



ENTREPRENEURIAL SELF-EFFICACY AND ENTREPRENEURIAL INTENTION: THE MEDIATING ROLE OF SELF-REGULATION

Tufail Nawaz, Lecturer, IBA, Gomal University, Dera Ismail Khan, tufail.nawaz@gmail.com

Muhammad Hamayun, Assistant Professor, Department of Management Sciences & Commerce, Bacha Khan University, Charsadda, drhamayun@bkuc.edu.pk

Ahmad Ali, Lecturer, IBA, Gomal University, Dera Ismail Khan, ahmad.iba@gu.edu.pk

Muhammad Asad Khan, Lecturer, Department of Management Sciences & Commerce, Bacha Khan University, Charsadda. muhammadasadkhan@bkuc.edu.pk

ABSTRACT- Current study investigated the predictive role of entrepreneurial self-efficacy to entrepreneurial intention directly as well as indirectly through adding self-regulation as a mediator. 352 final year students of business administration program enrolled in various public sector universities of KP, Pakistan were surveyed for this purpose. Adopted questionnaire containing Likert type questions was used as data collection instrument. Descriptive, scale reliability, correlation and mediation analyses were employed as data analyses statistical tools. For mediation analysis Model # 4 of PROCESS macros presented by Hayes (2013) was used. Results revealed that criterion variables are significantly positively associated with predictor. Results also revealed that self-regulation partially mediates the association of entrepreneurial self-efficacy with entrepreneurial intention. At the end some suggestions for future researchers are also provided.

Keywords: Entrepreneurial Self-efficacy, Self-regulation, Entrepreneurial intention, Simple mediation analysis, University Students

I. INTRODUCTION

Entrepreneurship as a career option is attracting researchers throughout the world now a days (Nawaz & Khan, 2020). Entrepreneurship element and its impact on various real life phenomena are widely examined. Employment opportunities, poverty alleviation, economic growth and reduction in unemployment rate are certain results connected with entrepreneurial behavior whereas entrepreneurial behavior is influenced by entrepreneurial intention.

The most recent years has seen a critical change in the economic landscape of Pakistan. The recovery of entrepreneurship in the nation has added to job creation, competitiveness and flexibility, job satisfaction and innovations (EIM, 2011). The reasonable growth has emerged in the field of entrepreneurship education and especially in entrepreneurship and new-firm creation educational module and projects. This growth has been somewhat powered by the expanding number of students in both secondary and tertiary education, viewing self-employment as a crucial occupational choice and expanding cognition from policy makers about the entrepreneurship as a policy tool for economic growth. Change of entrepreneurial education is additionally featured by the World Bank (2008) as one of the indispensable elements to expand employment rate. As indicated by Giacomini, Janssen, Pruett, Shinnar, Llopis and Toney (2011), "entrepreneurship education is critical in light of the fact that entrepreneurial activities are an imperative part of economic development, employment and innovation."

Pakistan is an agriculture base developing country and dependably tries to move its economic focus from farming to business for the making of more job opportunities as it is the demand of present time. Among the Pakistan state there are huge regional disparities. Entrepreneur assumes critical part to reduce these territorial disparities. At the point when economy is created through entrepreneurship couple of things grew naturally, which are business, social up gradation, improvement of living standards, lessening poverty and so on. Therefore, it is more important today, education system ought to build up the entrepreneurial intention amongst the students as they choose the fate of country.

Entrepreneurial intention has proven being an essential indicator of future entrepreneurial behavior. Krueger, Reilly and Carsrud. (2000) characterize entrepreneurial intention as it is a decision to establish a new business that is planned as opposed to being adapted. An individual may have the capability of being entrepreneur in view of having the ability to compete and self-efficacy however may not enter into entrepreneurship process as having no intention to become entrepreneur. S. Wu, and L. Wu (2008) says that entrepreneurial intention refers to establish a new business or new idea within existing set up. Henceforth, the idea of entrepreneurship is flexible and use in a broad contexts and the determinants

influencing entrepreneurial intention are extensive fields such as sociology (Weber, 1930), economics (Schumpeter, 1934), and psychology (McClelland, 1961).

