



School of Management

**BLEKINGE INSTITUTE OF TECHNOLOGY**

**Antecedents of Innovativeness and its impact on small firm performance**

**(A Study of Pakistani Small Firms)**

**Supervisor**

**Dr. Ossi Pesämaa**

**Authors:**

**Muhammad LaL Khan (800913-P759) & Irfan Jan Muhammad(751011-T078)**

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## **Abstracts**

Small firms have earned growing recognition due to its contribution to national economies. The way small firms matter has evolved over a period of time. The paradigm shift has been seen from the view point of small firms as a contribution to society and political stability to more on economic ground. The development and success of small firms may help smooth transition of economies however the mortality rate of such firms are quite high, they are variety of reasons for failures including undercapitalization to inability of owners to manage the firm when it's in growing stage. We strongly believe development of innovative capacity may prevent small firms from failing and contribute to sustainability and success. Based on this motivation we attempted to indentify and test some building factors of innovativeness and how these contribute to performance in small firms.

In our study we attempt to validate empirically the impact of three predictors i.e. Social Network, Entrepreneurial Climate and Learning Orientation on innovativeness and then the impact of innovativeness on small firm's performance. Our study reveals that out of these three predictors of innovativeness entrepreneurial climate and learning orientation positively contribute to innovativeness and subsequently innovativeness has positive impact on firm performance. Based on these findings we conclude that learning orientation and entrepreneurial climate can increase the small firms' capacity to innovate, which can increase firm performance. These findings are useful for small firms' owner as well as for policy makers in formulation of policy which may promote learning among small firms owner.

Key Words: Small Firms, innovation, innovativeness and performance.

## **Acknowledgements**

Dear Reader,

We both have been working in the management jobs for quite a long time. We have seen examples of small kiosks becoming famous food chains like Student Biryani (A spicy rice dish). Also cottage industry converting into a industrial units. These are real life examples of entrepreneurship which definitely involved innovations in business operations, manufacturing lines and even recipes. That is why having coming across this research idea we grabbed it.

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Sincerely,

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**Muhammad LaL Khan**  
**Irfan Jan Muhammad**

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# 1. Introduction

Pakistan economy primarily constitutes of a large proportion of small firms or so called small and medium sized enterprises (SMEs). Both terms used interchangeably in this thesis. According to Economic Census of Pakistan-2005, 3.2 million business enterprises exist in Pakistan Economy and small firms comprises over 99 percent. These small firms employ approximately 78 percent of non-agriculture labor force and contribute over 30 percent to GDP, 25 percent of manufacturing export earnings besides sharing 35 percent in manufacturing value added (SME Policy 2007). This group of firms in Pakistan is considered as a less formally organized because more than 96 percent firms are owned by an individual as a sole proprietor often referred to as an entrepreneur. Two percent are controlled by partnership and there are no corporate entities in SMEs.

Pakistan is a developing country largely depends on foreign aid assistance. The structural change from low income to middle income level can help struggling economy and SME has significant role to play in this structural transition. Literature on structural change suggests that apart from oil –exporting countries, most countries depend on their industrial sectors to achieve high level of GDP per capita (Syrquin 1989). If considering GDP proportion of service sector in developing countries the contribution to GDP is higher than the percentage share of manufacturing. At the same time there are no developed countries that reached this stage without manufacturing sector. Despite such great importance the majority of such firms become failures. Often small firms discontinue their operations in only a few years after start up. The exact failure rate is not confirmed owing to undocumented nature of the economy. Yet, there is consensus among the Government functionaries responsible for managing SME that this failure rate is quite high. Majority of small firms fail due to undercapitalization, lack of expertise of owner manager, and firm’s owner inability to manage firm when it starts to grow.

The above factors motivate us to contribute to this important sector of the country by not looking at the failures factor rather unleashing the factors that can increase innovation among such firms. We believe that unless small firms understand the phenomena of innovativeness they cannot address customer problems effectively. Innovation with great market validity certainly contributes to firm performance and also makes it competitive in the industry.

## 1.1. Small firms Definition

Table 1 below categorizes enterprises. The list three different groups so called micro, small and medium enterprises (SMEs). In addition to the staff headcount ceiling, an enterprise qualifies as an SME if it meets either the turnover ceiling or the balance sheet ceiling, but not necessary both (EC Enterprise and Industry website)

Table 1: Firm categories (EU, 2011)

Enterprise category	Headcount	Turnover	or	Balance sheet total
medium-sized	< 250	≤ € 50 million		≤ € 43 million
Small	< 50	≤ € 10 million		≤ € 10 million
Micro	< 10	≤ € 2 million		≤ € 2 million

SME definition in Pakistan according to SME policy 2007 is defined as below.

Table 2: Pakistan categories

Enterprise Category	Employment Size	Paid up Capital	Annual Sales
Small and Medium Enterprise	Upto 259	Up to Rs. 25 million	Up to Rs. 250 million

Frequently SME and Entrepreneurship are considered to be same thing. Although there is considerable overlap between SME and entrepreneurship but conceptual these are different concept. As this is not in the scope of our study we only look briefly into difference between SME and entrepreneurship. For instance small business owner is an individual who establish and manage a business for the purpose of personal goals. The firm must be the primary source of income and will consume the majority of one's time and resources. The owner perceives the firm as an extension of his or her personality, intricately bound with the family needs and desire. Entrepreneur is thus an individual, who establishes and manages a business for the principal purposes of profit and growth. The entrepreneur is characterized principally by innovative behavior and will employ strategic management practice in business. (Carland et al. 1984)

## 1.2. Significance of Small Firms to Nation's Economy

This segment of the economy is considered very important to nation's economies as it helps in creating job so reduce unemployment, creation of new business contributes to GDP and new small business with export orientation also adds to trade balance. The positive and statistical links between entrepreneurship and economic growth has been indisputably verified across a wide spectrum of units of observation, spanning the industry, region and the country. In the next section we look out the composition of SME in European, American and Pakistan economies.

According to Annual Report on EU Small and Medium sized enterprises published by EIM Business & Policy Research, there were over 20 million enterprises in the European Union (EU-27) in 2007. Among these 43,000 were large scale enterprises i.e. only 2%. A majority of enterprises in EU are hence SMEs. Within these SMEs, a large number of enterprises are micro (92%), employing less than 10 persons. Typically, a European firm is a micro firm. Small firms are therefore great sources of employment in EU. Around 67% of employment in the private, non financial economy is found in small firms. SME employs



88 million whereas large scale enterprises employ 43 million people. In addition to provide employment SME positively contribute to economic growth Carree et al. (2002) found a positive relationship between business ownership rates and economic growth rates for OECD countries. Thurik et al. (2008) similarly found that those OECD countries with a high rate of business ownership tend to exhibit lower levels of unemployment.

In United States Small firms/entrepreneurial activity is given more importance, which is evident from President Clinton's State of Union Address in 1993 (Audretsch 2002).

"Because small business has created such a high percentage of all new jobs in our nation over the last 10 to 1 years, our plan includes the boldest targeted incentive for small business in history. We propose a permanent investment tax credit or the small firms in this country"

Given that entrepreneurship is a vital determinant of economic growth, the idea is that much of the excess economic growth of United States is due to this lead (Audretsch et al. 2002). U.S with higher new firm start up rates tends to have a higher level of productivity growth (Holtz-Eakin & Kao 2003). In other similar studies found that U.S. states with higher rates of new firm start-ups exhibit higher rates of economic growth.

Small firms are also backbone of Pakistan's Economy. Due to this the Government of Pakistan designate the SMEs as one of the four pillars of economic revival plan prepared in 1999-2000.

### **1.3 Problem Discussion**

Small firms are considered to be the engine of economic growth and employment. The development and commercialization of innovation is one of ways through which small firms contribute to economic growth and employment. But the problem is we know very little about the actual processes whereby small firms undertake innovative activity since many small firms don't necessarily innovate in formally recognized way. The phenomena of building innovative capability is complex as it varies from business to business, industry to industry, hence a thorough understanding of the concept can play a vital role for the small firm owners in enhancing the innovative capacity.

The success of small firms depends on the extent of innovativeness which is the main focus of our inquiry in this study. Innovativeness refers to firm capacity to engage in innovation: that is introduction of new processes, products or ideas in the organization (Hult et al. 2003). This capacity to innovate is among the most important factor influencing performance (Hurly & Hult, 1998; Porter, 1990). It is generally agreed that innovation contribute to business performance (Hult et al. 2003), relatively little is known what drives innovativeness.

## 1.4 Problem Formulation and Purpose

The discussion in the preceding section leads us to form following research question.

**Research Question:** *What are the predictor and outcome of innovativeness in Small firms?*

Innovativeness is the capacity of firm to introduce some new process, product or idea in an organization. How such capacity is created and what are the important elements behind that occurrence. This indeed is very important question in research. To ascertain this phenomenon we can take help from literature and can suggest the important drivers of innovativeness. For instance Hult et al. 2003 describe market orientation, learning ordination and entrepreneurial orientation as drivers of innovativeness. The focus of present study would be on the relationship between social network, entrepreneurial climate and learning orientation with innovativeness and its impact on small firm's performance (Nybakk et al. 2009). These determinants of innovativeness will be verified from the sample of Small firms in Pakistan. Based on the result we would reach to conclusion how these determinants build firm capacity to introduce some new process, product or idea.

The next very important question in our research is to ascertain the link between firm performances and the innovativeness. Innovativeness leads to creation of innovations. If innovative products does not positively contributes to firm performance in term of market share, profitability and competitive positioning then there is no incentive for firms to go for innovation and commit resources in this endeavor. However, there is plenty of evidence which verified such linkages. The example of pharmaceutical company is pertinent here; a pharmaceutical company in its pursuit to landmark discovery of chronic disease which is untreatable may lead to competitive positioning and excellent business performance. At the same time companies need to be prudent when going for innovation. Too much innovation is also dangerous as it may lead firm towards confused positioning. Instead of gaining market share, such innovation may result in loss of market share.

