions

Profile of Respondents

Table 1 summarizes profile of respondents. Briefly 35.80% people were between age group 25-35, 49.02% were between 36-45, and 15.18% were above the age of 45. Further, 73.92% of respondents were male and 26.07% were females. 36.58% respondents were resident of city, 59.14% were residents of town and 4.28% were from village. 42.8% were PhD doctors and 57.2% had a Mphil degree. 30.35% of respondents had expertise in science subjects, 58.36% were experts of Social sciences and 11.29% were in arts and humanities. 14.40% were specialized in Economics, 6.23% in management, 1.56% in computer engineering, 3.89% in engineering, 12.45% in finance, 3.11% in physics, 3.89% in chemistry , 1.56% owned businesses,1.56% in Pak studies, 7.78% in sociology, 5.45% in English, 3.89% in urdu, 7.78% in computer science, 6.23% in statistics, 4.67% in mathematics, 1.56% in psychology, 1.56% in pharmacy, 3.50% in biology, 2.33% in anthropology, 1.17% in microbiology, 1.56% in political science, 1.56% in agriculture, 1.17% in education, 1.17% in history.

Table 1: *Profile of Respondents*

Variables	**Categories**	**Frequencies**	**Percentage**
Age	25-35	92	35.80
	36-45	126	49.02
	above 45	39	15.18
Gender	Male	190	73.93
	Female	67	26.07
Area	City	94	36.58
	Town	152	59.14
	Village	11	4.28

Education	Phd	110	42.80
	MS/MPil	147	57.20
Expertise	Sciences	78	30.35
	Social Sciences	150	58.36
	Arts and Humanities	29	11.29
Specialization	Economics	37	14.40
	Management Studies	16	6.23
	Computer Engineering	4	1.56
	Engineering	10	3.89
	Finance	32	12.45
	Physics	8	3.11
	Chemistry	10	3.89
	own Business	4	1.56
	Pak studies	4	1.56
	Sociology	20	7.78
	English	14	5.45
	Urdu	10	3.89
	Computer Science	20	7.78
	Statistics	16	6.23
	Mathematics	12	4.67
	Psychology	4	1.56
	Pharmacy	4	1.56
	Biology	9	3.50
	Anthropology	6	2.33
	Microbiology	3	1.17
	political Science	4	1.56
	Agriculture	4	1.56
	Education	3	1.17
	History	3	1.17

In this study we used statistical software SmartPLS 3 (Ringle,Wende & Becker,2015) to estimate the model. Model is assessed in two stages. In first stage measurement model assessed and in second stage structural model is assessed.

Measurement Model

In measurement model reliability and validity of latent variable is assessed. Model's reliability and convergence validity is assessed by factor's loadings, AVE and CR (Chin, 2010; Hair et al., 2011). Discriminant validity is measured through heterotrait-monotrait criterion and Fornell-Larcker criterion. Our analysis indicates that all the results are below than the critical value of 0.85 as shown in Table 2. Therefore, discriminant validity is acceptable for the constructs.

Table 2: *Outer Loadings, Reliability and Validity*

Constructs	**Factor Loadings**	**Cronbach Alpha**	**CR**	**AVE**
ATE(attitude toward entrepreneurship)		0.783	0.841	0.435
ATE1	0.538			
ATE2	0.671			
ATE3	0.837			
ATE4	0.696			
ATE5	0.586			
ATE6	0.568			
ATE7	0.677			
EI(entrepreneurial intentions)		0.792	0.863	0.506
EI40	0.822			

EI41	-0.497			
EI42	0.820			
EI43	0.487			
EI44	0.858			
EI45	0.688			
EI46	0.797			
EI47	0.701			
EI48	0.618			
IR(instrumental reasoning)		0.811	0.888	0.726
IR49	0.808			
IR50	0.868			
IR51	0.879			
LoC(locus of control)		0.808	0.859	0.445
LoC21	0.695			
LoC22	0.648			
LoC23	0.758			
LoC24	0.532			
LoC25	0.657			
LoC26	0.776			
LoC27	0.818			
LoC28	0.311			
LoC29	0.695			
LoC30	0.648			
LoC31	0.758			
LoC32	0.532			
LoC33	0.657			
LoC34	0.776			
NFA(need for achievement)		0.836	0.867	0.572
NFA35	0.714			
NFA36	0.569			
NFA37	0.702			
NFA38	0.813			
NFA39	0.935			
PSB (perceived support behavioral)		0.758	0.825	0.431
PSB10	0.632			
PSB11	0.844			
PSB12	0.749			
PSB13	0.755			
PSB14	0.12			
PSB15	0.568			
PSB16	0.662			
PSB17	0.632			
PSB18	0.844			
PSB19	0.749			
PSB20	0.755			
SN(subjective norm)		1.000	1.000	1.000
SN52	1.000			

