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## A Model for Measuring Entrepreneurial Inclination among University Students

**Nauroz Khan**

*Dean Faculty of Management Sciences, Mashaal University Afghanistan*

**Shahid Rasheed**

*Assistant Professor, Abasyn University Peshawar, Pakistan*

**Waqar Alam**

*Assistant Professor, Abasyn University Peshawar, Pakistan*

### **Abstract**

*The sole theme of the study was to measure the mind oriented concept among the university students, either internal perceptual factors have any impact on level of entrepreneurial inclination among university students in Peshawar KP. For the present study an adapted questionnaire was used having 27 items, encompasses all the dimensions of the selected variables includes risk and innovativeness, locus of control, tolerance for ambiguity, needs for achievement and entrepreneurial inclination. PLS evaluation technique was used contains reliability, validity and regression analysis. Results of the study reveal that all the selected variables have significant influence over the dependent variable. Results of the study have managerial implications for all the stakeholders that can be productive for uplifting the entrepreneurial culture. Beside the presence of working mechanism of business programs running in universities, Institutional support i.e. SMEDA & SME entrepreneurial environment is not fostering with an accelerated pace in KP, preceding studies has been made on entrepreneurial intentions which was about goal oriented concept however this study primarily focus on attitude of mind toward entrepreneurship i.e. entrepreneurial inclination.*

**Keywords:** Entrepreneurial Inclination, University, Students.

In a modern competitive job environment ideal career openings are limited. Consequently entrepreneurship and likewise courses took place a vital role in an academic arena; that provoke the interest in business graduates toward the creation of jobs for others by means of starting a new business organization. By definition entrepreneurship is the process of creating a new venture based on a creative or innovative idea that undertakes risk and uncertainty with an aim to make money (Dollinger, 2008). This new way of doing business contributes in elevating the deprived life style as well as the current state of economy, that's why in past few years entrepreneurship is considered to be an eye catching field in business studies (Alstete, 2002). Entrepreneurship fosters the learner to turn out to be as a source of job creator rather than job seeker.

In context of Pakistan alongside many successful stories for instance Air Blue / Sarviad Pharmacy etc. prevailing impulsive state of law & order situation (Terrorism etc.) has demolished nearly all kind of economic activities which leads unemployment rate from 13.60% to 15.20% in 2008 and 2009 respectively (Ahmad, 2012). At present many professional graduates perusing there degrees from well-known business schools ensuring a tie-up provision of governing authorities like Small Medium Enterprise Developmental Authority (SMEDA), Prime minister youth scheme and SME bank though still entrepreneurship field is not as much explored in Pakistan especially in Khyber Pakhtunkhwa (KP) province. Many of business sectors in KP province have a potential to grow up at domestic or international level with subject to condition of proper utilization of resources. Unfortunately this dream not comes true because of not upholding an entrepreneurial culture in the society.

Therefore this study emphasizes that beside presence of working mechanism of esteemed universities, SMEDA & SME why entrepreneurial environment is not fostering with an accelerated pace in KP, preceding studies has been made on entrepreneurial intentions which was about goal oriented concept however this study primarily focus on attitude of mind toward entrepreneurship i.e. entrepreneurial inclination. The main purpose of this study is to ascertain the change in the level of entrepreneurial inclination of the business graduates in private sector universities of KP due to various psychological factors i.e. Risk, Innovativeness, Span of control, Need/Thirst for achievement, and Tolerance (absorbance level) for ambiguity. Thus, the study deals with the following questions:

1. Whether risk and innovativeness influences the entrepreneurial inclination among university students?
2. Is locus of control effects entrepreneurial inclination among university students?

3. Does the need for achievement tend the level of entrepreneurial inclination among university students?
4. Whether tolerance for ambiguity impacts the entrepreneurial inclination among university students?

In order to mitigate the research questions the study has the following objectives:

1. To examine the effect of Risk and Innovativeness on students entrepreneurial inclination.
2. To ascertain the degree change in entrepreneurial inclination due to high level of tolerance.
3. To investigate the influence of Need for achievement on students entrepreneurial inclination.
4. To probe the impact of locus of control on students entrepreneurial inclination.

