

Determinants of Entrepreneurial Skills set in Pakistan: A Pilot Study

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Abstract *The purpose of this study is to assess the reliability and validity of entrepreneurial skills set construct developed by Smith and Eichholz (2008). The survey approach was used to collect response through 40 usable questionnaires from IT employees in Punjab as one of the largest populated province of Pakistan. The study adopted the stratified random sampling method for data collection. Then, reliability and validity of the instrument were assessed through experts from academia and industry and also from small sample of the data. The data was analyzed through SPSS v20 while results provide the evidence of validity and reliability of the instrument.*

Key words Entrepreneurship, skills, Pakistan

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1. Introduction

The ability to come up with innovative mindsets and proceed as an effective and resourceful way of creation of new business or as an effective and innovative within an organization is recognized in all areas (Foss and Klein, 2012). Similarly, skills are equally important for all those who want to become self-employed (Pardakhetchi and Shafizadeh, 2006; Imani, 2009). Entrepreneurial skills are, however, also recognized as an important indicator of response change and uncertainty (Deuchar, 2006, 2007; Gibb, 2002). Several researches have, to date, considered entrepreneurial skills for either important in the process of entrepreneurship and entrepreneurial success (Driessen and Zwart's, 1999; Giunipero, 2005; Gibb, 1993; Gürol and Atsan, 2006; Kuratko and Hodgetts, 2001; Hisrich, 2008; Oosterbeek *et al.*, 2010; Timmons, 1994; Zimmerer, 2008). The widely quoted skills are leadership, technical, personal, and managerial, technical, problem solving, innovation, risk taking propensity, and social networking and have been considered as key competences (Morales, 2013). However, entrepreneurship research lacks consensus regarding the issue of what main skills an entrepreneur has or needs (Morales and Marquina, 2013). The issue of evaluating and mapping the effects of entrepreneurial skills is under-researched (Chell, 2013; Pittaway and Cope, 2007). Therefore, there is a need to identify the major determinants of entrepreneurial skills in a developing economy like Pakistan.

Preceding studies have addressed several facets of entrepreneurial intentions include the role of person's traits and competencies in the process of entrepreneurship (Katz, 2007; Liñán and Santos, 2007), the environmental factors influencing of entrepreneurial decision (Cusumano, 2013; Krueger, 1993; Rengiah and Sentosa, 2014), and the effect of entrepreneurial education on entrepreneurship intention (Chrisman, 1997; Fekri *et al.*, 2012; Liñán, 2008; Lorz, 2011; Rengiah and Sentosa, 2014; Weber, 2010). In addition, the research in the entrepreneurial field comparing different countries has been focused particularly on cultural values (Lee and Peterson, 2000; Mueller and Thomas, 2001; Tiessen, 1997). However, apart from Global Entrepreneurship Monitor (GEM, 2012; 2013) studies, little research comparing particular sets of entrepreneurial skills in different countries has been attempted. Some of the neglected facets of entrepreneurial intention studies are the outcomes of entrepreneurship education and training programs and its results in the form of skills and its linkage or connection with successful

entrepreneurs. Therefore, it appears to be critical and worthy of exploring entrepreneurial skills' and development an instrument to assess these skills and their impact on potential entrepreneurs.

1.1. The objective of this study

This research study comprises of a pilot assessment performed to determine the validity and reliability of the instrument used for this study. Sekaran and Bougie (2010) explained validity as the degree to which an instrument is assessing what it should be measuring, while the reliability measures the instrument's ability to depict consistent and error free results. Keeping in view, this research study produced results of a pilot study about elements of entrepreneurial skills in Pakistani context. This study will not only remove the doubts about reliability and validity but will also provide the bases to conduct a final study. The study also aims to get an insight of the possibilities of the impact assessment, which will enable the researchers and practitioners of the area to predict prospective issues and take corrective actions while conducting the actual research.