Therefore the purpose of present study is twofold, first to explore how drivers like social network, entrepreneurial climate and learning orientation contribute to innovativeness in small firms and second to determine how innovativeness affects performance of small firms. We approach to these questions with the help of literature as there are ample studies in this context. The possible adoption of a (Nybakk et al. 2009) framework and the testing of the same in the context of Pakistani SMEs would give us practical results. Based on the framework a questionnaire will be adopted or developed to collect responses. The sample of small firms in our study pertains to the country first largest city Karachi and fourth largest city Multan. The target audience would be the small firms' owner or manager for questionnaire responses. We targeted 107 small firms in our study. Owing to empirical nature of study the measurement of the responses would be done through computer software like SPSS and Amos. Based on the results theoretical model will be further refined in accordance with the sample data.

## **1.5 Thesis' Structure**

The structure of thesis begins with the introduction of Small firms, how the small business evolves over a period of time and the way it used to matter change. Then the present study explains the concept of small business and their relevant importance in Nation's Economies. The introduction part move ahead and contains the problem discussion and problem formulation.

The next chapter of the thesis deals with the discussion on theoretical background and development of hypothesis. This is the main part of the thesis it discusses the work on the same problem in literature, findings and how it's related with the present study. Here in this part a detailed focus is given to theoretical framework, each construct in theoretical framework is given due importance and we try to back why a particular construct is valid to framework with considerable evidences. The detail work would lead us to propose/adopt model based on which we will further our study.

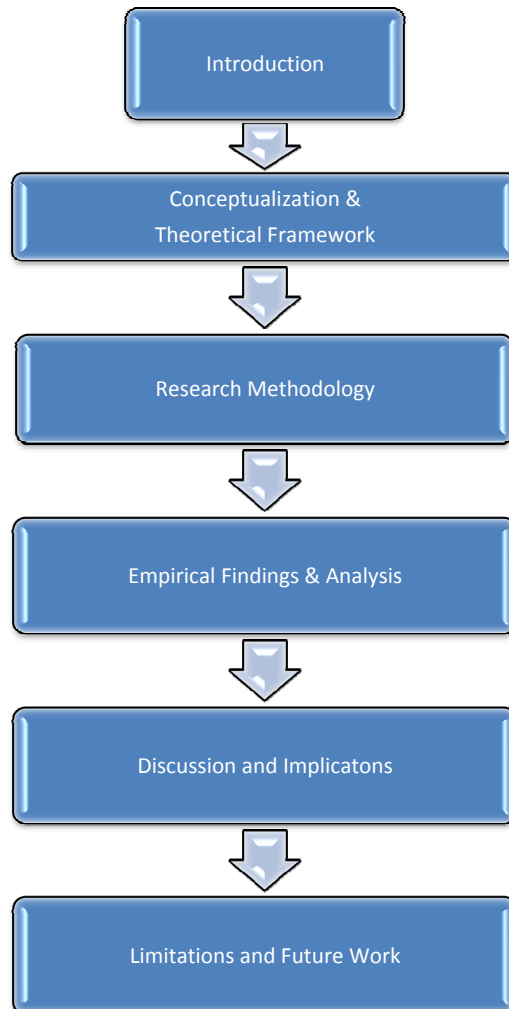
Then the next milestone in the thesis is the discussion about research method and justification are given about a particular method is useful to present study. This part expands with the consideration on Questionnaire Development with the rationale of a particular scale used in collecting responses. Finally this part is concluded with the discussion on sampling.

Subsequent to above section, the thesis describe the empirical findings and their significance to study. Based on this work we can conclude whether the framework earlier formed is in accordance with our results or not.

Conclusion and Implications is the last part of the thesis in which conclusion is drawn from this work and implications are discussed.

## Structure of Thesis

**Figure-1**



## 2. Theoretical background and hypotheses

### 2.1 Innovation

**Innovation** refers to new fresh ideas, which either to some extent or perhaps fundamentally change a product or service (Aufah 2003). Innovation is the outcome whereas innovativeness is the process that leads to innovations (Pesämaa, Shoham and Ruvio, 2011). Edwards and Gordon (1984) refers to this process by saying it “begins with an idea, proceeds with the development of an invention, and results in the introduction of a new product, process or service to the market place”. Yet, there is no universal definition of innovation. In the field of innovation the scholars have defined innovation generally as the development and use of new ideas, or behavior in organization. A new idea could be a new product, service or method of production. The notion of innovation is not only restricted to the outcome of new product only rather it included new business process for instance production process, new management technique like inventory management techniques or business process reengineering. Therefore innovation is multidimensional and can be classified as:

- Radical versus incremental
- Product versus process
- Administrative versus technological

Referring to first classification of innovation, which can be radical and incremental. Radical innovation is path breaking, discontinuous, revolutionary, original, pioneering, basic or major innovations (Green et al. 1995). Incremental innovations are small improvements made to enhance and extend the established processes, products and service. Whereas technological innovation is about the adoption of new idea that directly influences the basic output processes, while administrative innovations includes changes that affect the policies, allocation of resources and other factors associated with social structure of organization (Cooper, 1998).

The idea of innovation can be traced back to the findings of Schumpeter’s work on economic development. He argued that economic change revolves around innovation, entrepreneurial activities and market power (Schumpeter 1934). He described entrepreneur as pivot on which everything turn. Entrepreneurs whether they operate in big firms or small ones old companies or start up are the agents of innovation and creative destructions. He also coined the term creative destruction in 1942, to describe how innovative capitalist products and methods bring new product instead of them (McCraw, Thomas K. 2007). He supported this with examples replacing the old technology with the new one was due to the result of innovation. Here in this case the example of transportation system is evident how it was replaced from animal mode to technological or mechanical mode.

Drucker (1985) termed the innovation like any other corporate functions but different from other business activities. He argued that innovation depends on seven sources; there are unexpected occurrences, incongruities, process needs, industry and market changes, demographic changes, changes in perception and new knowledge. According to Drucker the first four sources of innovation exists inside

the company whereas three exist outside the company in its social and intellectual environment. To foster the process of innovation Drucker emphasis that innovation is both in and outside way of looking. Only having R&D won't help the companies to meet the innovation capabilities. If company sticks to its conventional wisdom it loses the new opportunities and if company pursue unplanned innovation it would result in failure. Therefore, companies before pursuing innovative projects must have the detailed understanding of nature of competition in the industry, customer's need and the problem faced by the majority of companies in addressing customer issues.

## 2.2 Innovation Dilemma

In current business environment innovation mantra is considered as a panacea for all problems. Ask many of CEOs today's CEO and they are likely to tell you that the ability to develop new ideas and innovation is one of the top priorities of their organizations (Porter, Stern and Council on Competitiveness, 1999). Thought the importance of innovation in this knowledge economy cannot be rejected however too many innovations may also lead to confuse positioning which consequently affects business performance. The pertinent example here is of Pakistan State Oil (PSO) where a writer is employed. PSO is largest oil marketing state owned enterprise in Pakistan, it maintain 80% share in black oil (Furnace oil) primarily used for IPP for generation of electricity and 60% in white oil whereas in lubricant it share only lye somewhere between 20-25%. The company is consistently facing problem in enhancing market share in lubricant against the world strong brands like Chevron and Shell.

In this case too much innovation is also contributing to company failures for instance the company has a series of nine brands for Diesel consumer whereas the competitors has only 2-3 brands for this consumer. Once asked the Senior Manger about the rationale for keeping such a big brand line the response was our novelty, we have brand for each segment. This novelty leads to product confusion.

From this example we can conclude that company decision in articulating innovation strategy must consider industry requirement, industry state whether it's in dynamic industry or stable one, market and customer orientation otherwise too much innovation would lead to confusion among customers resulting in poor performance.

## 2.3 Role of Innovativeness

Some firm are more innovative and enjoy industry success whereas others lack the innovative capability, some firms early adopts innovative ideas while other are reluctant. This interesting phenomena lack considerable work in literature and this is the focus of present study to understand the determinant of innovativeness and its subsequent effect on business performance. This section is build up on the concept of innovativeness and what roles it plays to innovation abilities of firms.

**Innovativeness** can be defined as capacity to introduce some new process, product or idea in the organization (Hurly & Hurt 1998). Innovativeness is the mean and process through which innovation is achieved and known as a determinant of performance (Pesämaa, Shoham and Ruvio, 2011). According to Rogers "innovativeness is the degree to which an individual or other unit of adoption is relatively

earlier in adopting new ideas than any other member of the system and as such “innovativeness” indicate behavioral change “

The long term success of firm depends on its capability in maintaining sustainable innovation. However there is gap in literature about what constitute innovation capabilities in organization and how it can be developed and make sustainable. Lawson and Samson (2001) define innovation capability as “the ability to continuously transform knowledge and ideas into new products, process and systems for the benefit of firm and its stakeholders” Their study conclude that innovation capability has seven aspects. These include vision and strategy, harness the competence base, organizational intelligence, creativity and idea management, organizational structure and systems, culture and climate, and the management of technology. Therefore innovation capability is considered combination of factors internal and external to organization which makes firm ability to innovate. Innovativeness is internal to organization as it’s the factor over which management has considerable control. As described earlier Drucker (1985) stressed the importance of innovativeness, he declined the innovation as inspirational rather described it as outcome of hard work. The very survival of firm depends on the innovativeness as it helps managers to devise solution to business problem and come out with new thing which is effective and contribute to business performance.

Innovation is major source of competitive advantage to contemporary organization. Per se a competitive advantage means performance sustain over time and will determine how the firm is different vis-à-vis its competitors (Hurly & Hurt 1998). Porter (1990) concludes from its four years research of ten important trading countries that nation competitiveness depends on the capacity of its industry to innovate and upgrade. As an example he explain that having strong domestic rival puts great pressure on companies making them to come up with better way of doing things. He argued that the creation and assimilation of knowledge had changed the fundamentals of competition.

There are other examples how firms who build the capacity to innovate and harness the benefit. The most relevant example here is the firms in ICT (information and communication technology industries. For instance CISCO System Inc. the world leader in networking technologies. The innovation strategy is at the core of CISCO success. CISCO does not invent everything at home rather it recognized that the real power lies outside the firm. This is one reason why CISCO has a smaller research and development department whereas others in the industry have bigger R&D. The strategy of CISCO is to use combination of some internal product development and purchase needed technologies from a mix of acquisition and partnership. In the same way CISCO has also realize that its core capability is not present in manufacturing rather it is in managing the suppliers, partner and customers in a way that customer order directly goes to related supplier/partners who make the shipment, hence the process reduces the cost and time.