Self-efficacy construct has been introduced by Bandura (1986) as one's assessment of capacity to carry out an activity. Self-efficacy was recognized as a consistent forecaster in various goal oriented conducts. Lee, Chang and Lim (2005) characterized self-efficacy with regards to entrepreneurship as the quality of a man's conviction that he or she is prepared to do effectively playing out the different parts and assignments of entrepreneurship. Krueger and Dickson (1994) proposed that eminent amounts of self-efficacy are related to key risk taking. Krueger et al (2000) contended self-efficacy as a basic forerunner of entrepreneurial intention. People having high level of self-efficacy are more interested in entrepreneurial assignments, also are additionally eager to try and prove tirelessness when confronted obstructions and mishaps. Self-efficacy impacts the decisions people make, the exertion people used, to what extent one endures at a duty and level of feeling about it. On the off chance that a man trusts that the execution of a specific undertaking is inside their capacity, he/she will act, regardless of the possibility that the duty is troublesome in light of the fact that he/she sees the fruitful finishing of the assignment as a doable objective given the confidence in self. Self-efficacy is along these lines identified with view of viability. Hence self-efficacy mediates entrepreneurial intentions (Zhao, Seibert & Hills, 2005) who dictated perceptions of desirability and feasibility.

In recent past, a model presented by Bandura (2012) incorporated self-regulation as a predictor of entrepreneurial behavior and was added as theoretical framework in the field of entrepreneurship. Before this very few amount of researchers examined the association of self-regulation with entrepreneurial intention of students (McMullen & Shepherd 2002).

Present study is an attempt to examine the direct association of entrepreneurial self-efficacy as well as indirect through self-regulation as a mediator in the said association among university students.

The following questions give insight to researcher to take this topic for present investigation.

RQ1. Is there any relationship of entrepreneurial self-efficacy with entrepreneurial intention among university students?

RQ2. Is there any association of entrepreneurial self-efficacy with self-regulation among university students?

RQ3. Is there any relationship of self-regulation with entrepreneurial intention among university students?

RQ4. Is self-regulation mediate the association of entrepreneurial self-efficacy with entrepreneurial intention among university students?

Research Objectives

To make study logical and methodological, researcher frame following objectives for present study:

1. To examine the association of entrepreneurial self-efficacy with entrepreneurial intention among university students.
2. To check the relationship of entrepreneurial self-efficacy with self-regulation among university students
3. To investigate the association of self-regulation with entrepreneurial intention among university students
4. To examine either self-regulation mediates the association of entrepreneurial self-efficacy with entrepreneurial intention among university students

II. LITERATURE REVIEW

Relationship of Entrepreneurial self-efficacy with Entrepreneurial intention

Self-efficacy imitates individual's confidence in individual's talent to effectively play out a specific action to achieve individual's objectives; moreover, it frames an influential element which impacts procedures, for example, emotional and psychological procedures and work of aptitudes (BarNir, Watson & Hutchins, 2011). High-efficacy conviction with respect to execution in a particular situation makes an individual to move toward that situation, while low efficacy makes one stay away from that situation. This condensed

dual causes why entrepreneurial self-efficacy impacts entrepreneurial intention: (1) "the same entrepreneurial circumstances might be evaluated as loaded with opportunities by persons having high level of ESE while the same circumstances would be consider as full of expenditures and hazards by persons having low level of ESE, (2) "in spite of the possibility that person sees an identical reality full of uncertainties, hazards, and difficulties, individuals having high level of ESE would believe more skilled to control that reality than individuals having low level of ESE". In this way, exceptionally highly efficacious people see less probability of disappointment and hence probably going to transmit testing conditions to rewards, while low efficacious people are probably going to harbor pictures of disappointments (Chen, Greene & Crick, 1998). A meta-investigation by Schlaegel and Koenig (2014) found ESE as significant positively correlated with entrepreneurial intention. So in the light of above findings researcher derived following hypothesis:

H1: Entrepreneurial self-efficacy and entrepreneurial intention are significantly positively correlated.

Relationship of Entrepreneurial self-efficacy with Self-regulation

In spite of the fact that self-efficacy and self-regulation, both have many attributes in common (Bandura 2012), experimental studies finding the relationship of these two constructs is rare especially in the field of entrepreneurship and education (Tumasjan & Braun, 2012).

Bandura (1997) underlines that self-efficacy influences individual's attitude by self-regulatory procedures, for example, inspiration to establish and seek individual objectives and targets, determination even with troubles and trust in effectively perform an assignment. Bryant (2007) features the critical necessitate to join these two variables to well clarify entrepreneurial attitude. Entrepreneurial self-efficacy, self-regulation and entrepreneurs' capacity to perceive inventive and imaginative prospects for establishing new businesses is integral (Tumasjan, 2012). In the field of education mostly researchers reviewed the association of entrepreneurial self-efficacy of students and their intentions for becoming entrepreneurs and establishing their own businesses (Fayolle et al. 2006; Zhao et al. 2005).