2. Literature review

According to the Longman's dictionary of contemporary English the skill as "practical knowledge and power; ability to do something (well)". While Wickham (2006) definition of skill is: "the demonstration of knowledge by action", before going on to add that 'entrepreneurial performance results from a combination of industry knowledge, general management skills and personal motivation" (p.100). Entrepreneurial skills are one of the business skills, which enable a self-employed entrepreneur to perform effectively in an uncertain business environment (Folahan and Omoriyi, 2006). The entrepreneur according to the chambers 21st Century Dictionary (2006) is defined as "somebody engaging in business enterprise that involves some personal economic risk. According to Hisrich and Peters (2002) "entrepreneurial skill is the capability that requires the financial, psychic and risk bearing approach involving potential efforts and time in introducing any novel and valuable thing which can be associated with return in terms of financial rewards, satisfaction and receiving the resulting rewards of monetary and personal satisfaction and independence". Formal descriptions/ definitions characterize entrepreneurial skills as ability to have self-belief, boldness, tenacity, passionate, empathy, readiness to take expert advice, desire for immediate result, visionary, and ability to recognize opportunity (Salgado-banda, 2005). Kilby (1971) describe that "the potential entrepreneurial skills includes the ability to perceive economic opportunity, innovations of technical and organizational nature., control over scarce resources, the ability to consider oneself liable of internal management and overall development of a firm".

Entrepreneur is defined as "anyone who consistently exploits opportunities by looking and responding to change." The nature of entrepreneurship is essentially multidisciplinary (Gartner, 1985). In order to develop and successfully manage a business, entrepreneurs need a range of entrepreneurial skills (Phelan and Sharpley, 2012). Entrepreneurs' skill allowed entrepreneurs to perform the functions of enterprise that governs their success (Shefsky, 1996). As Lichtenstein and Lyons (2001) postulate that instead of classifying entrepreneurs on the basis of their characteristics or enterprises, it is better to classify them on the basis of skill levels.

2.1. Skills and Competences

Competence is an elusive construct which is not defined adequately in entrepreneurship literature (Phelan and Sharpley, 2012). Competence is an underlying quality of an individual, which results in effective and/or superior performance in a job (Klemp, 1980). The construct of competence embraces a range of skills, abilities, and other characteristics related to perform a specific task or being proficient and competent (Chell, 2013). In literature of entrepreneurship, the constructs of skills and competences are often used interchangeably (Phelan and Sharpley, 2012; Chell, 2013). Though, some researchers argue that skills are also fall under the construct of "competencies" (Mischel, 1973). Parry (1998) distinguished between competencies and skills, as "skills tend to be situational and specific, whereas competencies are generic and universal" (p.62). Kanungo and Misra (1992) differentiated the skills from competences as "skills refer to the ability to engage in an overt behavior whereas competencies relate to the ability to engage in cognitive activity" (p. 1321). Furthermore, Le Deist and Winterton (2005) proposed a

classification of competence. They divided competence into four typology; cognitive competence, functional competence, behavioral and attitudinal competence, and meta-competence. In their typology of competence, cognitive competence represents the knowledge and understanding, whereas skills are considered functional competencies, behavioral and attitudinal competencies relate to social competence, and finally meta competence associated with acquiring other competencies. Chye and Sim (2005) further clarify that skills are subset of competence.

To be more focused on skills, they are multidisciplinary, and contain cognitive, affective, and behavioral elements (Chell, 2013). Fischer and Bidell (2005) defined skills as “a capacity to act in an organized way in a specific context” (p.5). Chell (2013) claims that skills and competencies are separate construct, and they should also be distinguished from ability and aptitude. However, skills are still an under researched slippery construct (Chell, 2013).

2.2. Skills can be built

There was a common belief that entrepreneurship is a trait, which pushes the persons who possess it towards specific behavior (Huefner and Hunt, 1994; Kasscieh, 1997; Schumpeter, 1991). This belief about entrepreneurship was challenged by Lichtenstein and Lyons (2001), based on that “entrepreneurs are not inborn but made” (Shefsky, 1996). They argued, “If this notion is true, it can be infer that entrepreneurs cannot be developed for the reason that we are helpless in imparting changes in individual personalities and traits. The only possible response to such explanation would be to identify those individuals who already possess this skill and to work on improving it. Furthermore, nobody is yet able to identify and associate characteristics or any specific behavior possessed by successful entrepreneurial. However, some functions have been performed by all entrepreneurs—they recognize that there is a need and market opportunities, they address the needs by visualizing and developing solutions, and capture the market opportunities by building organizations. As said earlier, specific behaviors cannot be associated with successful entrepreneurs because different functions require different actions in different situations.” (Lichtenstein and Lyons, 2001; p. 7).