Another study on four Chinese Telecom firms: Huawei, ZTE, DTT and GDT by Fan (2004) shows that these local companies who entered late in the telecom industry, must develop innovation capability to compete with multinational companies (MNCs) While summing up here we can conclude the innovativeness depend both on internal and external factors of the firm.

## **2.4 Antecedents to Innovativeness**

There are score of studies describing various drivers of innovativeness, for instance Hult et al. (2003) considered Market Orientation, Learning Orientation and Entrepreneur Orientation as determinant of Innovativeness which contribute to business performance. In this study the model was tested on a sample of 1000 firms with sales above US\$100 million per year. The findings revealed positive relationship of Market Orientation, Learning Orientation and Entrepreneur Orientation to Innovativeness.

The same kind of study was also done in Norway by Nybakk et al. (2009) to ascertain the antecedents to forest owner innovativeness. This study was aimed to investigate the issue in the context of Norwegian forest land owners and their involvement in non timber products and services. In their study they tested four theoretical constructs that is Social Network, Entrepreneurial Climate and Learning orientation were considered as key driver of innovativeness which further affects the business performance. The study positively reported the positive relationship of Social Network and Learning Orientation with innovativeness while negative relationship of Entrepreneurial climate with the innovativeness. Furthermore it was also proved that innovativeness has positive effect on economic performance of the firm. Similarly Pesämaa, Shoham and Ruvio (2011) report a positive relationship between innovativeness and performance in health care industry. They also found significant differences between groups with high and low learning orientation.

Nybakk et al. (2009) have great relevance with our study of antecedents to Innovativeness in Small firms. The forest owners may also come under the definition of SMEs and the findings of Innovativeness may have relevance with small firms in other sectors of industry. Based on this conviction the model developed in above mentioned study was adopted to test whether this also hold true in case of our study.

### **2.4.1 Social network and Innovativeness**

Social network has been defined as a specific set of linkages among a defined set of persons and it provided entrepreneurs with social capital (Mitchell, 1962; Coleman, 1988), or a quality that can exist between people that increases the return of human capital such as intelligence, education, work experience (Burt, 1997). It is assumed interaction must last for a meaningful time period for them to be considered as a part of lasting social interactions among people. We found this definition in the work of (Nybakk et al. 2009).

Social network add to process of innovativeness in variety of ways. For instance angel investments or social capital to start up new business encourage entrepreneur to take advantage from opportunity and build capacity to come up with innovative product or concept. Through network entrepreneur may get awareness about the result of a particular project and can align resources based on the suggestion from network firms. This scope of evidence adds to the notion of why firms form networks. The literature suggests two major reasons to form network, first is the resource requirement which convince firms to collaborate with other firms. Research conducted in global chemical industry between 1971 and 1991 highlights that firms were most keen to form linkages with other firms where those firms had a high level of commercial competence. Secondly, firms enter networks to identify opportunities by forming



unique links (Ahuja 2000). The Porter report establishes that inter-organizational network is critical for development of innovative ability in firms (Porter and Ketels 2003). Innovation benefits achieved from networking are speeding products to markets (Almeida and Kogut 1999), risk sharing (Grandori 1997), obtaining access to new market and technologies (Grandori and Soda 1995), pooling complementary skills (Eisenhardt and Schoonhoven 1996), safeguarding property rights when complete or contingent contracts are not possible (Liebeskind et al. 1996) and acting as a key vehicle for obtaining access to external knowledge (Cooke 1996). Their literature also shows that firms which don't cooperate and which don't formally and informally exchange knowledge limits their knowledge base long term and ultimately reduce their ability to enter into exchange relationships (Shaw 1993, 1998).

Durability of tie inside the network is also important aspect of networking, whether firms in a network maintain strong tie or weak tie would last impact on the innovativeness. The resilience of tie is determined with the frequency of meeting, level of trust and confidence. Ahuja (2000) studies on collaboration Networks, Structural Holes, and Innovation conclude that direct and indirect ties both have positive impact on innovation process whereas increasing structural holes (disconnection between firm's partners) have negative effect on innovation. The inter-firm strong tie maintenance enables the participating firms to share knowledge resulting in creation of more knowledge, strong ties also bring together complementary skills which independently are not possible and can't deliver complex nature of innovations and third benefit of networking is scale economies in research which independently would not have been possible.

Firms in high tech or in pharmaceutical industries require rapid innovative product to generate early cash flows make alliance the only option for successful results. The development of new product may also give distinct competitive positioning and first mover advantage. For instance the study of Deeds and Hill (1996) conducted on 132 biotechnology firms proves that a firm rate of new product development is a positive function of number of strategic alliances as such alliance helps firms in gaining access to resources however, it also suggest that if a firm enters too many alliances, diminishing returns and ultimately negative returns may set in. Another study of Gemunden, Ritter and Heydebreck (1996) on the network configuration and innovation success of German high tech industries shows that innovation success is significantly correlated with a firm's technological network. This partnership is not confined to competitors but it also takes suppliers, distributor, buyers, consultant, research and training institute and administration into its configuration.

We conclude here from the findings of Powel et al. (1996) that innovation will be found in networks of learning, rather than in individual firm when the knowledge base of industry is both complex and expanding and the sources of expertise are widely dispersed. The result of collaboration in such frame of work would result in rapid product development which would certainly contribute to business performance in term of market share and profitability. This fact leads us to form the following Hypothesis.

***Hypothesis 1: The greater the extent of social networking, the greater the degree of innovativeness among small firm owner***

## 2.4.2 Entrepreneurial Climate and Innovativeness

Shane (1993) observed the effect of culture values like individualism, power distance, uncertainty avoidance and masculinity on national rate of innovativeness in 33 countries in 1975 and 1980. The study concluded that nations rate of innovation varies because of the culture values of its nationals. The tendency of innovations is higher in culture where uncertainty acceptance is high and it's low in cultures where power distance and individualism lacks. Another important finding of this research was the relationship between per capita income and innovations. Countries with per capita income comparatively high, showed more innovative behaviors in its citizens.

National culture and organization culture have a profound influence on the level of entrepreneurship and innovation in organizations. Culture is primary determinant of entrepreneurship and innovation (Herbig et al. 1994). Shane (1993) observed the effect of culture values like individualism, power distance, uncertainty avoidance and masculinity on national rate of innovativeness in 33 countries in 1975 and 1980. The study concluded that nations rate of innovation varies because of the culture values of its nationals. The tendency of innovations is higher in culture where uncertainty acceptance is high and it's low in cultures where power distance and individualism lacks. Another important finding of this research was the relationship between per capita income and innovations. Countries with per capita income comparatively high, showed more innovative behaviors in its citizens.

The economic models vary across countries. Some countries are more innovative and get maximum benefit from entrepreneur activity while other lack entrepreneurial activity. In an important study of determinants and policy in a European-US comparison carried out by (Audretsch, Thurik, Verheul and Wennekers) the USA was amongst the top of list in OECD countries in terms of business ownership. USA has transited from managed economy to entrepreneur economy and this is due to globalization, technological development and knowledge. Besides these factors US economy face the shock of dynamism and small business have the flexibility to adjust according to shock in economy. Opportunities, globalization, advent of new technology contributed to the SME and entrepreneurial activity in US. Entrepreneur in US kept on going introduce products that have target market the entire world. For instance revolution in computing industry prevails by USA, for instance leading operating system software companies are US Microsoft and Apple Corporation. Another example of Google is related here its leader in search engine market. Face book social networking site dominates the world in social networking websites.

Nybakk et al. (2009) in their study on antecedents to forest owners' states that positive entrepreneurship climate augment the innovativeness amongst the forest owner local community lead us to suggest that same may hold true in case of present study of driver of innovativeness amongst small firm owner. Based on these facts we propose following hypothesis.

**Hypothesis 2:** *The higher the level of entrepreneurial climate in the local SME owners the greater the extent of innovativeness*

### **2.4.3 Learning orientation and innovativeness**

Organization learning can be defined as a dynamic process of creation, acquisition and integration of knowledge aimed at the development of resources and capabilities that contribute to better business performance and learning orientation refers to organization wide activity of creating and using knowledge to enhance competitive advantage. Huber (1991) defines the learning orientation as the development of new knowledge or insights that have the potential to influence behavior through its values and beliefs within the culture of organization. Calantone et al. (2002) studied the relationships among learning orientation, firm innovativeness, and firm performance using a broad array of US Industries. They defined learning orientation as activities of creating and using knowledge to enhance competitive advantage. We brought this definition from a Norway Study (Nyback et al. 2009)

Organizational learning is considered to be one of fundamental source of competitive advantage in the literature of strategic management. Stata, (1989) argues that in unstable environment the capacity of firm to learn faster than competitors may be the only sustainable competitive advantage. Hedlund (1994) affirm that as innovation change and organizational renewal become more critical base of competitive advantage, dynamic capabilities are likely to seen as more important proprietary resources that sustain a given position. William (1992) study reveal that all industries undergo substantial change, whether driven by customer, competitors or technology suppliers. This change creates pressure on business to innovate and improve their products in order to remain competitive in the industry. Firms that are able to learn about customers, competitors and regulators stand a better chance of sensing and acting upon events and trends in the marketplace (Tippins and Sohhi, 2003). Organizational learning is valuable to firms' customers as well because it focuses on understanding and effectively satisfying their needs through new products, services and ways of doing business. From this discussion we can comprehend that learning positively contribute in gaining competitive advantage which finally contribute to firm performance.

