Impact of Innovation, Technology and Economic Growth on Entrepreneurship

Mohammad Farooq Hussain
Associate Professor
University of Central Punjab
Lahore, Pakistan
E-mail: FarooqYHussain@gmail.com, Phone: +923344406140

Asad Afzal
University of Central Punjab
Lahore, Pakistan

Muhammad Asif
University of Central Punjab
Lahore, Pakistan\

Naveed Ahmad
University of Central Punjab
Lahore, Pakistan

Rao Muhammad Bilal
University of Central Punjab
Lahore, Pakistan

Abstract

This study is done to see the impact of innovation, technology and economic growth on the entrepreneurial activities. Correlation and Regression model has been used for this purpose. The results showed that these variables are highly correlated with the dependent factor "Entrepreneurship".

Keywords: Innovation, technology, economic growth, entrepreneurship

Introduction

Simply we can say that entrepreneurship is the art or science of innovation and risk-taking for profit in business, the quality of being an entrepreneur. New and unique combinations are the result of Entrepreneurship (Schumpeter, 1934). Successful and right futures are forecast by Entrepreneurship (knights, 1921). Effects of entrepreneurship have the following characteristics: 1) an individual entrepreneur focus on process through which those actions affect the economic growth and environment. 2). Due to innovative feature entrepreneurial are responsible for economic improvement in the society. 3) It distinguishes between the roles of investors, the manager and the entrepreneur. The creation of small businesses under the light of entrepreneurship is helpful for economic growth. Most of the entrepreneurship studies moves to focus on the participants in their locally entrepreneurial setup. These studies are linked with the role of entrepreneurs in innovations, new business ventures, and economic development of their home countries (McDougall and Oviatt, 1996:36). Pakistan's main problem is less entrepreneurial activity and I strongly believe that Pakistanis have more entrepreneurs than "employees" and our Young Entrepreneurs gives new ideas that are based on New Business Models and Emerging Technologies. **"**Our lacunae in the field of entrepreneurship needs to be taken seriously because there is mounting evidence that the key to economic growth and productivity improvements lies in the entrepreneurial capacity of an economy**"** (Romano Prodi, 2002). Macro economics has mostly used to control the Economic growth (Romer, 1990; Krugman, 1991).

In early studies Schumpeter (1911) clearly stated that **''**entrepreneur act as an innovator**''** it is most important way of economic development in a society. Joseph Schumpeter, is the pioneer who creates the major relationship between entrepreneurship and economic growth [Schumpeter (1934)] **''**Entrepreneurship is the Baronial ability and willingness of an entrepreneur, within and outside the existing organizations to identify and create new economic opportunities like new products, new production methods, and new product-market combinations and to introduce their innovative ideas into the market**"** (Wennekers and Thurik, 1999). Entrepreneurs have a very important role in development of technological structure. Technology provides the solution of the problems that is generated by innovation. Technology based entrepreneurship involves in an innovative process which identifies the unique opportunities through joint work. A technological change comes from the new and innovative ideas and the firms implemented those ideas into reality on international level. Through empirical research you can generate new and creative ideas about products and processes.

Some researchers observe that increasing profit of organization is because of change in technology. (Verspagen, 1992; Ruttan, 1997). According to entrepreneur perspective innovations mean creativity. **"**Innovation is a research area within the Marketing and Entrepreneurship Interface is a growing area of enquiry**"** (Fillis 2000a, 2000b; Fillis and McAuley 2000, Hackley and Mumby Croft 1998). Entrepreneurship opportunity identification and need to fulfilling innovation. Entrepreneurship and innovation is a key of economic growth, and there is strong relationship between entrepreneurial activity and economic development across the border. Entrepreneurship has also play a vital role in motivation. You can motivate entrepreneurship through culture, family and friend business. Another aspect of motivation is to motivate your employees by giving incentives, bonuses and increase salaries but according to entrepreneurship motivation is a deep meaning that to motivate your family and friend in the field of entrepreneurship u can give new and innovative idea to your friend to start new business and also running your family business with new creative ideas. We can't understand entrepreneurship until and unless we understand the single who involve in motivation (Venkataraman, 1997).

