

## Measuring Impact of Demographic and Environmental Factors on Small Business Performance: A case study of D.I.Khan KPK (Pakistan)

Muhammad Amjad Saleem  
Govt college of Management Sciences D.I.Khan

Muhammad Imran Sheikh  
City University of Science & Information Technology Peshawar

### Abstract

Small businesses play a vital role in economic development as they can provide the economy with efficiency, innovation, competition and job growth. Environment and Entrepreneurs are responsible for successes of the businesses. To know Impact of environment and various characteristics of entrepreneur on small business data was collected from 60 respondents randomly selected on structured questionnaire in D.I.Khan. Regression analysis showed positive significant of investment, entrepreneurial experience, business profile and culture with  $R^2=0.638$  and  $F= 11.222$ . Provision of opportunities to develop skill for business promotion is suggested by researcher.

### Introduction

Based on [www.wikipedia.org](http://www.wikipedia.org) a small business is privately owned business having few employees and low sales volume. Small businesses are frequent in many countries, depending on the economic system in operation. Typical examples include: convenience stores, bakery shops, hairdressers, tradesmen, lawyers, accountants, restaurants, photographers, etc. According to Small and Medium Industries Development Corporation (SMIDEC) small business has between 5 & 19 employees and annual sales turnover between RM200, 000 & less than RM 10million. Small business plays a vital role in economic development of the area especially in efficiency, innovation, competition and job growth. Entrepreneurs are responsible for the promoting businesses because they impart enthusiasm in economic activities within their territory; manage organizational and technical change; and also promote the innovation and learning culture on such environment Entrepreneurship is accepted as a driving force behind the economic and social development of countries But this depend upon the formal and informal attributes associated with the entrepreneurs. Therefore objective of this paper is to see determinants of business success in such an economy like Dera Ismail Khan.

Dera Ismail Khan is situated in the southern most part of Khyber Pakhtunkhawa (Pakistan).It is surrounded on the north by Tank and Lakki Marwat districts, on the east by Mianwali and Bhakkar districts and on the south by Dera Ghazi Khan District of Punjab. Tribal Areas are on the west and adjoin DIKhan district to South Waziristan Agency and Tank district. Dera Ismail Khan occupies a space of 7,326 squares Fifteen per cent of population lives in four urban areas, the rest 85 per cent lives in 344 rural localities. Total population of the district was 1,018,796 (2007 census).The average annual growth rate was 3.26 percent during this period. Overall literacy rate of the district is just 31.3 percent (2007 census). But in urban area literacy rate is 61%.There is one doctor for every 4,736 persons and one nurse for 21,038 people. Agriculture is the major money-making activity in the district. Most part of the district is a dry. Mostly urban people seek jobs in Govt for their livings. Those who do business most of them have no science and art of doing business. They have inadequate promotional activities or use available promotional facilities improperly. Socio-cultural and physical infrastructure is not well developed to support them. Disturbed political situation of the city is also a major hurdle in the way of investment. Quality assertion of the product is acceptable in the market. At present local market has low demand due to the low purchasing power of the customer. Although government has given subsidies to promote investment, yet it has not

given any attention to awareness and training programs for business class. Electricity is the only source of energy in D.I.Khan which is very costly and causes high cost.