The Innovativeness is thus associated with culture that emphasizes learning. Firm culture is one such important determinant of learning in an organization. For instance hierarchical structure does not promote the learning while the less bureaucratic, open culture and participative style of decision making always advance learning in an organization. Learning orientation amongst the industry players creates an environment of interaction, which makes the firms at local level to understand from each other experiences. Learning helps in gaining competitive advantage and learning is more crucial in technological firms. According to Argyris and Schon (1978), organizational learning will enhance a firm innovativeness, especially in knowledge-intensive industries. The literature also emphasizes learning as a critical factor in building organizational capability. Collis (1996) suggest two critical factors the ability to innovate and the ability to learn in building organization capabilities. He describe the organization capabilities as "the firm's dynamic routines that enable it to generate continuous improvement in the efficiency or effectiveness of its performance of product market activities"

These arguments also hold true in case of SME. Rhee, Park and Lee (2010) in their study of driver of innovativeness and performance for innovative SMEs in South Korea: Mediation of Learning orientation reveals that market orientation and entrepreneurial orientation significantly influence learning orientation in Small and Medium Enterprise. It further adds that learning orientation in SMEs

significantly affects innovativeness and innovativeness has a significant effect on performance. In addition to this there are further empirical evidences in literature in this matter. Lee and Tsai (2005) study attempt to evaluate the relationship between market orientation, learning orientation and innovativeness with the same of 700 Taiwan manufacturing and small firms. The findings of this study show market orientation is associated with the level of learning orientation and organizational innovativeness. The emphasis of learning orientation is associated with the levels of business innovation and a participative, power sharing and collaborative business operation mode may enhance a firm capability to promote innovativeness and business performance.

Cohen and Levinthal (1990) argued that the ability of a firm to recognize the value of new, external information, assimilate it and apply it to commercial ends is critical to its innovative capacity. They defined this as absorptive capacity. Innovativeness thus requires a firm to have the ability to translate and exploit knowledge into discontinuous aspects of social, industry specific knowledge, technological knowledge, and knowledge on market development (Tushman and Anderson 1986) as a result of organization learning. Note that knowledge is thus an outcome of learning. Organization learning thus enables firms to accomplish within paradigms improvement such as continuous improvement, but also paradigm shift i.e. breakthrough innovations (Baker and Sinkula 1999)

From the above discussion we can conclude that learning orientation influence the firm in following ways.

- It enhances the capacity of firm to innovate.
- Innovation gives competitive advantage.
- Innovation helps firms in early grabbing the market share hence it bring good performance to business.

The relevance between learning and innovativeness in literature convince us to suggest following hypothesis.

***Hypothesis 3: The higher the level of learning orientation among small firm owners the greater the degree of innovativeness***

#### **2.4.4 Innovativeness and economic performance**

The positive relationship between innovativeness and firm performance has been shown in a number of empirical studies. In a study of 845 Canadian Manufacturing Firms Thornhill (2006) find out this relationship holds true. This study of Thornhill (2006) yielded three important findings in relation to innovation. First industry level dynamism is positively related with innovation. The dynamic industry has very limited life cycle of product and continuous innovation is required to maintain share in the industry. The example of cellular phone development industry is relevant here. The hyper competition in this industry compels players to aggressively pursue for innovative products. Second innovation is positively associated with the firm performance. This relationship is unrelated and not affected by the dynamic nature of industry. The innovation leads to first mover advantage and distinct competitive positioning. Porter (1998) in his book Competitive Advantage states that a firm can pursue both low cost and differentiation strategy when it pioneer innovative product. The third finding of the research of Thornhill

is that firm knowledge, industry dynamism and innovation interact in a way that influences firm performance. In high tech firms where knowledge assets are high, innovative new products have the greatest impact on revenue growth. Baldwin and Johnson (1996) in their study of Canadian firms also showed the significance impact of innovation on a wide variety of business performance measures, including market share gain and return on investment. Dwyer and Mellor (1993) in their studies of Australian firms found out that firms adopting technical offensive strategy had the highest level of performance in term of meeting their performance objectives, profitability of their new product projects and perceived overall success. Salavou (2002) also found that product innovation was a significant determinant of business performance based on Return on Asset (ROA) in his studies of SMEs in Greece in food industry.

The above referred empirical studies shows considerable evidence of positive relationship between innovation and firm performance, were from manufacturing sector, whereas literature lacks much work on the impact of innovation on performance of service firms. Cainelli et al. (2006) mentioned that this lack of research is due to difficulty in obtaining micro-level data, which is well developed in manufacturing but less in Service sector. Despite lack of much research on this area, whatever we found shows positive relationship of innovation with performance in service sector too. For instance Cainelli et al.(2004) in their studies concludes that firm performance in service industry not only depend on innovation but also on the of financial resources pledged for innovation as well as on the type of innovation activity performed.

Hult, Hurley ad Knight (2003) in their study on Innovativeness, its antecedent and impact on business performance addresses three research questions. (1) Why are some industrial firms more innovative than others? (2) What effect does innovativeness has on business performance? (3) Does the linkage between innovativeness and business performance depend on the environmental context? Based on these research questions a model was prepare and tested which also showed that the innovativeness is an important driver of performance.

Another study in this context was carried out by Nybakk et al. (2009) to investigate the land the forest owner innovativeness. The authors developed a conceptual model narrating that social networking, entrepreneurial climate, and a learning orientation have direct effect on innovativeness and in turn innovativeness has positive impact on economic performance. As described earlier this study was done to investigate the innovativeness among forest owner innovativeness. The same have relevance with the innovativeness and performance of SMEs.

The literature suggests that innovation has an important role in the performance of SME, based on above relevance particularly the work of Nybakk et al. (2009) lead us to propose following hypothesis.

***Hypothesis 4: The higher the degree of innovativeness the greater the economic performance among small firm owners***

## 2.5 The Propose Model

The above theoretical framework proposes following model. This model is adopted from the work of Nybakk et al. (2009) in their research of antecedents to forest owner innovativeness. We found it relevant in our study of the same phenomena of innovativeness in SMEs.

We tend to verify whether this model hold true in case of our research on innovativeness in SMEs.

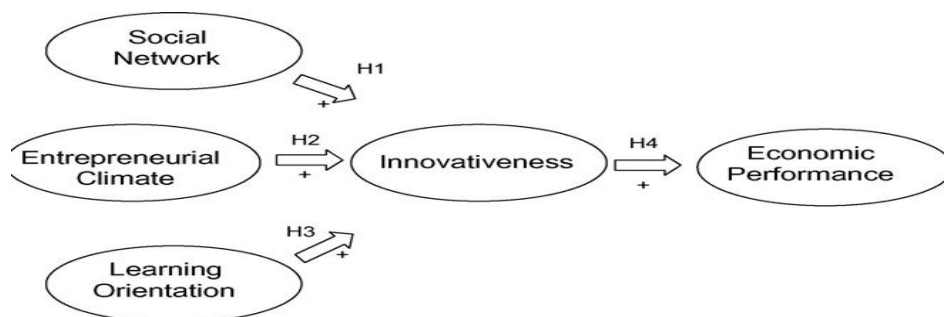


Fig.2. Theoretical framework of the study with hypotheses

Theoretical framework of the study with hypothesis, adopted from the work of Nybakk et al. (2009).

## 3. Method Special Proposal

Research Method in Social science research can be broadly divided into two categories quantitative research method and qualitative research method. Aliaga and Gunderson (2003) define quantitative research as:

“Quantitative research is explaining phenomena by collecting numerical data that are analyzed using mathematical based methods (in particular statistics)”

The objective of quantitative or empirical research is to develop hypothesis, theories and employ statistical measure to assess the phenomena. Quantitative method involve numbers, are deductive involve the researcher as an impartial observer. In this kind of research phenomena makes hypothesis, which are operationalise in term of instrument for instance questionnaire. Then the data is collected and analyzed using statistical measures. The quantitative research is quite flexible as numbers of phenomena we can ascertain this way are unlimited. This is one such big advantage of quantitative research. This method of research got disadvantages too, for instance there are phenomena which can only be better understand through qualitative research.

Qualitative research typically uses words, is inductive and requires more participation and involvement on the part of the researcher. It focuses on understanding of phenomena in their social, institutional, political and economic context. The disadvantage of this kind of research is that it focuses on a few

individual or subjects hence therefore cannot be generalized. The typical example of qualitative research is case study, which typically attempts to understand the only case.

Qualitative researcher use different approaches like ground theory practice, storytelling, group discussion, observation and interviews to gather data. As our study has a known theoretical area we find quantitative research methods more appropriate to our question.

### **3.1 Present Study and Research Method**

Our present study is well suited for quantitative research method; the rationale behind selecting quantitative method is obvious as our study develop hypothesis and theoretical framework which can only be assessed with quantitative measures. The literature on such studies also supports quantitative method as previous studies have been verified by quantities measures.

For instance the study of Nybakk et al. (2009) on antecedents to forest owner innovativeness uses the quantitative measures to verify the model. This study involves the development of theoretical framework and hypothesis which are then translated in questionnaire. Results were obtained through 683 responses.

Another study of Hult, Hurley, and Knight (2003) on the Innovativeness: Its antecedents and impact on business performance also employ quantitative methods to verify hypothesis.

In Pakistan an organization SMEDA has been working to help entrepreneurs looking for new avenues of investment in Pakistan by developing pre-feasibility studies. We went through some of them.

The nature of present study and evidence from literature guide us to use quantitative method in our research. In the subsequent sections we detailed the key components of quantitative research.

### **3.2 Questionnaire Development**

The questionnaire used in this present study was primarily adopted from the work of Nybakk et al. (2009) and amended as per our study. In addition to these other questions were also takes from the literature. For instance following four items were taken from the work of Sinkula, Baker and Noordewier (1997)

- We basically agree that our organization's ability to learn is the key to our competitive advantage
- The basic value of this organization includes learning as key to improvement.
- The sense around here is that employee learning is an investment, not an expense
- Learning in my organization is seen as a key commodity necessary to guarantee organizational survival

The following two questions related to entrepreneur climate were adopted from the study of Caruana, Ewing and Ramaseshan (2002)

- There are many opportunities available to my organization in the form of existing and or new products

- The potential for growth in the market served by my organization is substantial

The questionnaire consists of following five sections.

- Social Networking
- Entrepreneurial Climate
- Learning Orientation
- Innovativeness
- Performance

The complete questionnaire is present in the appendix at the end of this thesis.