Literature Review

More precisely entrepreneurship can be defined as an art or science of innovation and risk taking for profit in the business, the quality being an entrepreneur. Entrepreneurship refers to taking out new and unique combinations (Schumpeter, 1934). Entrepreneurship is the ability of an entrepreneur to forecast the better future successfully (Knights, 1921). Some important effects of entrepreneurship have the following characteristics: Firstly an individual entrepreneur and his or her effects the economic growth and the whole environment. Secondly it determines the entrepreneurial function acts as a responsible factor for economic improvement in the society due to its innovative feature. And then it distinguishes between the roles of investors, the manager and the entrepreneur. According to the entrepreneurial perspective it will helps for the creation of small businesses (Scherer and Ravens craft, 1984). Mostly focus on planning for launching the venture and suggests that there important targets in start ups. The specific argued that a new venture is kike an experiment with hypothesis or assumptions which based on the relation between product, market and completion that can only be tested through experiences (Block and Macmillan, 1985). Most of the entrepreneurship studies moves toward focus on the participants in their locally entrepreneurial setup.

These studies are linked with the role of entrepreneurs in innovations, new business venture businesses are most frequently under the attention and the strategic behavior and industry structure of these international ventures compared with domestically new start ups. Specific factors of industry and firm were presented as the significant magnitude to give details and make a distinction of firm's behavior. There was no theoretical and experimental role given to individual entrepreneurs who have compel the firms into an international field. This is not surprising because global entrepreneurship was still considered as a "yet newer power of research motion" in international business research (Wright and Ricks, 1994:699). Pakistan's main problem is less entrepreneurial activity that deserves attention. I strongly believe that the way out for Pakistanis is to have more entrepreneurs than "employees" (Aziz khan, 2009). Pakistan's main problem is less entrepreneurial activity that deserves attention. I strongly believe that the way out for Pakistanis is to have more entrepreneurs than "employees" (Aziz khan, 2009). Young entrepreneurs often attempt to get new ideas those are based on new business models and emerging technologies (Salman A. Sheikh, 2009). Entrepreneurship is broader concept that plays a central role in market economy. Economic growth, modern technology and innovation are the three independent variables relates to an entrepreneurship.

Economic Growth

Entrepreneurship is an instrument through which through which entrepreneur converts valuable and technological information into products and services (Kirzner, 1997).Ecnomic growth have generally been controlled to the area of macro economics (Romer, 1990; Krugman, 1991). Historic views of entrepreneurship, theoretical and expressive options relating entrepreneurship and economic growth have materialize from various fields of economics and management study, which includes economic history, industrial economics and management theory. (Wennekers and Thurik, 1999) Entrepreneurs introduce innovative products and production process and enter into the market; this way of entrepreneurial activity may effect the economic growth(Acs and Audretsch, 1990 and 2003).Relating entrepreneurship to growth at the national level is a despite recent efforts of the global entrepreneurship Monitor (GEM) research program (Reynolds et al., 2001). For a long time there was no proper empirical economic research have dome on the sources of economic growth. Although some copious papers have been written theoretically and descriptively on how entrepreneurship affects the economy (Porter, 1990; Baumol, 1993; Lumpkin and Dess, 1996).in early studies Schumpeter (1911) conceptually stated that "entrepreneur act as an innovator" it was key step moving towards economic development. The innovative activity of entrepreneurs provides Creative process"

(Schumpeter, 1942) Entrepreneurship is the magnificent ability and willingness of an entrepreneur, within and outside the existing organizations to identify and create new economic opportunities like new products, new production methods, and new product-market combination and to introduce their innovative ideas into the market (Wennekers and Thurik, 1999). Creating and introducing new economic opportunities and the competitive scope of entrepreneurship need more attention, the major contribution of the entrepreneurship to economic growth might be its uniqueness (Baumol 1993, p.198).

Technological Change

The development of every technology involves the efforts of the variety of the participants (Braun and Macdonald, 1982; Garud and Van de Ven, 1987; Karnoe, 1993; Aldrich, 1999).Technological change occur through a combination of the inputs of a number of entrepreneurs (Usher, 1954; Latour, 1991). Technology entrepreneurship engages the creation of new opportunities through cooperative work (Hayek, 1945; Garud and Kotha, 1994; Tsoukas, 1996; Girard and Stark, 2001)**.** Technical process automatically comes from the generation of new and creative ideas and implementation of those ideas, while other firm's follows domestically as well as internationally. New ideas includes both product and processes that may be created through basic research and development(Krugman,1979).Small technology-based entrepreneurial firms started to challenge big companies that still had a big competition in mass technical production arena(Meredith,1987;Carlsson,1989).The contribution of technological innovation to national economic growth has been well recognized in the economic journalism (Solow, 1956; Romer, 1986) as well as empirically (Mansfield, 1972; Nadiri, 1993).Recently researchers have examined the growth that is strong-minded due to technical change results in profit-maximization (Verspagen, 1992; Ruttan, 1997).in the 1980s and early 1990s,some researchers start focus on the person who had a personnel history in the entrepreneurial network. They deal with distinctive role played by personal and business set of connections in the new venture and early growth of technology-based entrepreneurial venture. **(**Birley, 1985; Aldrich and Zimmer, 1986; Johannisson, 1987).Additionally, spare network facilitate the search for vital assert providers (e.g. investment and technology partners and key customers), that offer the new venture for further access to financial resources and paired technology, distribution channels, etc (Chrisman et al, 1998)