Just several studies have utilized these two variables for inspecting entrepreneurial intentions and behavior of students (McMullen et al. 2002). This restricted understanding has an effect on the arrangement of successful instructive projects and learning strategies to evaluate the entrepreneurial qualities of students, which is significant in the advancement of entrepreneurial intentions and competency kills of students. Actually, self-regulation is individual's inspiration and capacity to imagine wanted future occasions in light of individual's previous information and knowledge and supervise and direct their attitude for understanding their view. Whereas self-efficacy refers to the capacity of an individual to effectively play out a particular assignment in a particular circumstance, self-regulation is the ability to consistently guide individual's thinking and conduct to accomplish the assignment although will have to face many hurdles (Bandura 2012). In the light of these past findings, researcher hypothesize

H2: Entrepreneurial self-efficacy and self-regulation are significantly positively correlated.

Relationship of Self-regulation with Entrepreneurial Intention

Although self-efficacy has generally been utilized to clarify individual's inspiration and execution and additionally intentions of students to select entrepreneurship as their profession in future (Tyszka, Cieslik, Domurat & Mavko, 2011; Chen et al. 1998), self-regulation has added to the research in fields of business and education as a theoretical framework in recent past (Tumasjan et al. 2012; Bryant 2007; McMullen & Shepherd 2002). Self-regulation theory has been emerged recently in the field of entrepreneurship.

Self-regulation refers to the way through which people make decisions, examine own capabilities to endorse intention and then leads themselves for accomplishing the necessary task when people face uncertain and highly complex situations while choosing entrepreneurship as a profession (Bryant 2007). Self-regulatory focuses additionally impacts the measure of exertion entrepreneur utilizes for structuring innovative pursuits and in addition their accomplishment in dealing with their company (Brockner et al. 2004). Promotion self-regulatory focus empowers business people to perceive different inventive and imaginative opportunities in the field of entrepreneurship (Tumasjan et al. 2012; Trevelyan 2011), choose which available opportunity to avail to be an entrepreneur (Bryant 2007) also upgrades the execution of their innovative pursuit (Hmieleski & Baron 2008). Prevention self-regulatory focus, thusly, leads entrepreneur far from dangerous and vague activities, for example, entering into another nature of business having separate industry or into unfamiliar market (Trevelyan 2011). McMullen et al. (2002) utilized a sample containing 142 business students to examine the association of self-regulation and entrepreneurial intention.

Researchers strongly believe that precise and deliberate interventions, for example, training and education, can enhance self-regulation and consequently student's intention as well as their skills of competency of becoming entrepreneur (Tumasjan et al. 2012; Bryant 2007). Based on above discussion, following hypotheses is derived.

H3: Self-regulation and entrepreneurial intention are significantly positively correlated.

Self-regulation as mediator in the relationship of Entrepreneurial self-efficacy and Entrepreneurial intention.

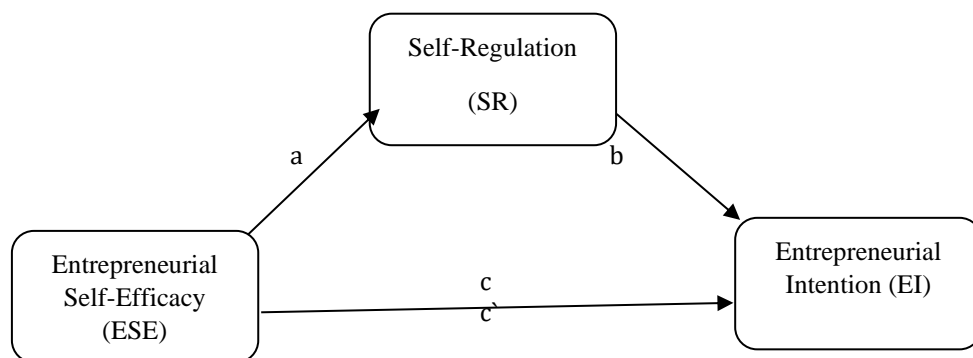
In recent past, Bandura (2012) anticipated a structured path model to demonstrate the connection of self-regulation with self-efficacy and attitude. Self-reactive and self-reflective actions, for example, observing and assessing behavior make the motivators that propel and guide one's learning, considerations, emotions, execution and environmental settings toward accomplishing an objective.

Present study plans to explore the role of self-regulation as a mediator in the association of entrepreneurial self-efficacy with entrepreneurial intention among students enrolled in various public sector universities of KP, Pakistan by adopting model presented by Hayes (2013). Hence following hypothesis is derived:

H4: Self-regulation mediates the association of Entrepreneurial self-efficacy with entrepreneurial intention.