All the construct in present study are measured with seven point Likert scale ranging from 1(Strongly disagree) to 7 (strongly agree). The questionnaire included additional items like experience as entrepreneur, Business / Unit and Industry.

### **3.3 Sampling and Data Collection**

Our sample frame consists of list of Multan an Karachi Chamber of commerce and industry and a part of sample was drawn from list of enlist contractors at National Bank of Pakistan from a population of all firms registered by the Pakistan Engineering Council. Around 50 companies were selected from the list of firms registered with Karachi Chamber and around 75 from Multan Chamber of Industries and around 30 from enlisted constructors of the National Bank of Pakistan. Our sample included young managers and entrepreneurs from every walk of life including an educationist, a manager and a firm owner.

The Questionnaires along with covering letters were sent to respondents through Emails. Reminders were sent after couple of days. But to our utter disappointment not many responded to our requests. Then we decided to change the strategy and started calling the respondents but due to unknown apprehension like in Pakistan much of the economy is undocumented a very few responded to us. One of the advantages was that as not facing the interviewer the respondent may not be embarrassed by any question which otherwise would generate respondent bias i.e. deliberate falsification. We started going personally to them. This added to cost of gathering the data. We tried to limit the geographical spread. As some of the respondents were not educated adequately we had to explain in depth the meaning of questions to avoid response bias.

The reasons behind considerable non response were that many of them were not convinced that this study can anyway improve anything on ground. Another reason was fearfulness of speaking anything that can go to competitors or tax authorities as much of Pakistan's' economy is undocumented and efforts by the government to document it so far have gone in vein. Many of them had our mails ended up in Junk mail folder.



## 4. Empirical Findings and Analysis

In this part of the thesis we attempt to present and analyze the result of survey. The responses were collected from total number of 107 respondents and the data was analyzed using SPSS and Amos. The small firms sampled for present study were primarily spread to range of industries. The complete results are compiled in tabular form are appended in the Appendix B.

### 4.1 Experience as an entrepreneur in years

In our sample of 107 respondents 42% respondents experience fall between 6-10 years, 37% experience was between 1-5 years whereas the respondents with more than 10 years of experience were 22%. The experience of 1 respondent went missing. In graphical appearance this fact is appended below.

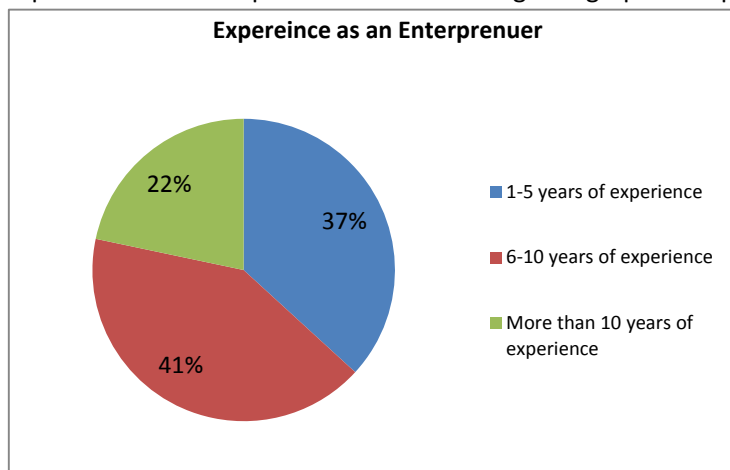


Figure 3 Experiences as an Entrepreneur

### 4.2 Unit of Analysis

The unit of analysis in the study was small firms' owners primarily; however in cases where we could not access to owner our aims was to reach at key decision maker at the organization. In this pursuit we classify our data into two group owners and managers. Manger identification includes the variety of designations for instance CEOs, General Manager, Director, Regional Manager and etc.

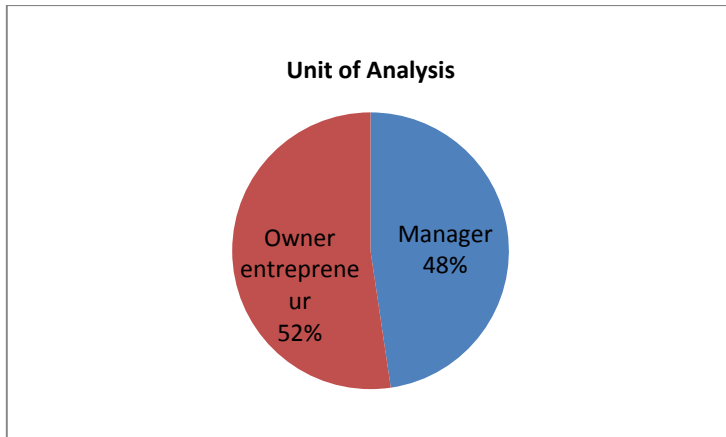


Figure 4 Unit of Analysis

### 4.3 Statistical Findings

Statistics for the measurement scale including means, standard deviation and internal reliability is crucial for the study. First this study was made to assure all variables are valid and measure what they are purported to measure. To do this all variables in the model was entered into Excel. From there the data was entered into SPSS and AMOS (Analysis of Moment Structures), which is a program with a graphical interface and written by (Arbuckle, 1995).

Mean and Standard Deviation, Mean is the central tendency of data whereas Standard deviation reflects the dispersion of data from mean. These both are first and foremost measure normally done in empirical research to verify the reliability of data. In the following section the mean and standard deviation obtain from sample results of every variable are shown.

#### ***Mean and Standard Deviation***

Table 3 Mean and Standard Deviation

Constructs and Indicators	Mean	Std. Deviation
<b>Social network</b>		
SN1.1: Lot of cooperation between me and other actors	4.76	1.87
SN1.2: Frequent conversations with other actors	3.99	1.67
SN1.3: Central position and important role in network	3.37	1.70
SN1.4: Frequently involved in voluntary work	3.99	1.77
SN1.5: Others often come to me for help when they have ideas	3.47	1.73
<b>Entrepreneurial climate</b>		
EC2.1: Many have started utilizing alternative income possibilities(AIC)	5.10	1.68
EC2.2: Many have started thinking about AIC	3.06	1.73
EC2.3: Central position and important role in the local network	4.04	1.65
EC2.4: Many have started with new activities, even it includes some risk.	3.53	1.72
EC2.5: Support from the local community when I develop new products	3.06	1.56
EC2.6: Many Opportunities available to my organization.	5.01	1.90
EC2.7: Growth potential in the markets served by my organization is substantial	5.20	1.90
<b>Learning Orientation</b>		
LO3.1: My ability to learn is important	5.10	1.71
LO3.2: Look at learning as an investment	5.06	1.77
LO3.3: Dependent on new knowledge to be competitive	4.85	1.80
LO3.4: Question my own judgment of the market/industry	4.48	1.70
LO3.5: Higher value for me to attend courses	4.73	1.79
LO3.6: Our organization's ability to learn is the key to our competitive advantage	4.50	1.88
LO3.7: Learning as key to improvement	4.15	1.83
LO3.8: Employee learning is an investment, not an expense	3.33	1.86
LO3.9: Learning as a key commodity necessary to guarantee survival.	4.43	2.05
<b>Innovativeness</b>		
INN4.1: I often seek out new ways to do things.	5.00	1.60
INN4.2: I am creative in my methods of operation.	5.61	1.27
INN4.3: I frequently try out new ideas	5.01	1.48
INN4.4: I implement innovations even it involve risks	4.39	1.95
INN4.5: I have introduced new products and services in the last year	4.24	1.82
INN4.6: I am first in my business community to utilize my resources in new ways.	3.05	1.23
<b>Performance</b>		
PF5.1: I reached the expected profitability	4.64	1.57
PF5.2: Achieve the higher profitability than other in the last three years.	4.60	1.60
PF5.3: Total sales have increased in the last three years.	4.70	1.80
PF5.4: Profitability has increased in the last three years.	4.66	1.89
PF5.5: Labor effort has increased in the last three years.	3.80	1.68

(First we start with looking at normality since this is a criterion for univariate and multivariate statistics (Hair et al., 2010).

#### 4.4 Assessment of normality

Table 4 Assessment of criteria

Variable	Min	Max	Skew	C.R.	Kurtosis	C.R.
Q1.1	1	7	-0.65	-2735	-0.94	-1983
Q1.2	1	7	0.03	0.11	-1053	-2222
Q1.3	1	7	0.39	1659	-0.81	-1703
Q1.4	1	7	-0.06	-0.24	-1.14	-2407
Q1.5	1	7	0.47	1979	-0.98	-2073
Q2.1	1	7	-0.78	-3288	-0.37	-0.79
Q2.2	1	7	0.61	2577	-0.70	-1474
Q2.3	1	7	-0.05	-0.20	-0.99	-2099
Q2.4	1	7	0.33	1.40	-1003	-2117
Q2.5	1	7	0.51	2.14	-0.58	-1217
Q2.6	1	7	-0.82	-3476	-0.52	-1094
Q2.7	1	7	-0.90	-3786	-0.43	-0.91
Q3.1	1	7	-0.68	-2888	-0.75	-1573
Q3.2	1	7	-0.62	-2596	-0.81	-1706
Q3.3	1	7	-0.63	-2671	-0.70	-1476
Q3.4	1	7	-0.28	-1197	-1039	-2194
Q3.5	1	7	-0.54	-2298	-0.69	-1453
Q3.6	1	7	-0.38	-1.59	-1.02	-2154
Q3.7	1	7	0.08	0.32	-1.18	-2491
Q3.8	1	7	0.51	2161	-1034	-2184
Q3.9	1	7	-0.26	-1075	-1223	-2583
Q4.1	1	7	-0.84	-3564	-0.13	-0.26
Q4.2	1	7	-1168	-4931	1586	3349
Q4.3	1	7	-0.89	-3753	0.13	0.28
Q4.4	1	7	-0.15	-0.62	-1323	-2794
Q4.5	1	7	-0.28	-1178	-1.04	-2195
Q4.6	1	7	0.67	2838	0.78	1656
Q5.1	2	7	-0.43	-1.83	-1107	-2338
Q5.2	1	7	-0.42	-1764	-0.85	-1.79
Q5.3	1	7	-0.44	-1847	-1114	-2352
Q5.4	1	7	-0.41	-1739	-1065	-2249
Q5.5	1	7	0.04	0.16	-1.13	-2386

All variables are normally distributed. Byrne (2009) suggest normality is acceptable if Mardias critical ration (C.R) values are less than .5 which is true for these indicators.