Initial Model

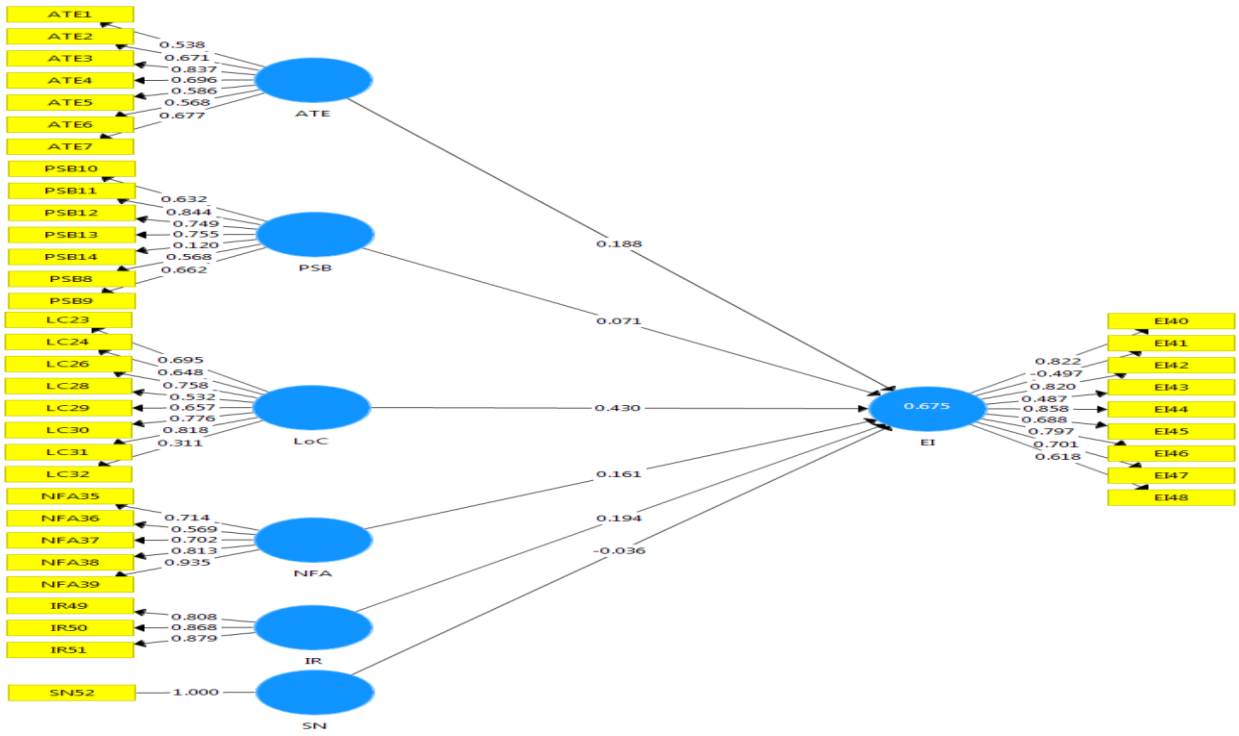

Figure 2. Initial model

All loadings are significant in the above figure 2, as all factor loadings are meeting the acceptance criteria. Further the R square value is 0.675 which indicate that 67.50 percent variance is explained by ATE, PSB, LoC, NFA, IR and SN in EI. Moreover the values of 0.188, 0.071, 0.430, 0.161, 0.194, -0.036 indicate standardized regression weight or path coefficient or effect generally the minimum criteria is not set, however, above .10 is better the more value increase the higher the explanatory power goes.

