Moderating Role of Entrepreneurial Learning on Antecedents of Entrepreneurial Intentions

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Abstract

The role entrepreneurial learning can also be evaluated from the perspective of entrepreneurial education which effects on the antecedent of entrepreneurial intentions beyond direct effect. However, among the antecedents, subjective norms' relationship with entrepreneurial intentions is unclear. Taking this perspective, this study using the data of global university entrepreneurial student spirit survey, Pakistan, analyze the moderating impact of entrepreneurial learning on relationship between subjective norms on attitude and PBC. The findings of the study suggested that entrepreneurial learning can play a substitution role for subjective norms in development of attitude and PBC towards generation of entrepreneurial intentions. The entrepreneurial learning moderating effect on attitude and PBC may have implication for the universities, educator and academia for developing the entrepreneurial environment, curriculum for developing entrepreneurial learning among the students.

1. Introduction:

Entrepreneurial intentions and its antecedents has got greater attention in entrepreneurship literature in recent decades for examining and understanding entrepreneurial behavior (Entrialgo and Iglesias, 2016). In various studies, intentions are identified as the best predictor of an individual's behavior(Ajzen,2002).The literature on entrepreneurship identified entrepreneurship education as one of the key determinants of entrepreneurial intentions which contributed significantly towards our understanding of students' entrepreneurial intentions(Fayolle , Gailly & Lassas-Clerc ,2006; Potter , 2008; Zhang *et al.* , 2014, Karimi, Biemans, Thomas, Mohammad & Martin ,2014). Therefore, entrepreneurship literature developed considerable agreement on the significance of promoting entrepreneurship intentions through entrepreneurship learning and education (Zhang, Duysters, & Cloodt , 2014; European commission, 2006).

This resulted in an increasing attention from researchers to understand the role of entrepreneurial learning and education in the generation of entrepreneurial intentions and behavior (Bae et al. 2014; Fayolle and Gailly 2015; Martin et al.2013).

However, the review of entrepreneurship literature suggest academician has paid less attention on learning from entrepreneurial education programs(Entrialgo and Iglesias, 2016). Although majority study found positive impact of entrepreneurial education but overall the relationship between entrepreneurial education on entrepreneurial intentions yielded mixed results (Bae*et al.* 2014). In their study Graevenitz, Harhoff, and Weber (2010) identified that the impact of entrepreneurial education on entrepreneurial intentions declined to certain extent, despite the fact that the entrepreneurship course have shown significantly positive effect on students' entrepreneurial learning skills. This suggest that entrepreneurial learning may take place not necessarily through entrepreneurship courses but also through entrepreneurship knowledge and skills students acquire during a program of study (Souitaris, Zerbinati et al. 2007). Rae and Carswell(2000) identified that there is close association between learning and venture creation in which learning is the dynamic process which play an important role in endorsing entrepreneurial behavior. The role entrepreneurial learning can also be evaluated from the perspective of entrepreneurial education which effects on the antecedent of entrepreneurial intentions beyond direct effect (Entrialgo and Iglesias , 2016). The study of Nabi, Liñán et al. (2011) found that entrepreneurial learning has a significant relationship with entrepreneurial intentions, and entrepreneurial learning may interact with the antecedents of entrepreneurial intentions and create a climate favorable for entrepreneurship. Thus, entrepreneurial learning may interact with antecedents of EI for

developing suitable environment for entrepreneurship or it may have moderation effect on other antecedents of entrepreneurial intentions

Therefore, based on the theory of Planned behavior this study will be analyzing such effect using entrepreneurial learning as moderator to understand it effect of subjective norms on attitude and PBC as antecedents of EI .

2. Theoretical background and hypothesis:

Entrepreneurial intention is a desire to start and own one's own business or venture(Bae, Qian et al. 2014). The study of Nabi, Liñán et al. (2011) found that individuals having entrepreneurial intentions have higher prospect of establishing a business then those who have only propensity. There are several theories that define intentions but theory of planned behavior has got much of the focus by researchers in entrepreneurship(Krueger, Reilly et al. 2000).