Secondly we studied the factor structure. We assigned the program so that each of the underlying measures (Questions) should load to a related construct.

We first look at the first construct called Social Network which is defined as a specific set of linkages among a defined set of persons and it provides entrepreneur with social capital or a quality that can exist between people that increases the return of human capital such intelligence, education and work experience. Interaction must last for a meaningful time period for them to be considered as a part of social networks. Accordingly one can look at a social network as a pattern of lasting social interactions among people. This definition was brought from a study in Norway (Nyback et al., 2009). As Hair et al., (2010) suggest so called loadings to exceed .5. In our first construct social network all measures exceeded .5.

When looking at the second theoretical construct Entrepreneur climate. This measure is defined as the local cultural factors, social factors and traditions that influence the entrepreneur's innovativeness. A positive entrepreneurial climate gives a local community a positive spillover effects resulting from entrepreneurial activities plus social and cultural capital that are important for innovativeness. And we found it in (Nyback et al, 2009). In our results we found that Q2.2, Q2.3, Q2.4 and Q2.5 were all below the cut-off level of .5 suggested by Hair et al., 2010. Therefore these were deleted from the dataset.

When looking at the third tested constructs that is Learning Orientation (LO) we had nine variables (Questions). This construct is defined as activities of creating and using knowledge to enhance competitive advantage and we found it in (Nyback et al, 2009). Here we found that Q3.4 was below the cut-off level of .5 suggested by Hair et al., 2010. Because of this poor loading this item was therefore deleted from the dataset before testing the final model.

When looking at fourth tested theoretical measure that is Innovativeness (INN) we had six variables (Questions). This measure is defined as the propensity to create and/or adopt new products, processes, and business systems and we found it in (Nyback et al, 2009). Here we found that Q4.2 and Q4.6 were below the cut-off level of .5 suggested by Hair et al., 2010. Because of these poor loadings these items were deleted from the dataset before testing the final model.

Finally looking at our fifth tested construct that is Performance (PF) we had five variables (Questions). This measure is defined as the increase in market share, profitability and customer loyalty. Here we found that Q5.5 was below the cut-off level of .5 suggested by Hair et al., 2010. Because of this poor loading this item was therefore deleted from the dataset before testing the final model.

Table 5: Loadings

Question	Direction	Construct	Loading
Q1.1	<---	SN	0.51
Q1.2	<---	SN	0.74
Q1.3	<---	SN	0.73
Q1.4	<---	SN	0.55
Q1.5	<---	SN	0.55
Q2.1	<---	EC	0.66
<b>Q2.2</b>	<b>&lt;---</b>	<b>EC</b>	<b>0.48</b>
<b>Q2.3</b>	<b>&lt;---</b>	<b>EC</b>	<b>0.29</b>
<b>Q2.4</b>	<b>&lt;---</b>	<b>EC</b>	<b>0.41</b>
<b>Q2.5</b>	<b>&lt;---</b>	<b>EC</b>	<b>0.41</b>
Q2.6	<---	EC	0.87
Q2.7	<---	EC	0.86
Q3.1	<---	LO	0.71
Q3.2	<---	LO	0.67
Q3.3	<---	LO	0.73
<b>Q3.4</b>	<b>&lt;---</b>	<b>LO</b>	<b>0.13</b>
Q3.5	<---	LO	0.62
Q3.6	<---	LO	0.83
Q3.7	<---	LO	0.72
Q3.8	<---	LO	0.63
Q3.9	<---	LO	0.72
Q4.1	<---	INN	0.76
<b>Q4.2</b>	<b>&lt;---</b>	<b>INN</b>	<b>0.46</b>
Q4.3	<---	INN	0.80
Q4.4	<---	INN	0.77
Q4.5	<---	INN	0.66
<b>Q4.6</b>	<b>&lt;---</b>	<b>INN</b>	<b>0.37</b>
Q5.1	<---	PF	0.87
Q5.2	<---	PF	0.83
Q5.3	<---	PF	0.90
Q5.4	<---	PF	0.86
<b>Q5.5</b>	<b>&lt;---</b>	<b>PF</b>	<b>0.460</b>

Finally, we decided to delete Q1.1 and Q1.3 because the modification indices (Hair et al., 2010) indicated the residuals of this significantly created error for the overall model.

The final model thus has 22 variables and questions. These variables are presented in a correlations table appended in appendix B at the end of document. In the next section we shall also measure correlation within construct using Cronbach's Alpha Statistics.

Table 3: Descriptive statistics of means, standard deviation and reliability (Number of observed respondents is (N) =107).

Constructs and Indicators	Mean	Std. Deviation	Reliability Cronbach alpha
<b>Social network</b>			
SN1.2:Frequent conversations with other actors	3.99	1.67	alpha 0.61
SN1.4:Frequently involved in voluntary work	3.99	1.77	
SN1.5:Others often come to me for help when they have ideas	3.47	1.73	
<b>Entrepreneurial climate</b>			
EC2.1: Many have started utilizing alternative income possibilities(AIC)	5.10	1.68	alpha 0.84
EC2.6: Many Opportunities available to my organization.	5.01	1.90	
EC2.7: Growth potential in the markets served by my organization is substantial	5.20	1.90	
<b>Learning Orientation</b>			
LO3.1: My ability to learn is important	5.10	1.71	alpha 0.89
LO3.2:Look at learning as an investment	5.06	1.77	
LO3.3:Dependent on new knowledge to be competitive	4.85	1.80	
LO3.5:Higher value for me to attend courses	4.73	1.79	
LO3.6:Our organization's ability to learn is our competitive advantage	4.50	1.88	
LO3.7:Learning as key to improvement	4.15	1.83	
LO3.8:Employee learning is an investment, not an expense	3.33	1.86	
LO3.9: Learning necessary to guarantee organizational survival.	4.43	2.05	
<b>Innovativeness</b>			
INN4.1: I often seek out new ways to do things.	5.00	1.60	alpha 0.83
INN4.3: I frequently try out new ideas	5.01	1.48	
INN4.4: I implement innovations even it involve risks	4.39	1.95	
INN4.5: I have introduced new products and services in the last year	4.24	1.82	
<b>Performance</b>			
PF5.1: I reached the expected profitability	4.64	1.57	alpha 0.92
PF5.2: Achieve higher profitability than others in the last three years.	4.60	1.60	
PF5.3: Total sales have increased in the last three years.	4.70	1.80	
PF5.4: Profitability has increased in the last three years.	4.66	1.89	

Cronbach's alpha which is a reliability measure reflects the correlation within the theoretical concept we suggested. Hair et al., (2010) suggest this measure to exceed .7. In our case this is true except for social network (SN) which is a below this. Hair et al., (2010) state that level above .6 could be used for exploratory purposes but should be carefully interpreted.

## 4.5 Structural model

Now when reliability is reported and we know how well each theoretical measure works we examine the structural model shown in Fig No. 2. The model was analyzed using AMOS 4.0. To interpret the model or assess the significance of model it must ensure that the model has an adequate fit. In this regard several statistics are cited in the above section indicating an acceptable fit for the model to the data. Based on these statistics and evaluating model using AMOS we have following findings.

Beginning with H1 (Social Networking → Innovativeness) we suggest social networking has a positive (+) effect on innovativeness, and this is not supported (standardized regression coefficient in bold has a value of = .01 and p-value show it is non significant at .924 level. Next we hypothesize (H2) (Entrepreneurial climate → innovativeness) Entrepreneurial climate has a positive (+) effect on innovativeness and this is supported (standardized regression coefficient is = .33 and p-value show it is significant at .04 level). Our third independent concept is learning orientation. Here we hypothesize (H3) (Learning orientation → Innovativeness) Learning Orientation have a positive (+) effect on innovativeness, and this is supported (standardized regression coefficient is strong and as much as = .61 and p-value show it is significant at a level of .001). Finally we hypothesize (H4: Innovativeness → Performance) innovativeness has a positive (+) effect on performance, and this is supported (standardized regression weight is strong and as much as = .84 and p-value showing a significant level of .000. Our model also show that the three suggested predictors explain 70 % of innovativeness which is considered much and as much as 83 % of performance

Results of the model are reported graphically in Figure 2 below.

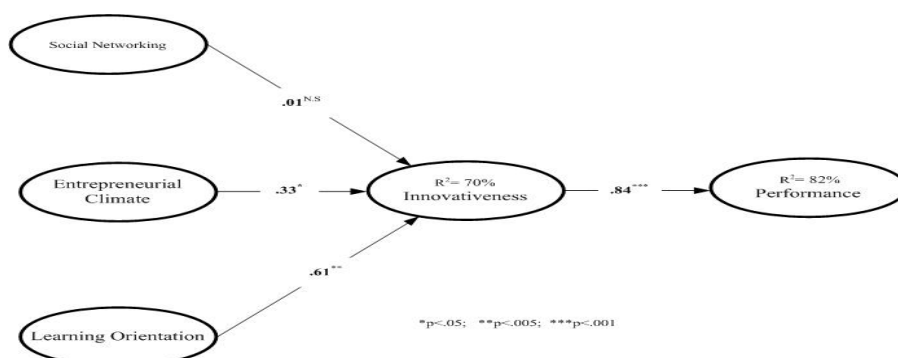


Figure 5 Structural Model.

R square denoted with R<sup>2</sup>

Standardized regression coefficient in bold

\*p<.05; \*\*p<.005; \*\*\*p<.001

Non significant values denoted with N.S



## 5. Discussion and Implication

The present study investigated the impact of three antecedents Social Networking, Entrepreneur Climate and Learning Orientation on innovativeness and then the impact of innovativeness on firm performance.

Several conclusions can be drawn from the result of this work. First the sample data supported that the two antecedents' entrepreneurial climate and learning orientation have positive effects on firm innovativeness while the Social Networking antecedent did not support the model.