### **Literature Review**

Obtainable literature in the field of entrepreneurship can be easily divided into three leading approaches; i.e. Trait approach, Behavioral approach and Cognitive approach. (McStay, 2008)

#### **Trait Approach**

Every individual cannot become as an entrepreneur due to his/her some special personality traits. Trait approach emphasizes on those particular traits which made a person unique from others i.e. entrepreneur. According to McStay (2008) so far foregoing studies does not specify those traits that help individual to become an entrepreneur, however there are seven (07) elements of personality traits contributing toward entrepreneurial intention and successful entrepreneurship (Dej, 2007). Elements includes; i. Need for Achievement, ii. Locus of Control, iii. Risk Taking, iv. Tolerance of Ambiguity, v. Creativity, vi. Self-Efficacy, vii. Need for Autonomy. Studies also reveal the weak linkage between the traits among entrepreneurs and non-entrepreneurs which is a significant contribution in exploring the field of entrepreneurship (Brockhaus, 1982).

#### **Behavioral Approach**

Despite the role of traits toward entrepreneurship it is moreover important to observe how an entrepreneur deals with the multiplex processes while in creating a new venture, this is what behavioral approach implies. According to Gartner (1988) researches in the field of entrepreneurship has been switched from trait approach to behavioral approach because it more important to know what entrepreneurs does rather than who the entrepreneur is, particularly in creating a new organization. However it stands not likely to overlook the person totally (Shaver & Scott, 1991). Even though it is worth mentioning that behavioral approach missing the cognitive context toward entrepreneurship includes perception and motives (Good & Brophy, 1990).

#### **Cognitive Approach**

Psychologists argue that cognitive approach focus on how an individual think about a particular object or phenomena as actions are pertains to such thoughts (mental process). When an entrepreneur pursues the opportunity to startup an innovative business he/she not only uses the affective judgement but a cognitive reasoning. Therefore scholars argue that cognitive model may be very useful in predicting entrepreneurs and entrepreneurship (Gartner, 1985). Though this approach is infancy yet in the field of entrepreneurship but it is turned out to be a productive approach for exploring the future prospect of the entrepreneurs and entrepreneurship (McStay, 2008).

### **Linkage between Personality Traits and Entrepreneurial Inclination**

In the context of the study internal factors implies psychological factors that determined individual propensity (personality traits) to create new venture i.e. entrepreneurship.

#### **Risk and Innovativeness**

Risk refers to uncertain state of affairs in business which likely to be the reason of profit or loss for the business. It denotes the tendency of an entrepreneur decision making in an uncertain situation. According to McClelland (1961) suggests that entrepreneurs are profound to assume risk at rational levels in different business activities where they possess control over the activities or consequences, however beyond those rational levels they (Entrepreneurs) do not assume the risk. Several studies proposed risk as a driving tool for entrepreneurs (Cromie, 2000; Palmer, 1971; Mill, 1984; Ho and Koh, 1992; Koh, 1996; Cunningham and Lischeron, 1991).

Innovativeness refers to ability or mind set of an entrepreneur creating new things. Entrepreneur can bring innovativeness in many aspects of the business, like for instance in product, business process and market etc. Mitton (1989) argue in his study that innovativeness is also one of the major attribute of entrepreneurial properties in an entrepreneur.

**Need for Achievement**

McClelland theory of need postulates that an individual aspiration in order to ensure the things better is the fundamental causes which differentiate one individual from others (Entrepreneurs from Non-Entrepreneurs). Theory argues the personality possess such characteristic do the tasks effectively and more efficiently than it has been done formerly. Students with high need for achievement strive more for entrepreneurial behavior (Varghese and Hassan, 2012).