Table 3: *Discriminant Validity Fornell-Larcker Criterion*

	ATE	EI	IR	LoC	NFA	PSB	SN
ATE	0.660						
EI	0.397	0.711					
IR	0.133	0.656	0.852				
LoC	0.270	0.769	0.698	0.667			
NFA	0.346	0.685	0.652	0.719	0.757		
PSB	0.249	0.619	0.699	0.686	0.550	0.657	
SN	0.183	0.341	0.494	0.335	0.419	0.502	1.000
Heterotrait-Monotrait Ratio (HTMT)							
	ATE	EI	IR	LoC	NFA	PSB	SN
ATE							
EI	0.479						
IR	0.198	0.770					
LoC	0.386	0.896	0.848				
NFA	0.417	0.676	0.654	0.793			
PSB	0.344	0.702	0.840	0.829	0.528		
SN	0.211	0.365	0.546	0.364	0.410	0.615	

Structural Model

Structural model is also known as inner model. Structural model is used to capture the linear regression effect of one construct on other. According to Chin's (1998) recommendations, a bootstrapping procedure using 5000 sub samples performed for evaluating statistical significance of each path coefficient. All the paths are assessed at 10%, 5% and 1% level of significance using two tailed test and should results in t-statistics value greater than 1.645, 1.960, and 2.576.

Table 4: *Hypotheses Results*

Hypotheses	Co-efficient	S.E	t-values	p-values
ATE -> EI	0.188	0.069	2.726	0.007
IR -> EI	0.194	0.064	3.039	0.002
LoC -> EI	0.430	0.089	4.842	0.000
NFA -> EI	0.161	0.097	1.659	0.098
PSB -> EI	0.071	0.058	1.207	0.228
SN -> EI	-0.036	0.045	0.799	0.425

The results indicate that attitude towards entrepreneurship (ATE), instrumental readiness (IR), locus of control (LoC), and need for achievement (NFA) has coefficient values of 0.188, 0.194, 0.430, and 0.161 with p values of 0.007, 0.002, 0.000, and 0.098 respectively. These p-values show that these factors affect significantly the entrepreneurship intention and thus accept the alternative hypotheses. Whereas, Perceived behavioral control (PSB) has positive and subjective norms (SN) has negative but insignificant effect on entrepreneurial intention as evident from t and p value which is not according to the threshold i.e. the t-value should be greater than 1.645, 1.960, and 2.576 and p-value should be less than 0.10, 0.05, and 0.001 at 10%, 5%, and 1% level of significance.