The theory of planned behavior identified three antecedents of intentions; perceived behavioral control, attitudes towards behavior and subjective norms(Ajzen 2002). Attitude towards the behavior is a degree to which the behavioral beliefs produce negative or positive evaluation of it. Subjective norms are consequences of a perceived social support or pressure an individual receive from family, friends and other significant people of the society. PBC is the perceived easiness or difficulty of accomplishing particular behavior by an individual(Autio, H. Keeley et al. 2001, Ajzen 2002). This study wanted to reconfirm the relationship of intentions with its antecedents from Pakistani perspective therefore we posit;

H1 (a): *Attitudes towards entrepreneurial behavioral is related to entrepreneurial intentions*

H1 (b): *Perceived behavioral control is related to entrepreneurial intentions.*

H1(c*): Subjective norms are related to entrepreneurial intentions.*

Among the three antecedent of entrepreneurial intention, subjective norms' effect on entrepreneurial intention remained unclear. According to several studies, some say that SN is significantly correlated with intentions (Heuer and Kolvereid 2014, Karimi, Biemans et al. 2016, Pérez-López, González-López et al. 2016)other found that SN are not significantly correlated with intentions(Liñán and Chen 2009, Varamäki, Joensuu et al. 2015).

To further anlyze the subjective norms relationship with other antecedent of intentions from Pakistani Perspective.

Thus we pose:

H2 (a): *subjective norms are related to attitude towards entrepreneurial behavior.*

H2 (b): *subjective norms are related to perceived behavioral control*

2.1 Moderating role of entrepreneurial learning

As we know some studies suggest that SN does not have a significant correlation with intention(Autio, H. Keeley et al. 2001) and other studies also found that the subjective norms does not have a significant correlation with PBC and attitudes towards behavior (Fretschner & Weber 2013, García-Rodríguez, Gil-Soto et al. 2015).So, there must be some moderators that can help to see; what are other possible variables that can affect the relationship between subjective norms and other antecedents of entrepreneurial intentions. This will help in identifying the reason that why their relationship is unclear(Entrialgo and Iglesias 2016).

Perceived behavioral control can be altered by adapting individual's beliefs and views about the availability of resources (Entrialgo and Iglesias 2016), this could be influenced by the knowledge they get from the entrepreneurial environment provided by the active entrepreneurs, self-employed parents, friends and the fellow students. This influence of

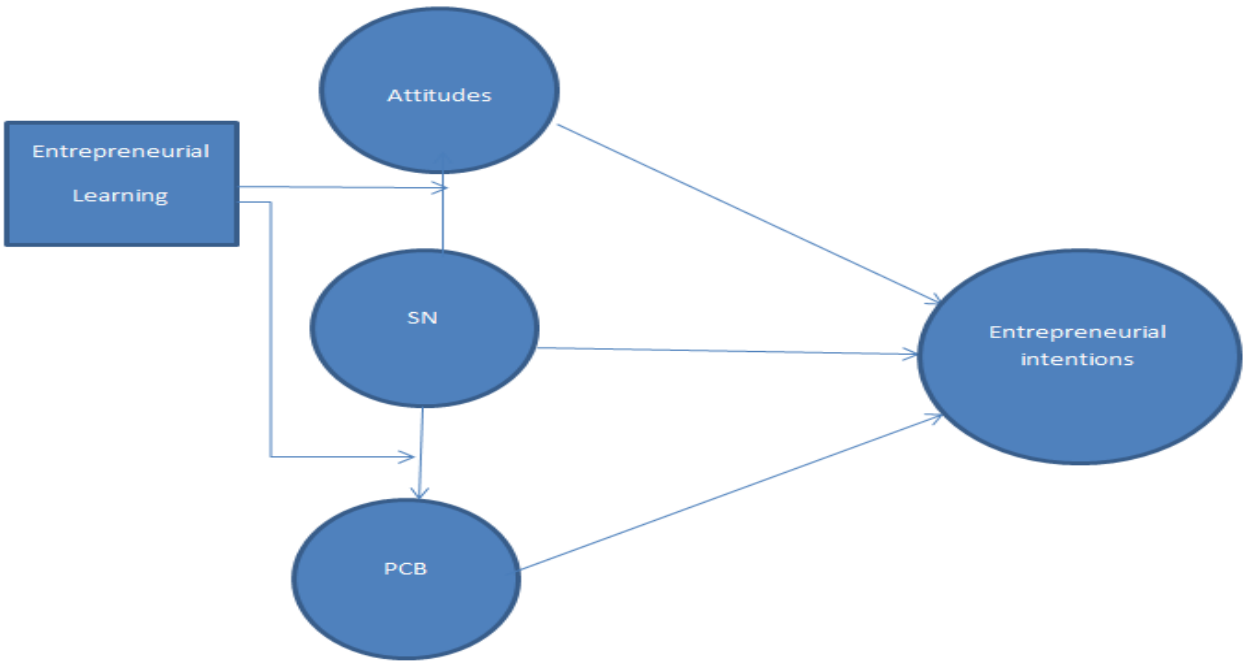
subjective norms can be influenced by the learning students get from the courses offered at university.