**Tolerance for Ambiguity**

Term refers to coping with the uncertain situation in an affirmative way, because low level of patience of an entrepreneur may lead to worst situation. Mostly entrepreneurs operate in an uncertain environment therefore entrepreneurs must have tolerance to handle the situation in neutral way. According to Segal, Borgia and Schoenfeld (2005) found that tolerance for ambiguity is significant predictor for determining entrepreneurial intentions.

**Locus of Control**

Word locus refers to position or point while term control reveals the ability to influence the things or objects. So in entrepreneurial context locus of control can be defined as the perception ability of an entrepreneur where he or she has influence on his/her life events. This locus of control may be internal or external, if entrepreneur attribute his success/failure to his own work and believe possess internal locus of control however if entrepreneur attribute his success/failure to outside hold external locus of control.

According to Varghese and Hassan (2012) those students possess high level of locus of control (internal) tends to become an entrepreneur most likely rather than the individuals who carry external locus of control. Despite this many research studies reveals the same a predictor of entrepreneurial behavior for individual (Cromie, 2000; Ho and Koh 1992; Bonnett and Furnham, 1991).

**Table: 1 Factors Affecting Entrepreneurial Inclination**

N	FACTORS	STUDIES
1	Risk and Innovativeness	Asamani and Mensah (2013), Ghazali <i>et al.</i> , (2012) Varghese and Hassan (2012), Gürol and Atsan (2006), Fatoki (2010), Gürol and Atsan (2006), Kakkonen (2004).
2	Need for achievements	Asamani and Mensah (2013), Ismail <i>et al.</i> (2012), Gürol and Atsan (2006).
3	Tolerance for Ambiguity	Segal, Borgia and Schoenfeld (2005), Budner (1962), (Koh, 1996), Mitton (1989).
4	Locus of Control	Hajer and Habib (2013), Uddin and Bose (2012), Opoku-Antwi <i>et al.</i> (2012), Altinay <i>et al.</i> , (2012), Goksel and Belgin (2011), Franke and Lüthje (2004).

**Conceptual Framework**

According to Sekaran (2006) framework is a rationally developed, labeled, and explained network of associations between variables that have been recognized over such practices as interviews, observations, and literature survey. Bases on above literature following framework has been developed for the study;

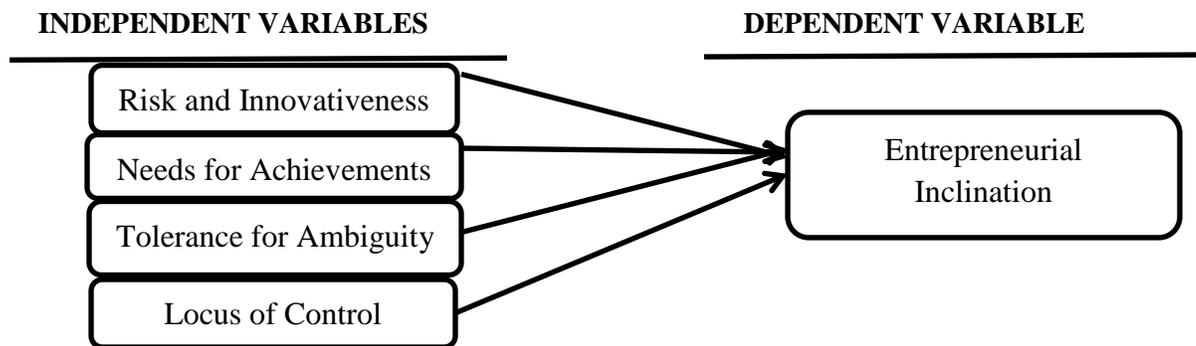


Figure 1. Conceptual framework

- H1:** Factor high level of Risk and Innovativeness has significant effect on entrepreneurial inclination among university students.
- H2:** Factor Need for Achievement has significant effect on entrepreneurial inclination in students.
- H3:** Factor Tolerance for ambiguity has significant effect on entrepreneurial inclination

**H4:** Factor locus of control has significant effect on entrepreneurial inclination in university students.

### **Research Methodology**

This segment of the study enlightens the approach that scholar adopted in conducting the study. The study focused on examining the role of personality traits of university students over their entrepreneurial inclination in Peshawar.