Final Model

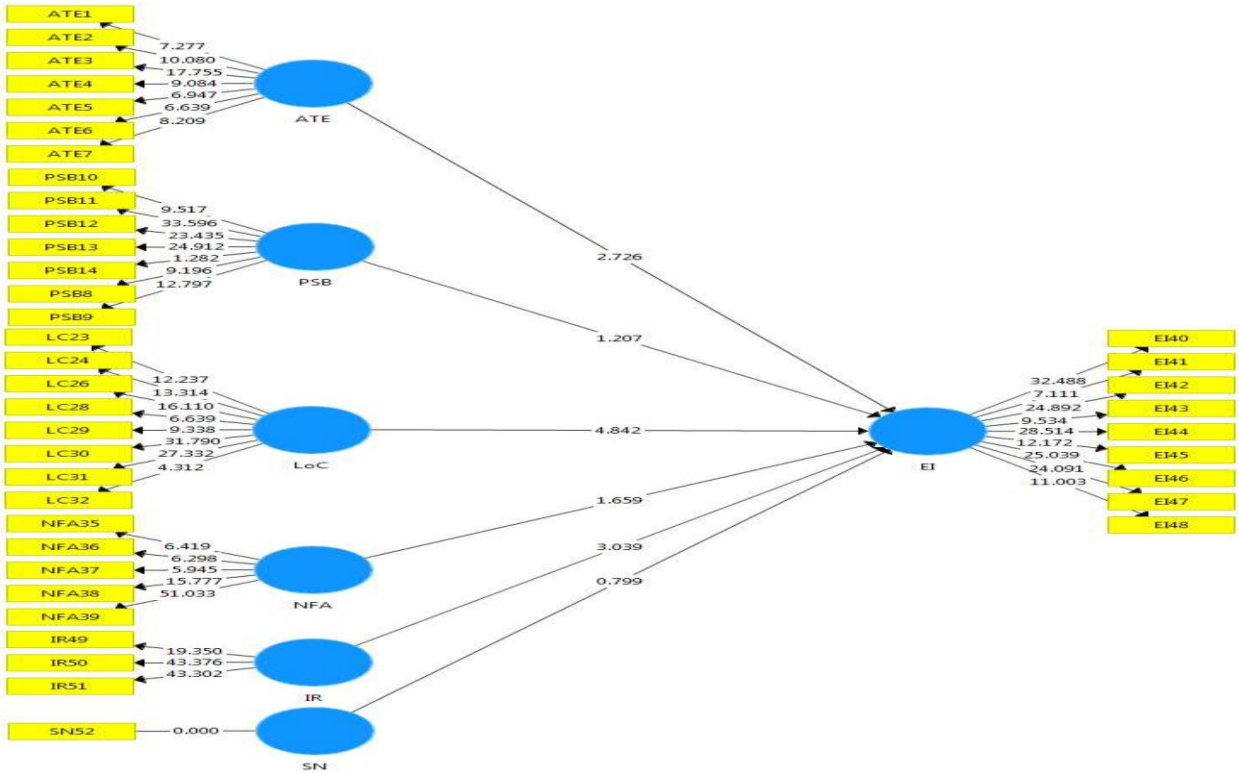

Figure 3: *Final Model*

Bootstrapping is another step in which sub-samples are created from original data set; therefore, bootstrapping was run to estimate the significance of path coefficient that is estimated in PLS SEM. After executing bootstrapping function, the results show the significance of the model which converts the values of R^2 into T as shown in figure 3.

Discussion

The results verify the positive association of all the antecedents to entrepreneurial intentions for the faculty members except the subjective norms. The study highlights the significant role of attitude towards entrepreneurship and entrepreneurial intention among the faculty members as was reported in previous studies (Ismail et al., 2015). Attitude is part and parcel of personality that is made by our belief system and acts to evoke emotions for performance of specific behaviors/activities like entrepreneurship (Awang et al., 2013). The abilities and foundation related attitudes influence the business foundation activities (Sternberg, et al. 2007) and education promotes the abilities and attitudes of people (Rauch & Hulsink, 2015). Education endows meanings to live and assists in maintaining social and financial life. It is the education that stimulates a person to work harder for achieving success in organizations through application of different learnt skills. Personality trait is therefore vital in influencing to opt entrepreneurship as a career predicted in theory of planned behavior (Ajzen, 1991; Awang et al., 2013). The association and interaction among the educated people at large results in positive effect on their thinking and motivation to start the entrepreneurship activities. Results of the study prove that education plays a global role for inculcating entrepreneurial traits in the faculty members irrespective of their disciplines because basic aim of education is cognitive enrichment of the students and consequently enabling them to comprehend and achieve diverse goals in their lives.

Subjective norms shows a negative relation in building an entrepreneurial intention of Pakistan's highly qualified faculty as was suggested in previous literature (Rauch & hulsink, 2015; Kautonen et al., 2015). It refers to the likelihood that referent individual or groups approve or disapprove of performing a given behavior. The people around in Pakistani society exert less influence on starting an entrepreneurial activity due to the reason that entrepreneurial intentions are not deep rooted in the culture of Pakistani society. One of the possible reasons that people do not compel others to start a business activity may be that less exposure to the practical approaches in the businesses. Besides, a negative hype related to the business risk and many more less patronization at the government level in the less developed society like Pakistan where majority of the people are job oriented. The other reasons may include that most of the success stories are not backed up by the management science theories roaming around in the Pakistani context whether that is the business of real estate, food, transport etc.