Research suggests that learning from entrepreneurship education program influences the intentions to establish a new venture (Souitaris, Zerbinati et al. 2007, Nabi, Walmsley et al. 2016).For this Souitaris, Zerbinati et al. (2007) developed perceptual framework of learning on the basis of Johannisson (1991)work on five levels of entrepreneurial learning: the know-why (attitudes, values, motivations of entrepreneurs), the know-how (abilities and skills), the know-who (social skills), the know-when (intuition when to take decision) and the know-what (knowledge). This study did not found any significant relationship between entrepreneurial learning and entrepreneurial intentions. However the study Nabi, Walmsley et al. (2016)identified a significantly positive relationship between entrepreneurial learning and intentions. Given that we examine that whether the SN influence antecedents of intentions or not, using entrepreneurial learning as moderator. We define entrepreneurial learning as learning as a result of attending courses at university in general rather than focusing on some specific course(Bergmann, Hundt et al. 2016).

First, we pose that entrepreneurial learning moderate the relationship between SN and PBC as the as PBC could be changed by changing the beliefs of people about availability of resources(Entrialgo and Iglesias 2016) and entrepreneurial learning may help them to change their perspective about available resources and change their PBC.

H3 (a*): entrepreneurial learning moderate the relationship between subjective norms and attitudes towards the entrepreneurial behavior*

H3 (b): *entrepreneurial learning moderate the relationship between subjective norms and perceived behavioral control.*



3. Methodology

The data was collected under Global University Entrepreneurial Spirit Students' Survey (GUESSS) 2016, from12 Pakistani universities from the first week of the April 2016 to the last week of the June 2016. These twelve universities include from four provinces across the

country. In this research paper we used micro-data from this survey to check the entrepreneurial intentions and moderating effect of entrepreneurial learning on relationship between subjective norm and other antecedents of entrepreneurial intentions. More than 10,000 students were asked to fill questionnaire through online questionnaire administration, 1099 responses were received as filled questionnaires. The majority of the respondents were from the field of Business administration. There were 58.5% Undergraduate (Bachelor); 21.7% Graduate (Master) and other (e.g., PhD, MBA) were 19.8%. The gender distribution was almost equal: 62.3 % male and 37.7 % female, with average age of 23 years.

3.1 Entrepreneurial Intentions:

The entrepreneurial intentions are measured through Liñán and Chen (2009) six items consisting of seven-point Likert scales (1 = "strongly disagree", 7 = "strongly agree").

3.2 Perceived behavioral control:

Perceived behavioral control according to Ajzen (2002) should contain items that assess the self-efficacy as well as controllability. Thus we measured PBC through 7items of self-efficacy(DeNoble, Jung et al. , Chen, Greene et al. 1998, George and Zhou 2001, Forbes 2005, Zhao, Seibert et al. 2005, Linan 2008, Kickul, Gundry et al. 2009) and 3 items of controllability(Levenson 1973), on the Likert scale of seven-points.

3.3 Subjective norms

Liñán and Chen (2009)Scale for subjective norms is used to measure reaction from close family, friends and fellow students. On the scale of seven-point from very negatively to very positively.

3.4 Attitudes towards entrepreneurial behavior

This is also measured through Liñán and Chen (2009)five item on seven point likertscale from very negatively to very positively.