When Lazear (2004, 2005) proposed the Jack-of-all-the-trades (JAT), he also guided that “Necessary set of skills can be acquired to start a business if someone does not already possess them.” (Lazear, 2001; p. 208). Though, the concept that entrepreneurial skills can be learned mainly supports Lichtenstein and Lyons (2001) work by development of EDS. They suggest that entrepreneurship comprises skills set, which is not an output of innate endowment but training and development.

2.3. Establishing an Entrepreneurial Skills-set

Several studies have been considered entrepreneurial skills as important indicator of entrepreneurship (Armanurah Mohamad, Muhammad Hussin, 2014; Chell, 2013; Fitriati and Hermiati, 2010; Kemelgor, 1985; Kuratko and Hodgetts, 1995; Liñán, 2008; Morales and Marquina, 2013; Phelan and Sharpley, 2012; Silva and Silva, 2006; Timmons, 1999). The previous studies on entrepreneurial skills have resulted in an extensive list of skills required by entrepreneurs. All skills referred by enormous studies are perhaps significant for entrepreneurs in different situations. However, the studies conducted in the domain of entrepreneurship, overlap the skills required by entrepreneurs, and not surprisingly, these overlaps make skill categorization difficult (Chye and Sim, 2005).

Furthermore, Lazear (2004) suggests that a native entrepreneur can be imparted with a specific skill if complete set of skills is not already acquired. Smith, Schallenkamp and Eichholz (2007) conducted a study to develop a skills framework for entrepreneurs. Through exploratory study they collected the responses of those entrepreneurs that have a minimum two years of entrepreneurship experience of technical assistance. The respondents of the study were asked to rank the skills in terms of usefulness and also assess their own ability against each skill considered. Based on their findings, they developed four categories of skills; technical skills, managerial skills, entrepreneurial personal skills, and personal maturity skills. However, they did not develop any instrument to assess the level of these skills, which an individual can possess. Keeping in view of study of Smith *et al.* (2007), this study adapted these four categories of skills, developed an instrument, and further checked its validity and reliability.

3. Methodology of research

This study consists of a pilot test conducted to assess the validity and reliability of the instrument. Pilot study is commonly used in detecting any deficiencies in the instrument. According to Sekaran and Bougie (2010), validity refers the extent to which an instrument is measuring what it should be measuring, whereas the reliability measures the instrument's ability to produce consistent results and free from error. The study also aims to get view of the conditions of the impact assessment, which enables the researchers to foresee potential problems and modify when conducting the actual research. The study is mainly focused on measuring validity and reliability of entrepreneurial skills set developed by and Smith *et al.* (2007). Survey research method helps to describe the phenomenon and looks for the causes of any activity (Zikmund, 1994). According to Neuman (1997), survey research is a useful method to facilitate the researcher to gather data from a large number of respondents in order to measure multiple variables and testify many hypotheses. There are many benefits of survey method comprise access to large number of respondents, inexpensive to administer, and more specifically free from interviewer bias (Sekaran and Bougie, 2010). Accordingly, survey research design was adopted in this study. The study assessed the entrepreneurial skills by the IT employees in Punjab, Pakistan. According to Fink (2003), sample sizes in pilot studies are usually small, while it is common to be increased to about sample size of 100 respondents (Dillman, 2007). Additionally, Babbie (1990) and Robins (1999) suggested that sample size for pilot study ranges from twenty-five to seventy five. Accordingly, total of 55 questionnaires were randomly distributed personally to the IT employees in Pakistan.