The majority of findings are consistent with the model found in the study of (Nyback et al. 2009) however the only one hypothesis which is "*The greater the extent of social networking, the greater the degree of innovativeness among small firm owner*", was not supported. It has regression coefficient .01 and  $p \rightarrow$  value shows non significance at .942 level. As we have discussed in the theoretical framework section that literature has suggested, social networking positively contributes to innovativeness. The reason behind this non significance could be the way we measured data and possibly the selection of small firms in our study. As referred above in the context of biotech firms the social networking positively contributes to innovation. Further investigation in this context is required.

Entrepreneurial climate positively contribute to innovativeness and this is supported in our findings. This hypothesis has regression coefficient=0.33 and  $p \rightarrow$  value 0.04. This finding is consistent with the literature. For instance Fagerberg et al. (1995) states that positioned in a "learning economy" the focus has been to increase the innovation capacity of small and medium enterprise by indentifying how the climate fosters innovation. Various terms have been used to describe this social cultural impact on region (Stroper, 1995). Lordkipatnidze et al. (2005) studied sustainable tourism companies and found that poor entrepreneur culture and climate was an impending factor to economic development. These references from literature were found in the study of (Nyback et al. 2009). From this finding policymakers may formulate and use policy instrument in a way that encourage entrepreneur climate.

The third antecedent Learning Innovation positively contributes to innovativeness. This hypothesis has regression coefficient .61 and  $p \rightarrow$  value .001 which means the learning innovation has considerable higher impact on innovativeness. Again this is consistent with the literature. Organization management literature and innovation literature both support this relationship. Slater and Narver (1995) suggest that learning orientation is directly related to new product success. Such findings have good implications for policy makers and politicians and these are recognized by SMEDA (small and medium enterprise development authority of Pakistan). This authority is primarily responsible for developing and supporting small firms in Pakistan. It arranges variety of training program ranging from manufacturing concern to service concern and also offer free of cost accounting software and provides training in managing the book of accounts of firm. In addition to these services SMEDA also conduct seminars and trade shows on variety of perspectives.

In our findings innovativeness is positively related with firm performance. We hypothesized that "*The higher the degree of innovativeness the greater the economic performance among small firms owner*" This hypothesis has regression coefficient .84 and  $p \rightarrow$  value .000. Innovativeness and its antecedents

explain 83% of performance. Furthermore this finding is consistent with the literature. The work of Deshpande et al. 1993 shows a positive relationship between firm performance and innovativeness. In addition to this, the work of Schumpeter and Porter strongly support this phenomenon.

The purpose of our thesis was to investigate the drivers of innovativeness in small and medium enterprise and how innovativeness contributes to firm performance. We approach to this endeavor by using framework of Nyback et al. 2009 and with slight modification we tested on the data from 107 small firms of Pakistan. The results obtained have two folds purpose, first they can be used internally, as innovativeness is important for firm performance the task of owner/management must be to design and implement organizational culture that encourages learning and testing of new ideas. At the policy maker end it's imperative to create environment that foster learning and create climate of innovativeness in small and medium firms.

## **6. Conclusions**

This study investigates the relationships between social network, entrepreneurial climate and learning orientation to innovativeness and its impact on performance of small firms. Our findings reveal that both entrepreneurial climate and learning orientation positively contribute to innovativeness and further innovativeness influence performance. Whereas the construct social network construct does not contribute to innovativeness.

Thus our findings have important implication for the owners of small firms in Pakistan; they can increase the innovative capability of their firms by paying more attention towards learning orientation and entrepreneur orientation to improve performance. The investment in learning based capabilities and developing of entrepreneurial instinct to exploit opportunities plays a key role in the maintenance of innovativeness.

## **7. Limitation and Future Research**

As with any research project this empirical research study has many limitations. The first is about the sample size we were only able to sample 107 respondents despite immense efforts as the firm's owners in Pakistan don't have such tendencies of sharing information. The second limitation was the nature of sample as it may be observed from sample that the small and medium enterprises in our study varies across different industries, a separate research in future may be conducted to verify the same model in different industries that research would take to interesting results. For instance this study may be repeated only for high tech firms. As innovativeness is complex and multidimensional concept so study across different sector of economy may yield some interesting facts. In our present research we selected or adopted three antecedents to innovativeness, which according to our view could be a limitation, the inclusion of other antecedents' customer orientation, market orientation in theoretical framework may be explored.

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## QUESTIONNAIRE

Thanking you for participating in this survey. The basic purpose of this survey is to ascertain the fact that how innovativeness affects firm performance, does it contribute positively or it's not related with the firm performance. If you have any questions regarding the completion of this questionnaire please contact Muhammad LaL Khan/Muhammad Irfan Jan by Mobile Nos. 03457331506/03002354538. Your specific answers will be completely anonymous, but your views, in combination with those of others, are extremely important to this research.

### Personal Details

Name:  
 Position:  
 Business Unit/Division  
 Industry:  
 Business Setup Year:  
 Experience as an entrepreneur:

### Instructions.

Please complete the following questionnaire with specific regard to the above enquiry, by placing a “ Y ” in the appropriate box. The scale is as per following setting.

Strongly							Strongly
<u>Disagree</u>							<u>Agree</u>
1	2	3	4	5	6	7	

1.Social Networking		1	2	3	4	5	6	7
1.1	I cooperate with other actors in the local community							
1.2	We frequently discuss common problems in the local community							
1.3	I have a central position and important role in the local network							
1.4	I am frequently involved in voluntary work and help others in local community							
1.5	When others in the local community have some questions related new ideas about new ways of doing things they often come to me							



Continue

2. Entrepreneurial Climate		1	2	3	4	5	6	7
2.1	I think businessmen have started thinking about utilizing alternative income possibilities							
2.2	When someone in the local community has new idea, this is highly appreciated by the community							
2.3	I have a central position and important role in the local network							
2.4	Many have started with new activities, even it includes some risk.							
2.5	I will experience support from the local community when I start up with the new products and service.							
2.6	There are many opportunities available to my organization in the form of existing or new products.							
2.7	The potential for growth in the markets served by my organisation is substantial							

3. Learning Orientation.		1	2	3	4	5	6	7
3.1	My ability to learn is important to increase the value added to my business.							
3.2	I look at learning as an investment and not a cost.							
3.3	I am dependent on new knowledge to be competitive							
3.4	I often question my own judgement of the market/industry							
3.5	It has higher value for me to attend courses, seminars and other learning activities related with my business.							
3.6	We basically agree that our organization's ability to learn is the key to our competitive advantage							
3.7	The basic values of this organization include learning as key to improvement							
3.8	The sense around here is that employee learning is an investment, not an expense							
3.9	Learning in my organization is seen as a key commodity necessary to guarantee organizational survival.							

4. Innovativeness		1	2	3	4	5	6	7
4.1	I often seek out new ways to do things.							
4.2	I am creative in my methods of operation.							
4.3	I frequently try out new ideas							
4.4	I implement innovations even it involve risks							
4.5	I have introduced new products and services in the last year							
4.6	I am often first in my business community to utilize my resources in new ways.							

5. Performance		1	2	3	4	5	6	7
5.1	I reached the expected profitability							
5.2	I reached than the higher profitability than other in my business community in the last three years.							
5.3	Total sales have increased in the last three years.							
5.4	Profitability has increased in the last three years.							
5.5	Labour effort has increased in the last three years.							

THANKS

## APPENDIX B

**Table 6 Experience as an entrepreneur in years**

	<b>Experience</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	1-5 years of experience	39	36.4	36.8	36.8
	6-10 years of experience	44	41.1	41.5	78.3
	More than 10 years of experience	23	21.5	21.7	100
	Total	106	99.1	100.0	
Missing	System	1	0.9		
Total		107	100		

**Table 7 Position:**

	<b>Position</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	Area Sales Manager	1	0.9	0.9	0.9
	CEO	6	5.6	5.6	6.5
	CEO/MD	1	0.9	0.9	7.5
	Chief Executive	1	0.9	0.9	8.4
	Director	7	6.5	6.5	15
	Distributor	1	0.9	0.9	15.9
	GM	2	1.9	1.9	17.8
	GM-Marketing	1	0.9	0.9	18.7
	Goldsmith	1	0.9	0.9	19.6
	Manager	7	6.5	6.5	26.2
	Owner	54	50.5	50.5	76.6
	Owner/Farming	1	0.9	0.9	77.6
	Owner/Partner	1	0.9	0.9	78.5
	Partner	4	3.7	3.7	82.2
	Proprietor	15	14	14	96.3
	Quality Manager	1	0.9	0.9	97.2
	Regional Manager	1	0.9	0.9	98.1
	RM	1	0.9	0.9	99.1
	Team Lead	1	0.9	0.9	100
	Total		107	100	100

**Table 8 Owners and Managers**

<b>Owners and Managers</b>		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	Manager	51	47.7	47.7	47.7
	Owner entrepreneur	56	52.3	52.3	100
	Total	107	100	100	

**Table 9 Business Setup Year:**

<b>Business Setup Year:</b>		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	1935	1	0.9	0.9	0.9
	1960	1	0.9	0.9	1.9
	1968	1	0.9	0.9	2.8
	1970	1	0.9	0.9	3.7
	1971	1	0.9	0.9	4.7
	1975	1	0.9	0.9	5.6
	1987	1	0.9	0.9	6.5
	1990	5	4.7	4.7	11.2
	1992	1	0.9	0.9	12.1
	1995	1	0.9	0.9	13.1
	1996	1	0.9	0.9	14
	1997	2	1.9	1.9	15.9
	1998	2	1.9	1.9	17.8
	2000	5	4.7	4.7	22.4
	2001	10	9.3	9.3	31.8
	2002	11	10.3	10.3	42.1
	2003	9	8.4	8.4	50.5
	2004	7	6.5	6.5	57
	2005	7	6.5	6.5	63.6
	2006	13	12.1	12.1	75.7
	2007	13	12.1	12.1	87.9
	2008	5	4.7	4.7	92.5
	2009	5	4.7	4.7	97.2
	2010	2	1.9	1.9	99.1
	Nil	1	0.9	0.9	100
	Total	107	100	100	