By drawing all the above developed hypotheses researcher obtained the following theoretical model for present study

Figure 1: Theoretical Framework



III. METHODOLOGY

Population, Sampling and Procedure

Final year students of business administration program enrolled in various public sector universities of KP, Pakistan are targeted as study population. Reason behind this set of respondents is actually they are near to complete their studies and will have to pick a career option among a set of options after completing their studies. Due to homogeneous population, simple random sampling technique is used as selecting respondents from population. Questionnaire having Likert type scales was used as data collection instrument. Measures were extracted from previous available literature to measure present study constructs. Different statistical tools like descriptive, reliability, correlation and mediation were employed for data analyses with the objectives to answer the research questions.

IV. DATA ANALYSES AND RESULTS

For testing hypothesized model, firstly reliability coefficients were computed for confirming reliability level of scales. Secondly, descriptive analysis comprising means and standard deviation values were generated. Thirdly, correlation matrix was generated using Pearson correlation test to ascertain the relationship among study variables and finally mediation analysis is conducted for testing mediating role of mediating variable by using PROCESS macros by Hayes (2013). Once the required raw data has been collected successfully, next step is data analysis. Data analysis is providing reasons for understanding, clearing and interpreting of the data collected through questionnaires (Zikmund et al., 2010). The selection

behind these various statistical tools is actually based on the research questions formulated for the present study. SPSS version 21 is used for conduct of data analysis.

Table 1: Summary of Scale Reliability

No.	Construct	No. of Items	α
1.	Entrepreneurial self-efficacy	5	0.75
2.	Self-regulation	11	0.76
3.	Entrepreneurial intention	6	0.88
	Overall	22	0.83

Table 1 shows the scale reliability coefficients which ranges between 0.75 and 0.88 and crossed the minimum acceptable value of “ α ” which is 0.7 (Nunnally, 1978).

Descriptive and Correlation Analysis

Descriptive analysis comprising information about the mean and standard deviation scores along with correlation coefficients are presented below in table 2.

Constructs	Mean	Std. De	ESE	SR	EI
Entrepreneurial Self-efficacy (ESE)	3.80	0.62	1		
Self-regulation (SR)	3.48	0.54	.278**	1	
Entrepreneurial Intention (EI)	3.93	0.76	.335**	.313*	1

**Correlation is significant at 0.05 level

Above table 2 shows correlation coefficients between entrepreneurial self-efficacy and entrepreneurial intention as well as between entrepreneurial self-efficacy and self-regulation which are 0.335 and 0.278 with p-value $0.000 < 0.05$ respectively. This mean that entrepreneurial self-efficacy is significantly positively associated both with entrepreneurial intention and self-regulation. Hence H1 and H2 both are accepted. Furthermore, table 2 also shows the correlation coefficient between self-regulation and entrepreneurial intention which is 0.313 with p-value $0.000 < 0.05$. This also means that self-regulation is significantly positively associated with entrepreneurial intention. Hence H3 is also accepted.

Mediation Analysis

As self-regulation is considered as a mediating variable in the association of entrepreneurial self-efficacy and entrepreneurial intention for which Model# 4 of PROCESS macros presented by Hayes (2013) was employed.

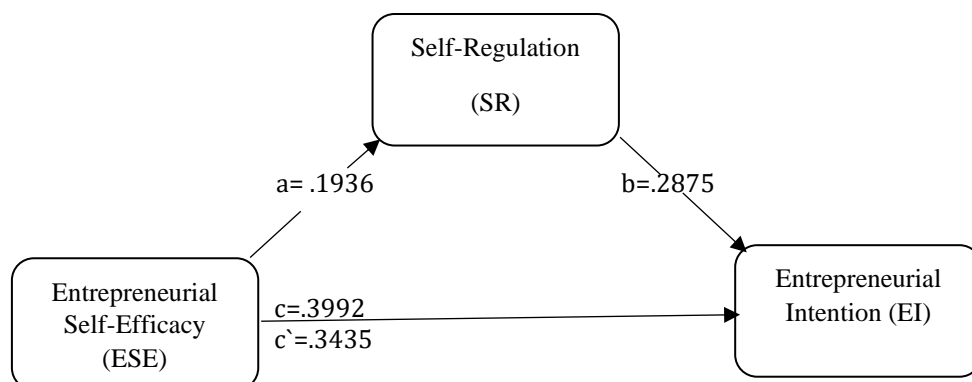


Table 3: Summary of mediation model

Entrepreneurial Self-Efficacy (ESE)				n=352		
Model Summary						
R	R-sq	SE	F	Df1	Df2	p
.6272	.3750	.3662	111.12	2.00	379.00	0.000
Path						
Path	Coefficient		p value			
ESE→SR(a)	.1936		.0008			
SR→EI (b)	.2875		.0000			
ESE →EI (c)	.3992		.0000			
ESE→SR→EI (c')	.3435		.0000			
Effect						
Effect	95CI					
Total	.3992		.2811		.5173	
Direct	.3435		.2279		.4592	
Indirect	.0556		.0221		.1025	
Sobel test or normal theory test for indirect effect						
Effect	se	Z	p			
.0556	.0197	2.8230	.0048			