### **Literature Review**

Small business success has been defined in a variety of scale by different scholars for example Paige and Littrell (2002), defined small business by intrinsic criteria and extrinsic outcomes. Intrinsic criteria include freedom and independence, controlling a person's own future, and being one's own boss. Extrinsic outcomes include financial returns, personal income, and wealth to only one who is owner of business. Masuo et al. (2001) measured small business success in terms of economic or financial returns such as return on assets, sales, profits, employees and survival rates; Determinants of business success also vary in nature. For example, (Kraut and Grambsch, 1987; Kallerberg and Leicht, 1991) found size of investment and access to capital (Cooper, 1985; Hsrich, 1990; Krueger, 1993; Lussiers and Pfeifer, 2001; Raman, 2004; Panda, 2008) found that good causes business success. Meng & Liang(1996) Found that experience has no concern with business success. Hisrich, 1990; Kallerberg and Leicht, 1991; Krueger, 1993 Rowe et al. 1993; Lussiers and Pfeifer, 2001; Masuo et al,2001;Thapa, 2007; Indarti and Langenverg, 2008; found that higher the education most successful is the business. Minniti and Bygrave (2003) saw no impact of education on business success. Kraut and Grambsch (1987), Hisrich (1990) Kallerberg and Leicht, (1991), Krueger (1993), Rowe et al, (1993), Masuo et al, (2001) found positive impact of age and supportive networks on business success. Zimmerrer and Scarborough (1998) pointed out that most of entrepreneurs in the United States start business during their 30s and 40s, many researchers founded that there is no limit of age for entrepreneurial aspirations. Age difference at the start of business seems to have no association to business success. According to Staw (1991), at the start of any business age is not a key factor,a good trained and prepared entrepreneur starts business in better way. Staw (1991) also notes that sequential age and entrepreneurial age is related to business success Kallerberg and Leicht(1991), Rowe et al,(1993); Masuo et al, (2001);Rose et. al (2006) state that skills, and training has impact on success of the business.Cooper (1985), Green and Pryde(1989),Raman (2004) found that motivational factors such as initiatives, assistance from others, encouragement by family and friends, skill and economic conditions lead to the success of the entrepreneurs. Swunney and Runyan (2007) state that generating income and creating job for them, prop up from family and friends are the foremost factors for motivating the people to become successful entrepreneurs.

Rogoff et al. (2004) found that internal factors such as nature and size of business, the ability of entrepreneur to magnetize financing, marketing and human resource and external factors such as sales tax rates, available infrastructure, existing market condition, business opportunitis and threats are determinants of business success. The value of government support to small business success is reported in a number of studies ,For example Yusuf (1995) , Sarder, et al, (1997) found in their research work that the firms getting support services like financing, training, technical, extension and consultancy, information etc from the public or private agencies showed significant raise in sales, employment and productivity. On the opposing, some other studies like Kirpalani and Macintosh (1980), Mambula (2004) found that government support was minor to small business success. Location of business also effect business success (Kraut and Grambsch, 1987; Kallerberg and Leicht, 1991).

### **Methodology**

Primary data from 60 businessmen who were randomly selected using stratified sampling technique and had more than Rs500000/- investment and at least five employee was collected with the help of structured questionnaire A five-point Likert scale was used in questionnaire on different attributes (innovativeness, business knowledge, hard work, strong financial resources, product competitiveness and business

networking, Government assistance, training and extension services, marketing, moral support, technical assistance, infrastructure, and business-related policies etc) regarding business profile, skill, socio cultural environment and business environment and Govt policies. Regression impact was seen on average profit per month for knowing success ness of business. ANOVA test was also applied to know impact of group differences.

**Modeling.**

The General Linear Model is commonly estimated using ordinary least square has become one of the most widely used analytic techniques in social sciences (Cleary and Angel 1984). Most of the statistics used in social sciences are based on linear models, which means trying to fit a straight line to data collected. Ordinary least square is used to predict a function that relates dependent variable (Y) to one or more independent variables (x<sub>1</sub>, x<sub>2</sub>, x<sub>3</sub>...x<sub>n</sub>). It uses linear function that can be expressed as

$$Y = a + bX_i + e_i$$

Where

- a            Constant
- b            Slope of line
- X<sub>i</sub>         Independents variables
- e<sub>i</sub>         Error term

Hence to assess contribution of different determinants in business successness Linear Regression Model was expressed as follow

$$Y \text{ (Average profit per month)} = a \text{ (constant)} + X_1 \text{ (Age)} + X_2 \text{ (Education)} + X_3 \text{ (Experience)} + X_4 \text{ (Business profile)} + X_5 \text{ (Skill)} + X_6 \text{ (Socio cultural factors)} + X_7 \text{ (Business environment and Govt policies)} + X_8 \text{ (Investment)} + e_i \text{ (Error term)}$$

**Analysis and Interpretation**

Estimation of the business success using original variables showed moderate to strong multicollinearity among the independent variables (table1). The large value of F-statistics F= 11.222 shows that the explanatory variables included in the model collectively had significant impact on profit. The high R<sup>2</sup> and Adjusted-R<sup>2</sup> values suggest that 80 percent variations in the profit were explained by the explanatory variables included in the model. The coefficient for experience, business profile, culture and investment was positive and significant below 5 percent level and suggests that experience, business profile, culture and investment affected profit positively. One percent increase in experience, business profile, culture and investment increased profit about 80% percent. It means that more experienced businessmen, political stability, facilities from govt to encourage business activities, more investment and business promoting culture in the choice of population increased business and caused more profit as well as image building.