3.4 Entrepreneurial learning

Entrepreneurial learning was adapted through (Souitaris, Zerbinati et al. 2007)5 item scale that measured entrepreneurial learning from courses in general rather than from one specific course

4. Data analysis and results

By using SmartPLS3.2.0 a statistical software research hypotheses were tested through a specific structural equation modeling technique of partial least square.

4.1 Evaluation of measurement model

Firstly the individual item reliability was assessed through the outer loadings of each construct's measure by following the rule of thumb that excluding the items having below threshold value of 0.5(Hair Jr, Hult et al. 2016)we retained all items but one because all had the value above 0.5 (see table) but one item of PBC was creating the issue of multicollinearity. After excluding one item the VIF values were below the threshold of 5.0 value suggested by Hair Jr, Hult et al. (2016) thus data does not show multicollinearity issue.

Table 2: Average variance extracted (AVE)

	1	2	3	4	5
1. Entrepreneurial Intentions	**0.840**				
2. Attitude towards entrepreneurial behavior	0.877	**0.913**			
3. Subjective Norms	0.538	0.560	**0.875**		
4. Perceived behavioral control	0.821	0.876	0.635	**0.798**	
5. Entrepreneurial learning	0.661	0.691	0.471	0.678	**0.853**

Secondly, composite reliability was used to establish internal consistency of measures. According to (Hair Jr, Hult et al. 2016) the composite reliability coefficient should be at least 0.7 and our results show that composite reliability for all the constructs are above the threshold.

Thirdly, discriminant validity was established by using average variance extracted (AVE) suggested by Fornell and Larcker (1981), suggesting further that the square root of the AVE should be greater than the correlations among latent constructs. This was attained by comparing the constructs' correlations with square roots of AVE (Fornell and Larcker 1981). See table;

Table 2: Factor loadings and Reliability

Latent variables	items	Standardized loadings	Composite reliability	Average variance extracted
Entrepreneurial intentions	EI1	0.717	0.935	0.706
	EI2	0.845		
	EI3	0.841		
	EI4	0.881		
	EI5	0.944		
	EI6	0.796		
Attitudes towards Entrepreneurship	AtE1	0.919	0.962	0.834
	AtE2	0.860		
	AtE3	0.890		
	AtE4	0.984		
	AtE5	0.946		
Subjective Norms	SN1	0.849	0.907	0.765
	SN2	0.873		
	SN3	0.902		
Perceived behavioral control	PBC1	0.720	0.940	0.636
	PBC2	0.784		
	PBC3	0.802		
	PBC4	0.794		
	PBC5	0.822		
	PBC6	0.805		
	PBC7	0.785		
	PBC8	0.765		
	PBC9	0.894		
Entrepreneurial learning	EL1	0.727	0.930	0.728
	EL2	0.928		
	EL3	0.879		
	EL4	0.918		
	EL5	0.795		

Note: standardized loadings, composite reliability and AVE are significant at p<0.001

The values for the variance inflation factor (VIF) in the sample are between 1.00 and 1.65, below the recommended cutoff value of 5.00 (Hair et al., 2014). Therefore, in accordance VIF, the data analyzed in this study do not present problems of multicollinearity.

4.2 Evaluation of structural model

Results show that there is positive and significant relationship between attitudes towards entrepreneurial intentions (β=0.676, p<0.001), perceived behavioral control (β=0.214, p<0.005) and entrepreneurial intentions, thus supporting H1 and H2. There is a positive but insignificant relationship between SN and intentions; therefore H3 is not fully supported.

Table 3: Structural Model

	β	Sig.
S.N → Attitude	0.162	.015
S.N → PBC	0.246	.0002
Attitude → E.I	0.676	.000
PBC → E.I	0.214	.003
S.N → E.I	0.107	.375