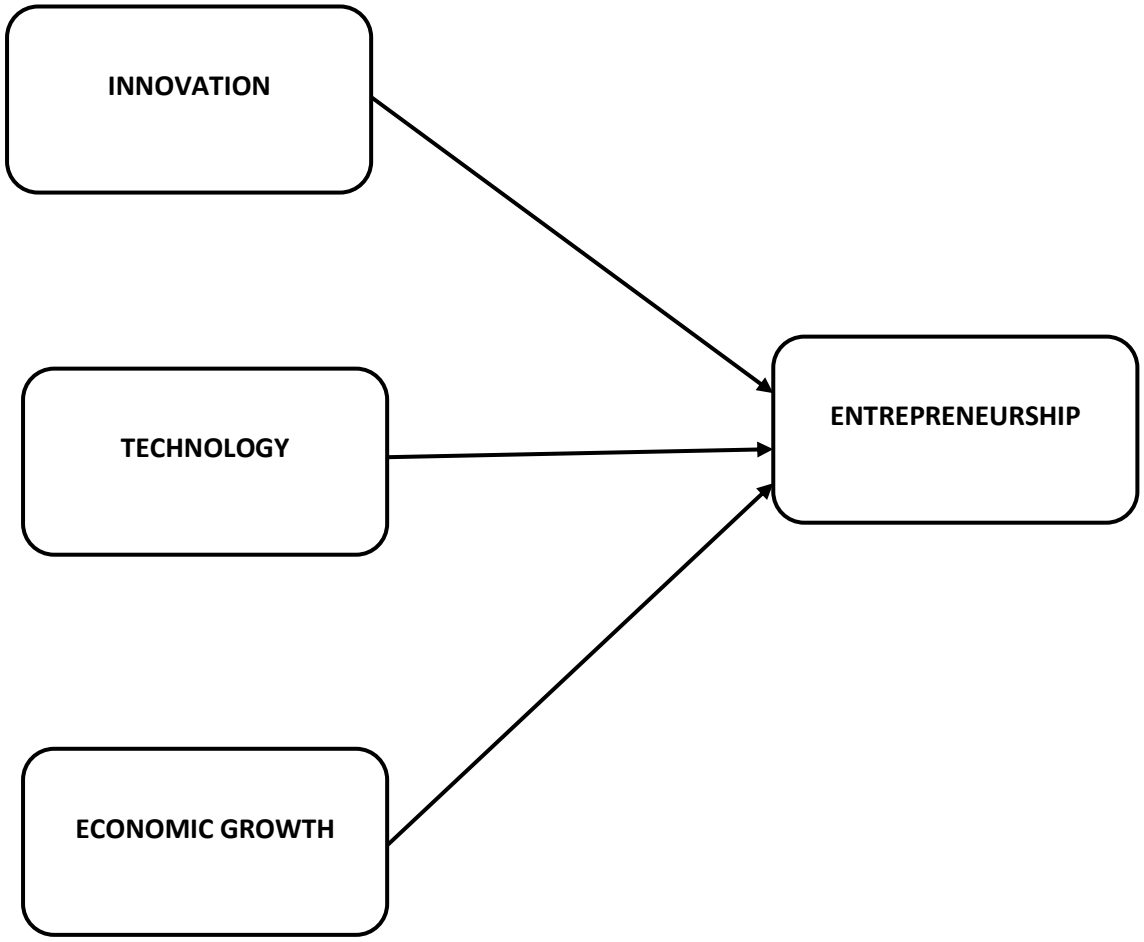
Innovation

Innovation is the process that renews something that exist or not, the birth of something new. According to entrepreneur perspective innovation means creativity. Creation of organization (Gartner, 1988) "The successful use of an idea that adds value to the customer and commercial return for the creator" Cris Beswick (2010). In Pakistan there are many entrepreneurs which create innovative products. Recently COMSATS institute of information technology has taken a new step to support mobile innovation in Pakistan. Called Best Mobile Innovation in Pakistan (BMIP) Contest 2010 is open for any "Made in Pakistan" innovation related to mobile industries and technologies. (As the official press release June 8 2010).This developed research was in several countries and later crossed with theories of innovation resulting in new terms like "milieux innovateurs" (Aydalot, 1986; Maillat, 1998). **'**The role of marketing in strategic management deals with the entrepreneurial work of organization and organization growth; in short, innovation**'** (Kerin, 1992, p.332).However, innovation and entrepreneurship have by tradition been given little appreciation in the strategic marketing dialogue (Day and Wensley, 1983).