#### **Research Philosophy**

Current study is a survey based study which is measured through instrument, carrying quantitative methods for analyzing the data, testing of hypothesis (deductive approach) followed by the testify characteristics of research positivity of research proposed by Robson (2002) used by Latif (2015) it is concluded that present study lies in positivist research paradigm.

#### **Nature of Research**

This research is the blend of both qualitative and quantitative in nature as variables are qualitative in nature subsequently which were computed through the use of opinion poll and analyzed by means of statistical techniques.

#### **Research Design**

Research design is the wider range model but it is *blueprint* for the collection, measurement and analysis of data (Cooper and Schindler, 2008). Linking the research design with current study, the aim of this was to hypotheses testing pertinent to factors effecting entrepreneurial inclination among university students in KP which is based on descriptive cum correlational in nature. By means of convenience sampling the respondents were asked for their responses in normal and natural environment reflecting that study design non-contrived. Scale was developed by means of reviewing various instruments. Data was collected by personal visits to the degree awarding institutes; hence the time horizon for the study was cross-sectional. Finally for the analysis PLS evaluation was used for the analysis of the study.

#### **Population and Sampling**

Population refers to the complete set of cases from which a sample is taken (Saunders, 2011). However subset of the population is called sample (Sekaran, 2003). In present study business graduates in management sciences department among different private sector universities in Peshawar are considered as population. A convenient sampling technique has been adopted; total 170 business graduates were taken as a sample unit for study.

#### **Measurement and Instrumentation**

In order to measure the entrepreneurial inclination among university business graduates a questionnaire was adopted that was already developed and used by Yusof, Sandhu and Jain (2007). All the constructs of the questionnaire were measured using a seven-point likert scale ranges from 1= Strongly Disagree to 7= Strongly Agree. Constructs like risk and innovativeness, Need for achievement, Tolerance and ambiguity, Locus of control and Entrepreneurial inclination was measured by 12, 6, 5, 4, and 6 items respectively.

#### **Date Collection**

Data for the said study was collected from university business graduates of various private sector universities includes Abasyn University, City University, Sarhad University, Qurtaba University and Preston University by means of questionnaire. Personal visits were also conducted for data collection. In addition to this for the completion of this research study data from secondary sources were also taken like say for instance articles from journals, research thesis and library search.

### **Data Analysis and Interpretation**

This section speaks about the data and data analysis using Structural Equation Modeling method using SMART-PLS.

#### **Reliability Test**

Reliability test reveals the consistency of the questionnaire to which a scale yields the same consistent results if repeated on trial. Different factors in the study were evaluated for reliability. Reliability in the present study is assessed using Composite Reliability (CR). CR is employed basis on the standardized loadings and measurement errors of each separate item (Fornell & Larcker, 1981). The results are shown in the following table 2, reflecting values between .87 and .93 which indicates that reliability of all the items of the constructs greater than .70, means good reliability.

Table 2: Reliability analysis of the constructs

Constructs	Composite Reliability
<b>RI</b>	0.93
<b>NA</b>	0.87
<b>TA</b>	0.89
<b>LC</b>	0.87
<b>EI</b>	0.89

**Construct Validity**

In order to ascertain the construct validity, researcher used convergent and discriminant validity tests.

**Convergent Validity**

Convergent validity is recognized in the research constructs, when the factors that should be related to each other are in fact associated. To find out whether convergent validity is established or not, Average Variance Extracted (AVE) is calculated having threshold of .50 or above. The results of the study indicate AVE for all the constructs over the recommended value of .50. Hence convergent validity for the present study was successfully established.