The model explained 78.1 per cent of the variance of EI, which is a considerable level of predictive accuracy (Chin 1998). The f^2 values of 0.02, 0.15 and 0.35 indicate a weak, medium or large effect size (Hair Jr, Hult et al. 2016). In this model, the lowest f^2value (0.001) was for SN in relation to entrepreneurial intentions, and the highest value (0.486) was for the relationship between attitudes and entrepreneurial intentions.Q^2 was observed through blindfolding procedure to calculate how well the path model predicts the values initially observed. It is suggested that the Q^2 acceptable value should be above 0 (Hair Jr, Hult et al. 2016). For all the dependent variables included in the study, and in all cases, the values were greater than 0suggesting a predicting relevance of the model. While the root mean square residual (RMSR) is a measure of the mean absolute value of the covariance residuals, and is considered to be as absolute measure of fit. SMSR value which is 0.058 less than 0.08 reflects an adequate degree of fit (Henseler, Hubona et al. 2016)

By analyzing subjective norms relationship to attitudes towards entrepreneurial behavior intention (β=0.162, p<0.01) and perceived behavioral control (β=0.246, p=0.001) we found a significant and positive relationship thus supporting H2 (a, b).

4.2 Moderating effect

Product indicator approach was applied using Partial Least Squares Structural Equation Modeling in order to estimate the strength of the moderating effect of entrepreneurial learning on the relationship between subjective norms and antecedents of entrepreneurial intentions. H4 (a) which states that entrepreneurial learning moderate the relationship between subjective norms and attitudes is supported as moderator has weaken the relationship between subjective norms and attitudes towards entrepreneurial behavior with β=-0.120, p=0.001. H4 (b) was also supported as entrepreneurial learning moderated the relationship between subjective norms and perceived behavioral control with β=-0.139, p=0.001.

5. Discussion

The finding of the study suggest that attitude and PBC have positive and significant impact on entrepreneurial intentions which is consistent with findings of many studies which confirm positive and significant impact of attitude and PCB on entrepreneurial intentions (Ajzen 2002, Luthje&Franke, 2003, Liñán, Rodríguez &Ruedae 2011,Liñán, Rodríguez-Cohard et al. 2011).However, subjective norms have positive but insignificant impact on entrprneurial intentions which indicate that the relationship between SN and EI is ambigious, this indicate that SNhave weak or no impact on the EI of students in Pakistani universties . These finding are also many confirm the studies of (Autio et al, 2001,Liñán and Chen 2009, Kreuger etal., 2000,Varamäki, Joensuu et al. 2015) which found no significant impact of SN on entrepreneurial intentions. This study also found positive and significant impact of subjective norms toward Attitude and PBC which signifies that relevant others play an important role in developing the attitude and PBC of the students.

Along with that this study observed the role of entrepreneurial learning to understand its impact. Our study focused on the moderating effect of entrepreneurial learning on the relationship between subjective norms and attitude and PBC which are antecedents of entrepreneurial intentions. The findings indicated that entrepreneurial learning has moderated the relationship between SN and other two antecedents of entrepreneurial intentions. The weaker relationship between SN and PBC in presence of entrepreneurial learning as moderator indicate that entrepreneurial learning and knowledge played the role of substitute for relevant others i.e family and friends support and approval. This suggest that entrepreneurial learning made students less dependent on the support and approval of friends and family members support and approval in their control over entrepreneurial behavior. These findings are in line with the study of (Entrialgo and Iglesias, 2016)that knowledge and skill created by entrepreneurial education appears to develop students' confident in an unfavorable environment and to certain extent compensate behavioral control in favorable environment.

The findings of Hypothesis 4 b indicate that Entrepreneurial learning also having the moderating effect on the relationship between SN and attitude towards entrepreneurship. The moderating of EL also weakens the relationship between SN and attitude towards new venture. Therefore, it does act as substitute for relevant others approval in establishing the positive attitude toward new venture creation. This suggests that entrepreneurial learning play an important role in development of attitudes towards new venture creation.

6. Conclusion

On the basis of findings and discussion we are able to conclude that entrepreneurial learning seems to have substitution with SN in development of attitude and PBC towards generation of entrepreneurial intentions. However, if students do not have acquired entrepreneurial learning SN is very important element in generation of Attitude and PBC.

The findings of this study have implication for the universities, educator and academia for developing the entrepreneurial environment, curriculum for developing entrepreneurial learning among the students. The findings also have implication for research on the impact of SN on the antecedents of entrepreneurial intention on the students by taking entrepreneurial learning as substitute of subjective norms in the future studies for developing attitude and PBC.

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