"Innovation as a research area with in the marketing and entrepreneurship interface is a growing area of equity" (Fillis 2000a, 2000b; Fillis and McAuley 2000,Hackley and Mumby Croft 1998).Exploring innovation within the marketing and entrepreneurship presents a clear picture of SME's behavior, as well as offering practical advice for entrepreneurial marketers (Day 1998; Carson et al.1995; Fillis 2000b). The marketing and entrepreneurship interface focus on analytical skills, judgment, positive thinking, innovation and creativity (Carson 1995),.Hackley and Mumby-Croft 1998:505).The Marketing and Entrepreneurship model of research serves as a stage for furthering the investigation of innovation by offering opportunities for its investigation through a variety of research methodologies (Carson and Coviello 1996).Entrepreneurial process of entrepreneurial discovery and evaluation is most useful in generating need satisfying innovation [Miles et al.(2002)]. While entrepreneurship and innovation are a key of economic growth, researchers are yet to document a strong relationship between entrepreneurial activity and economic development across nations [(Acs and Audretsch, 2005), Van Stel et al.(2005)]

THEORATICAL FRAMEWORK

INDEPENDENT VARIABLE **DEPENDENT VARIABLE**



Correlations

	eco_mean	**inno_mean**	**tech_mean**	**entre_mean**
eco_mean Sig. (2-tailed)	**(.622)**			
inno_mean Sig. (2-tailed)	.249*	**(.761)**		
tech_mean Sig. (2-tailed)	.155	.479**	**(.632)**	
entre_mean Sig. (2-tailed)	.710** .000	.446** .000	.226 .064	**(.732)**

*. Correlation is significant at the 0.05 level (2-tailed).

**.Correlation is significant at the 0.01 level (2-tailed).

Cronbach alpha (Reliability) in parenthesis

Methodology

The above table shows that there exists **strong relationship** between the variables involved in the study. The significance level is 100 % between economic growth, innovation and entrepreneurship which means these results can be applicable to whole population. These variables are highly co-related to each other. In Pakistan there is no relationship between entrepreneurship and technology. The value of correlation economic growth and entrepreneurship is 0.710 which are highly correlated.

The value of correlation innovation and entrepreneurship is 0.446 which are highly correlated. The value of correlation technology and entrepreneurship is 0.226 which is not correlated.

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	tech_mean, eco_mean, inno_mean[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: entre_mean

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.763[a]	.582	.562	.42749

a. Predictors: (Constant), tech_mean, eco_mean, inno_mean

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.290	3	5.430	29.712	.000[a]
	Residual	11.696	64	.183		
	Total	27.985	67			

a. Predictors: (Constant), tech_mean, eco_mean, inno_mean

b. Dependent Variable: entre_mean

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.495	.418		1.185	.240
	eco_mean	.609	.080	.639	7.654	.000
	inno_mean	.289	.092	.294	3.128	.003
	tech_mean	-.013	.086	-.014	-.148	.883

a. Dependent Variable: entre_mean

The interpretation reveals the following values.

- **Co-Efficient of Correlation r= .763[a]**
- **Co-Efficient of Determination R^2=.582**
- **Standard Error of Estimate s_e= .42749**

Our R saquare show that **58%** changed in dependent variable is explained by independent variable. The value of beta show that one unit change in independent variable bring the **.635** units change in dependent variable. This study contains the **.42749** errors.

H1: Economic growth and Entrepreneurship is accepted because it is highly significant 0.001***.
H2: Innovation and Entrepreneurship is accepted because it is significant 0.01**
H3: Technology and entrepreneurship is rejected because it is non significant.

Discussion

The purpose of this research is to find out the impact of economic growth, innovation and technology on entrepreneurship. Our finding shows the positive relationship between Economic growth and Entrepreneurship which is denoted by H1 and the Innovation and Entrepreneurship which is denoted by H2. Technology and entrepreneurship are negatively correlated in our research which is denoted by H3. Which is (β = -.014, $p < .10$) not significant. We see that there is the positive impact of between Innovation and Entrepreneurship with (β = .294 $p < .001$) with significance. In western culture there is the positive relationship between Technology and entrepreneurship but in Pakistan its significance show that there is inverse proportion.

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