Table 1 Regression impact of following independent variables on dependent variable Average profit per month

Model	R	R Square	Adjusted R Square	F	Sig.
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1	.799	.638	.581	11.222	.000
Independent Variables	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-34.668	17.096		-2.028	.048
Age	-.280	.267	-.158	-1.050	.299
Education	.355	.365	.090	.973	.335
Experience	1.052	.290	.547	3.628	.001
Business profile	1.781	.465	.411	3.833	.000
Skill	.427	.298	.144	1.435	.157
Culture	-.629	.237	-.246	-2.655	.011
Business environment	-.357	.389	-.089	-.917	.363
Investment	.004	.001	.329	3.382	.001

Remaining explanatory variables i.e age, education, skill, and business environment had no significant impact on profit. Same results can be seen in table 2 on, experience and investment using ANOVA

Table 2 Impact of following Explanatory variables on profit using ANOVA

Variable	Levels	Sum of Squares	df	Mean Square	F	Sig
Investment	Between Groups	5728.425	2	2864.212	21.983	.000
	Within Groups	7426.509	57	130.290		
	Total	13154.933	59			
Age	Between Groups	2.489	1	2.489	.011	.917
	Within Groups	13152.444	58	226.766		
	Total	13154.933	59			
Experience	Between Groups	3277.344	2	1638.672	9.456	.000
	Within Groups	9877.589	57	173.291		
	Total	13154.933	59			
Education	Between Groups	1844.600	2	922.300	4.648	.013
	Within Groups	11310.333	57	198.427		
	Total	13154.933	59			

However higher education level also had positive and significant impact on profit. Descriptive statistics in table 4 shows that 70% respondents were educated above secondary level. Fifty three percent had entrepreneurial experience of 11 years to 20 years. Forty percent had investment between 1 million and 2 million.

Table 4 Descriptive statistics

Variables	Attributes	F	%age
Age	Below 20 Years	0	0

	21-40 years	42	70.0
	Above 40 years	18	30.0
Education	Below primary level	4	6.7
	Between primary and secondary levels	14	23.3
	More than secondary level	42	70.0
Experience	1-10 Years	14	23.3
	11-20 Years	32	53.3
	21-above	14	23.3
Investment	Up to Rs 1million	22	36.7
	Between Rs 1million and Rs 2million	24	40.0
	Above Rs 2million	14	23.3

Source: - Field survey

Strong and positive correlation can be seen in table 5 between profit and experience, business profile, investment.

Table 5 Correlation between Explanatory variables on profit

Variables	Age	Education	Experience	Business profile	Skill	Culture	Business environment	Investment
<b>Profit</b>	.224	.054	.432	.465	.376	-.021	-.014	.547
Sig. (2-tailed)	.085	.681	.001	.000	.003	.874	.913	.000

Major cause behind this was non availability of advisory services from where businessmen could develop business skill among them. Businessmen were doing business on the basis of their experiences in those business profiles (Nature of goods) which were either sold more frequently or had much profit per unit and were according to existing culture. Businessmen were not more initiative in bringing positively change in the existing culture and could not motivate customers well or adopt promotional activities effectively in order to enhance sale. Businessmen were also not able to do SWOT analysis well on and hence could not manage their business as it should be. Higher general education enabled businessmen to understand business world but due to lack of business back ground they could not understand business world technically. However collectively all explanatory variables had significant impact on profit and revealed findings that rejected null hypothesis and confirmed that all explanatory variables used in the model were very important for success ness of business. At the end it is suggested that Govt should provide opportunities to businessmen for developing skill to promote their businesses.

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