Table 3 shows that the model investigating the relationship of entrepreneurial self-efficacy with entrepreneurial intention with mediating effect of self-regulation is significant ($F=111.12$, $p<0.000$) and explained a significant amount of variance in entrepreneurial intention ($R^2=0.37$). In simple mediation model results revealed that entrepreneurial self-efficacy is significantly positively related to self-regulation ($a=0.193$, $p<0.0008$) as well as to entrepreneurial intention ($c=0.399$, $p<0.000$). Also, Self-Regulation is significantly positively associated with entrepreneurial intention ($b=0.287$, $p<0.000$).

The effect of entrepreneurial self-efficacy related to entrepreneurial intention after adding the mediating effect of self-regulation is also positively significant ($c'=0.343$, $p<0.000$). Furthermore, results show the total effect (0.399, 95% CI [0.281, 0.517]), the direct effect (0.343, 95% CI [0.227, 0.459]) and indirect effect (0.055, 95% CI [0.022, 0.102]) of entrepreneurial self-efficacy on entrepreneurial intention. For the determination of the presence of significance indirect effect, the upper and lower confidence intervals (CIs) must not contained zero. Present model results also don't contain zero and hence indicates that mediation is occurring. Sobel test ($Se=.019$, $Z= 2.823$, $p= 0.004$) significant results also confirming about that self-regulation playing the role of mediator in the said association. However, as both the path c' ($c'=0.399$, $p<0.000$), and c ($c=0.343$, $p<0.000$) are significant which indicates the partial mediating role of mediator in the relationship of predictor and criterion. Hence the H4 is partially accepted.

V. DISCUSSION

Present study investigated the association of entrepreneurial self-efficacy with entrepreneurial intention directly as well as indirectly through self-regulation among university students. The objectives extracted from research questions of present study were (1) To examine the association of entrepreneurial self-efficacy with entrepreneurial intention among university students (2) To check the relationship of entrepreneurial self-efficacy with self-regulation among university students (3) To investigate the association of self-regulation with entrepreneurial intention among university students (4) To examine either self-regulation mediates the association of entrepreneurial self-efficacy with entrepreneurial intention among university students.

Results revealed that entrepreneurial self-efficacy is significantly positively associated with entrepreneurial intention which is in line with the results obtained by Miao (2015). Results also revealed a significant positive relationship of entrepreneurial self-efficacy with self-regulation as well as of self-regulation with entrepreneurial intention which is in line with the results of Pihie and Bagheri (2013). Hence hypotheses H1 to H3, all are accepted.

Hypothesis 4 in the present study was about to examine the mediating role of self-regulation if any between the relationship of entrepreneurial self-efficacy and entrepreneurial intention. Results also revealed that self-regulation partially mediates the association of entrepreneurial self-efficacy and entrepreneurial intention among university students in present study context.

VI. CONCLUSION

Basic concept of present study was to examine the predictive phenomena of entrepreneurial self-efficacy for entrepreneurial intention in the students of business administration program enrolled in various public sector universities of KP, Pakistan. Additionally, the mediation mechanism of self-regulation in the association of entrepreneurial self-efficacy and entrepreneurial intention was also under observation in present study.

On the bases of findings, it is concluded that both entrepreneurial self-efficacy and self-regulation are the important personality attributes of students which may divert their intention towards establishing their own ventures rather than choosing the position of employment working for other organizations.

VII. FUTURE DIRECTIONS

Researchers in future may add to this body of knowledge by adding other relevant variables in the present study model. Also due to time constrain, only KP, public sector universities were taken under consideration for present study whereas there are plenty of private sector universities which were ignored. So researchers in future may also expand the sampling area by adding private sector universities. Also universities from throughout the country may be added by researchers in future. Moreover, Preacher and Hayes (2008) have developed almost 76 different models for observing the indirect effect of predictor variables on criterion variables. So researchers in future may also add different mediators and moderators to get more significant results.

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