Table 3: AVE for constructs

	Average Variance Extracted (AVE)
Tolerance for Ambiguity	0.79
Entrepreneurial Inclination	0.74
Risk and Innovativeness	0.72
Locus of Control	0.69
Need for Achievement	0.60

**Discriminant Validity**

Discriminant validity tells us the extent to which appropriately distinct constructs are not related with each other. For discriminant validity the following techniques was used;

1. Fornell-Larcker Criterion
2. Cross Loadings Analysis

Through Fornell-Larcker principle, Square root of AVE for each of the constructs should be greater than the inter-correlations of other constructs. The table 4 shows that square root of AVE of the constructs is greater than other inter-construct correlations. Hence, study successfully established the discriminant validity.

Table 4: Fornell and Larcker Criterion

	Tolerance for Ambiguity	Entrepreneurial Inclination	Risk and Innovativeness	Locus of Control	Need for Achievement
<b>Tolerance for Ambiguity</b>	<b>0.88</b>				
<b>Entrepreneurial Inclination</b>	0.31	<b>0.86</b>			
<b>Risk and Innovativeness</b>	0.46	0.51	<b>0.84</b>		
<b>Locus of Control</b>	0.36	0.73	0.78	<b>0.83</b>	
<b>Need for Achievement</b>	0.66	0.57	0.73	0.74	<b>0.77</b>

The next method is cross loadings for measuring discriminant validity and convergent validity (McLure Wasko & Faraj 2005). Factor loadings of an indicator should be greater than the construct of it than on any other factor (McLure Wasko & Faraj 2005). Results of table 5 indicate the factor loading of

measurements found greater than their cross-loadings, which support tests of convergent and discriminant validity. Hence scale used for this study sounds satisfactory.