**Table 10 Business Unit/Division**

	<b>Business Unit/Division</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid		71	66.4	66.4	66.4
	-	5	4.7	4.7	71
	A.J Builders & Developers	1	0.9	0.9	72
	A.K Engineers	1	0.9	0.9	72.9
	Afnan Enterprises	1	0.9	0.9	73.8
	Al-Haq International	1	0.9	0.9	74.8
	Ali Enterprises	1	0.9	0.9	75.7
	Contech Construction	1	0.9	0.9	76.6
	Cosmetics	1	0.9	0.9	77.6
	Electronics	1	0.9	0.9	78.5
	Grocery	1	0.9	0.9	79.4
	Gul Ahmed Textile	1	0.9	0.9	80.4
	Gulf Associates Engineering	1	0.9	0.9	81.3
	High Tech Poly Construction	1	0.9	0.9	82.2
	Hussain Enterprises	1	0.9	0.9	83.2
	Ice-Cream	1	0.9	0.9	84.1
	Industrial Lubricant	1	0.9	0.9	85
	Kohinoor soap & detergent	1	0.9	0.9	86
	Lubricant	1	0.9	0.9	86.9
	MARCO Builders & Developers	1	0.9	0.9	87.9
	Master Ofisys Pvt. Ltd	1	0.9	0.9	88.8
	Multan Spinning Mills, Multan	1	0.9	0.9	89.7
	Nabeel Furnishing Co	1	0.9	0.9	90.7
	Noor Bros	1	0.9	0.9	91.6
	Pearl Interior	1	0.9	0.9	92.5
	Resturant-Energy	1	0.9	0.9	93.5
	S.S Enterprises	1	0.9	0.9	94.4
	Sale	1	0.9	0.9	95.3
	Shaheen Construction Co.	1	0.9	0.9	96.3
	Sign Ad (Pvt) Ltd	1	0.9	0.9	97.2
	Tectonics ( Pvt ) Ltd	1	0.9	0.9	98.1
	Textile	1	0.9	0.9	99.1
	Unitetes Associates Engineering	1	0.9	0.9	100
	Total	107	100	100	

**Table 11 Industry:**

	<b>Industry</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	Agric. Land	1	0.9	0.9	0.9
	Agric. Production	1	0.9	0.9	1.9
	Air-conditioning works	1	0.9	0.9	2.8
	Auto Dealer	2	1.9	1.9	4.7
	Bakery and Confectionery	1	0.9	0.9	5.6
	Bookseller	1	0.9	0.9	6.5
	Carriage	1	0.9	0.9	7.5
	Cloth Export	1	0.9	0.9	8.4
	Cloth Merchant	1	0.9	0.9	9.3
	Clothes Designing and Sales	1	0.9	0.9	10.3
	CNG Stations	1	0.9	0.9	11.2
	Construction	9	8.4	8.4	19.6
	Construction & Electrical Works	1	0.9	0.9	20.6
	Cutlery	1	0.9	0.9	21.5
	Dairy Farms	2	1.9	1.9	23.4
	Distribution	3	2.8	2.8	26.2
	Diversified. Includes local cola.	1	0.9	0.9	27.1
	Drug Store	1	0.9	0.9	28
	Educator	1	0.9	0.9	29
	Electronics Manufacturer	1	0.9	0.9	29.9
	Energy Sector(Owners of CNG & Gas stations	1	0.9	0.9	30.8
	Engineering	1	0.9	0.9	31.8
	Engineering Products	1	0.9	0.9	32.7
	Entertainment Theatre	1	0.9	0.9	33.6
	Farming/Wheat and Sugarcane Producer	2	1.9	1.9	35.5
	Fast Food	1	0.9	0.9	36.4
	Fast Food Resturant	1	0.9	0.9	37.4
	Financial Consultancy	1	0.9	0.9	38.3
	Fish Farming	1	0.9	0.9	39.3
	Flour Mill(Small)	1	0.9	0.9	40.2
	FMCG	1	0.9	0.9	41.1
	Food(Orange) Processing	1	0.9	0.9	42.1
	Fruit Orchards	1	0.9	0.9	43
	Furniture	1	0.9	0.9	43.9
	Furniture Sales	1	0.9	0.9	44.9
	Furniture Works	3	2.8	2.8	47.7
	Gold designing/sale	1	0.9	0.9	48.6
	Grocery Store	2	1.9	1.9	50.5

HAMAZ Pharma	1	0.9	0.9	51.4
Handi Crafts	1	0.9	0.9	52.3
Honey Processing and Sales	1	0.9	0.9	53.3
Industrial Engineering	1	0.9	0.9	54.2
Interior Decoration	1	0.9	0.9	55.1
IT-College	1	0.9	0.9	56.1
IT-Consultancy	1	0.9	0.9	57
Junior School	1	0.9	0.9	57.9
Leasing	1	0.9	0.9	58.9
Leather	1	0.9	0.9	59.8
Light Engineering	1	0.9	0.9	60.7
Local Cola	1	0.9	0.9	61.7
Lubricant	1	0.9	0.9	62.6
Management Consultancy Firm	1	0.9	0.9	63.6
Mango Producer/Exporter	1	0.9	0.9	64.5
MegaMarketing/Realestate	1	0.9	0.9	65.4
Mobile Phone Shop	1	0.9	0.9	66.4
NGO	1	0.9	0.9	67.3
Paints and Chemicals	1	0.9	0.9	68.2
Panaflex Signs	1	0.9	0.9	69.2
Panaflex Signs Designing and sales	1	0.9	0.9	70.1
Pepsi-Agency	1	0.9	0.9	71
Pepsi-Distribution	1	0.9	0.9	72
Petrol Stations	1	0.9	0.9	72.9
Petroleum	2	1.9	1.9	74.8
Petroleum Trasnportation	1	0.9	0.9	75.7
Photshop	1	0.9	0.9	76.6
Plastics	1	0.9	0.9	77.6
Private Schools	1	0.9	0.9	78.5
Production	1	0.9	0.9	79.4
Rafi Eye Hospital	1	0.9	0.9	80.4
Repair and Maintenance	1	0.9	0.9	81.3
Repair, Maintenance and Furniture	1	0.9	0.9	82.2
Repair, Renovation and Maintenance	2	1.9	1.9	84.1
Repair, Renovation, Maintenance and Furniture	1	0.9	0.9	85
Resturant & Energy	1	0.9	0.9	86
Security Company	1	0.9	0.9	86.9
Shoes Manufacturer	1	0.9	0.9	87.9
Software House	2	1.9	1.9	89.7
Spinning/Textiles	1	0.9	0.9	90.7

Textile	1	0.9	0.9	91.6
Textile Exporter	1	0.9	0.9	92.5
Textile Manufacturer	1	0.9	0.9	93.5
Textiles Mills	1	0.9	0.9	94.4
Tourism	1	0.9	0.9	95.3
Tourism/Travel Agent	2	1.9	1.9	97.2
Trading	1	0.9	0.9	98.1
Transporter	1	0.9	0.9	99.1
Unilever Distribution	1	0.9	0.9	100
Total	107	100	100	





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Table 12 Correlation coefficient for the variables

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	
Q1	1																						
Q2	.32**	1																					
Q3	.36**	.36**	1																				
Q4	0.06	.22*	0.01	1																			
Q5	0.1	0.06	0.07	.60**	1																		
Q6	0.07	0.1	0.1	.54**	.78**	1																	
Q7	-0.1	0.12	0.06	.52**	.52**	.57**	1																
Q8	0.07	0.13	0.05	.29**	.54**	.52**	.51**	1															
Q9	0	0.14	0.1	.43**	.58**	.50**	.50**	.69**	1														
Q10	-0.02	0.06	0.1	.30**	.49**	.51**	.38**	.48**	.49**	1													
Q11	0.11	0.09	0.13	.56**	.66**	.62**	.61**	.52**	.57**	.55**	1												
Q12	0.01	0.12	.23*	.38**	.40**	.44**	.48**	.40**	.50**	.50**	.66**	1											
Q13	.22*	0.1	.37**	.35**	.38**	.40**	.38**	.47**	.42**	.40**	.51**	.46**	1										
Q14	0.14	0.18	.21*	.49**	.51**	.50**	.47**	.40**	.54**	.40**	.57**	.58**	.53**	1									
Q15	0.07	0.04	0.12	.34**	.42**	.44**	.46**	.30**	.37**	.28**	.50**	.47**	.32**	.49**	1								
Q16	0.16	0.14	.20*	.38**	.40**	.46**	.36**	.33**	.40**	.20*	.34**	.43**	.40**	.40**	.64**	1							
Q17	0.12	0.12	.27**	.41**	.50**	.46**	.47**	.46**	.45**	.31**	.54**	.54**	.47**	.46**	.52**	.62**	1						
Q18	-0.16	-0.01	0.02	.41**	.42**	.47**	.46**	.27**	.38**	.23*	.40**	.30**	.28**	.33**	.50**	.54**	.52**	1					
Q19	-0.01	-0.01	0.14	.56**	.62**	.64**	.62**	.48**	.51**	.42**	.65**	.54**	.48**	.55**	.49**	.33**	.54**	.42**	1				
Q20	0.01	0.01	0.07	.50**	.66**	.65**	.58**	.39**	.41**	.37**	.54**	.41**	.35**	.44**	.50**	.36**	.45**	.38**	.79**	1			
Q21	-0.01	0.08	0.1	.65**	.64**	.58**	.58**	.43**	.51**	.46**	.68**	.56**	.53**	.58**	.42**	.32**	.53**	.38**	.76**	.74**	1		
Q22	0.01	0.01	0.13	.65**	.62**	.56**	.62**	.41**	.54**	.45**	.62**	.49**	.47**	.61**	.46**	.33**	.42**	.40**	.71**	.71**	.82**	1	

\*\* p<.01; \*p<.05

Q1-3 measure social network;  
Q4-6 measure environmental culture;  
Q7-14 measure learning orientation;  
Q15-18 measure innovativeness;  
Q19-22 measure performance