The study shows a positive but insignificant impact of perceived behavioral support on entrepreneurial intention (Luthje & Franke, 2003). Self-efficacy defines variations in entrepreneurial intentions to a large extent (Rasli, 2013). Self-perception of entrepreneurial capability with high level goal setting and commitment influences the intention to enfold the entrepreneurial behavior (Rasli, 2013). Bakotic and Kruzic (2010) add education as one environmental support variable that can influence entrepreneurial attitude and intention so does (Hynes & Richardson, 2007). Another psychological trait promoting entrepreneurship is a person's confidence; his/her skill level, risk taking attitude and awareness of the entrepreneurial enterprise are the important features. For businesses, the intellectual ability is considered to be an asset which creates innovative products and reliable services. The more trained and well educated employer and employee, the more that firm will theoretically produce. The success of educated people involves hard working and enabling them to be farsighted, rational decision making, good at problem solving and manifest perseverance at work (Ali et al., 2011).

The study confirms to the results of various studies already conducted in context of positive correlation among instrumental readiness and entrepreneurship intention (Perez et al., 2013). Capital being an important factor contributes to the entrepreneurial intention likewise the social networking and updated knowledge (Prodan & Drnovsek, 2010). The education can help in raising the income level and it should come as no surprise that higher education generally means high income; however, education is not a guarantee of success (Fang et al., 2012). The high qualified job holders with savings can start new ventures

with startup capital and up to date knowledge and proper networking in the form of their students. A strong social network plays a significant role in the success of the entrepreneurs to gain access to resources, information and business ideas (Salwah et al., 2013). Social networks allow the entrepreneur to take short cuts in decision-making with relative confidence, to save valuable time, and to learn from personal experience and that of others (Sequeira et al., 2007). The academic staff can take advantage of their research to commercialize the results of their research. The literature shows positive relationship among academic staff and researchers and industrial partners with the extent to which the academic researcher engages in knowledge transfer (Landry et al., 2007; Ponomariov & Boardman, 2010). Contacts in the industrial world may raise awareness that scientific work has market potential (Fritsch & Krabel, 2012), thereby increasing academics' ambitions and attitudes to become actively involved in the exploitation of this potential by starting up their own firm (Krabel & Mueller, 2009; Gulbrandsen & Smeby, 2005). A qualified faculty with strong observational skills and large social network can create and promote the entrepreneurial activities and can adjust to the environment and situation quickly. Need for achievement and locus of control both has significant and positive correlation to entrepreneurial intentions among the faculty members as was discussed in previous studies.

Need for achievement and locus of control both has positive association with developing entrepreneurial intentions as was suggested by the previous studies (Bonte & Jarosch, 2011). The education promotes the belief and motivates the person to excel in life with higher work efficiency. The belief of entrepreneurial success, proven by hard work, self-belief and capability, experiencing new ideas and things, managing responsibilities efficiently have positive contribution in making a persons' entrepreneurial intention.

Conclusion

The purpose of the study was to examine the entrepreneurial intention among the faculty members having highest education in their fields based on theory of planned behavior (TPB). The results are in line with earlier findings available in literature for the usability of TPB model in predicting entrepreneurial intention. The results verify the positive and statistical significant association of the antecedents (attitude towards entrepreneurship, locus of control, need for achievement and instrumental readiness). Further, Perceived behavioral control has positive and subjective norm has negative but statistical insignificant relationship with entrepreneurial intention. The results reveal that an individual (faculty member) irrespective of their fields is interested in starting an entrepreneurial activity. The positive entrepreneurial intention of faculty members from various fields indicates that if the government or universities add the entrepreneurial courses in their curriculum can result in better domino effect in entrepreneurial success.

The education in general influences entrepreneurial intentions through its effect on personal attitude. The fallout of this study identifies the significance of entrepreneurial education not only to the business students but also for the other disciplines that would motivate and provide skills to the individuals to become entrepreneurs.

The study has three important implications for policy makers and higher education institutions. Firstly, Ajzen's TPB model can also be used to predict the entrepreneurial intentions of the faculty member's in Pakistani universities. Secondly, higher education does promote entrepreneurial intentions irrespective of the discipline. Thirdly, entrepreneurship education should be given more weight age irrespective of the disciplines students are involved in.

Limitations and Future Directions

The study is restricted in terms of sample size used for the study. A larger sample size may contribute in enhancement of the results. In the study single university was considered for collection of responses from the highly qualified faculty members. It is recommended to gather responses from various to get the broader view regarding similar examination.

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