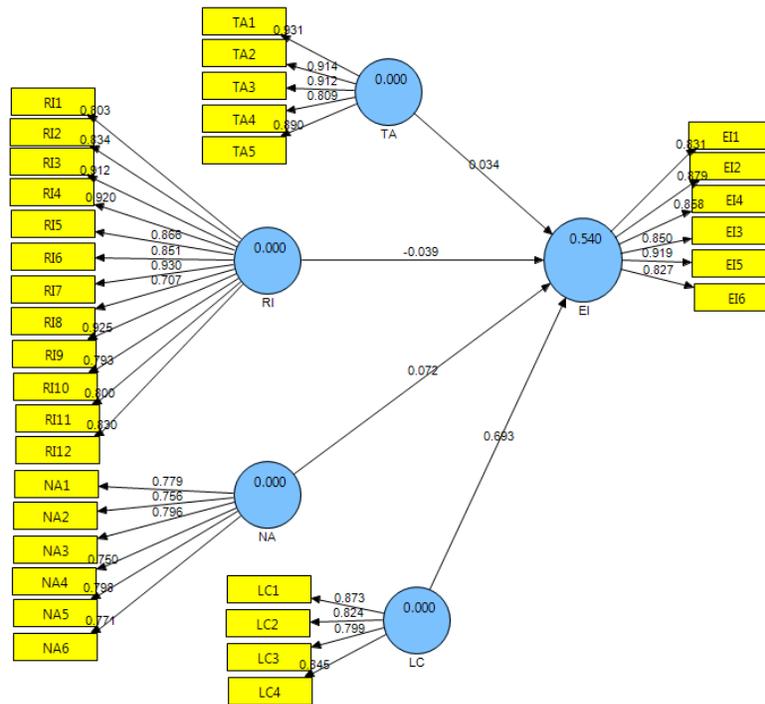
Table 5: Cross Loadings

	<b>Entrepreneurial Inclination</b>	<b>Risk and Innovativeness</b>	<b>Locus of Control</b>	<b>Tolerance for Ambiguity</b>	<b>Need for Achievement</b>
<b>EI1</b>	0.83				
<b>EI2</b>	0.87				
<b>EI3</b>	0.85				
<b>EI4</b>	0.85				
<b>EI5</b>	0.91				
<b>EI6</b>	0.82				
<b>RI1</b>		0.80			
<b>RI2</b>		0.83			
<b>RI3</b>		0.91			
<b>RI4</b>		0.92			
<b>RI5</b>		0.86			
<b>RI6</b>		0.85			
<b>RI7</b>		0.92			
<b>RI8</b>		0.70			
<b>RI9</b>		0.92			
<b>RI10</b>		0.79			
<b>RI11</b>		0.79			
<b>RI12</b>		0.83			
<b>NA1</b>			0.77		
<b>NA2</b>			0.75		
<b>NA3</b>			0.79		
<b>NA4</b>			0.75		
<b>NA5</b>			0.79		
<b>NA6</b>			0.77		
<b>LC1</b>				0.87	
<b>LC2</b>				0.82	
<b>LC3</b>				0.79	
<b>LC4</b>				0.84	
<b>TA1</b>					0.93
<b>TA2</b>					0.91
<b>TA3</b>					0.91
<b>TA4</b>					0.80

**Structural Equation Model**

The structural model comprises the hypothesized relationship between independent and dependent variables in the study. The structural model provides information as to how well the model predicts the hypothesized paths.

The results of the analysis show an R<sup>2</sup> value of .540 for entrepreneurial inclination. This shows that 54% significant change (F = 41.93, p > .05) in entrepreneurial inclination can be attributed by risk and innovativeness, need for achievement, tolerance for ambiguity, and locus of control. Additionally, in case of the influence of individual predictor variables risk and innovativeness has negative and insignificant, Tolerance for ambiguity has positive insignificant, need for achievement has positive insignificant, locus of control has positive significant influence on entrepreneurial inclination. From the results it is concluded that hypothesis for the present study remained stood and accepted.



**Discussion and Implications**

The present study was an attempt to investigate the role of various perceptual factors on inclination of the students to become entrepreneurs who were seeking their business studies from different private sector universities. Hypothesis was formulated based on critical literature review and data was collected through adopted questionnaire and analyzed by means of smart pls. In the light of the results risk and innovativeness effect found significant having negative magnitude on entrepreneurial inclination. Previous studies shows a blend of the both negative and positive effect like say for instance (Miao, 2015), (Wong & Man, 2012), however in context of Pakistan risk propensity is considered to be one of the prominent hurdle for the students to become entrepreneur (Tanveer *et al.*, 2012). It might be because of the limited opportunity and resources that suppressed the vision of the student for creating new venture. Considering need for achievement as a predictor for entrepreneurial inclination results deems fine in the light of the numerous research studies (Ullah, Farooq, & Ahmad, 2012, McClelland, 1961; Littunen, 2000; Utsch *et al.*, 2000; Robinson *et al.*, 1991; Johnson, 1990), degree of locus of control (Leone *et al.*, 2000; Rotter, 1996; Koh, 1996; Riipinen, 1994; Hansemark, 1998; Shane, 2003; Busenitz *et al.*, 1997; Mitton, 1989; Mueller *et al.*, 2000; Ho *et al.*, 1992; Brockhaus *et al.*, 1986) magnitude of tolerance for ambiguity (Teoh & Foo, 1997; Schere, 1982; Sexton, *et al.*, 1985). Thus influence of all the selected variables on entrepreneurial inclination founds statistically significant. Overall results of the study indicated that there is a significant influence has been reported on students entrepreneurial inclination to start new venture as entrepreneur; results were also found in line to previous studies like for instance Salwah, Siti, and Norhatta, (2015) Manjit, Shaufique, and Shoiab (2010), Marques, Ferreira, Gomes, and Rodrigues (2010). Here it is

noteworthy to understand for the obtaining better results from the study that universities should have to focus on incubation centers where a business graduates can get exposure to become entrepreneur. By perusing this strategy the negative attitude not only of the students but of the staff as well can be reduced at rational level for creating new ventures and spread new job opportunities.

### **Conclusion and Future Research**

Finally this study was conducted with the aim to highlight those dominant factors that hold thinking ability of the new graduate to become entrepreneur, wide range of variables were taken in to study but future studies can be conducted on other perceptual factors as well as considering the role of the university education or institutional role in order to highlight the other broader avenues relevant to this study.

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