This study used the questionnaire data collection. In questionnaire, closed-ended questions were used, as it is better to generate statistics over other methods, and widely used reliable data collection instrument (Dawson, 2007). Furthermore, the items include in the questionnaire were gauged on seven-point Likert scale. Out of the 55 questionnaires sent to the IT employees, 48 were returned, and 8 of them had been found incomplete, so only 40 questionnaires were available for analysis. Nonetheless, after distribution and pursuing in person, the response rate was achieved about 72.7%.

Validity of the instrument can be define as the instrument measures what it intends to measure (Sekaran and Bougi, 2010; Hair Jr. *et al.*, 2010). In this paper content or face validity was conducted to confirm the validity of the items. Content validity can be defined as the degree to which the items have the ability to measure a particular construct and how closely these items measure the concept they were designed to measure (Hair Jr. *et al.*, 2010). In addition, this study also examined the reliability of the instrument. However, there are many ways of testing reliability; Cronbach's alpha coefficient is among most widely accepted methods of testing reliability of an instrument (Sekaran and Bougie, 2010). Reliability refers to the degree to which an instrument produces consistent results (Sekaran and Bougie, 2010). Finally, SPSS v20 for Windows was used to test the reliability in this study.

4. Results

4.1. Validity Test

Questionnaires were given to the panel of experts and small sample of potential respondents from IT industry in Pakistan. Experts consulted include assistant professors, associate professors and professors in the Department of Business Administration, Islamic International University Islamabad, and Leads Business School, Lahore Leads University, as well as some IT professionals from IT industry in Pakistan and asked to evaluate and provide their input on relevance, content and suitability of the items adapted to measure the constructs. The corrections and recommendations were incorporated in to the questionnaire before pilot study.

4.2. Reliability Test

The results of reliability tests provide evidence of high reliability values ranging from 0.762 to 0.923. As Cronbach's alpha value of 0.60 is considered acceptable, while higher value shows higher reliability of an instrument and indicates higher inter-item consistency (Sekaran and Bougie, 2011). The results of the pilot test present that the values of Cronbach's alpha for the examined constructs are all above 0.70. Accordingly, given the established threshold value of 0.7, it can be established that all the constructs of entrepreneurial skills set are reliable, and therefore, there was no need to remove any item.

Table 1. Reliability Test Construct

Construct	No of Items	Cronbach's Alpha
Technical Skills	5	0.867
Managerial Skills	6	0.852
Personal Maturity Skills	4	0.762
Leadership Skills	10	0.918
Entrepreneurial Personal Skills	14	0.923

Additionally, the descriptive analysis in Table 3.2 demonstrates that 22.5% respondents have 1 year working experience, 10% have 2 years, while 47.5% have more than 5 years of working experience. Moreover, the data collected from different cities reveals that 72.5% IT companies from Rawalpindi, 12.5% from Lahore, 2.5% from Faisalabad, while 12.5% belong to Gujranwala. Furthermore, 70% of the respondents were male while 30% were female respondents. Finally, as far as educational background is concerned, 5% respondents have doctoral degree, 25% did master in computer sciences, 5% were hold master in information technology degree, 17.5% have master degree other than computer sciences, 37.5% were bachelor degree holders, while 2.5% hold diploma or equivalent qualification.

Table 2. Descriptive analysis

Item	Frequency	Percent
Work experience		
1 years	9	22.5
2 years	4	10.0
3 years	2	5.0
4 years	6	15.0
5 years or more	19	47.5
Location of your company		
Rawalpindi	29	72.5
Lahore	5	12.5
Faisalabad	1	2.5
Gujranwala	5	12.5
Gender		
Male	28	70.0
Female	12	30.0
Educational Background		
Doctoral degree	2	5.0
Masters in computer sciences	10	25.0
MIT	2	5.0
Master degree in other subject	7	17.5
Bachelor degree (4 years)	15	37.5
Diploma or equivalent	1	2.5
Others	2	5.0

5. Conclusions

The purpose of this paper was to conduct a pilot study and pre-test the validity and reliability of the items measuring the entrepreneurial skills set constructs. The study helped in detecting errors in the instrument, ambiguous sentences, and removing useless items. The results of this pilot study reveal that all constructs are above 0.70. Therefore, it can be concluded that all the constructs of entrepreneurial skills set are reliable, and subsequently there was not a single item to be removed.

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